ESAWAS
REGULATORS ASSOCIATION

THE WATER SUPPLY AND SANITATION REGULATORY LANDSCAPE ACROSS AFRICA

CONTINENT-WIDE SYNTHESIS REPORT

Eastern and Southern Africa
Water and Sanitation Regulators Association

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CONTENTS

ACRONYMS

AIAS	Water Supply and Sanitation Infrastructure Administration (Mozambique)
ANAS	National Water and Sanitation Agency (Cape Verde)
ARME	Multisector Economic Regulatory Agency (Cape Verde)
AURA	Water Regulatory Authority (Mozambique)
CAR	Central African Republic
CORAL	Local Regulatory Commissions (CORAL)
DRC	Democratic Republic of the Congo
ESAWAS	Eastern and Southern Africa Water and Sanitation Regulators Association
EWRA	Egyptian Water and Sanitation Regulatory Authority
EWURA	Energy and Water Utilities Regulatory Authority
FIPAG	Water Supply Investment and Assets Fund (Mozambique)
FSTP	Faecal Sludge Treatment Plant
GNI	Gross National Income
MIS	Management Information System
MMDAs	Metropolitan, Municipal, and District Assemblies (Ghana)
MoLAFWRD	Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (Zimbabwe)
MoWE	Ministry of Water and Energy (Ethiopia)
MoWE	Ministry of Water and Environment (Uganda)
NWASCO	National Water Supply and Sanitation Council (Zambia)
ONAS	National Sanitation Agency of Senegal
ONEAD	National Office of Water and Sanitation (Djibouti)
PURC	Public Utilities Regulatory Commission (Ghana)
SDG	Sustainable Development Goal
SONES	National Water Company of Senegal
WASREB	Water Services Regulatory Board (Kenya)
WSS	Water Supply and Sanitation
WSSE	Water Supply and Sanitation Services Enterprise (Ethiopia)
WURD	Water Utilities Regulatory Department (Uganda)

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EXECUTIVE SUMMARY

Progress in expanding water supply and sanitation (WSS) services across Africa has not occurred at the pace required to meet Sustainable Development Goal 6, and considerable further improvements are needed. Across Africa, the average coverage rate for at least 'basic' water supply services rose from 58% in 2000 to 71% in 2020, while coverage rates for at least 'basic' sanitation have increased from 32% to 44% over the same period (Joint Monitoring Programme, 2020). Despite these critical improvements, progress has not occurred at the rate required. Even before COVID-19, insufficient progress was being made toward the Sustainable Development Goal 6 WSS targets, with very few African countries on track to achieve universal 'basic' water supply and sanitation services by 2030 (United Nations, 2018). Altogether, 411 million (31%) people in Africa remain without access to a basic water supply service and 779 million (58%) without access to basic sanitation, including 208 million (16%) who still practise open defecation (UNICEF; WHO, 2022). Most of these unserved populations reside in rural areas.

Safe and equitable WSS service provision depends on effective regulation to formalise the sector, and provide clear guidelines for those working within it. Water supply and sanitation service delivery is mainly public run and comprises network infrastructures which create natural monopolies. Water sector reforms resulted in a significant rethink of the policy, legal and institutional landscape in many countries, with a number of countries instituting regulation/monitoring oversight for WSS.

Regulation plays a key role in improving service delivery in a country. A well-functioning regulatory system is a central feature of good sector governance. The premise of regulation is to ensure that Government policy is implemented and service providers are accountable and supported in delivering efficient, affordable, reliable and quality services. Regulators are generally been mandated to undertake both economic and technical regulation of WSS service provision to ensure a balance between the quality of the service, the interests of consumers and the financial sustainability of the providers.

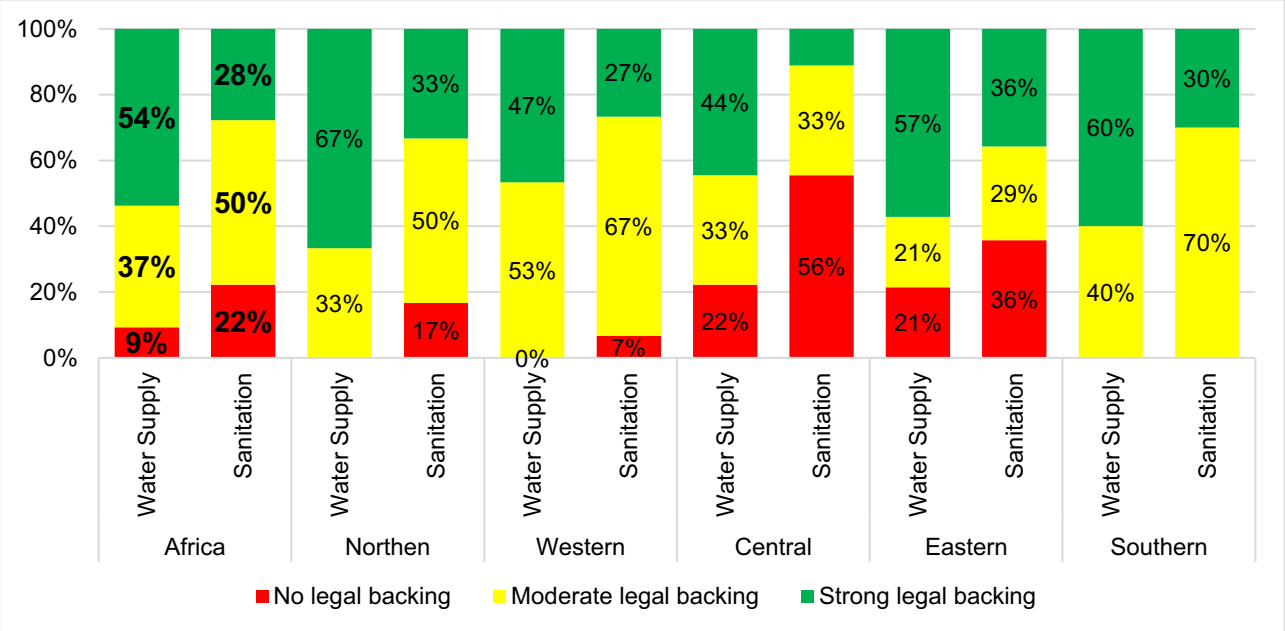
There is no single 'best-practice', or one-size-fits-all approach/design or model for WSS regulation. Countries must instead find the 'best-fit' according to their particular context. Effective regulation demands alignment with country specific reforms, governance systems and political economy and development objectives. However, there has been limited reference material on the setup of these frameworks across Africa that can serve as replication points for countries intending to institute effective regulation.

This report provides an overview of the status of WSS regulation across Africa. It presents a summary of regulatory frameworks in place for WSS service provision in urban and rural areas in 54 countries based on a study initiated by ESAWAS. Key findings and overviews are provided for the policy and legal backing for WSS regulation, different spheres of regulation (regulated service providers, regulated service delivery types), regulatory mechanisms, and the regulatory environment.

In many countries, WSS regulation has started receiving more concerted attention. WSS regulation has progressed at different levels across Africa over the last two decades. In countries such as Cape Verde and Tanzania, there has been considerable emphasis, with significant reforms and an expansive set of regulatory mechanisms applied. Conversely, in countries like Equatorial Guinea and Eritrea, only a very limited set of regulatory activities are performed. In many countries, initial efforts are underway to strengthen WSS regulation.

Policy and legal backing: National WSS policy documents consistently state the need to strengthen WSS regulation but vary in the extent to which they provide tangible measures or strategies. Prioritising WSS regulation in national policy or strategy documents is usually crucial in enacting or amending the required legal instruments to reform or strengthen regulatory frameworks for WSS. National policy documents exist for water supply in 45 of 54 African countries (83% of countries) and sanitation in 44 countries (81%). Legal instruments touching on WSS have been developed in all African countries; however, substantial variations exist in the extent to which these meaningfully address WSS regulation. Figure A shows that Twenty-nine countries (or 54%) have a strong legal backing for regulating water supply services compared to just 15 for sanitation services (28%).

Figure A: Legal Backing for Regulating Water Supply and Sanitation Services – Regional



Regulatory Models: A diversity of regulatory frameworks exist for WSS service delivery, with most African countries having mixed approaches comprising multiple regulatory models. Four main regulatory models are utilised to regulate WSS service provision across Africa:

I. ***Regulation by Agency.*** A regulatory body (semi-) autonomous from the government has discretionary powers to regulate WSS or aspects of WSS.
II. ***Regulation by Contract.*** A public entity other than a (semi-) autonomous regulatory agency and a service provider agree on contractual clauses that determine how key aspects of WSS service provision are defined and controlled, such as tariffs and service standards.
III. ***Ministerial Regulation.*** A ministry performs some or all regulatory responsibilities for WSS and does not use contracts as a core regulatory tool for WSS service provision.
IV. ***Self-Regulation.*** A service provider (typically a public utility or unit of local government) is legally mandated to perform key regulatory activities upon itself (i.e., setting tariffs and performance standards, performance reporting).

Table A details the regulatory models applied in each African country for WSS service delivery on a region-by-region basis. It highlights how many countries have multiple regulatory models for WSS service provision, with different regulatory models often used to regulate different service providers. The predominant regulatory model in each country is flagged using bold text in the table – this refers to the regulatory model by which the primary service provider in each country is regulated (in most cases, a national or regional utility).

Table A: Regulatory Models Applied for Water Supply and Sanitation Service Provision

Region	Regulation by Agency	Regulation by Contract	Ministerial Regulation	Self-Regulation
Northern	**Egypt**, **Mauritania**	**Algeria**, **Morocco**, **Tunisia**	Algeria, **Libya**, Mauritania, Morocco, Tunisia	
Western	**Cape Verde**, **Gambia**, **Ghana**, **Liberia**, **Mali**, **Niger**, Nigeria, **Sierra Leone**, **Togo**	**Benin**, **Burkina Faso**, **Cote d'Ivoire**, Ghana, **Guinea**, Liberia, Mali, Niger, **Senegal**, Togo	Benin, Burkina Faso, Gambia, Ghana, Guinea, **Guinea-Bissau**, Liberia, Mali, Niger, **Nigeria**, Sierra Leone	Liberia
Central	**Burundi**, **Congo Republic**, **Gabon**	**Cameroon**, **Central African Republic**, **Chad**, Congo Republic, Democratic Republic of the Congo, **Equatorial Guinea**,	Burundi, Cameroon, CAR, Chad, Congo Republic, **DRC**, Equatorial Guinea, Gabon, **Sao Tome and Principe**	
Eastern	**Kenya**, **Rwanda**, Seychelles, **Tanzania**,	Madagascar, **Somalia**, **Uganda**	**Comoros**, Djibouti, **Eritrea**, **Ethiopia**, **Madagascar**, **Mauritius**, Rwanda, **Seychelles**, **South Sudan**, **Sudan**, Somalia, Tanzania, Uganda	**Djibouti**
Southern	**Angola**, **Lesotho**, **Mozambique**, **Zambia**	**Eswatini**, South Africa	Angola, **Botswana**, Eswatini, Lesotho, **Malawi**, Mozambique, **Namibia**, **South Africa**, **Zimbabwe**	Malawi
Total – Regulatory Model Applied	**22 countries (41%)**	**24 countries (44%)**	**48 countries (89%)**	**3 countries (6%)**
Total – Predominant Regulatory Model	**20 countries (37%)**	**15 countries (28%)**	**18 countries (33%)**	**1 country (2%)**

Regulation by agency generally performs better than other regulatory models. Regulation by agency performs considerably better than each of the other regulatory models, with notably more countries where this is the predominant regulatory model having developed at least 12 of the 16 investigated regulatory mechanisms. Similar trends are evident across the other areas studied, including legal backing for WSS regulation, the progress made in regulating smaller, deconcentrated service providers and service delivery types such as onsite sanitation and point water sources, and the status of the regulatory environment. This indicates that several benefits exist to adopting regulatory arrangements based on regulation by agency.

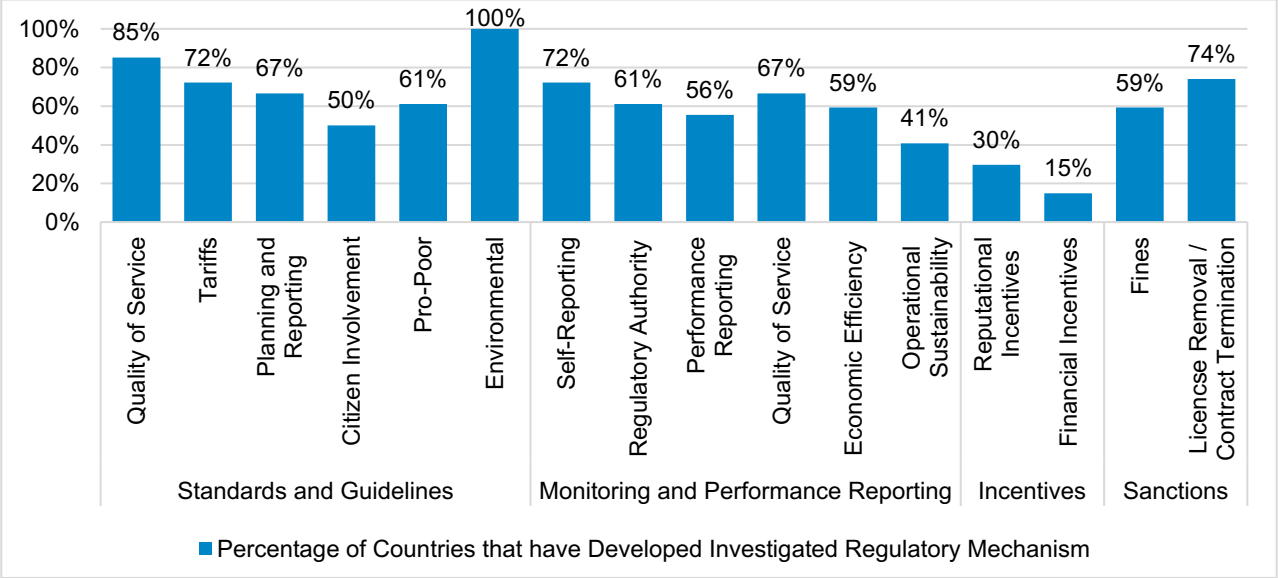
Spheres of Regulation: All African countries have multiple WSS service providers (national and regional utilities, large-scale private enterprises, informal private operators, community-based operators, etc.), operating at diverse scales and degrees of formality. In most African countries, regulators and regulatory activities are overwhelmingly focused on the predominant service providers (i.e., national or regional utilities and large private operators), with smaller, deconcentrated service providers such as water committees or informal private operators receiving little or no oversight. Various factors explain this, including regulatory mandates, regulatory actors' capacity, the sheer number and level of formality of small-scale service providers, and data availability. Different regulatory forms are often applied to regulate different service providers within and among countries.

Many countries' overall regulatory arrangement and the activities of most regulatory actors are biased toward regulating water supply service delivery, with sanitation often receiving considerably less attention. Across Africa, 59% of countries are regulating networked piped water supply services at scale compared to just 11% for point water sources. Sewered sanitation serves just 13% of Africa's population, compared to the 47% of Africans that use onsite sanitation facilities of varying levels of quality. However, regulations or standards and guidelines have been developed for key aspects of onsite sanitation in just 41% of the countries and are being applied at scale in only 11% while for sewered sanitation, 63% of countries have developed regulations or standards and guidelines and 43% of countries are applying these at scale.

Regulatory Mechanisms: A regulatory mechanism is an intervention or process used by a regulatory actor to guide and influence the behaviour and performance of key stakeholders within the WSS sector, including service providers. Considerable variations exist in the development and application of regulatory mechanisms. Overall, 7 countries (13%) have developed 15 or 16 of the regulatory mechanisms investigated, 14 (26%) have developed 12 to 14, 14 (26%) have developed 9 to 11, 7 (13%) have developed 6 to 8, 11 (20%) have developed between 3 and 5, and 2 (4%) have developed 0 to 2.

The most progress has been made in developing standards and guidelines and empowering regulatory actors with sanctioning powers, while there is limited use of incentives. Figure B details the percentage of the 54 African countries included in this study that have developed each of the 16 regulatory mechanisms investigated. It highlights that the greatest progress has been made in the area of standards and guideline development, especially standards for environmental protection (100% of countries) and quality of service (85%). Important progress is also evident in the ability of regulatory actors to sanction service providers; however, these sanctioning powers are rarely utilised in most cases. The most significant challenges exist with regulation by incentives – only 15% and 30% of countries utilise financial and reputational incentives, respectively. Widespread challenges are also evident concerning regulatory actors tracking an appropriate set of operational sustainability indicators (41%), performance reporting (56%), and development of standards and guidelines for citizen involvement (51%) or pro-poor aspects (61%).

Figure B: Regulatory Mechanisms for Water Supply and Sanitation Service Provision



Regulatory Environment: Despite many good practices, most countries have pressing limitations in their regulatory environment for WSS. Many countries have taken vital steps to strengthen the regulatory environment. This includes establishing dedicated regulatory actors that are at least partially autonomous from the government, financing regulatory actors through sources independent of direct government influence, developing substantive avenues for public participation in developing and applying regulatory mechanisms, and heightening transparency by ensuring the public availability of reports on service provider performance. Nevertheless, in most countries, pressing challenges persist in the regulatory environment. Of note, regulatory actors have the autonomy to set or approve tariffs independently of government in just 30% of countries, only 28% of lead regulatory actors are financially autonomous of government, and regulatory reports on service provider performance are publicly available in only 33% of countries.

Substantial regional variations exist in the landscape for WSS regulation. Noteworthy differences are evident in the status of WSS regulation among countries in each of Africa's five regions. Nevertheless, several broad trends are evident at the regional level:

I. ***Northern.*** This region is characterised by ***largely good performance in regulatory mechanism development***. Except for Libya, important progress has been made across the region in developing

regulatory mechanisms, especially for standards and guidelines, monitoring and performance reporting and sanctioning. However, for most of these mechanisms, there is limited publicly available information on the extent of their consistent application. Additionally, the broader ***regulatory environment suffers from several limitations*** concerning autonomy, public participation in the development and application of regulations and transparency.

II. ***Western.*** This region has largely ***moderate to good performance in WSS regulation***, but with ***substantial variations*** among countries. Regulation by agency is prevalent, but ministerial regulation and regulation by contract are also widely practised, with many countries applying multiple regulatory arrangements. Most countries in the region perform moderately or well in developing and applying regulatory mechanisms, including examples of good practice across different regulatory arrangements. However, some West African countries (i.e., Liberia, Guinea-Bissau) face considerable challenges in effectively regulating WSS services.

III. ***Central.*** This is the region facing the ***greatest challenges in WSS regulation***. Central African countries have generally given the least emphasis and attention to WSS regulation. Many Central African countries remain reliant on ministerial regulation or relatively underdeveloped forms of regulation by contract. Comparatively minimal progress has been made in developing and applying regulatory mechanisms and regulating actors beyond the primary WSS service providers such as national utilities. Important limitations are also evident in the regulatory environment.

IV. ***Eastern.*** This region has the ***greatest diversity in regulatory arrangements and regulatory mechanism development and application***. Regulation by agency, regulation by contract, ministerial regulation, and self-regulation are all practised. In countries such as Kenya, Tanzania, Uganda and Rwanda, important progress has been made establishing dedicated, independent regulatory actors and expanding and improving the application of expansive sets of regulatory mechanisms. Conversely, countries such as Sudan, South Sudan, Eritrea, and Somalia, face wide-ranging challenges in effectively regulating WSS service provision.

V. ***Southern.*** This region has largely moderate to good performance in WSS regulation, with all countries performing moderately to very well. A couple of countries stand out for performing especially well; however, equally importantly, no Southern African country has developed less than seven of the 16 investigated regulatory mechanisms, indicating strong regional progress. Regulation by agency and ministerial regulation are predominant, with comparatively limited use of regulation by contract. A diverse set of good practices are also evident across several Southern African countries, including Zambia, South Africa, Zimbabwe, and Mozambique.

Significant work is now required in many African countries to translate policy objectives or the provisions set out in legal instruments into strengthened or reformed regulatory frameworks. The findings of this study should be able to guide various interventions and actions by sector stakeholders towards improving sector performance. The study further presents a springboard towards strengthening regulation across Africa through advocacy, technical assistance, collaborations and synergies. It is envisaged that a dedicated Africa-wide WSS Regulators Association would be opportune to be established for such purposes.

CHAPTER

1

INTRODUCTION

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1. INTRODUCTION

The attainment of Sustainable Development Goal (SDG) 6 on ensuring the 'availability and sustainable management of water and sanitation for all' is a crucial target for most countries. However, across Africa, many systemic weaknesses undermine WSS service provision, contributing to the failure to expand access at the required rate and deliver sustainable and equitable services. The water, sanitation, and hygiene (WASH) sector has traditionally been beset by many challenges that led to the degradation and deterioration of service provision in most countries across the African continent. These included, among others, lack of a comprehensive sector policy or strategy to guide sector organisations in the performance of their tasks; non-existence of a comprehensive legislative framework; and multiplicity of actors with unclear and overlapping roles and responsibilities leading either to duplication of efforts or gaps in some areas, poor coordination, and lack of oversight and reporting.

Water sector reforms were a response to addressing the declining performance of the institutions charged with the responsibility of service provision. These challenges resulted in a significant rethink of the policy, legal and institutional landscape in many countries, with a number of countries instituting regulation/monitoring oversight to formalise the sector and provide clear guidelines for those working within it.

A well-functioning regulatory system is a key-driver in delivering safe, equitable and reliable water supply and sanitation (WSS) services. Regulators are critical to ensuring Government policy is implemented. WSS service delivery is comprised of network infrastructures which create natural monopolies that need to be regulated. The regulation of WSS services broadly involves applying a series of interventions designed to promote sector goals in the public interest. The role of regulatory actors is to ensure a balance between service quality, the interests of consumers and the financial sustainability of service providers (WSUP & ESAWAS, 2020). A well-established regulatory system and the application of a robust set of regulatory mechanisms can improve service delivery by ensuring compliance with regulations and standards and balancing social, environmental, and economic interests. Regulators ensure that service providers are accountable and supported to perform effectively, provide services equitably, that the tariffs and other financing tools help achieve sustainability while meeting the needs of the urban poor, and that key performance indicators are available for purposes of service provider benchmarking and sector performance reporting.

There is no single 'best-practice' or one-size-fits-all approach to regulating WSS service delivery. Various arrangements exist for regulating WSS services, including regulation by agency, regulation by contract hybrid, ministerial regulation, and self-regulation. However, there is limited up-to-date reference material on the different regulatory setups across Africa. This lack of information limits the understanding of common challenges and trends as well as the determination of good practices to serve as models for replication in countries looking to improve WSS regulation or institute necessary reforms. This is especially crucial considering the importance of learning from what has (and has not) worked in comparable contexts rather than simply transporting frameworks and interventions from high-income country settings that have evolved to address different sector requirements. Within this context, the Eastern and Southern African Water and Sanitation Regulators Association (ESAWAS) commissioned a study to map the status of WSS regulation in all 55 African countries.

This report provides an overview of the status of WSS regulation across Africa and is based on assessments of 54 country cases. It presents a summary of regulatory frameworks in place for WSS service provision in rural and urban areas in 54 countries. Table 1 details the countries included. The study originally focused on 55 countries based on the African Union's Member States; however, information on the status of WSS regulation could not be obtained for the Republic of El Sahrawi. Key findings and overviews are also provided for the policy and legal backing for WSS regulation, different spheres of regulation (regulated service providers, regulated service delivery types), regulatory mechanisms, and the state of the regulatory environment. Five regional reports (Northern, Western, Central, Eastern, Southern) provide greater detail, while 54 country reports present country-specific information. These reports can be accessed on the ESAWAS website.

Table 1: Countries Included in the Study

Region	Included Countries
Northern Africa (6)	Algeria, Egypt, Libya, Mauritania, Morocco and Tunisia.
Western Africa (15)	Benin, Burkina Faso, Cabo Verde, Cote d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo.
Central Africa (9)	Burundi, Cameroon, Central African Republic, Chad, Congo Republic, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Sao Tome and Principe.
Eastern Africa (14)	Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Tanzania and Uganda.
Southern Africa (10)	Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe.

1.1. METHODOLOGY AND SCOPE

This study utilised a mixed-methods approach centred on completing a comprehensive analytical framework. This assignment was not designed to directly assess or analyse the impact of regulatory frameworks and activities on access to WSS services. It instead specifies the existing regulatory frameworks implemented by each African country and outlines information on these frameworks in relation to internationally recognised standards/guidance concerning prerequisites for – or characteristics of – effective WSS regulation. To this end, an in-depth analytical framework (Annex 1) was developed to capture qualitative and quantitative data. This comprised 142 indicators, spanning seven main areas or dimensions of regulation:

I. The **policy provision** for WSS regulation and the extent to which legal instruments provide the necessary **legal backing** for WSS regulation.
II. **Regulatory models** utilised for WSS regulation (regulation by agency, regulation by contract, ministerial regulation, self-regulation) and responsibilities for regulating different sub-sectors (urban and rural WSS, environmental protection, water resources management).
III. Regulatory responsibilities for different WSS **service providers** (i.e., national and regional utilities, formal and informal private operators, units or departments of local government, water committees) for urban and rural WSS.
IV. Existence and application of regulations for different **service delivery types** (networked piped water supply, point water sources, household water supply, sewered sanitation, onsite sanitation, communal sanitation).
V. Development and application of **regulatory mechanisms** (standards and guidelines, monitoring and performance reporting, financial and reputational incentives, sanctions).
VI. State of the **regulatory environment** regarding aspects of autonomy, participation, and transparency.
VII. **Enabling and constraining factors** to establishing and strengthening WSS regulation.

The quantitative information captured in the analytical framework used a comparatively simple scoring methodology comprising a three-point traffic-light scoring system (0, 1, 2) and Yes / No questions. This approach does not capture key nuances and country-by-country variations, which are detailed in the regional and country reports. However, at the top-level, it enables the streamlined comparison of information across countries and, in turn, the development of a continent-wide overviews.

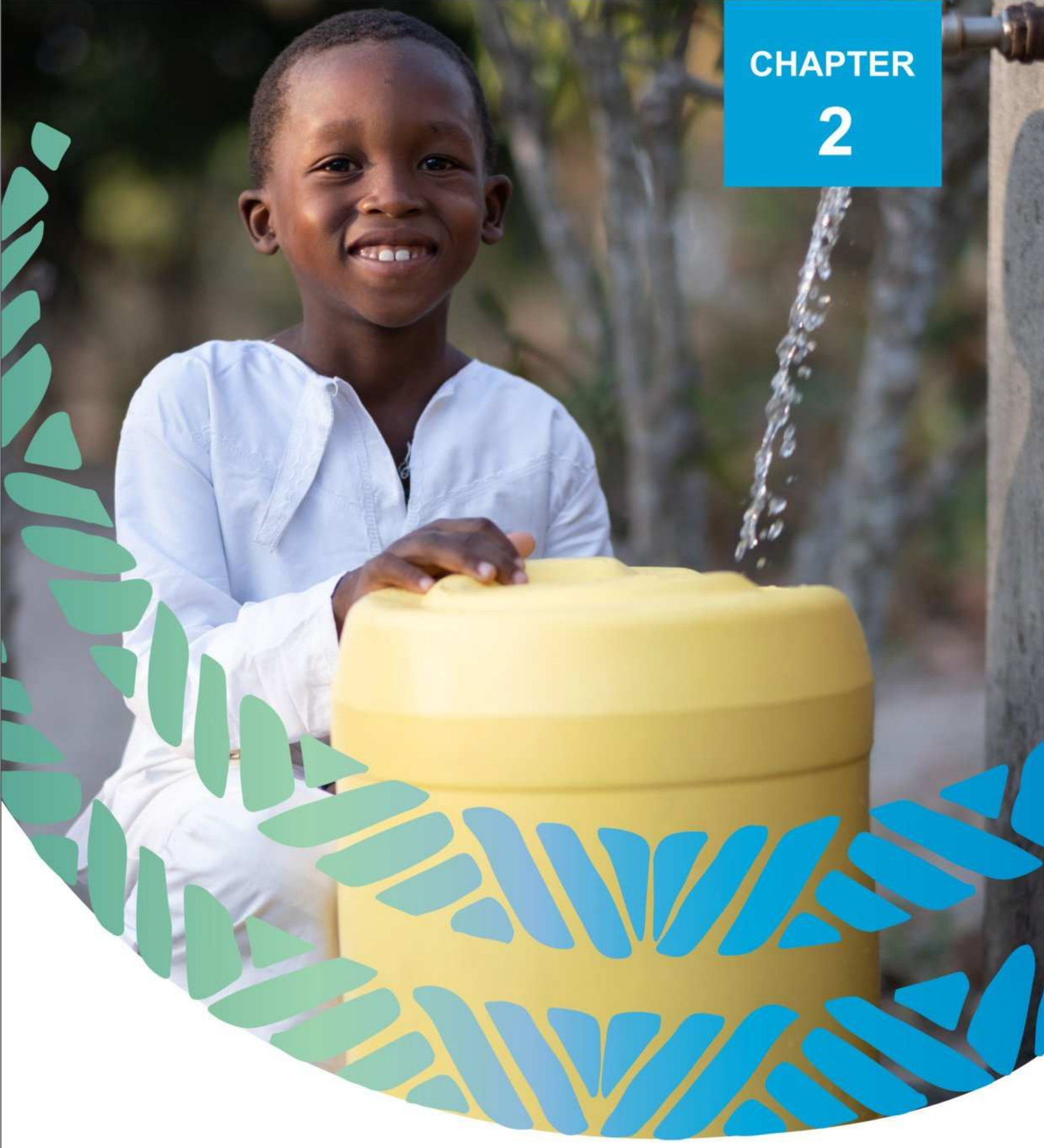
For each country, the analytical framework was completed through stakeholder consultations and a desk review of key documents (i.e., legal instruments, policies and strategies, reports produced by regulatory actors and service providers, sector assessments and diagnostics, and existing national and international studies). The extent to which the study relied on secondary information sources versus stakeholder consultations varied among countries based on the existence and comprehensiveness of relevant recent reports and other information sources. In most countries, consulted stakeholders principally comprised key regulatory actors. However, in some instances, consultations were held with external stakeholders (i.e., development partners such as UNICEF) due to access constraints. For each country, the information collected for the study was shared with relevant regulatory actors or other key stakeholders for review and validation.

1.2. STRUCTURE

The remainder of this report is structured into the following sections:

I. **Section Two** presents an overview of Africa's WSS context, drawing out key regional differences.
II. **Section Three** specifies the status of policy and legal frameworks for WSS regulation, providing key information on whether legal instruments sufficiently provide the enabling environment for WSS regulation.
III. **Section Four** details the different regulatory models and regulatory arrangements utilised for WSS regulation and outlines key trends and developments.
IV. **Section Five** presents the extent to which different service providers and service delivery types are regulated.
V. **Section Six** outlines the regulatory mechanisms that have been developed – and applied – across four aspects: (i) standards and guidelines; (ii) monitoring and performance reporting; (iii) incentives; (iv) sanctions.
VI. **Section Seven** focuses on the regulatory environment for WSS service provision.
VII. **Section Eight** presents nine building blocks for effective WSS regulation, highlighting the importance of each of these and key measures required across Africa to strengthen them.
VIII. **Section Nine** outlines important areas for further research to guide the establishment, expansion and strengthening of WSS regulation.

Across each of these sections, a number of case studies are provided to showcase good practice or illustrate broader trends and challenges in regulating WSS service delivery. When viewing these case studies, it is critical to note that there are no one-size-fits-all universal solutions to WSS regulation. Any framework, regulatory mechanism, or set of interventions and measures must be rooted in – and developed based on – the local political, financial and institutional context of the country in question.



CHAPTER

2

WATER SUPPLY AND SANITATION CONTEXT

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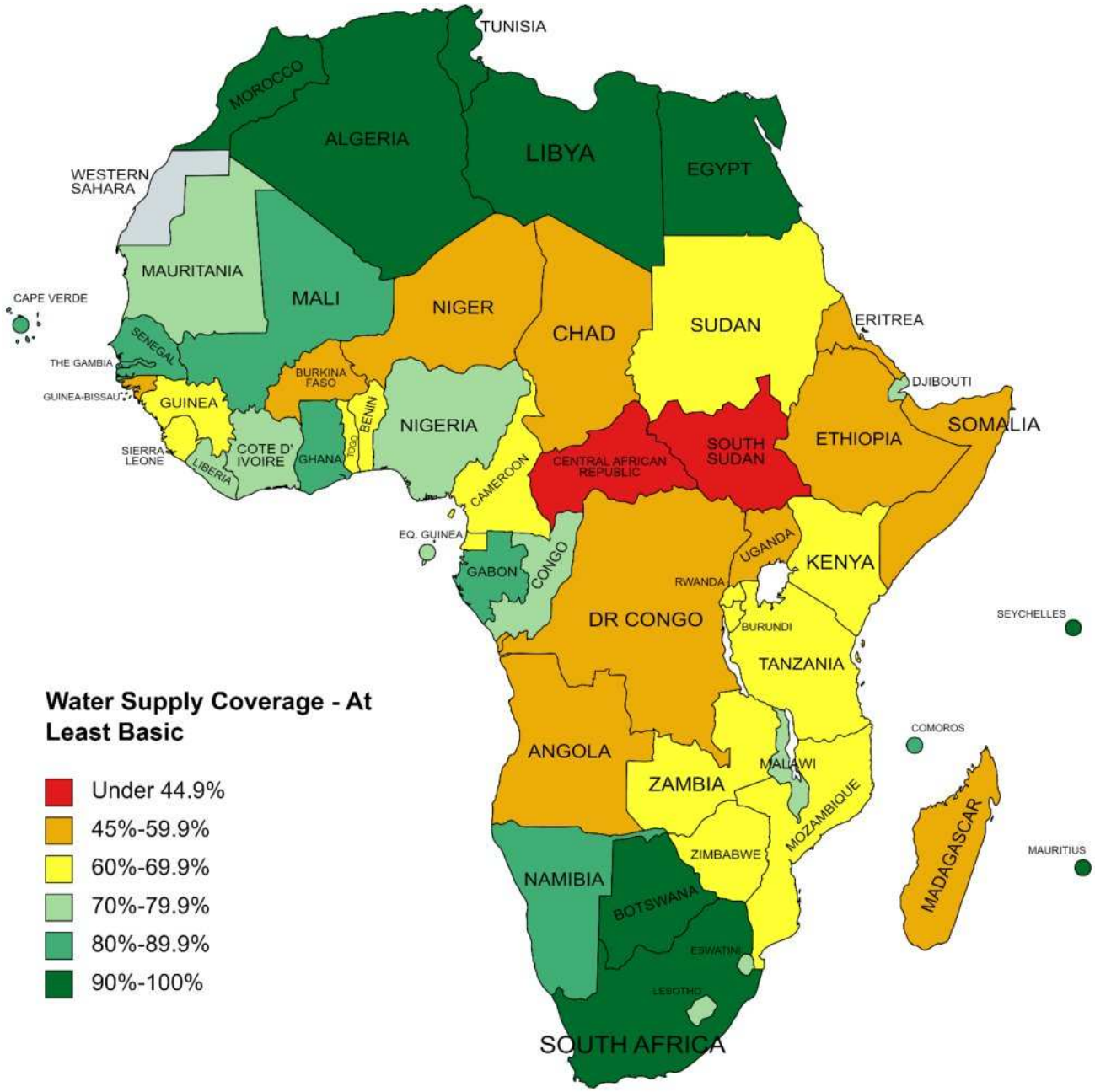
2. WATER SUPPLY AND SANITATION CONTEXT

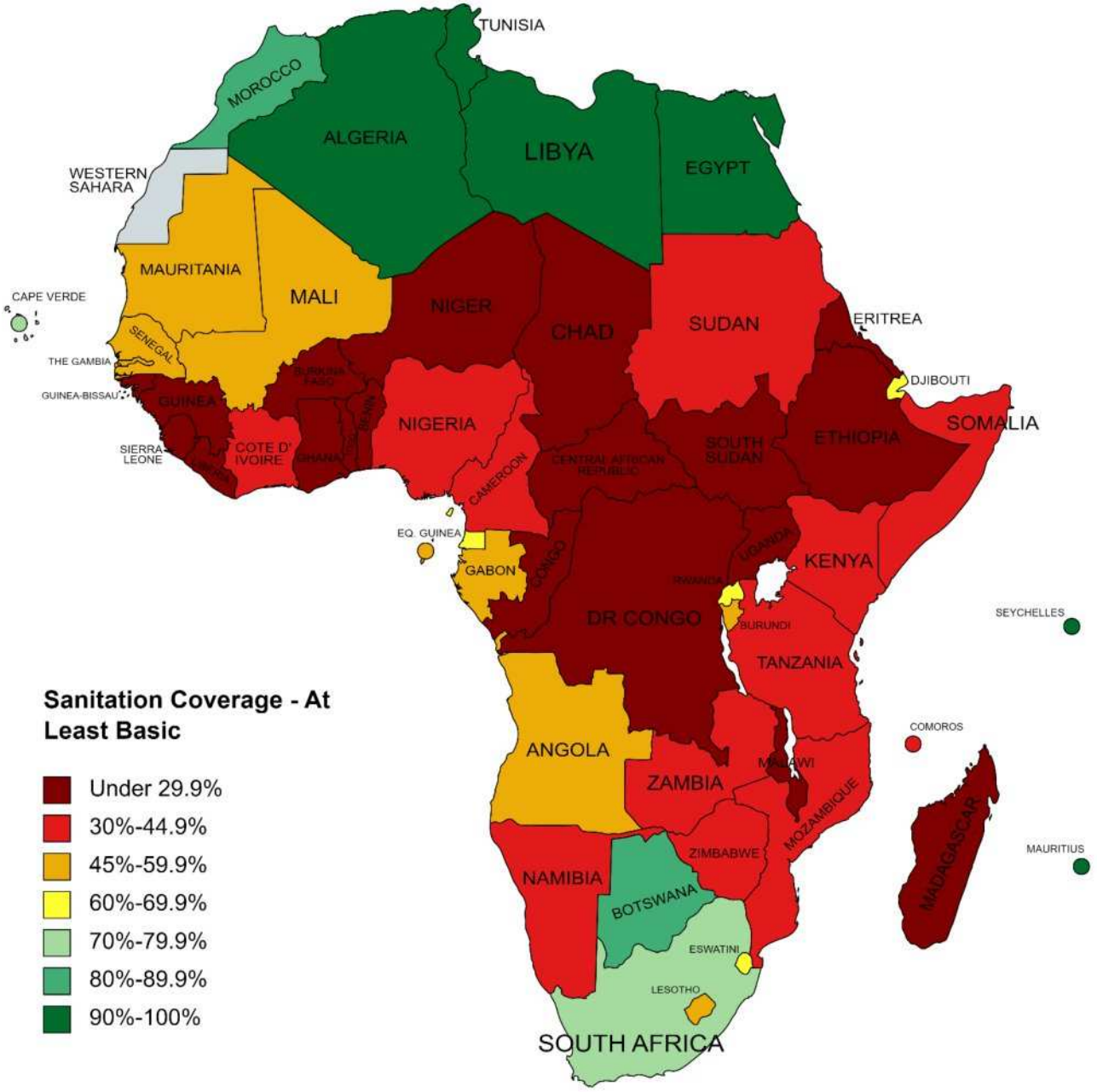
Africa represents a highly diverse WSS context. Figures 1 and 2 detail the coverage rates for at least 'basic' water supply and sanitation services across Africa,[1] while Annex 2 presents more detailed country-specific data on WSS coverage as well as several socio-economic indicators. These figures highlight considerable variations in coverage rates among and within Africa's regions and how, in all but three countries (Equatorial Guinea, Rwanda, Seychelles), coverage rates for water supply services exceed sanitation services. Northern Africa has the highest average coverage rates for WSS services (92% for water supply, 85% for sanitation), while Southern Africa performs moderately (73% average coverage rate for water supply, 49% for sanitation). Central Africa (62% for water supply, 35% for sanitation) and Eastern Africa (65% for water supply, 41% for sanitation) have low average coverage rates for WSS services. In Western Africa, average coverage rates are moderate for water supply services (71%) but very low for sanitation (32%).

Figure 1: At Least 'Basic' Water Supply Coverage Rates (Joint Monitoring Programme, 2020)



[1] Presented data is sourced from the Joint Monitoring Program rather than country reported data to aid analysis between countries based on a comparable methodology.

Figure 2: At Least 'Basic' Sanitation Coverage Rates (Joint Monitoring Programme, 2020)



WSS services have improved over the last two decades; however, accelerated progress is required to achieve Sustainable Development Goal (SDG) 6 targets. Figures 3 and 4 present how coverage rates have changed over the last two decades across Africa and each region. Broadly comparable progress is evident across Northern, Western, Eastern and Southern Africa, with average coverage rates increasing by 14-15% for water supply and 11-17% for sanitation. Improvements have been slower in Central Africa (six percent for water supply, seven percent for sanitation). Most African countries have improved WSS services over the last two decades. However, both water supply and sanitation services have deteriorated in five countries.[2] Across Africa, despite important improvements in WSS services, progress has not occurred at the rate required. Significantly, even before COVID-19, insufficient progress was being made towards the SDG 6 WSS targets, with very few countries below 95% coverage on track to achieving universal 'basic' water supply and sanitation services by 2030 (United Nations, 2018). Altogether, 411 million (31%) people in Africa remain without access to a basic water supply service and 779 million (58%) without access to basic sanitation, including 208 million (16%) who still practise open defecation (UNICEF; WHO, 2022). Most of these reside in rural areas

[2] For water supply, the five countries with a deteriorating coverage rate from 2000 to 2020 are Burkina Faso, Cote d'Ivoire, the Central African Republic, Comoros, and Zimbabwe. For sanitation, the five countries with a deteriorating coverage rate from 2000 to 2020 are Gambia, Burundi, the Central African Republic, the Democratic Republic of the Congo, and Zimbabwe.

Figure 3: At Least 'Basic' Water Supply Coverage (2000-2020) – Regional Averages

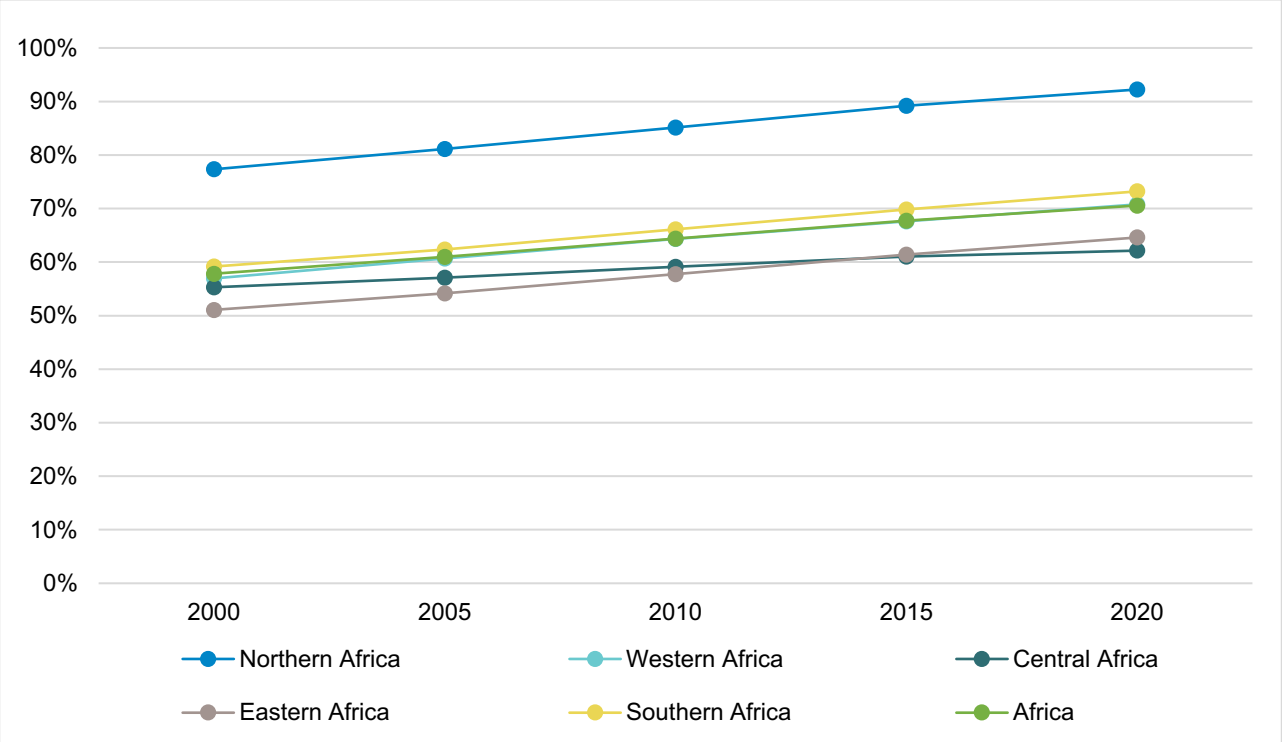
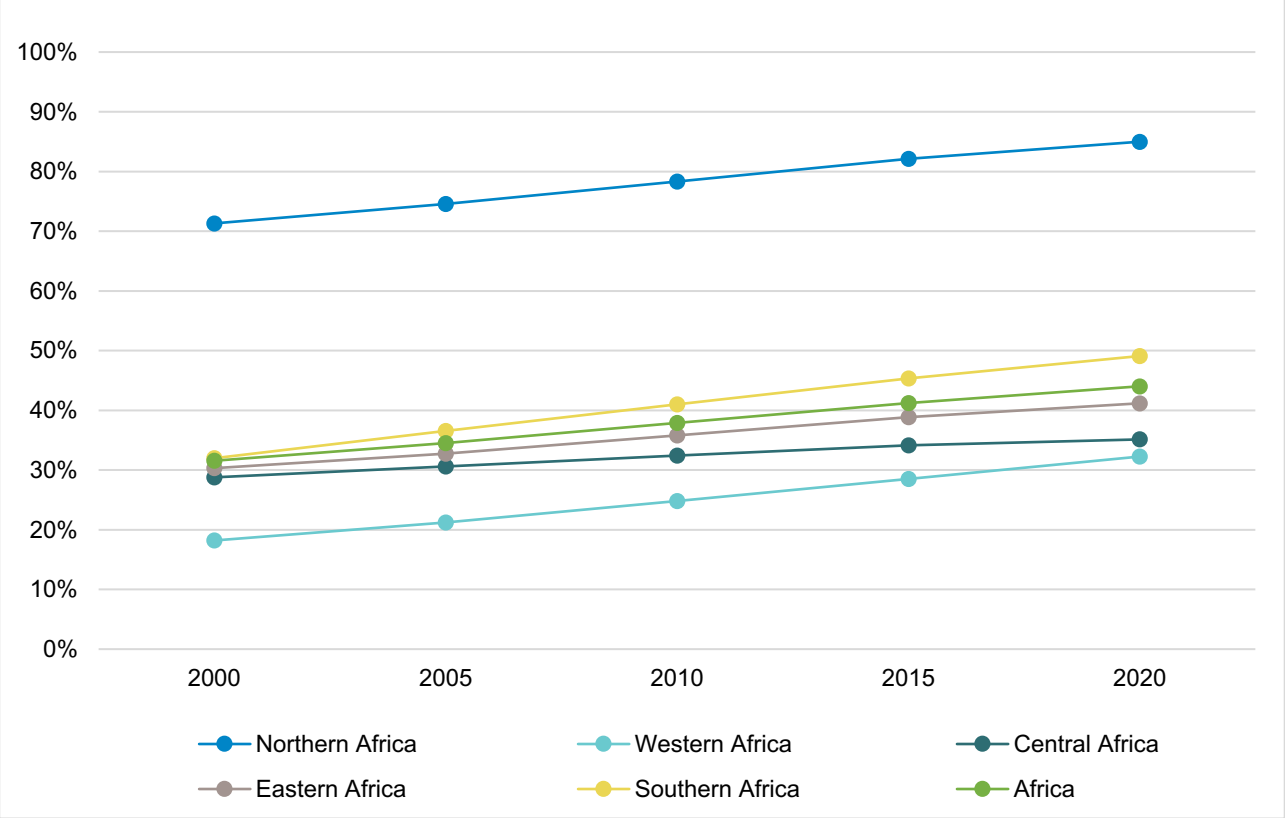


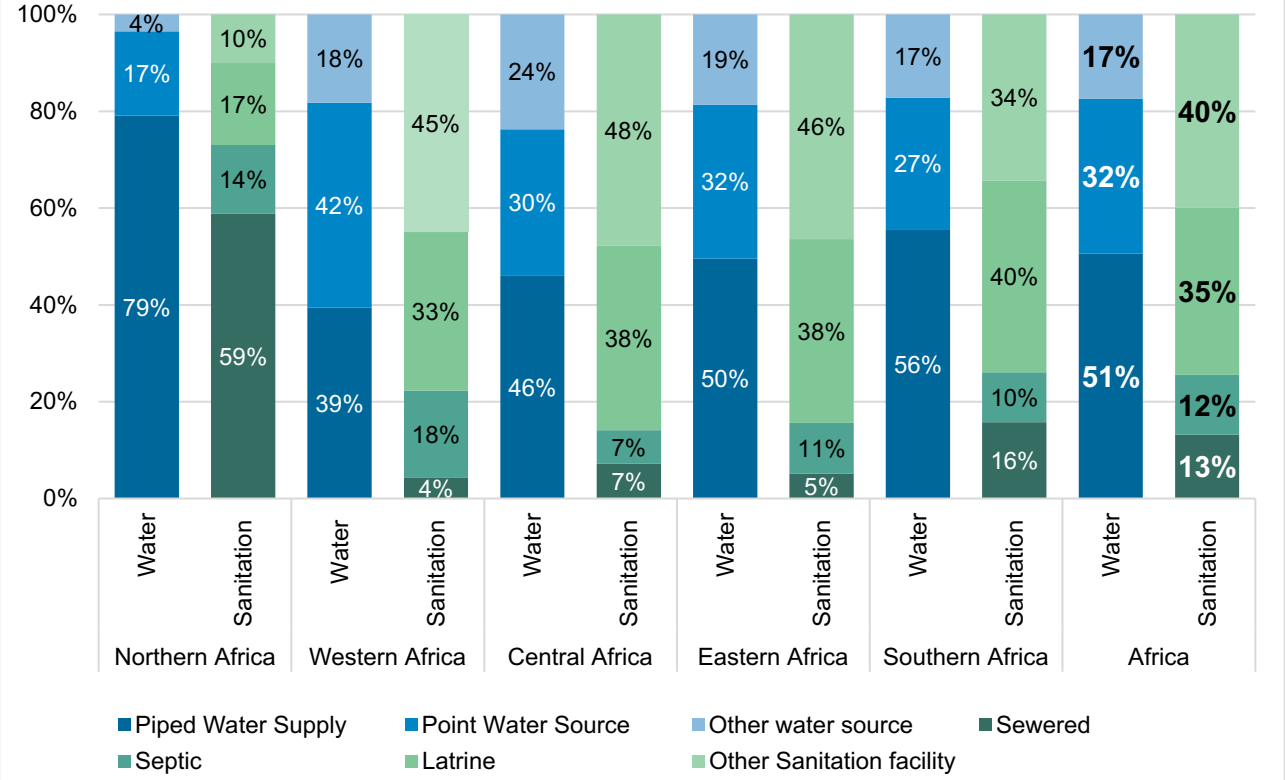
Figure 4: At Least 'Basic' Sanitation Coverage (2000-2020) – Regional Averages



The types of facilities for providing WSS services vary considerably among Africa's regions. Figure 5 details the use of five broad WSS facility types across Africa and each region. Annex 3 presents this information on a country-by-country basis. In Northern Africa, piped water supply is predominant, while in the other regions there is a much greater reliance on non-piped water supply (i.e., point water sources such as hand pumps or standpipes fitted to boreholes). On the sanitation side, Northern Africa is the one region where sewered sanitation is common. Elsewhere, onsite sanitation and especially latrines of varying levels of quality are the

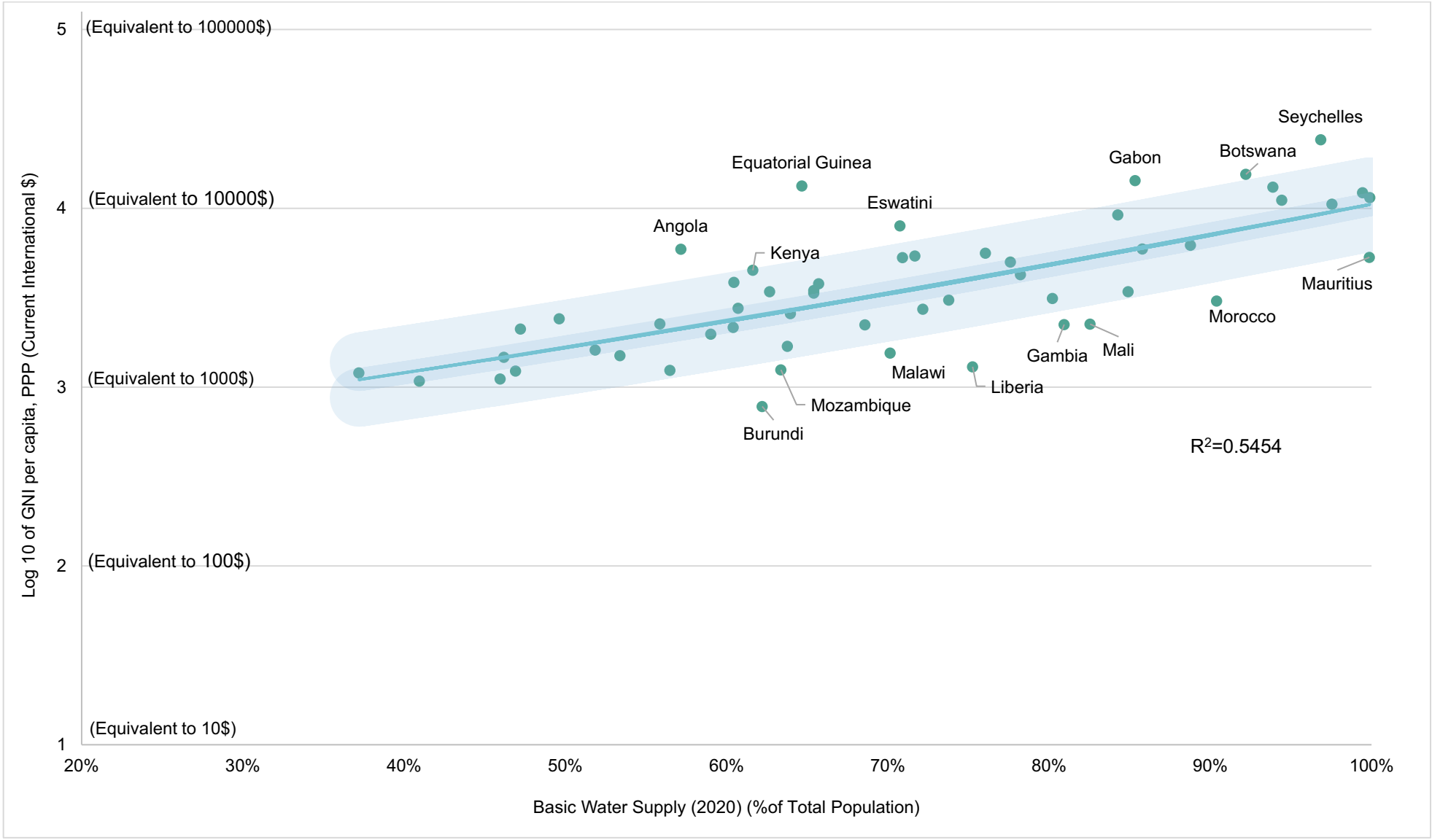
most common technology option. Even greater variations exist among countries as well as between rural and urban areas and wealth quintiles.

Figure 5: Water Supply and Sanitation Facility Types



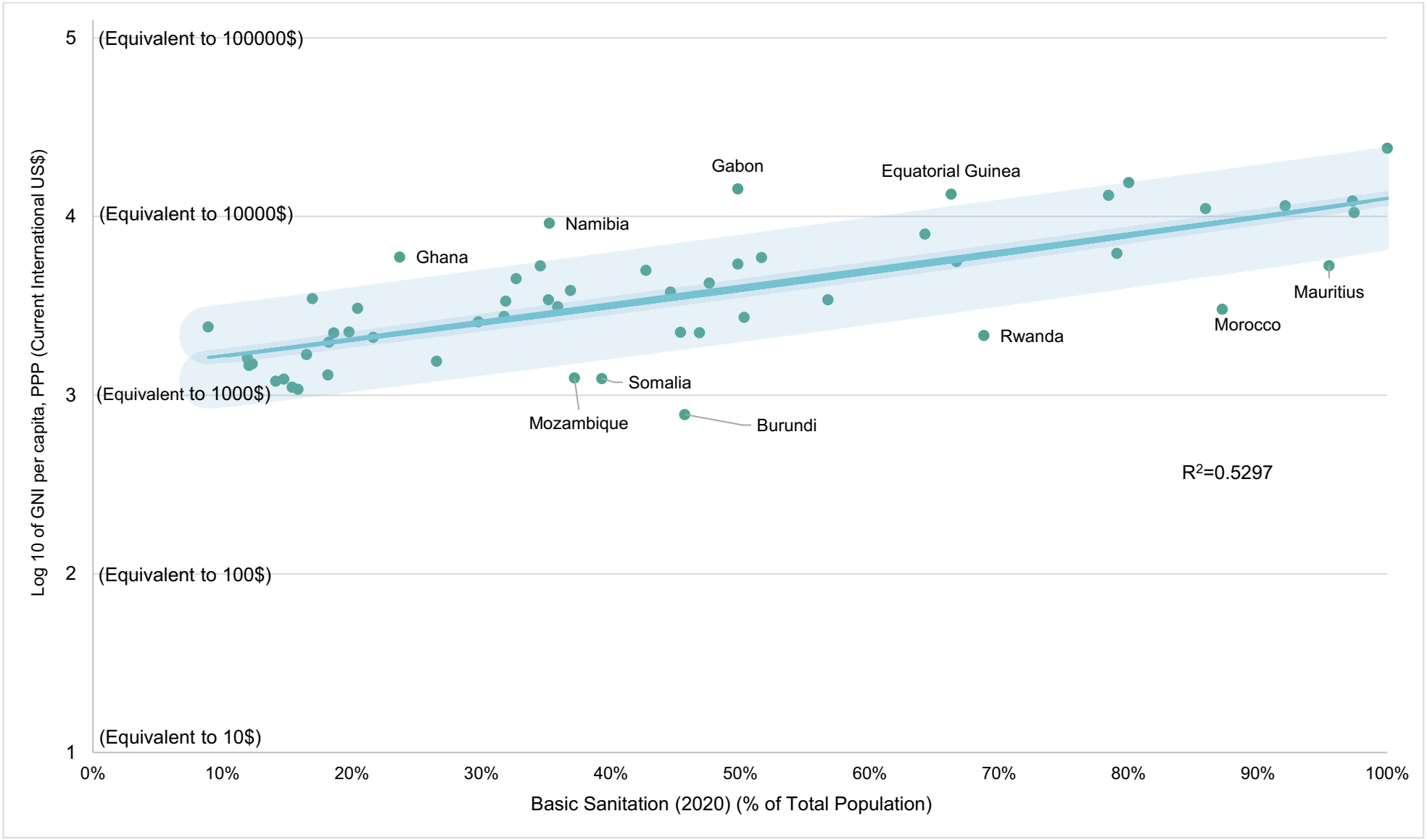
Economic development impacts WSS coverage rates. Figures 6 and 7 show the results of a correlation analysis between coverage rates for at least 'basic' water supply and sanitation services against per capita gross national income (GNI). Both figures show a clear trend, with an r^2= 0.54 and r^2=0.53 indicating that at least 54% and 53% of the 54 countries have WSS coverage rates directly linked to the GNI. However, several countries have made notably better (or worse) progress than countries with comparable levels of economic development. These rates of progress are influenced by a series of contributing factors such as geographic location, the availability of water sources, and political and financial commitments to WSS. Burundi, Gambia, Liberia, Malawi, Mali, Mauritius, Morocco, and Mozambique stand out for having water supply coverage rates far exceeding those of countries with comparable levels of economic development. Conversely, Angola, Botswana, Equatorial Guinea, Eswatini, Gabon, Kenya, and Seychelles, perform especially poorly. For sanitation, Burundi, Mauritius, Morocco, Mozambique, Rwanda, and Somalia have made greater progress than countries with similar levels of economic development, while significant challenges are evident in Equatorial Guinea, Gabon, Ghana, and Namibia.

Figure 6: Water Supply Coverage vs GNI, PPP[3]

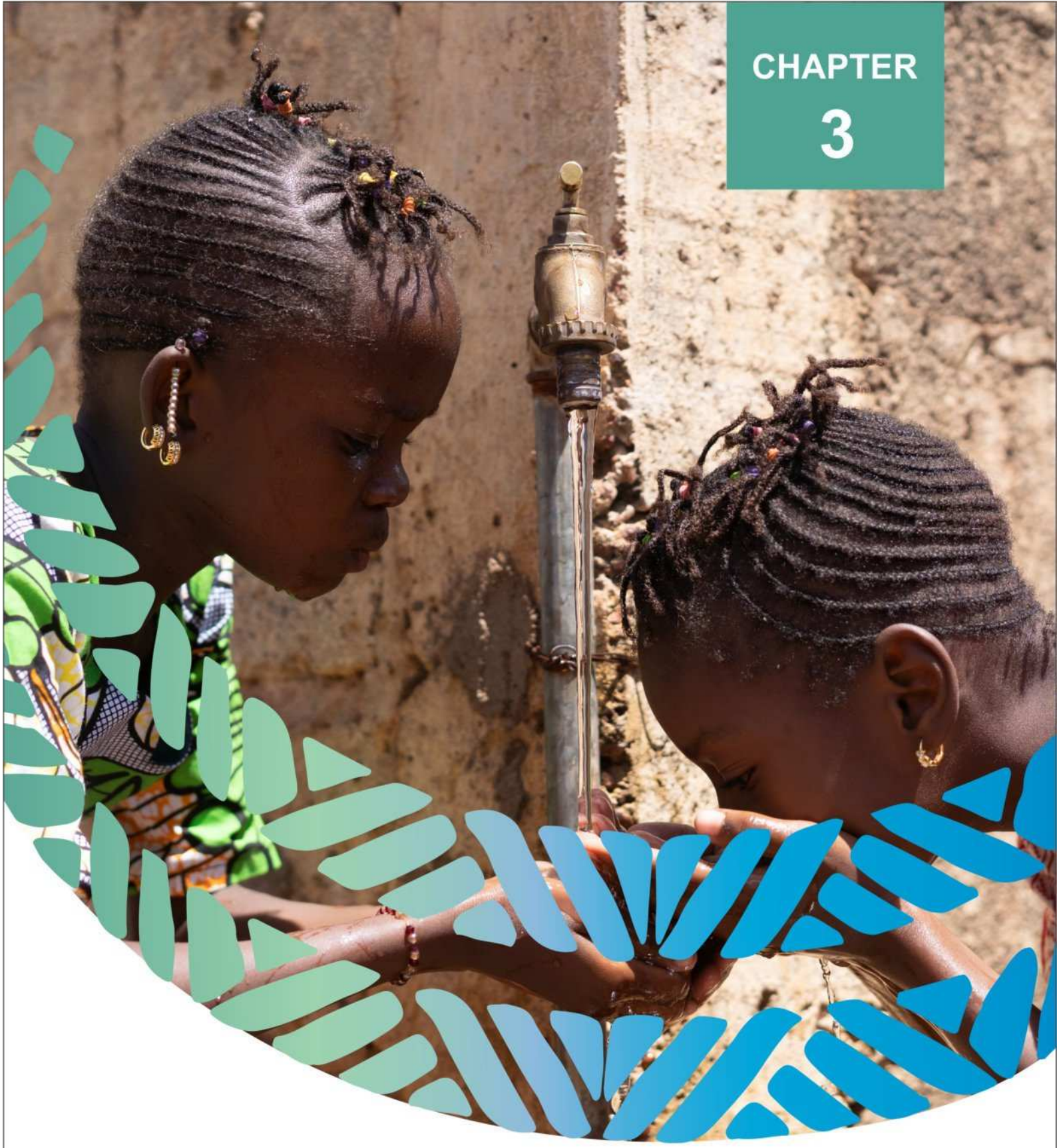


[3] The relationship between GNI and water coverage is not linear. If a linear model is assumed, the estimates will be biased. Accordingly, a log transformation of the variable GNI is used.

Figure 7: Sanitation Coverage vs GNI, PPP[4]



[4] The relationship between GNI and sanitation coverage is not linear. If a linear model is assumed, the estimates will be biased. Accordingly, a log transformation of the variable GNI is used.



CHAPTER

3

POLICY PROVISION AND LEGAL BACKING

ESAWAS
REGULATORS ASSOCIATION

3. POLICY PROVISION AND LEGAL BACKING

3.1. POLICY PROVISION

National WSS policy documents consistently state the need to strengthen WSS regulation but vary in the extent to which they provide tangible measures or strategies. Table 2 shows the countries where water supply and sanitation policies (or equivalent) have been developed. It highlights how national policy documents exist for water supply in 45 of 54 African countries (83% of countries) and sanitation in 44 countries (81%). National WSS policy documents typically mention WSS regulation, at the very least. Nevertheless, considerable variations exist in the extent to which they address WSS regulation. In some countries, WSS regulation is front and centre. For example, policy documents from South Sudan explicitly note the importance of creating a robust regulatory framework and contain several strategies and objectives, including establishing a WASH Regulatory Board and a Water Resources Management Authority. However, in many countries' WSS policies, regulation is not as pronounced. A broad statement or objective is provided on strengthening WSS regulation, but key measures or more detailed objectives are not spelt out. For instance, Eritrea's water and rural sanitation policies briefly note the desire for improving WSS regulation but do not specify detailed measures or pathways to achieve this broad objective.

Prioritising WSS regulation in national policy or strategy documents is usually crucial in enacting or amending the required legal instruments to reform or strengthen regulatory frameworks for WSS. In cases where specific measures and objectives are not specified in national policy documents, only very limited progress is generally found to be made following the finalisation of the policy document in reforming regulatory frameworks, developing regulatory mechanisms, and expanding the spheres of regulation. Conversely, in cases where countries have enacted or amended legal instruments to establish a regulatory actor or expand and refine its powers, this is nearly always preceded by a WSS policy or strategy specifying core objectives and measures in this area. For example, Zambia's 1994 National Water Policy detailed the central principle of separating regulatory and executive functions and the need to amend the Water Act. This was followed by Zambia's 1997 Water Supply and Sanction Act which included the establishment of the National Water Supply and Sanitation Council (NWASCO) as well as NWASCO's mandate, the regulatory tools at its disposal, and features that help ensure NWASCO's autonomy.

Box 1: Malawi's Weak but Evolving Regulatory Arrangements for WSS

Malawi currently has a relatively fragmented and poorly defined regulatory arrangement for WSS services, with responsibilities split across several actors and ministerial regulation, regulation by agency, and self-regulation all applied. The Ministry of Water and Sanitation is the lead regulatory actor for WSS service provision; however, its regulatory mandate is only explicitly defined for Malawi's five parastatal water boards that provide piped water supply and sewered sanitation services in urban and peri-urban areas. Other actors with regulatory responsibilities include the Ministry of Health, Ministry of Local Government, local government authorities, the National Water Resources Authority, the Environmental Protection Agency, and the Water Services Association of Malawi.

The regulatory mechanisms developed for – and applied to – these water boards are also relatively light-touch, and several weaknesses exist across various areas: standards and guideline development, monitoring and performance reporting, regulation by incentives, and sanctions and enforcement. These weaknesses in the current regulatory arrangement and mechanisms are recognised by the government and steps are beginning to be taken to resolve these challenges. Significantly, Malawi's new **National Water Policy** explicitly specifies the objective of establishing a dedicated water supply service regulator and details an expansive set of core functions for the desired agency. These include:

I. Tariff setting.
II. Monitoring and enforcing tariff limits.
III. Setting service standards (drinking water, effluent discharge).
IV. Monitoring and enforcing service standards.
V. Dispute resolution.
VI. Consumer complaints.

There is now a pressing need to develop the necessary legal instruments to establish this dedicated agency and empower it to improve WSS regulation.

Table 2: Policy Documents

Region	Country	Water Supply Policy (or Equivalent)	Sanitation Policy (or Equivalent)
Northern	Algeria	✓	✓
	Egypt	✓	✓
	Libya	✗	✗
	Mauritania	✓	✓
	Morocco	✓	✓
	Tunisia	✓	✓
Western	Benin	✓	✓
	Burkina Faso	✓	✓
	Cape Verde	✓	✓
	Cote d'Ivoire	✓	✓
	Gambia	✓	✓
	Ghana	✓	✓
	Guinea	✓	✓
	Guinea-Bissau	✗	✗
	Liberia	✓	✓
	Mali	✓	✓
	Niger	✓	✓
	Nigeria	✓	✓
	Senegal	✓	✓
	Sierra Leone	✓	✓
	Togo	✓	✓
Central	Burundi	✓	✓
	Cameroon	✓	✓
	CAR	✓	✓
	Chad	✓	✓
	Congo Republic	✗	✗
	DRC	✓	✓
	Equatorial Guinea	✗	✗
	Gabon	✓	✓
	Sao Tome and Principe	✗	✗
Eastern	Comoros	✗	✗
	Djibouti	✗	✗
	Eritrea	✓	✓
	Ethiopia	✓	✓
	Kenya	✓	✓
	Madagascar	✗	✗
	Mauritius	✓	✓
	Rwanda	✓	✓
	Seychelles	✓	✓
	Somalia	✗	✗
	South Sudan	✓	✓
	Sudan	✓	✓
	Tanzania	✓	✓
	Uganda	✓	✓
Southern	Angola	✓	✗
	Botswana	✓	✓
	Eswatini	✓	✓
	Lesotho	✓	✓
	Malawi	✓	✓
	Mozambique	✓	✓
	Namibia	✓	✓
	South Africa	✓	✓
	Zambia	✓	✓
	Zimbabwe	✓	✓
Totals		**45 countries (83%)**	**44 countries (81%)**

In several African countries, national WSS policies specify objectives for reforming their regulatory framework for WSS service provision. Many countries are looking to reform the regulation of WSS services, and this is often most explicitly reflected in key provisions of national WSS policies. Additionally, in several countries, recent national WSS policies specify the desire to create a dedicated and autonomous regulatory agency focused on WSS service delivery. Box 1 above details key measures included in Malawi's 2022 National Water Policy focused on establishing a regulatory agency for water supply services. However, in many countries, challenges have prevented the translation of ambitious political commitments into a strengthened or reformed regulatory arrangement. For example, there has been limited progress implementing

provisions in South Sudan's National Water Policy and 2011 WASH Sector Strategic Framework on establishing a WASH Regulatory Board and a Water Resources Management Authority. As the case-study of Liberia illustrates, considerable efforts are required to translate objectives from national WSS policies into improved WSS regulation (see Box 2).

Box 2: Liberia – Ambitious Reform Agenda but Long-Standing Implementation Challenges

Liberia's current WSS regulatory arrangements are highly fragmented, with regulation by agency, self-regulation, regulation by contract (applied by the national utility to private service providers), and ministerial regulation all practised to varying degrees. The sector has been going through a long-term process of reform and restructuring, starting with the adoption of the Water Supply and Sanitation Policy in 2009. The policy lays out a clear vision for establishing a single, independent regulatory commission responsible for technical and economic regulation of WSS services, overseen by a board comprising representatives of relevant ministries.

However, operationalising the regulatory arrangements laid out in the 2009 Water Supply and Sanitation Policy has been a challenge. The National WASH Commission Act was not passed until 2017, and the law leaves aspects of the commission's mandate ambiguous. For example, not directly addressing key regulatory functions such as tariff setting and the establishment and enforcement of service standards for water supply. The existing mandates of other key actors, such as the Liberia Water and Sewer Corporation, which is self-regulating and legally mandated to regulate private service providers**,** have also not been revised, resulting in overlaps and a lack of clarity in some regulatory responsibilities. Further complicating the situation, multiple WSS strategic documents – the WASH Compact (2011), WASH Sector Strategic Plan (2012), and One WASH Program (2018) – have been developed, each providing somewhat different roles and responsibilities for the various WSS sector institutions. A process of revising and clarifying mandates is urgently needed and envisioned as part of National WASH Commission's strategic plan; however, this is expected to be difficult.

Ultimately, although Liberia's 2009 Water Supply and Sanitation Policy offers a clear direction for regulatory reform, there are substantial gaps in the legal frameworks and institutional capacities needed to implement it. Liberia's experience illustrates the challenge of putting ambitious policy provisions into practice and failure to map out the entire 'regulatory eco-system'. Reshaping established structures and introducing new institutions that require substantial resources and capacity building to exercise their mandate,+ presents both a political and operational challenge, even with a policy that provides a well-defined roadmap.

Few countries have developed strategic frameworks for strengthening aspects of WSS regulation; however, these can play a critical role in guiding the strengthening or expansion of regulatory activities. Strengthening or reforming a regulatory framework or expanding regulatory activities to a set of service providers or service delivery types represents a considerable undertaking. Even before regulatory activities begin, this typically requires a series of measures or action points to be implemented (often by a multiplicity of institutions) and significant resources to be mobilised. Strategy documents explicitly focused on improving WSS regulation can play a vital role by providing an essential degree of specificity to the measures to be taken. For example, outlining current challenges and detailed objectives, specifying precise measures to be implemented, and detailing organisational responsibilities, timeframes, costs and sources of funds for each of these. Box 3 provides an overview of the strategy documents developed by Zambia's WSS regulator, the National Water Supply and Sanitation Council, and the role these resources are playing in expanding its regulatory activities to the often-neglected areas of urban and peri-urban onsite sanitation and rural WSS services. Despite the pertinent role detailed strategy documents can play, only a few other African countries have developed or are developing comparable documents to guide the implementation of priority activities for strengthening or reforming WSS regulation. For example, in Uganda, the Water Utilities Regulatory Department of the Ministry of Water and Environment has a strategy for strengthening WSS regulation and is developing a roadmap for regulating onsite sanitation, including the establishment of national tariffs and standards and the incorporation of sanitation indicators into regulated service providers' contracts (making them responsible for data collection). Additionally, in Liberia, there is a strategic plan focused on institutional development of the National WASH Commission, including strengthening its ability to develop and apply regulations.

Box 3: Zambia – The Benefits of Strategic Frameworks for Regulating Onsite Sanitation and Rural Water Supply and Sanitation Services

Zambia benefits from well-established regulatory frameworks for WSS service delivery and applying a wide range of regulatory mechanisms to the piped water supply and sewerage services provided by its 11 commercial utilities in urban and peri-urban areas. However, until recently, regulatory activities were overwhelmingly focused on these 11 commercial utilities, with other service providers and service delivery types receiving little meaningful oversight. This began to change in 2018 when comprehensive strategy documents were developed detailing a series of steps and measures to improve the provision and regulation of urban onsite sanitation and faecal sludge management and rural WSS services.

Several deep-rooted and systemic challenges make regulating these services – and the types of service providers that typically provide them (i.e., private vacuum tanker operators, water committees) – difficult, in addition to their informal status and fragmentation across a large numbers of providers. As a result, limited progress has been made in regulating these services and service providers across Africa (see Section 5). These strategy documents specify objectives in these areas and are guiding the collective action required by setting out measures to be taken by a wide range of actors. This includes detailed action points across aspects such as institutional arrangements, licenses and permits, regulations, by-laws, monitoring and performance reporting, service level agreements and guarantees, standards and guidelines, and inspections. Critically, these documents also outline the budget required for their implementation and specify organisational responsibilities and timeframes for their implementation.

Further work is required to implement these frameworks. However, these documents are playing a crucial role, helping to ensure increased focus on the regulation of these services and pushing important measures to be taken in several areas. Of note, key action points from these documents that have been – or are being – implemented include:

I. Modifying commercial utilities' licenses to cover onsite sanitation and rural water supply and sanitation.
II. Developing permitting conditions to guide commercial utilities when they delegate service provision to other service providers (i.e., onsite sanitation, rural water supply).
III. Guidelines developed on minimum service levels, water quality monitoring, tariff setting (revised to include rural water supply and sanitation and onsite sanitation), and reporting for rural areas.
IV. Ongoing data capturing through GIS mapping, including tool standardisation and sharing with stakeholders for utilisation.
V. Supporting commercial utilities to develop strategies for delivering or expanding onsite sanitation and rural water supply services.
VI. Standard operating procedures developed for onsite sanitation and faecal sludge management.
VII. Key performance indicators identified and a benchmarking framework developed.
VIII. Generic organisational structures developed for delivering onsite sanitation and faecal sludge management services, as well as rural water supply and sanitation.
IX. Training of private pit emptiers to be engaged by commercial utilities.
X. the web based NWASCO Information System reviewed to incorporate onsite sanitation and rural water supply and sanitation.
XI. Structures developed for rural water supply and sanitation data collection, validation, and reporting.

3.2. LEGAL INSTRUMENTS

Legal instruments touching on WSS have been developed in all African countries; however, substantial variations exist in the extent to which these meaningfully address WSS regulation. All African countries have legal instruments touching on aspects of WSS service delivery. These can play a crucial role in enabling effective WSS regulation by specifying the mandates of regulatory actors, preventing overlapping or competing responsibilities, empowering regulatory actors with the required functions and authority, and laying the foundations for a robust regulatory environment based on financial and managerial autonomy. Conversely, where legal instruments are poorly defined, duplicate regulatory responsibilities, or do not explicitly address key aspects of WSS regulation, they can contribute to systemic weaknesses across the sector. Legislative instruments vary in form, including dedicated water and sanitation acts, acts establishing a regulatory authority, acts related to national or sub-national public enterprises (i.e., national or regional utilities), presidential decrees on specific topics, or a series of acts that address different aspects that touch on WSS service provision (i.e., water resources, public health, environmental management, local government).

Legislative instruments generally provide a much stronger legal backing to regulating water supply services than sanitation services. Figures 8 and 9 use a simple colour-coded traffic-light scoring to display the extent to which legal instruments provide the required legal backing for WSS regulation.

0 = No Legal Backing. Legal instruments either do not exist or make no mention of regulatory mandates or functions for water supply or sanitation. For example, in Equatorial Guinea, legal instruments have been developed that address or touch on aspects of WSS service delivery, but these neither detail regulatory mandates nor assign regulatory responsibilities.

1 = Limited Legal Backing. Legal instruments support the regulation of water supply or sanitation services but do not provide sufficient legal backing. This usually occurs where legal instruments exist and specify regulatory mandates and responsibilities but fail to detail the specific regulatory functions and powers or consider the sub-sectors and types of service providers to be regulated. In Zimbabwe, for example, a wide range of legal instruments have been developed (i.e., Water Act, Public Health Act, Environmental Managemental Act, Zimbabwe National Water Authority Act). These note regulatory mandates for key aspects of WSS service provision. However, they primarily focus on issues such as water resources management and do not sufficiently define regulatory powers and functions for WSS service delivery.

2 = Strong Legal Backing. Legal instruments address water supply or sanitation regulation, setting out regulatory mandates and functions. In the Democratic Republic of the Congo, for example, the 2015 Water Code specifies that the government shall establish a regulatory authority for public water services and details comparatively wide-ranging regulatory functions of this *to-be-created* entity (see Box 4).

This scoring system used in Figures 8 and 9 does not reflect key country-specific nuances such as the strength of legal instruments for different service delivery types (see Sub-Section 5.1.) or the extent to which legal instruments have been operationalised. Nevertheless, Figures 8 and 9 do highlight how legal instruments often provide a stronger legal backing for regulating water supply services compared to sanitation. Twenty-nine countries (or 54%) have a strong legal backing for regulating water supply services compared to just 15 for sanitation services (28%). This is not to say that these acts or other legal instruments would not benefit from updating or strengthening. For instance, to address non-networked water supply more explicitly or to define regulatory mandates and functions more precisely for all service providers and water supply sub-sectors. However, in these countries, legal instruments explicitly define the mandates of regulatory actors and include a detailed specification of their powers and functions, thereby providing the necessary legal backing to perform key regulatory activities for water supply service delivery. Similarly, while only five countries (9%) do not have a legal instrument providing any legal backing for regulating water supply services, 12 countries lack this for sanitation (22%).

Figure 8: Legal Instruments for Regulating Water Supply Services

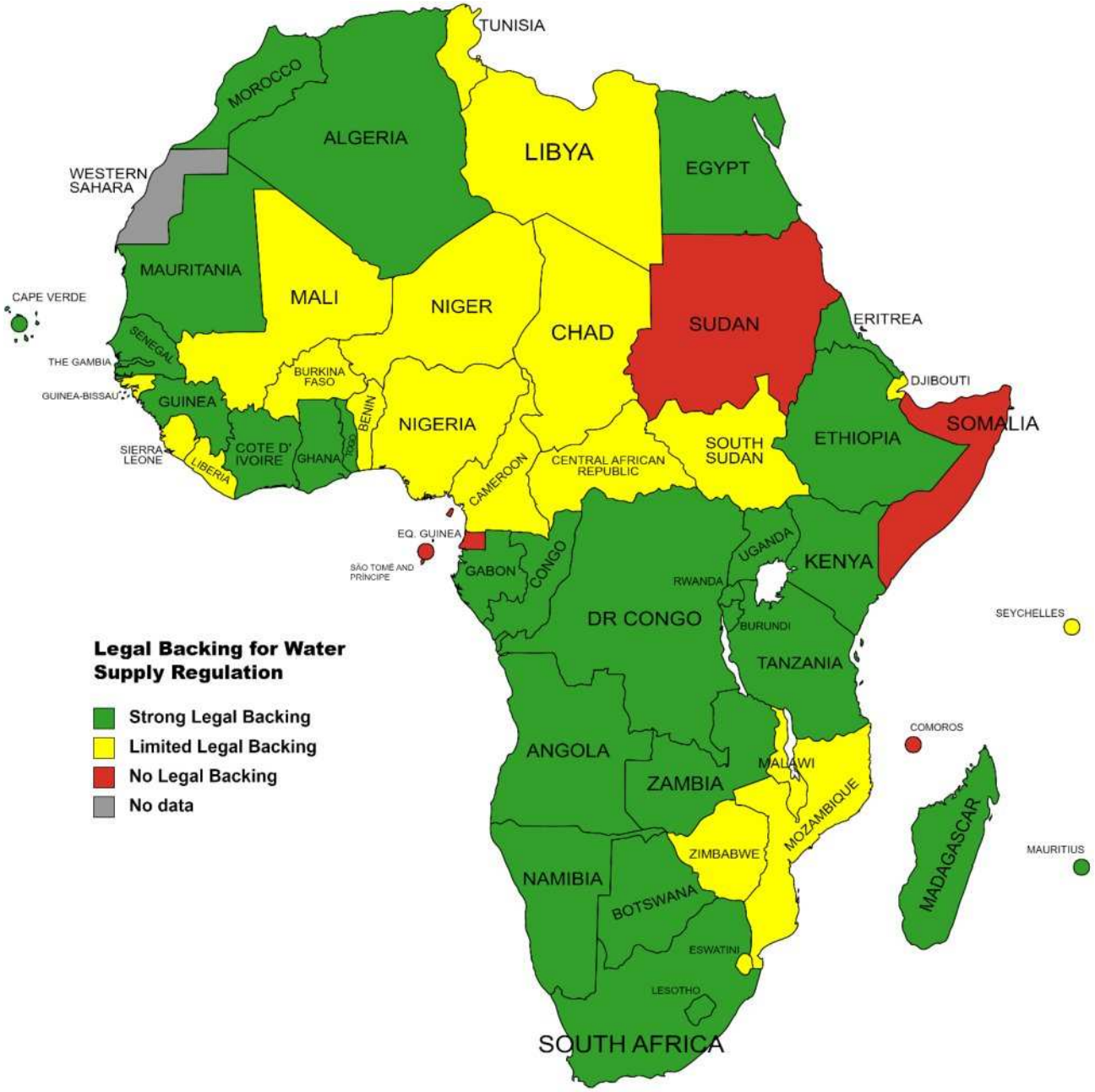
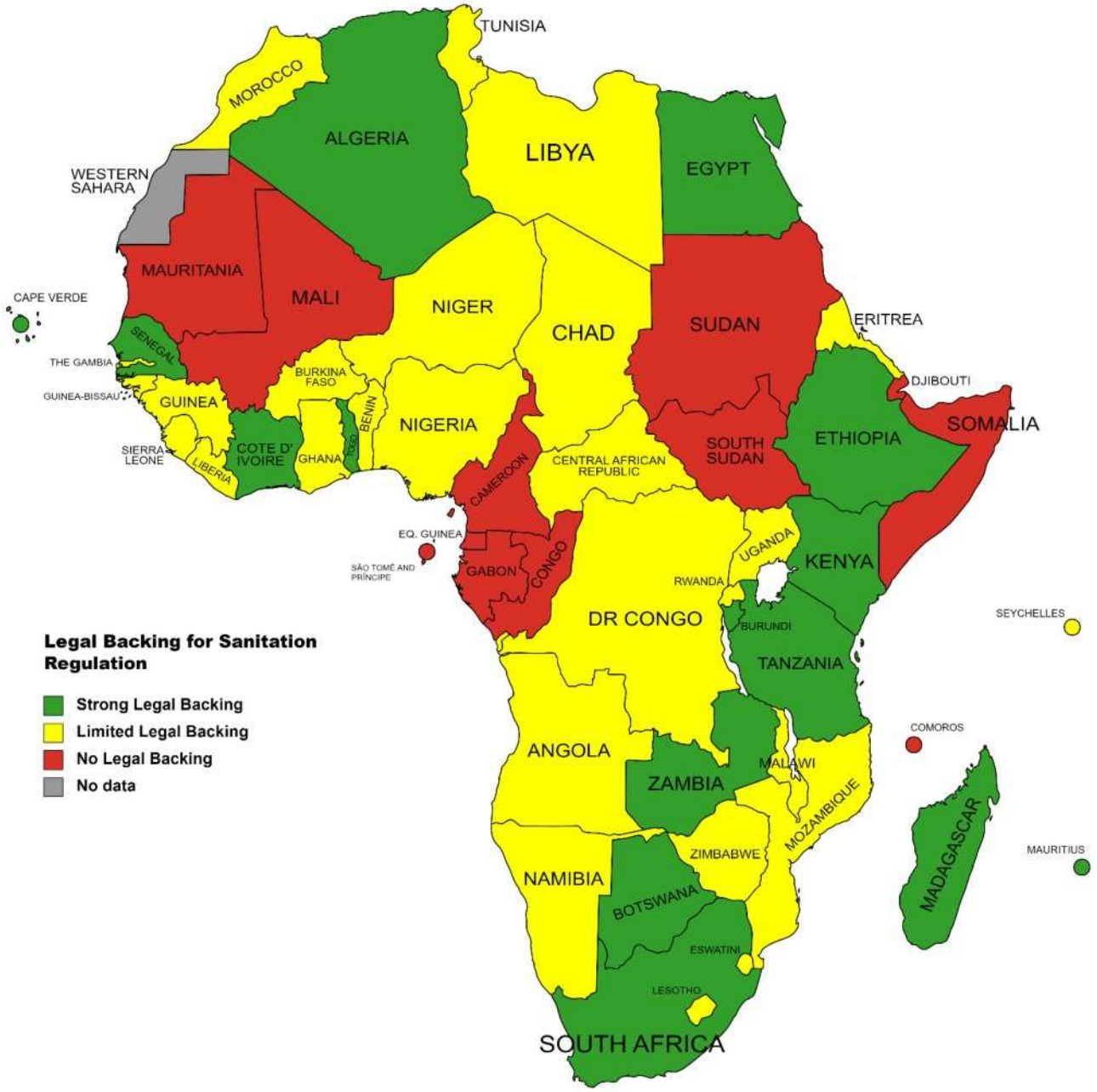


Figure 9: Legal Instruments for Regulating Sanitation Services

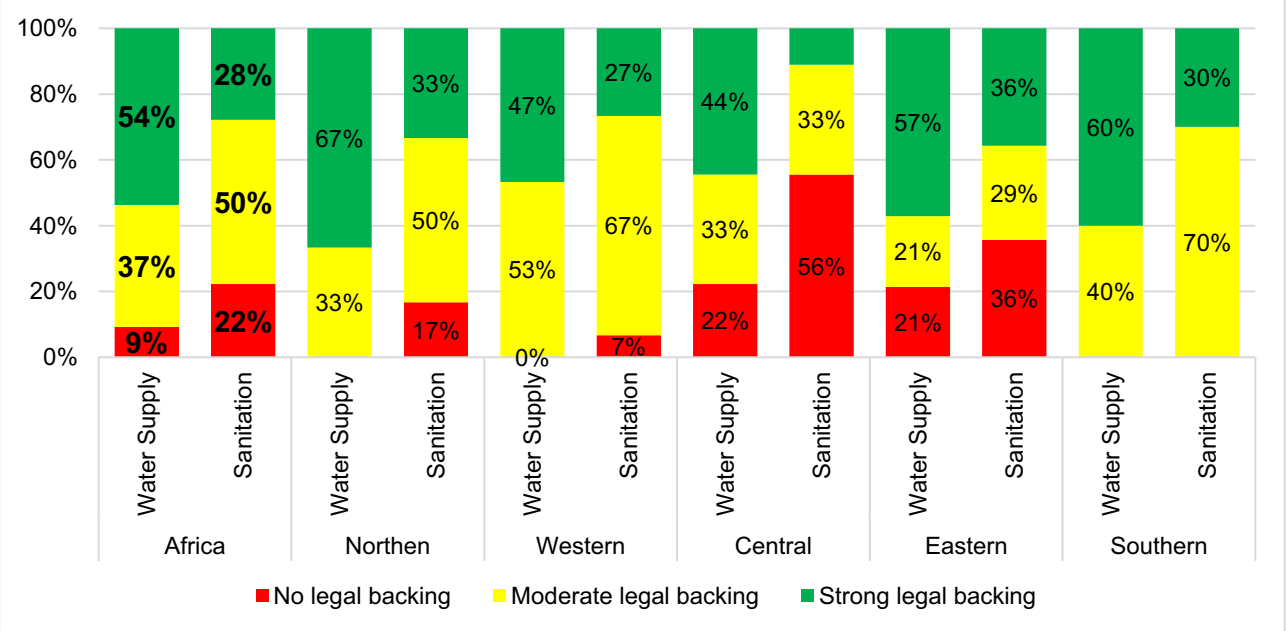


Noteworthy regional variations exist in the extent to which legal instruments provide the required legal backing for regulating WSS service provision. Table 4 notes the countries in each region with a strong legal backing, limited legal backing and no legal backing for WSS regulation, while Figure 10 provides a top-level overview of regional and continent-wide performance. Each of these are based on the same scoring utilised for figures 8 and 9. Several notable regional trends are highlighted by this data. In the first instance, across each region, less progress has been made in developing instruments that provide the necessary legal backing for regulating sanitation services compared to water supply, showing how this a common challenge across Africa. Secondly, Central Africa is the worst performing region, with only one country (the Democratic Republic of the Congo) having an appropriate legal backing for regulating water supply services and no countries having this for sanitation. Northern, Eastern, and Southern Africa all perform comparatively well, albeit with several pressing challenges evident. Western Africa performs moderately. Figure 10 also highlights the high degree of variability among countries in Eastern Africa where there are many examples of very good performance, as well as several countries with no legal backing for regulating water supply or sanitation services (Comoros, Somalia, South Sudan, Sudan).

Table 4: Legal Backing for Regulating Water Supply and Sanitation Services

	Strong Legal Backing		Limited Legal Backing		No Legal Backing	
	Water Supply	Sanitation	Water Supply	Sanitation	Water Supply	Sanitation
Northern	Algeria, Egypt, Mauritania, Morocco	Algeria, Egypt	Libya, Tunisia	Libya, Morocco, Tunisia		Mauritania
Western	Cape Verde, Cote d'Ivoire, Gambia, Ghana, Guinea, Senegal, Togo	Cape Verde, Cote d'Ivoire, Senegal, Togo	Benin, Burkina Faso, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Sierra Leone	Benin, Burkina Faso, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Niger, Nigeria, Sierra Leone		Mali
Central	Burundi, Congo Republic, DRC, Gabon	Burundi	Cameroon, CAR, Chad	CAR, Chad, DRC	Equatorial Guinea, Sao Tome and Principe	Cameroon, Equatorial Guinea, Congo Republic, Gabon, Sao Tome and Principe
Eastern	Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Tanzania, Uganda	Ethiopia, Kenya, Madagascar, Mauritius, Tanzania	Djibouti, Seychelles, South Sudan	Eritrea, Rwanda, Seychelles, Uganda	Comoros, Somalia, Sudan	Comoros, Djibouti, Somalia, South Sudan, Sudan
Southern	Angola, Botswana, Lesotho, Namibia, South Africa, Zambia	Botswana, South Africa, Zambia	Eswatini, Malawi, Mozambique, Zimbabwe	Angola, Eswatini, Lesotho, Malawi, Mozambique, Namibia, Zimbabwe		

Figure 10: Legal Backing for Regulating Water Supply and Sanitation Services – Regional



Appropriate legal backing can exist for regulating WSS service delivery but not be operationalised. In several countries, comprehensive legal instruments have been developed, but substantive challenges and delays often exist in implementing or operationalising key provisions related to WSS regulation. The Democratic Republic of the Congo (DRC) clearly illustrates this (see Box 4). Additionally, in Algeria, although the Water Act mentions an independent water regulator that was established in 2008, this entity was never properly operationalised and was dissolved in 2018 with its mandate transferred to the Ministry of Water

Resources. Similarly, in Madagascar, the 1999 Water Code establishes a dedicated regulatory actor for WSS services and explicitly defines its mandate. Critically, however, the regulatory agency's establishment has been hampered by frequent periods of transitional government and political instability. In the absence of an established regulatory body, the Ministry of Water and Sanitation is the primary regulator.

Box 4: Democratic Republic of the Congo – Comprehensive Water Code Requiring Further Implementation

The DRC's WSS sector is undergoing fundamental reforms principally initiated by a new Water Code enacted in 2015 that provides legal backing to various aspects of WSS service provision and water resources management. Among several key provisions, this Water Code specifies that the Government shall establish a regulatory authority for public water services by decree deliberated in the Council of Ministers. The Water Code also specifies the comparatively wide-ranging regulatory functions of this *to-be-created* entity:

I. Ensuring compliance by water supply operators and service providers with specified conditions of concession contracts, declarations and authorisations.
II. Monitoring the adherence to standards and norms by WSS operators and service providers.
III. Establishing specifications for awarding concessions and any normative document within the public water supply services framework.
IV. Aiding dispute resolution between operators and between consumers and public water supply service providers.
V. Determining the rules and procedures for fixing the elements of the tariff structure.
VI. Ensuring that rates and tariffs do not exceed the permitted maximums.

The implementation of the Water Code has not proceeded at the pace required or expected due to various governance and financial factors, as well as insufficient progress decentralising a wide range of functions. In particular, Decree No. 22/04 on the creation, organisation, and operation of a Public Water Service Regulatory Authority (ARPSE) was only recently passed (March 2022). This delay has, for the time being, resulted in regulatory functions for WSS being split across a wide range of ministries in a fragmented regulatory arrangement that is not effectively regulating WSS service providers or services.

Common challenges exist in the instruments providing legal backing for regulating sanitation services. As Figures 8, 9 and 10 all highlight, less progress has been made across Africa in developing legal instruments that provide the necessary legal backing to regulate sanitation services compared to water supply services. Two common challenges are evident:

I. ***Poorly Defined Mandates and Functions.*** Dedicated acts or other legal instruments have rarely been developed for sanitation. Instead, responsibilities for regulating sanitation services are often included in local government, public health, and environmental management acts. In these instances, regulatory mandates are usually not explicitly defined, and regulatory powers and functions are, in some cases, completely absent. Health or environmental authorities or local governments are often empowered to eliminate "nuisances" that threaten public health or the environment, but sanitation is not always addressed explicitly or in detail, and specific regulatory mechanisms are not described.
II. ***Sewerage Bias.*** Sewered sanitation services only serve a small proportion of Africa's population (13%), with onsite sanitation being the predominant service delivery type (see Figure 5). Nevertheless, in many countries, legal instruments focus on regulatory mandates and functions for sewered sanitation services, neglecting to address onsite sanitation and related service providers. Kenya's Water Act is illustrative of this, providing a clear legal backing for regulating water supply and sewerage services but excludes onsite sanitation (see Box 5).

Box 5: Kenya – Detailed Water Act that Nevertheless Excludes Onsite Sanitation

Kenya's Water Act, 2016 provides a consolidated, explicit and comprehensive legal backing for regulating WSS services. Key relevant sections of the Act specify regulatory mandates and functions for water resources and water services. The Act established the Water Services Regulatory Board (WASREB) with the principal objective of protecting the interests and rights of consumers in the provision of water services. The Water Act also explicitly specifies a comparatively expansive set of powers and functions for WASREB, which include:

I. Determining and prescribing standards for providing water services and asset development.
II. Evaluating, recommending and approving the imposition of water and sewerage tariffs to county water services providers.
III. Setting licence conditions and accrediting water services providers.

IV. Monitoring and regulating licence conditions and accrediting water service providers.
V. Advising the Government of Kenya.
VI. Monitoring progress in the implementation of the Water Strategy.
VII. Maintaining a national database and information system on water services.
VIII. Establishing complaints mechanisms.
IX. Developing guidelines on consumer group establishment and facilitating the establishment of these groups.
X. Inspecting waterworks and water services to ensure they meet prescribed standards.
XI. Reporting annually on issues of water supply and sewerage services and the performance of relevant sectors.
XII. Maintaining a register of all licensed water services providers.
XIII. Revoking and transferring the licence of a water services provider.
XIV. Issuing fines to non-compliant licenced water services providers.
XV. Imposing a special regulatory regime on a license that persistently contravenes the conditions of a licence or the requirements of the Water Act.

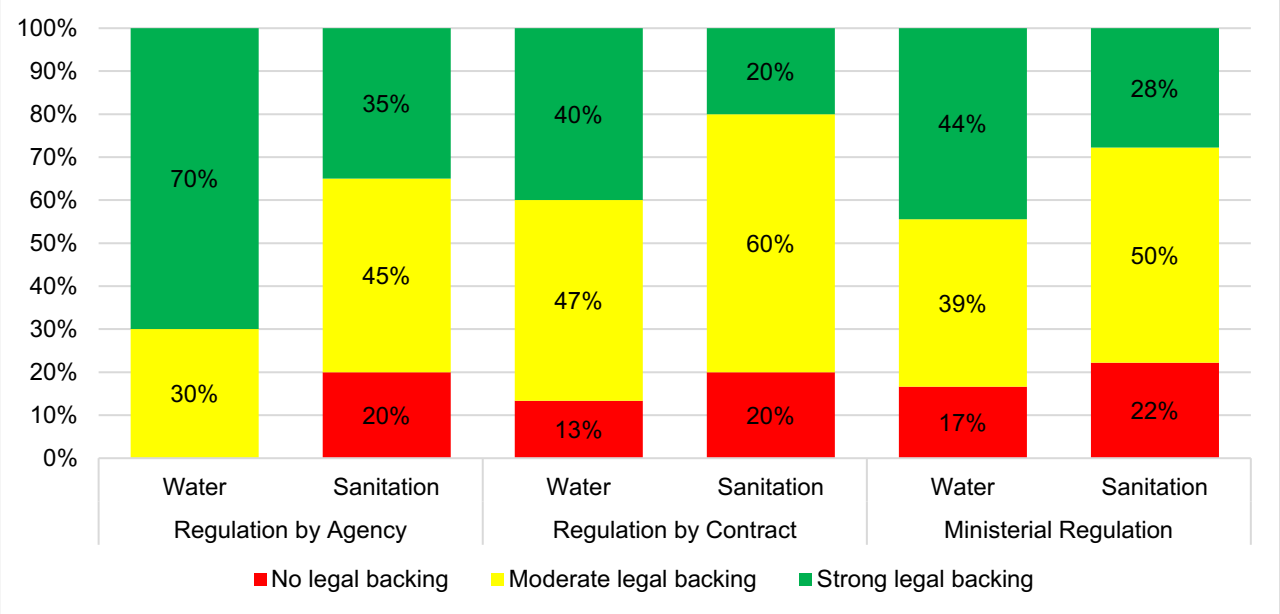
Beyond these aspects, the Water Act provides pertinent information on various aspects that help to strengthen the regulatory environment. These include safeguarding WASREB's autonomy (i.e., through its staffing and financing) and promoting mechanisms to increase participation and transparency. Nevertheless, the Water Act insufficiently addresses the regulation of sanitation services. Onsite sanitation is excluded entirely, limiting WASREB's ability to conduct regulatory activities in this area. This is a common challenge found across Eastern Africa. Importantly, steps have been – and continue to be – taken to address this. WASREB has published guidelines for inclusive urban sanitation service provision for utilities that encompass non-sewered sanitation and soon to be enacted policy documents placing greater emphasis on onsite sanitation.

Regulation by agency is the regulatory model typically benefiting from the strongest legal backing. The following section highlights how different regulatory models are used to regulate WSS service delivery across Africa. Table 5 notes the countries in each region with a strong legal backing, limited legal backing, and no legal backing for WSS regulation disaggregated according to the predominant regulatory model applied in each country. Figure 11 then details top level figures concerning the percentage of countries with no, limited or strong legal backing for regulating water supply and sanitation, grouping countries according to the 'predominant' regulatory model applied. Table 5 and Figure 11 highlight how regulation by agency benefits from the strongest legal backing – 70% and 30% of countries where this is the predominant regulatory model have a strong legal backing for regulating water supply and sanitation services, respectively. This is not surprising since dedicated regulatory agencies are typically established through enacting a legal instrument that usually articulates their mandate and powers and functions. Strong legal backing does not ensure the development and effective application of regulatory mechanisms. However, it often lays the foundation for more effective WSS regulation by clearly defining regulatory mandates, preventing overlapping responsibilities, and empowering regulatory actors with the required functions and authority. The stronger legal backing for regulation by agency compared to other regulatory models should be viewed as closely connected to the better performance of this regulatory model in developing and applying regulatory mechanisms (see Figure 21).

Table 5: Legal Backing for Regulating Water Supply and Sanitation Services – Regulatory Model

	Strong Legal Backing		Limited Legal Backing		No Legal Backing	
	Water Supply	Sanitation	Water Supply	Sanitation	Water Supply	Sanitation
Regulation by Agency	Angola, Burundi, Cape Verde, Congo Republic Egypt, Gambia, Ghana, Kenya, Lesotho, Mauritania, Rwanda, Tanzania, Togo, Zambia,	Burundi, Cape Verde, Egypt, Kenya, Tanzania, Togo, Zambia,	Gabon, Liberia, Mali, Mozambique, Niger, Sierra Leone	Angola, Gambia, Ghana, Lesotho, Liberia, Mozambique, Niger, Rwanda, Sierra Leone,		Congo Republic, Gabon , Mauritania, Mali
Regulation by Contract	Algeria, Cote d'Ivoire, Guinea, Morocco, Senegal, Uganda	Algeria, Cote d'Ivoire, Senegal	Benin, Burkina Faso, Cameroon, CAR, Chad, Eswatini, Tunisia	Benin, Burkina Faso, CAR, Chad, Eswatini, Guinea, Morocco, Tunisia, Uganda	Equatorial Guinea, Somalia	Cameroon, Equatorial Guinea, Somalia
Ministerial Regulation	Botswana, DRC, Eritrea, Ethiopia Mauritius, Madagascar, Namibia, South Africa	Botswana, Ethiopia. Mauritius, Madagascar, South Africa	Libya, South Sudan, Malawi, Seychelles, Zimbabwe, Guinea-Bissau, Nigeria	DRC, Eritrea, Guinea-Bissau, Libya, Malawi, Namibia, Nigeria, Seychelles, Zimbabwe	Comoros, Sao Tome and Principe, Sudan	Comoros, Sao Tome and Principe, South Sudan, Sudan,

Figure 11: Legal Backing and Regulatory Model



In several countries, concrete steps are currently underway to reform or update key WSS legal instruments. In many countries, the critical gaps in their legal instruments related to WSS regulation are understood, and some countries are taking steps to amend existing legal instruments or develop entirely new instruments. For example, in Comoros, a new Water Code (2020) details regulatory responsibilities and recognises the need for an independent WSS regulator. The process of establishing such a regulator is currently underway, and decrees are being drafted that expressly define regulatory roles and responsibilities. Additionally, in Mozambique, the Water Regulatory Authority (*Autoridade Reguladora de Águas*; AURA) is mandated to regulate all WSS services. There are now efforts to update the legal framework because regulatory responsibilities are overlapped between the Water Regulatory Authority and Local Municipalities, hindering performance of the national regulator. Moreover, in Mauritania, a Sanitation Act is being developed to address key legal gaps.

CHAPTER

4

REGULATORY ARRANGEMENTS

ESAWAS
REGULATORS ASSOCIATION

4. REGULATORY ARRANGEMENTS

Across Africa, various regulatory models are applied to WSS service provision. Six main regulatory models are applied for WSS services. These are:

I. ***Regulation by Agency.*** A regulatory body (semi-) autonomous from the government has discretionary powers to regulate WSS or aspects of WSS. This regulatory agency can be mandated to perform a specific set of functions (i.e., economic regulation) or hold a more comprehensive set of powers for regulating WSS service delivery.

II. ***Regulation by Contract.*** An approach whereby a public entity (other than an autonomous regulatory agency) and a service provider agree on contractual clauses that determine how key aspects of WSS service provision are defined and controlled, such as tariffs and service standards. In these cases, the contract represents the key document establishing or defining the provisions to be abided by, rather than existing regulations or standards.

III. ***Ministerial Regulation.*** A ministry responsible for WSS – or an aspect of WSS – is tasked with performing some or all regulatory responsibilities for WSS. For example, where a ministry is responsible for developing standards and guidelines, as well as overseeing some WSS service providers and applying regulatory tools (i.e., standard enforcement, monitoring, performance reporting).

IV. ***Self-Regulation.*** A service provider (typically a public utility or unit of local government) provides WSS services and is legally mandated to perform regulatory activities upon itself. This usually includes setting tariffs and performance standards and carrying out performance monitoring and reporting.

Most countries have a mixed regulatory arrangement, comprising multiple regulatory models and applying different regulatory models for different WSS sub-sectors, service providers or service delivery types. Table 6 presents an overview of the regulatory models applied across Africa, noting the countries in each region where the given regulatory model is applied.[5] The same country often appears under several different regulatory headings. Where the name of the country is highlighted in bold, this indicates the predominant regulatory model for WSS service provision in the country in question. For the purposes of this study, the predominant regulatory model refers to the regulatory model under which the primary type of service provider in each country is regulated. In most cases, this refers to how a national or regional utility is regulated. Annex 5 presents a more detailed overview of the regulatory models and actors for each country. Table 6 illustrates the wide diversity of regulatory arrangements and the fact that most countries have mixed regulatory arrangements based on multiple regulatory models where several actors typically hold regulatory responsibilities. In many countries, this reflects how different regulatory arrangements have been developed over time to account for different WSS service providers. This is not surprising considering the markedly different challenges in – and requirements for – regulating national or regional utilities, private operators of varying sizes and formality, and community-based organisations such as water committees (see Sub-Section 5.1.). However, in several countries, the application of multiple regulatory models also illustrates how regulatory arrangements are fragmented and poorly defined, with often overlapping responsibilities split among several institutions.

[5] This does not consider regulatory responsibilities for water resources or environmental protection. These can be found in each of the five regional reports produced or in greater detail in the respective country report.

Table 6: Regulatory Models Applied for Water Supply and Sanitation Service Provision

Region	Regulation by Agency	Regulation by Contract	Ministerial Regulation	Self-Regulation
Northern	**Egypt**, **Mauritania**	**Algeria**, **Morocco**, **Tunisia**	Algeria, **Libya**, Mauritania, Morocco, Tunisia	
Western	**Cape Verde**, **Gambia**, **Ghana**, **Liberia**, **Mali**, **Niger**, Nigeria, **Sierra Leone**, **Togo**	**Benin**, **Burkina Faso**, **Cote d'Ivoire**, Ghana, **Guinea**, Liberia, Mali, Niger, **Senegal**, Togo	Benin, Burkina Faso, Gambia, Ghana, Guinea, **Guinea-Bissau**, Liberia, Mali, Niger, **Nigeria**, Sierra Leone	Liberia
Central	**Burundi**, **Congo Republic**, **Gabon**	**Cameroon**, **Central African Republic**, **Chad**, Congo Republic, Democratic Republic of the Congo, **Equatorial Guinea**,	Burundi, Cameroon, CAR, Chad, Congo Republic, **DRC**, Equatorial Guinea, Gabon, **Sao Tome and Principe**	
Eastern	**Kenya**, **Rwanda**, Seychelles, **Tanzania**,	Madagascar, **Somalia**, **Uganda**	**Comoros**, Djibouti, **Eritrea**, **Ethiopia**, **Madagascar**, **Mauritius**, Rwanda, **Seychelles**, **South Sudan**, **Sudan**, Somalia, Tanzania, Uganda	**Djibouti**
Southern	**Angola**, **Lesotho**, **Mozambique**, **Zambia**	**Eswatini**, South Africa	Angola, **Botswana**, Eswatini, Lesotho, **Malawi**, Mozambique, **Namibia**, **South Africa**, **Zimbabwe**	Malawi
Total – Regulatory Model Applied	**22 countries (41%)**	**24 countries (44%)**	**48 countries (89%)**	**3 countries (6%)**
Total – Predominant Regulatory Model	**20 countries (37%)**	**15 countries (28%)**	**18 countries (33%)**	**1 country (2%)**

Significant regional variations exist in the regulatory models utilised for WSS service provision. Figure 12 highlights the percentage of countries in Africa and across each region where each of these four regulatory models is the predominant regulatory model. It highlights the broadly comparable number of countries where regulation by agency (37% of countries), ministerial regulation (33% of countries), and regulation by contract (28%) are the predominant regulatory models. Several noteworthy regional variations are also evident. In the first instance, Western Africa has made the greatest progress in establishing dedicated regulatory agencies and bodies, with 53% of countries applying regulation by agency. Conversely, in Central Africa, the prominence of regulation by contract (44% of countries) and ministerial regulation (22% of countries) results in ministries rather than dedicated regulatory agencies holding the most expansive mandates and functions. In Southern and Eastern Africa, several countries have established dedicated regulatory agencies and bodies; however, ministerial regulation remains the most common predominant regulatory model. In Northern Africa, regulation by contract is the most common predominant regulatory model (50% of countries).

Figure 12: Predominant Regulatory Model – Regional

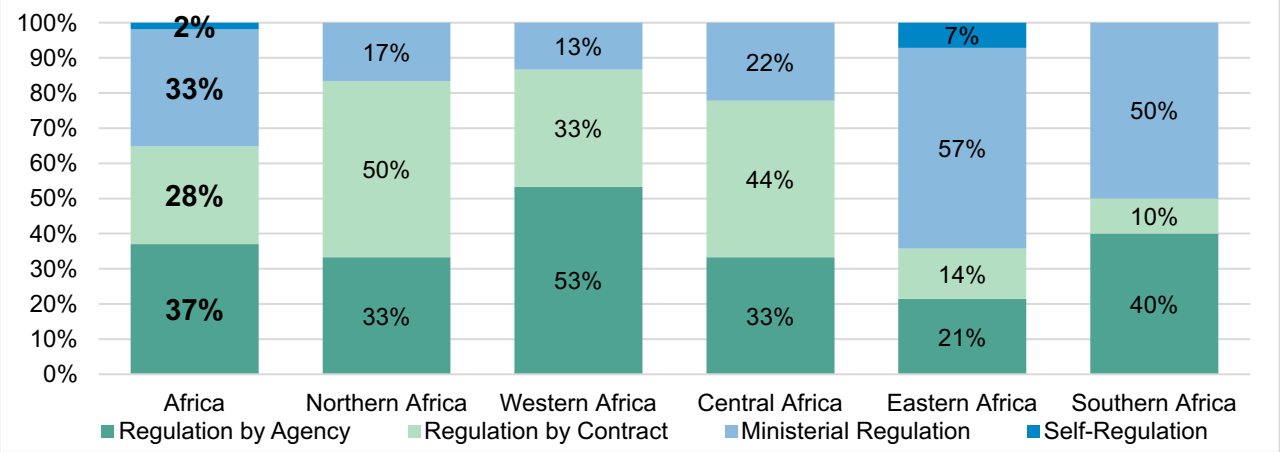


Figure 13 details the primary regulatory model per each country included in the study.

Figure 13: Predominant Regulatory Model Applied for Water Supply and Sanitation Service Provision

In some countries, different regulatory models are applied to water supply and sanitation service provision respectively. In most countries, greater emphasis is given to regulating water supply services than to sanitation, sometimes resulting in different regulatory models being applied. This distinction is most stark in countries where dedicated regulatory actors have been created but are only mandated to regulate – or, in practice, only regulate – water supply services. This is the case in seven of the 22 countries (32%) with dedicated regulatory agencies at the national level (Congo Republic, Gabon, Ghana, Mali, Mauritania, Niger, Sierra Leone). In the Congo Republic, for example, the Water Sector Regulatory Body is responsible for overseeing and ensuring compliance with contracts between the Ministry of Energy and Hydraulics and private operators for urban and rural water supply services but currently performs no functions relating to urban and rural sanitation. Additionally, in Ghana, the Public Utilities Regulatory Commission is mandated to regulate all public utilities. However, Ghana's WSS service delivery arrangements mean that it only regulates the urban and peri-urban piped water supply services provided by Ghana Water Company Limited, with sanitation services largely being regulated at the sub-national level by Metropolitan, Municipal, and District Assemblies. Similarly, in Sierra Leone, while water supply in urban areas is regulated by the autonomous Sierra Leone

Electricity and Water Regulation Commission, responsibilities for regulating sanitation services are split between the Ministry of Health and Local Governments.

Responsibilities are usually split between several actors, sometimes constraining effective WSS regulation. In many African countries, multiple actors hold key regulatory functions. Ten countries (19%) have a single actor responsible for WSS regulation in urban and rural areas, while, in 12 countries (22%), these responsibilities are split between two actors. In 32 countries (59%) countries, three or more actors hold regulatory functions for WSS services provision in urban and rural areas. The centralisation of regulatory responsibilities around one or two dedicated actors is far from a guarantee of the effective performance of regulatory responsibilities. Indeed, in several countries, regulatory functions are centralised within one Ministry but do not receive the attention required (i.e., Libya, Madagascar). However, it is worth noting that in several of the countries that have made the greatest progress in developing and applying a relatively extensive set of regulatory mechanisms (i.e., Cape Verde, Cote d'Ivoire, Kenya, Senegal, Tanzania, Kenya, Rwanda, Egypt) key regulatory functions are held by one or two dedicated regulatory actors. Equally, in several countries (i.e., the DRC, Liberia, Sudan, South Sudan, Zimbabwe), the fragmentation of regulatory responsibilities across several actors (often Ministries) is a pressing constraining factor impeding more effective WSS regulation.

Ministerial regulation is the most common regulatory model for WSS service provision. Ministerial regulation occurs where a ministry responsible for WSS – or aspect of WSS – is tasked with performing some or all regulatory responsibilities and does not utilise contracts to specify key provisions that WSS service providers must adhere to. For example, a ministry responsible for policy formulation is also tasked with regulatory functions such as developing standards and guidelines, overseeing some WSS service providers and applying regulatory tools (i.e., standard enforcement, performance reporting). Ministerial regulation remains the most common regulatory model, with most African countries applying ministerial regulation for at least a portion of WSS service provision. It is the predominant regulatory model in 15 (33%) countries and is found in 46 (89%) African countries for at least one aspect of WSS service provision. Some countries with regulatory arrangements principally based on ministerial regulation have developed and are applying a comparatively expansive set of regulatory mechanisms (i.e., South Africa). Nevertheless, several common challenges are frequently cited with regard to ministerial regulation. These include the failure to precisely define regulatory mandates and powers, the fragmentation of regulatory responsibilities among several ministries (or departments within one ministry), the limited prioritisation of regulatory activities within ministries with wide-ranging functions, and insufficient autonomy. Indeed, many countries where ministerial regulation is the predominant regulatory model have made the least progress in developing and applying regulatory mechanisms (see Section 6). Box 6 details Zimbabwe's regulatory arrangement for WSS service provision that illustrates several common challenges of ministerial regulation evident across many African countries.

Box 6: Zimbabwe – A Fragmented Regulatory Arrangement Principally Based on Ministerial Regulation

Zimbabwe has a fragmented regulatory arrangement for WSS service provision based on **ministerial regulation**. At the national level, regulatory responsibilities for WSS service provision are split among three ministries. The Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (MoLAFWRD) regulates water supply to consumers, the Ministry of Health and Child Care has regulatory responsibilities centred on sanitation and water quality, and the Ministry of Local Government and Public Works oversees Zimbabwe's 32 Urban Local Authorities and 60 Rural District Councils that are the main WSS service providers. The arrangement illustrates four common challenges with ministerial regulation:

I. Each ministry with regulatory responsibilities for WSS is dependent on wider government-led budgeting processes to fund its regulatory activities. This creates **financial autonomy** challenges and contributes to the **insufficient funding** for regulatory activities, with financial resource constraints representing a key barrier to regulatory actors' performance of their responsibilities.
II. Ministries are responsible for overseeing the performance of other arms of government (urban local authorities, rural district councils) that they are closely connected to, creating challenges related to **independence** and **conflicts of interest**.
III. Regulatory responsibilities are **fragmented** among several ministries, with ministries often holding overlapping responsibilities for some areas and coordination among ministries representing an ongoing challenge.
IV. Ministries hold wide-ranging functions, causing regulatory responsibilities to sometimes be **'lost'** and **not receive the prioritisation** required for their effective performance.

Zimbabwe's WSS sector acknowledges the need to improve the regulatory arrangement, and reforms are underway. Notably, the President recently approved the process of centralising regulatory mandates and functions more closely around the Department of National Water, Sanitation and Hygiene Coordination of MoLAFWRD to reduce the fragmentation and ensure regulatory aspects receive the attention required.

Ministerial regulation, like other regulatory models, can be applied at various levels. Ethiopia, Nigeria and South Sudan are each federal countries.[6] In each of these countries, ministerial regulation is the predominant regulatory model, but state or regional actors are mandated to develop and implement their own regulations and regulatory mechanisms within broad parameters set at the federal level. This enables the contextualisation of regulations but often results in considerable variations in the regulatory activities performed. Box 7 details Ethiopia's regulatory arrangement that is based on ministerial regulation and also highlights the greater emphasis that has been placed on regulating water supply services compared to sanitation in many African countries. Additionally, in many instances, key WSS competencies have been decentralised, with local government mandated to fulfil very broad regulatory functions under the application of ministerial regulation. For example, by-law development, regulating smaller, deconcentrated service providers (i.e., water committees, independent, private vacuum tanker operators), and ensuring their jurisdiction is kept in a clean and sanitary condition. In the vast majority of instances, resource-constrained local governments struggle to fulfil this mandate and typically perform only a very limited set of regulatory activities (if any). Box 12 uses the example of Uganda to illustrate many of the common challenges that local governments face in overseeing and regulating small-scale service providers.

Box 7: Ethiopia – Ministerial Regulation in Federal Countries

Ethiopia has a highly decentralised regulatory arrangement that reflects its federalised nature. It practices **ministerial regulation** for both water supply and sanitation services. Although Ethiopia's decentralised regulatory arrangements are relatively clear and well-structured, the capacity to apply regulations is often limited. At the local level, a lack of staff, specialised skills, and budgets often prevent woredas and small-town water boards from actively engaging in regulatory activities.

Under the counties' One WASH National Programme, precise regulatory arrangements exist at each governmental level for water supply services. At the federal level, the Ministry of Water and Energy (MoWE) is mandated to establish regulations and standards, develop financing mechanisms, and build the capacity of other levels of government. Regional bureaus are mandated to formulate region-specific regulations and guidelines, ensure compliance with federal regulations, and conduct regular monitoring of – and provide technical assistance to – service providers. In larger regions, some functions such as monitoring and technical support are decentralised to the zonal level. Performance monitoring, customer protection, and tariff setting are further decentralised to the local level. In large cities and small towns, utilities formally referred to as Water Supply and Sanitation Services Enterprises (WSSSEs) are overseen by independent Boards typically composed of representatives of the regional, zonal, woreda (local government), and/or town administration, consumers, and other stakeholders such as the business community. In rural areas, community-based committees operate water facilities and set and collect fees from users, with woredas mandated to oversee their operations.

While the roles of each level of government are similar for sanitation, regulatory responsibilities are much more fragmented. MoWE, the Ministry of Health, the Environment, Forest and Climate Change Commission, and the Ministry of Urbanisation and Infrastructure all have mandates to regulate aspects of sanitation. Similarly, there are often multiple bureaus, such as health and urban development, involved in sanitation at the regional level. Local oversight by WSSSE Boards or woreda governments is limited, as WSSSEs and community-based committees typically play little role in sanitation service delivery.

In 23 countries, dedicated regulatory agencies have been established for aspects of WSS service provision. Regulation by agency occurs where a regulatory body, at least partially autonomous from the government, has discretionary powers to regulate WSS or aspects of WSS. This regulatory model is often instigated based on the guiding principle of the need to ensure the separation of policymaking, service delivery, and regulatory functions. Several advantages are posited to regulation through a dedicated agency over ministerial regulation. These include reduced opportunities for political interference, increased consistency in

[6] Nigeria represents a particularly interesting example. While ministerial regulation is the predominant regulatory form, some states (i.e., Lagos, Abia) have established dedicated state-level WSS regulators, while others regulate through state-level ministries. With the role of the federal-level comparatively limited (i.e., compared to Ethiopia), significant variations exist among Nigerian states in the regulations and regulatory mechanisms in place and the extent to which they are applied and enforced.

applying regulatory tools, heightened prioritisation of regulation, and the specialised capacity of regulatory actors. Nevertheless, if regulatory agencies are *overly* insulated from political considerations, they risk becoming non-responsive to public needs, and mechanisms for participation and consultation are often built into agencies' procedures to prevent this. Table 7 summarises the three main types of regulatory agencies with core responsibilities for WSS service provision evident across Africa.

Table 7: Types of Regulatory Agencies

Type of Regulatory Agency	Overview	Countries
Regulatory Agency for Water Supply and Sanitation	A regulatory body, at least partially autonomous from the government, has discretionary powers to regulate water supply and sanitation services.	Cape Verde, Egypt, Kenya, Liberia, Mozambique, Zambia, Nigeria **7 countries**
Regulatory Agency for Water Supply	A regulatory body, at least partially autonomous from the government, has discretionary powers to regulate water supply services but does not hold regulatory powers concerning sanitation service provision.	Congo Republic, Mauritania, Niger **3 countries**
Multi-Sectoral Regulatory Agency	A regulatory body, at least partially autonomous from the government, has discretionary powers across multiple sectors (i.e., energy, telecommunications), including for water supply and / or sanitation.	Angola, Burundi, Cape Verde, Gabon, Gambia, Ghana, Lesotho, Mali, Rwanda, Sierra Leone, Seychelles, Tanzania, Togo **13 countries**

Regulation by agency is the predominant regulatory model in 20 (37%) countries and is found for aspects of WSS service provision in 22 (41%) countries. Regulatory agencies with responsibilities for WSS service provision include dedicated WSS regulators (i.e., Zambia, Kenya) as well as multi-sectoral regulators responsible for WSS and other sectors such as energy and tele-communications (i.e., Ghana, Rwanda, Tanzania, Sierra Leone). Regulatory agencies typically benefit from holding an explicit mandate and a precisely defined set of functions. However, the breadth and depth of their mandate and functions vary considerably. In some countries, these agencies hold a broad mandate for the entire WSS sector, while, in others, they may be focused on a specific sub-sector (i.e., urban water) or service provider (i.e., a national or regional utility). Similarly, a regulatory agency can be mandated to perform a specific set of functions (i.e., Cape Verde's Multi-Sector Economic Regulatory Agency) or hold a more comprehensive set of powers for regulating WSS service delivery. Variations exist in the performance of regulation by agency. However, many countries where this is the predominant regulatory model have made the greatest progress in developing and applying regulatory mechanisms and no examples of regulation by agency were found where only a limited set of regulatory mechanisms have been developed (see Section 6). Box 8 outlines Cape Verde's regulatory arrangement, which is performing very well.

Box 8: Cape Verde – Regulation by Technical and Economic Agencies

Cape Verde has precise, well-developed arrangements for WSS service provision based on regulation by agency. Two autonomous regulatory agencies, the National Water and Sanitation Agency (*Agência Nacional de Água e Saneamento*; ANAS) and the Multisector Economic Regulatory Agency (*Agência de Regulação Multissectorial da Economia*; ARME), share responsibility for WSS regulation. ANAS is a technical regulator dedicated to WSS, with responsibilities including developing and enforcing technical standards for service quality and regulating water abstraction and effluent disposal, amongst others. ARME conducts economic regulation, including tariff review and approval, developing standards for financial management and reporting, and monitoring financial performance. Its responsibilities cover electricity and telecommunications as well as WSS. The two agencies' mandates and functions are explicitly established in separate legal instruments, ensuring clearly defined roles and minimising duplication of efforts. ANAS and ARME also collaborate closely to regulate WSS service providers, including joint inspections and publication of a joint sector report. Environmental regulation is treated as a separate sphere, managed by the Ministry of Agriculture and Environment; however, several areas at the intersection of WSS and environment (i.e., water resources management, water quality, effluent discharge) are the responsibility of ANAS.

ANAS and ARME's establishment were part of a comprehensive reform process based on a 2011 national policy letter calling for institutional restructuring to clarify and strengthen regulatory responsibilities and reduce fragmentation. Legislative changes, including a revision of the Water Code, the law establishing ANAS, and the restructuring of a pre-existing economic regulator to create ARME, occurred between 2013 and 2018. Since their establishment, ANAS and

ARME have developed a comprehensive set of regulatory mechanisms, including standards and guidelines for many aspects of WSS service provision and a nationwide monitoring and performance reporting system. Although some weaknesses remain in applying regulation to all service providers (i.e., private onsite sanitation providers and rural water vendors), Cape Verde has made substantial progress in developing regulatory structures and mechanisms over the last decade.

The use of contracts by regulatory agencies as a core regulatory tool is increasingly popular, especially in Western and Central Africa. Under this variation of regulation by agency, rather than developing stand-alone regulations on areas such as tariffs or service standards, key aspects of service delivery are regulated through contracts. Contracts are often signed by the ministry responsible for WSS, but are typically designed, monitored, and enforced by the dedicated regulatory institution. When effectively applied, this arrangement can provide the flexibility to tailor regulatory provisions to different service providers, as is the case with regulation by contract, but can also insulate decisions about the design and enforcement of regulations from political considerations, as in more traditional forms of regulation by agency. Cote d'Ivoire is an interesting example of this. Here, two independent regulatory bodies, the National Office of Drinking Water and the National Office of Sanitation and Drainage, use contracts to regulate the national utility's provision of networked water supply and sewerage services across the country.

Box 9: Senegal – A Hybrid System of Regulation by Contract and by Agency

Senegal has practised a hybrid of regulation by contract and regulation by agency since the establishment of the National Water Company of Senegal (*Société Nationale des Eaux du Sénégal*; SONES) and the National Sanitation Agency of Senegal (*Office National de l'Assainissement du Sénégal*; ONAS) in 1996. SONES and ONAS are autonomous institutions responsible for regulating urban water supply and sanitation, respectively. They do so through contracts with private service providers. SONES uses an *affermage*, or leasing, contract with the national water supply distribution company, to set requirements for:

I. Water quantity and quality.
II. Electromechanical and network maintenance.
III. Billing and cost recovery.
IV. Customer relations.
V. Investments to be made in system expansion.

ONAS uses similar contracts to engage private operators in the operation and maintenance of sewer systems and faecal sludge treatment plants (FSTPs). In addition, ONAS has taken steps to formalise emptying and transport services through a call centre to link households with private mechanical emptiers and provisions in the contracts of FSTP operators to ensure safe emptying practices. Tariffs are determined separately by ministerial order.

SONES and ONAS are distinct from more traditional regulatory agencies in terms of their internal structures and functions. Both institutions are legally established as companies and are the holders of the country's water supply and sanitation assets, respectively, thereby allowing them to enter into *affermage* contracts with private enterprises to deliver services and operate and maintain the assets. As asset holding companies, SONES and ONAS have responsibilities for WSS sector planning and infrastructure development as well as regulation of private providers. ONAS also operates some sewered sanitation infrastructure directly. SONES and ONAS also have different relationships with their supervising ministry, the Ministry of Water and Sanitation, than most regulatory agencies. SONES and ONAS enter into performance contracts with the Ministry of Water and Sanitation and the Ministry of Economy, Planning and Cooperation, which include provisions on both their regulatory and investment activities and help ensure that they comply with financial and managerial requirements.

Regulation by contract is another commonly applied regulatory model, especially in North and Central African Francophone countries. Regulation by contract occurs where a public entity, other than a (semi-) autonomous regulatory body, with regulation as a core part of its mandate and a service provider agree on contractual clauses that determine how key aspects of WSS service provision are defined and controlled.[7] Where effectively applied, this arrangement can provide the requisite flexibility to tailor regulations to specific service providers and service delivery needs during the contract setting process. However, this also opens the door to political interference in contract design, award, and enforcement. Regulation by contract is found across Africa but is especially common in Francophone countries and particularly Central and Northern Africa.

[7] In these cases, the contract represents the key document establishing or defining the provisions to be abided by rather than existing regulations or standards.

In total, regulation by contract is the predominant regulatory model in 15 (28%) countries and for aspects of WSS service provision in 24 (44%) countries. Table 8 details the four main ways of applying regulation by contract that were identified.

Table 8: Main Ways of Structuring Regulation by Contract

Way of Structuring	Overview	Example Countries
Regulation by Contract via Ministry	A Ministry or set of ministries determining key performance indicators to be included in contracts, signing contracts with WSS service providers, and subsequently ensuring compliance. This is usually done by a Ministry with wide-ranging responsibilities; however, in some instances, departments of ministries with specific regulatory functions enter into these contracts or are responsible for ensuring compliance (i.e., Eswatini, Uganda).	Algeria, Benin, Burkina Faso, Cameroon, CAR, Chad, Congo Republic, Eswatini, Guinea, Morocco, Tunisia, Uganda **12 countries**
Regulation by Contract via Asset Holder	An asset holding entity is responsible for ensuring compliance with contracts typically signed by the ministry or ministries responsible for WSS.	Senegal (see Box 9), Cote d'Ivoire **2 countries**
Regulation by Contract via Sub-National Government	A sub-national governmental actor determines the key performance indicators included in contracts, signs contracts with WSS service providers, and subsequently ensures compliance with these contracts and enforces contractual provisions. The sub-national entities entering into and ensuring compliance with these contracts are typically either local governments (i.e., South Africa, Ghana) or state-level ministries in federal countries (i.e., Somalia, some states in Nigeria).	Burkina Faso, Ghana, Somalia, South Africa **4 countries**
Regulation by Contract via Service Provider	A national utility or private operator is legally mandated to enter into contracts with other service providers that regulate their activities, including service quality and tariffs. Critically, the entity designing, signing, and enforcing contractual provisions is the utility, without direct involvement by any other institution.	Algeria, Equatorial Guinea, Liberia, Mauritius **4 countries**

Across each of these variations, well and poorly performing examples can be found. In Eswatini, for example, the recent application of regulation by contract has helped provide a vital degree of specificity to the quality of services and operational performance expected of the Eswatini Water Services Corporation. Conversely, in Equatorial Guinea, contracts are overwhelmingly focused on initial infrastructure construction, with limited attention to – or follow-up of – key aspects of service provision. Equally, the extent to which the provisions of contracts focused on WSS service delivery are enforced also naturally varies significantly among countries and within countries for different WSS services and service providers. Box 10 provides an overview of regulation by contract in Uganda, where the establishment of a dedicated regulatory actor within the Ministry of Water and Environment has helped to ensure the comparatively effective application of regulation by contract.

Box 10: Uganda's Application of Regulation by Contract

Regulation by contract is the predominant regulatory model in Uganda. The 1997 Water Act empowers the Ministry of Water and Environment (MWE) to regulate WSS service provision, but regulatory responsibilities within MWE have evolved considerably over time. A regulatory unit was created within MWE in 2009, and in 2016 the Water Utilities Regulatory Department (WURD) was established as a dedicated department focused on several key aspects of WSS regulation:

I. Service provider licensing and contracting.
II. Tariff review and approval.
III. Technical regulation of service quality.
IV. Standard and guideline development.
V. Competition management and service area designation.
VI. Customer protection.

The major urban WSS providers are the National Water and Sewerage Corporation, which serves cities and large towns, and six regional Umbrellas of Water and Sanitation, which serve small towns and rural growth centres. Each of these service providers are regulated by contract. WURD is responsible for developing the contracts, including determining key performance indicators and targets and monitoring service providers' performance during the contract period. Providers who meet or exceed their contracts' targets are eligible for bonuses and conditional grants. The contracts currently only cover piped water supply (and sewerage in the case of the National Water and Sewerage Corporation). The inclusion of indicators on point source water quality and onsite sanitation are under consideration.

In Uganda, the use of contracts has been valuable in establishing clear expectations and incentives for service providers. Furthermore, the existence of a dedicated department within MWE focused on regulation has helped ensure that there are sufficient resources and expertise available to effectively design and monitor the contracts – particularly as their use has been expanded from the National Water and Sewerage Corporation to the six Umbrellas in recent years.

Elements of self-regulation are found across Africa, but self-regulation has only been incorporated into the regulatory arrangement for substantive aspects of WSS regulation in three countries. Self-regulation often ends up being applied for aspects of WSS service delivery in a *de facto* manner, because of the low capacity of regulatory actors to oversee all aspects of service provision across highly fragmented and numerous providers. For example, it is often the case that regulatory mechanisms are not applied or only applied on a very limited or inconsistent basis to water committees and private vacuum tanker operators despite responsibilities being detailed. Additionally, in several countries, national state-owned companies practice *de-facto* self-regulation even if a 'programme-contract' binds them. This is the case for example with the National Water Company and the National Office for Water Services in Mauritania, the mandates for which fall outside of the scope of the Regulatory Authority. Nevertheless, in most countries, self-regulation is not designed into the regulatory arrangement for a substantive set of regulatory functions, with core regulatory functions such as licensing, standard-setting, and performance reporting usually being held by ministries, regulatory agencies or sub-national governmental actors. However, in Djibouti, Liberia, and Malawi (6% of African countries), forms of self-regulation have been designed into the regulatory arrangement for a noteworthy set of regulatory functions. The Liberia Water and Sewer Corporation, Liberia's national utility, was established before there was any regulatory body in the country and is legally empowered to set its own tariffs and service standards. In Malawi, a slightly different arrangement exists where the Water Services Association of Malawi performs several pertinent regulatory functions, including water quality audits and benchmarking the performance of Malawi's five parastatal water boards. Box 11 provides an overview of Djibouti's regulatory arrangement for WSS service provision, which is the most extensive example of self-regulation in Africa.

Box 11: Djibouti – Africa's Most Comprehensive Example of Self-Regulation

In Djibouti, service providers are mandated with the most comprehensive set of functions related to regulating their own performance. The National Office of Water and Sanitation (ONEAD) is a financially autonomous public enterprise that is Djibouti's primary WSS public utility. It provides piped water supply and sewered services in the urban and semi-urban areas that most of Djibouti's population reside in. Law No. 145/AN/06/5L establishing ONEAD in 2006 and its subsequent decrees explicitly specify a broad set of regulatory functions for ONEAD, with only limited supervision from relevant ministries (Ministry of Agriculture, Water, Fisheries, Livestock and Fish Resources, Ministry of Health, Ministry of Environment).

Of note, ONEAD has the authority to adjust tariffs at the end of each year in accordance with the evolution of cost-of-production indices. The General Management of ONEAD presents proposed tariff updates to the Board of Directors for consideration and then to the State's highest authority for approval by decree. For drinking water services, ONEAD is supposed to conduct as many tests as necessary to determine the quality of the water supplied and shall comply with all applicable regulatory requirements. ONEAD is also responsible for adapting drinking water infrastructures' capacities to growing urban demand. For sanitation services, ONEAD is required to test effluent at least once every six months and to include the following information:

- The volume of effluent received in twenty-four hours (m^3/day).
- Effluents concentrations in Biological Oxygen Demand, Chemical Oxygen Demand and Suspended Solids.
- Daily flows over twenty-four hours at the outlet.

CHAPTER

5

SPHERES OF REGULATION

ESAWAS REGULATORS ASSOCIATION

5. SPHERES OF REGULATION

5.1. REGULATED SERVICE PROVIDERS

All African countries have multiple WSS service providers, typically providing a variety of services and operating at a diversity of scales and levels of formality. The number, scale of service providers' operations and the type of service provider are critical factors influencing the extent to which regulatory mechanisms are applied. WSS service providers for can be divided into the following six broad categories:

I. ***National and Regional Utilities.*** National or regional utilities typically provide networked piped water supply and sewerage services, with the latter usually serving only a small fraction of the population in the urban core. In some cases, onsite sanitation services (i.e., septic tank emptying) are also provided, but, where this is done, it is typically only on a limited basis and is not a core focus. These utilities may have a service area comprising urban and rural areas; however, rural populations beyond those in small towns are nearly always served via alternative service providers. In some countries (i.e., Uganda), regional utilities operate alongside a larger national utility.

II. ***Local Government.*** In addition to its other service authority functions (i.e. monitoring or support to rural water committees), a unit or department of local government may directly manage or deliver water supply and sanitation services. These actors typically provide onsite sanitation services (sometimes across the sanitation service chain) and manage piped water supply facilities; however, this arrangement is also found for sewered sanitation (i.e., Ghana, South Africa).

III. ***Large-Scale Private Enterprises.*** While not common, there are large, formal companies delivering WSS services at the national or city-scale in several African countries. For example, SEN'Eau operates Senegal's piped water network, while Aguas Ponta Preta operates sewer networks and a treatment plant in Cape Verde. These service providers typically focus on networked water supply and sewerage systems. However, a growing number of companies serve areas without access to networked services. For example, formal private operators providing packaged or sachet water are a key source of drinking water in Ghana, Nigeria, and Sierra Leone, and UDUMA plays a key role in rural water supply facility management across rural areas of Benin, Burkina Faso, Cote d'Ivoire, Guinea, and Mali.

IV. ***Small- to Moderate-Scale Private Enterprises.*** These are formalised private operators (i.e., licensed) defined by the fact that they operate at a small- to moderate-scale. This covers a range of private operators. For example, private operators managing an individual water supply system (i.e., a piped water supply facility serving 10,000 people in a small-town in Mozambique) or a small set of water supply systems (i.e., less than 10), as well as individual licensed private vacuum tanker operators. Compared to larger enterprises, these operators tend to focus more on serving lower-income areas without access to networked services. For example, E-Water operates 150 prepaid water kiosks across rural areas in Gambia and Sanergy operates container-based sanitation services in low-income areas of Nairobi, Kenya.

V. ***Informal Private Operators.*** These are informal operators or individuals that may operate across a relatively wide service area (i.e., multiple districts, a large town, or part of a city) but have not yet gone through a process of formalisation (i.e., licensing or registration). Informal operators are typically small or micro service providers, and commonly provide services such as the mechanical or manual emptying and transport of faecal sludge and water sales (packaged or bulk).

VI. ***Community-Based Organisations.*** Community-based entities such as water committees or associations are, in most African countries, the primary water supply service providers in rural areas, especially for point water sources in more dispersed communities. Water committees vary in their degree of formality and are often not legally constituted but usually operate at the scale of an individual settlement, neighbourhood or water supply facility.

Different regulatory models are often applied to regulate different service providers. Tables 9 and 10 detail the countries where each of these main types of service providers are documented and which regulatory models are utilised to regulate them.

Table 9: Water Supply Service Providers

Service Provider Type	Regulation by Agency	Regulation by Contract	Ministerial Regulation	Self-Regulation
National Utility	Burundi, Cape Verde, Congo Republic, Gambia, Gabon, Ghana, Lesotho, Mali, Mauritania, Niger, Rwanda, Seychelles, Sierra Leone, Togo	Algeria, Burkina Faso, Cameroon, CAR, Chad, Cote d'Ivoire, Guinea, Eswatini, Senegal, Tunisia, Uganda	Benin, Botswana, Comoros, DRC, Guinea-Bissau, Madagascar, Mauritius, Namibia, Sao Tome and Principe, Seychelles, South Sudan	Djibouti, Liberia
Regional Utility	Angola, Cape Verde, Egypt, Kenya, Nigeria, Sierra Leone, Tanzania, Zambia	Algeria, Uganda	Angola, Cameroon, Eritrea, Ethiopia, Malawi, Nigeria, South Africa, Sudan	Malawi
Local Government	Cape Verde, Nigeria	Morocco, Uganda	Lesotho, Gambia, Guinea-Bissau, Morocco, Mozambique, Namibia, Nigeria, South Africa, Tunisia, Zimbabwe	
Private Enterprises	Burundi, Cape Verde, Cote d'Ivoire, Gambia, Ghana, Kenya, Morocco, Mozambique, Mauritania, Nigeria, Rwanda, Sierra Leone, Tanzania	Benin, Burkina Faso, Chad, DRC, Equatorial Guinea, Ghana, Liberia, Madagascar, Mali, Niger, Senegal Somalia, Sierra Leone, South Africa, Togo, Uganda	Cameroon, CAR, Djibouti, DRC, Gambia, Ghana, Nigeria, South Sudan, Sudan, Togo	
Community-Based Organisations	Cote d'Ivoire, Kenya, Liberia, Mozambique, Rwanda, Zambia		Benin, Burkina Faso, Burundi, Cameroon, CAR, Chad, DRC, Eswatini, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Madagascar, Malawi, Mali, Nigeria, South Sudan, Sudan, Tanzania, Togo, Uganda, Zimbabwe	

Table 10: Sanitation Service Providers

Service Provider Type	Regulation by Agency	Regulation by Contract	Ministerial Regulation	Self-Regulation
National Utility	Burundi, Cape Verde, Gambia, Lesotho, Rwanda, Togo	Algeria, Burkina Faso, CAR, Cote d'Ivoire, Eswatini, Guinea, Tunisia, Uganda	Benin, Botswana, DRC, Mauritania, Mauritius,	Djibouti, Liberia
Regional Utility	Angola, Cape Verde, Egypt, Kenya, Nigeria, Tanzania, Zambia	Algeria	Angola, Cameroon, Eritrea, Ethiopia, Malawi, Nigeria, Sierra Leone, South Africa, Sudan	
Local Government	Cape Verde, Ghana, Nigeria, Sierra Leone, Togo, Zimbabwe	Morocco,	Algeria, Comoros, Eswatini, Lesotho, Malawi, Madagascar, Mozambique, Namibia, Nigeria, South Africa, Tunisia, Togo, Uganda, Zimbabwe	
Private Enterprises	Burundi, Cape Verde, Cote d'Ivoire, Gambia, Eswatini, Kenya, Morocco, Mozambique, Nigeria, Rwanda, Seychelles, Tanzania, Togo, Zambia,	Burkina Faso, Chad, Congo Republic, Equatorial Guinea, Gabon, Liberia, Niger, Senegal, South Africa	Benin, Burkina Faso, Cameroon, CAR, Congo Republic, Djibouti, DRC, Eritrea, Eswatini, Guinea, Guinea-Bissau, Madagascar, Malawi, Mali, Nigeria, South Sudan, Sierra Leone, Togo, Uganda, Mozambique, Zimbabwe	

Tables 9 and 10 highlight how ministerial regulation, regulation by agency, and regulation by contract are each used to regulate different types of WSS service providers across Africa. Nevertheless, a few broad trends are evident in the utilisation of different regulatory models for different types of service providers:

I. **Regulation by Agency.** Regulatory agencies are often established to regulate utilities or large private companies and organised accordingly. For example, in Ghana, the Public Utilities Regulatory

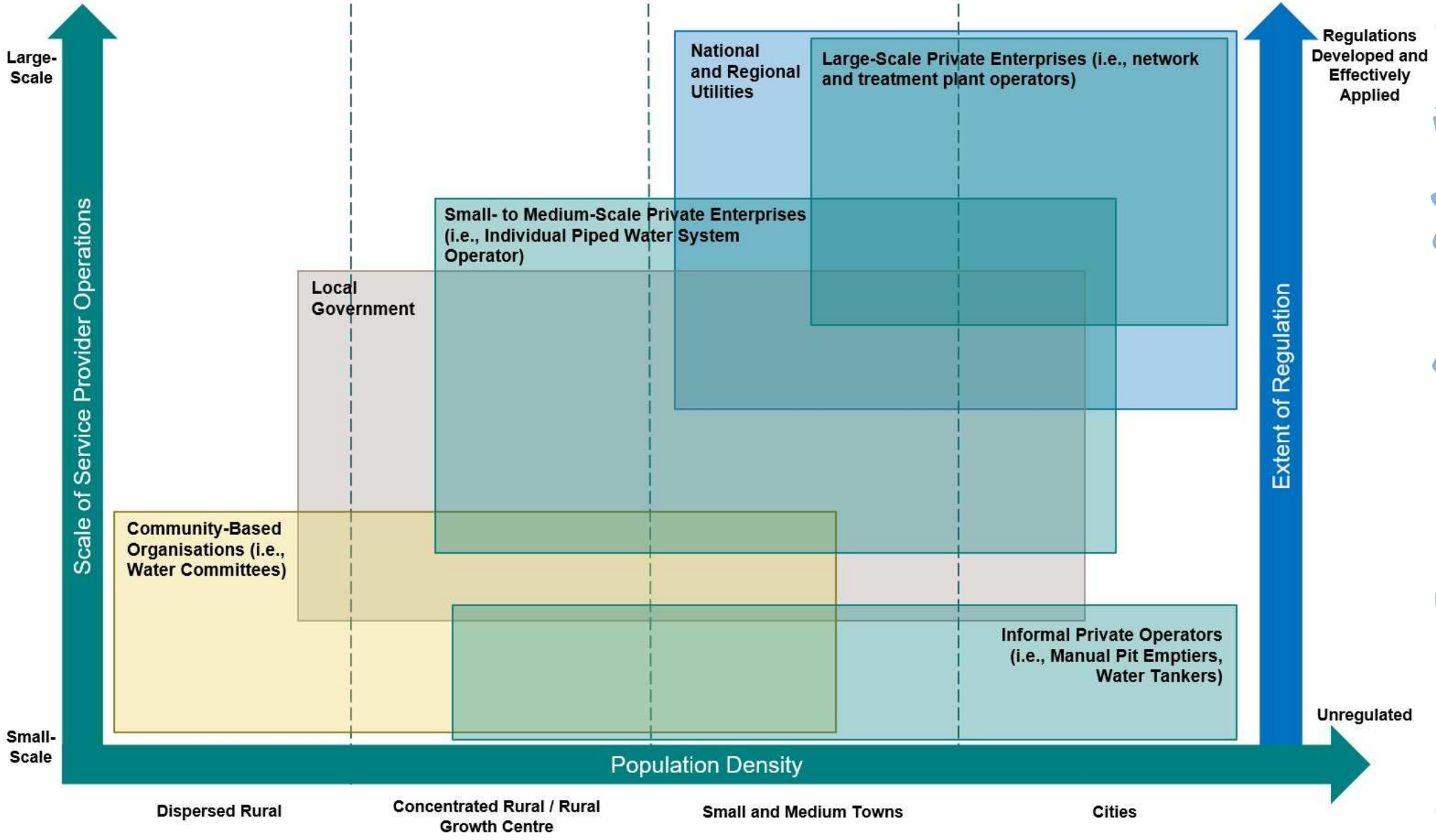
Commission, is a multi-sectoral regulatory agency mandated to regulate Ghana's public utilities. In the WSS sector, the Public Utilities Regulatory Commission only regulates Ghana Water Company Limited, with other service providers regulated much less effectively through alternative regulatory models. Staff members of dedicated regulatory agencies or bodies often have expertise orientated around analysing formal service providers' technical and economic performance. Additionally, processes for core functions such as tariff setting and performance monitoring typically require substantial data that can often only be provided by more formalised service providers. National or regional utilities and large-scale private service providers also represent the 'lowest hanging fruit' because of the significant challenges in regulating smaller, deconcentrated service providers. In contexts where regulatory institutions are relatively new or have struggled to perform their functions, ensuring effective regulation of these service providers is prioritised.

II. **Regulation by Contract.** Regulation by contract is most commonly applied for larger providers such as national utilities. For example, in countries such as Guinea and Eswatini, regulation by contract is only used to regulate the national utility. However, some countries have taken steps to apply regulation by contract to small- and medium-scale service providers. Monitoring compliance is still a challenge, but if the contracting authority is able to do so, regulation by contract can work well for small, deconcentrated providers. Contracts and compliance requirements can be tailored to providers' capabilities, and as long as there are reasonable expectations of enforcement, the prospect of losing a contract (or having it extended or expanded) creates meaningful incentives for compliance.

III. **Ministerial Regulation.** Ministerial regulation is often a 'default' regulatory model utilised for WSS service providers when other regulatory models have not been developed (i.e., in the absence of a dedicated regulatory body or application of regulation by contract. In many countries, ministries hold these responsibilities for the main WSS service provider and smaller, deconcentrated service providers. For example, in the DRC, in the absence of the yet to be operationalised dedicated regulatory body that is being created following the passage of the 2015 Water Code, regulatory functions for all WSS service providers are currently split across a wide range of ministries (see Box Four). Linked to this, ministerial regulation is especially common for regulating the delivery of WSS services by local government and community-based organisations (i.e., water committees), and, more broadly, the delivery of sanitation services. The extent of regulatory activities performed under ministerial regulation varies widely. Some ministries apply an important set of regulatory mechanisms to larger service providers. For instance, South Africa's Department of Water and Sanitation to water service authorities. However, under ministerial regulation, local governments are often responsible for applying regulations to smaller-scale service providers (i.e., water committees, private vacuum tanker operators). This can partially address the challenges of the number of these service providers and limited data availability as sub-national actors are closer to service providers. However, decentralising key regulatory responsibilities results in vital (often poorly defined) regulatory responsibilities being transferred to institutions that typically face considerable human, financial, and material resource constraints. Box 12 outlines the challenges evident in Uganda in regulating smaller, deconcentrated service providers, which are illustrative of the challenges many local governments and sub-national actors face in fulfilling their regulatory responsibilities.

In the vast majority of African countries, regulatory activities focus on larger, more formalised service providers, with smaller, deconcentrated service providers typically receiving limited attention. Figure 14 below presents a schematic with a simplified overview of the degree to which each of these six broad categories of WSS service providers are ***typically*** regulated. It does not represent a comprehensive summary applicable to all African countries or service providers. There are, of course, variations in the extent to which regulatory mechanisms are applied to different WSS service providers across the continent. Indeed, in some countries, national and regional utilities are left to function with only very limited oversight. At the same time, in others, meaningful steps are being taken to regulate smaller, deconcentrated service providers such as water committees and small-scale private vacuum tanker operators. Nevertheless, Figure 13 illustrates how as the scale and level of formalisation increases, the extent to which service providers are ***typically*** the focus of regulatory activities, also increases. This is most notably seen in how, in most African countries, regulators and regulatory activities are usually overwhelmingly focused on the predominant service providers (i.e., national or regional utilities, large private operators), with smaller, deconcentrated service providers such as water committees or small-scale private operators receiving little oversight.

Figure 14: Extent to which Different Water Supply and Sanitation Service Providers are Regulated: A Generic Mapping



Many factors explain why regulatory activities are typically focused on the predominant and largest service providers. Numerous factors make regulating larger service providers such as national utilities easier and more (resource-)effective for regulators than regulating large numbers of smaller, less formalised and dispersed service providers. These include:

I. ***Regulatory Mandates.*** In some countries, regulatory mandates and functions are defined in relation to a specific WSS service provider or type of service provider or for all public utilities. For example, in Malawi, the WaterWorx Act of 1997 principally defines the responsibilities of the Ministry of Water and Sanitation in relation to the five parastatal regional water boards rather than WSS services more broadly. In these instances, regulatory actors either do not have the formal mandate to regulate other providers or have not taken steps to claim this mandate where it is ambiguous.

II. ***Regulatory Mechanisms.*** The types of regulations and regulatory mechanisms developed are often principally designed for the primary WSS service providers and the services they provide. Less attention is usually paid to developing or tailoring comparable mechanisms for smaller, deconcentrated service providers. In several countries, regulators are undertaking the lengthy process of adapting regulations and regulatory mechanisms to smaller, deconcentrated service providers; however, this is a process requiring substantial will, resources, and capacities.

III. ***Number of Service Providers.*** The very large numbers of small-scale service providers in most countries creates considerable challenges in monitoring their activities and applying different regulatory mechanisms (i.e., standard enforcement, regulation by incentives, sanctioning, performance reporting). This is especially true considering the centralised nature of most regulators, as well as the very real resource constraints that most regulators face.

IV. ***Service Provider Professionalisation and Formality.*** In many cases, small-scale service providers are informal. For example, water committees are typically organised voluntarily, have often only received a perfunctory initial training, do not receive sufficient ongoing support, and are sometimes not even legally constituted or registered with relevant authorities. Likewise, many private emptying and transport institutions are informal, unregistered businesses. In these instances, regulators have fewer entry points (i.e., licensing, contracting) to begin regulating these providers and fewer levers for enforcement or incentives.

V. ***Data Availability.*** Closely related to the number of small-scale providers and their degree of professionalisation is limited data availability on their activities**.** Most smaller service providers such as water committees and private vacuum tanker operators or manual pit emptiers have neither the equipment nor the capacity to collect and self-report the data that regulators rely on. Moreover, regulatory authorities rarely have sufficient staff and resources to routinely collect or validate data from a large number of smaller service providers.

Box 12 uses Uganda as an illustrative case study to highlight the substantive challenges that most African countries face in trying to regulate smaller, highly deconcentrated service providers.

Box 12: Uganda – Challenges of Regulating Smaller Service Providers

The Water Utilities Regulation Department (WURD) within Uganda's Ministry of Water and Environment effectively applies regulation by contract to the National Water and Sewerage Corporation (serving cities and large towns nationwide) and six regional Umbrellas of Water and Sanitation (providing piped water services in small towns and rural growth centres). However, effectively regulating other service providers – the thousands of water committees that manage point water sources in rural areas and the small-scale private sanitation enterprises that deliver emptying and transport services – remains a substantial challenge.

Local governments are legally mandated to oversee these service providers but have played a limited role in practice. Regular monitoring of far-flung boreholes is logistically challenging and resource intensive. It also requires skills and equipment, for example, for regular water quality testing, that are rarely available at the local level. Furthermore, the community-based water users committees that manage point sources largely operate informally and do not provide regular reports or data to the local government.

Similar challenges exist in regulating onsite sanitation, but the situation is further complicated by a lack of clear laws and policies on regulatory responsibilities. Sanitation is only indirectly addressed in the Public Health Act and Environment Act, and WURD's mandate to regulate sanitation is established through a Memorandum of Understanding with the Ministry of Health, which has official responsibility for the sector. WURD is developing a roadmap for regulating

onsite sanitation, including the establishment of national tariffs and standards and the incorporation of sanitation indicators into regulated service providers' contracts (making them responsible for data collection). The fragmentation of responsibilities in the sanitation sector increases the difficulty of developing regulations.

Despite the challenges, Uganda has seen progress, particularly in the regulation of emptying and transport service providers in Kampala, the capital. The Kampala Capital City Authority has developed a set of ordinances for regulating these providers, including licensing requirements, safety standards, and mechanisms for tracking their operations and monitoring the disposal of faecal sludge. WURD envisions scaling this model to other urban areas.

These challenges are by no means exclusive to Uganda; they are present in an overwhelming majority of African countries. Uganda's experience illustrates the difficulties that even a well-established regulatory body that operates effectively in other areas faces in regulating deconcentrated service providers.

Some dedicated regulatory agencies and bodies have taken vital and often highly impressive steps to extend regulatory activities to smaller-scale service providers. In many African countries, large, formalised service providers are being pushed to diversify their services (i.e., offering onsite sanitation services) and to expand their service areas into rural growth centres and small towns (Adank, Lieshout, & Ward, 2021). Nevertheless, in most countries, smaller, deconcentrated and often less formalised service providers such as water committees, private vacuum tanker operators, and manual pit emptiers will continue to play a crucial role in WSS service delivery in the medium-term. Crucially, in a small set of countries with relatively high-performing regulatory agencies that have developed comprehensive systems for overseeing larger providers, steps are now being taken to regulate smaller, deconcentrated service providers. In Zambia, for example, a series of measures are being implemented to enable the National Water Supply and Sanitation Council to regulate private vacuum tanker operators, manual pit emptiers, and water committees (see Box Three).

The countries that have made the most progress regulating small- and medium-scale service providers have adapted their regulatory approaches to meet them. Where regulatory agencies or bodies are expanding to regulate medium- or small-scale service providers, this typically requires the tailoring of arrangements and mechanisms to different types and sizes of WSS service providers. A strategy seen in several countries involves a dedicated regulatory actor taking a more indirect approach, with actors at the local level responsible for enforcing regulations (see Box 13). Another strategy involves the regulatory authority creating 'layers' of regulatory oversight, in which entities that the regulator already effectively regulates are assigned responsibilities for monitoring smaller providers they engage with and ensuring their compliance with regulations. This helps relatively small, centralised regulatory institutions extend their reach. Smaller providers may also require different incentives and sanctions. For example, access to a larger pool of customers through call centres established for emptying and transport services in countries such as Uganda and Senegal are contingent upon compliance with certain standards.

Box 13: Mozambique – Multi-Tiered Approach to Regulating Service Providers

To reach the whole country, AURA – Mozambique's regulatory agency – applies a two-tiered approach, with three regimes for WSS regulation: direct, indirect and consultative.

I. AURA *directly* regulates 19 primary systems in the urban capitals owned by the Water Supply Investment and Assets Fund (FIPAG), a public WSS asset holder. AURA sets the standards for these service providers, gathers reports, and directly audits service delivery performance. To achieve decentralisation of regulation enforcement, the direct regulation is carried out by AURA local agents, known as ALC.
II. *Indirect regulation* is applied in 130 secondary systems, where the Water Supply and Sanitation Infrastructure Administration (AIAS) is the asset holder. In this regime, AURA sets the standards and guidelines for service provision, but Local Regulatory Commissions (CORAL) enforce regulations. CORAL were established as an instrument of decentralisation to promote an effective partnership between AURA and the local authorities.
III. *Consultative regulation* is applied for systems where local governments are the asset holders, but they delegate service provision to private operators. In this case, the elaboration of regulatory instruments is the municipality's responsibility, with AURA intervening only if requested.

This overall model has improved decentralisation and allowed AURA to get closer to consumers. It has been categorised as *promising* and *adequate* to ensure WSS regulations enforcement in countries with large extensions of territory, such as Mozambique.

Efforts to regulate small-scale providers are often most effective when paired with initiatives to professionalise and formalise service providers. As stated above, the limited professionalisation or formalisation of smaller, deconcentrated service providers is a common constraining factor impeding their effective regulation. Accordingly, it is unsurprising that steps to begin meaningfully regulating small-scale service providers have often proved most effective when coupled with measures to increase service providers' level of professionalisation and formalisation. Promising steps in this area are seen for onsite sanitation services in urban and peri-urban areas in several countries. For example, in parallel with developing and applying regulations for faecal sludge management services in countries such as Uganda, Zambia, and Senegal, regulatory authorities and other national stakeholders (with donor support) have engaged with small private enterprises to help them operate more formally. Efforts include a diverse set of measures such as:

I. Training on regulations and how to comply.
II. Ongoing capacity building support.
III. Provision of equipment or supplies to enable providers to meet regulatory requirements (i.e., for the use of personal protective equipment).
IV. Facilitating access to financing or business support services to improve general business practices such as accounting and data collection that are fundamental to providers' ability to comply with regulations.

5.2. REGULATED SERVICE DELIVERY TYPES

Greater emphasis is given to regulating water supply services than sanitation. Many countries' overall regulatory arrangement and the activities of most regulatory actors are biased toward regulating water supply service delivery, with sanitation often receiving considerably less attention. Figures 15 and 16 show continent-wide and region-by-region performance in the development and application at scale of regulations or standards and guidelines for four core WSS service delivery types:[8]

I. Networked piped water supply.
II. Point water sources.
III. Sewered sanitation.
IV. Onsite sanitation.

They are based on a three-point traffic light scoring scale,[9] and Annex 7 details the score for each country for each service delivery type investigated. This three-point scale represents a simplification of the situation within individual countries. However, these figures highlight the bias towards water supply services in general as well as the bias towards the conventional service delivery types of piped water supply and sewered sanitation. Box 14 details how Ghana's regulatory arrangement is biased towards water supply services.

Box 14: Ghana – A Regulatory Arrangement Biased Towards Urban and Peri-Urban Water Supply Services

Ghana's regulatory arrangement for WSS service delivery is principally based on **regulation by agency** with **regulation by contract** and **ministerial regulation** also applied. The regulatory mandates and powers of key regulatory actors are largely well-established through a series of comprehensive legal instruments. However, as is the case in many African countries, regulatory activities are overwhelmingly focused on the urban and peri-urban piped water supply services Ghana Water Company Limited provides, with other sub-sectors, service providers, and service delivery types not receiving sufficient attention.

The Public Utilities Regulatory Commission (PURC) is a multi-sectoral regulatory agency with a comprehensive set of powers and a mandate that covers the regulation of Ghana's public utilities. The PURC has developed and applies an expansive set of regulatory mechanisms to the piped water supply services provided by Ghana Water Company Limited. These cover standards and guidelines, monitoring and performance reporting, regulation by incentives, and sanctions.

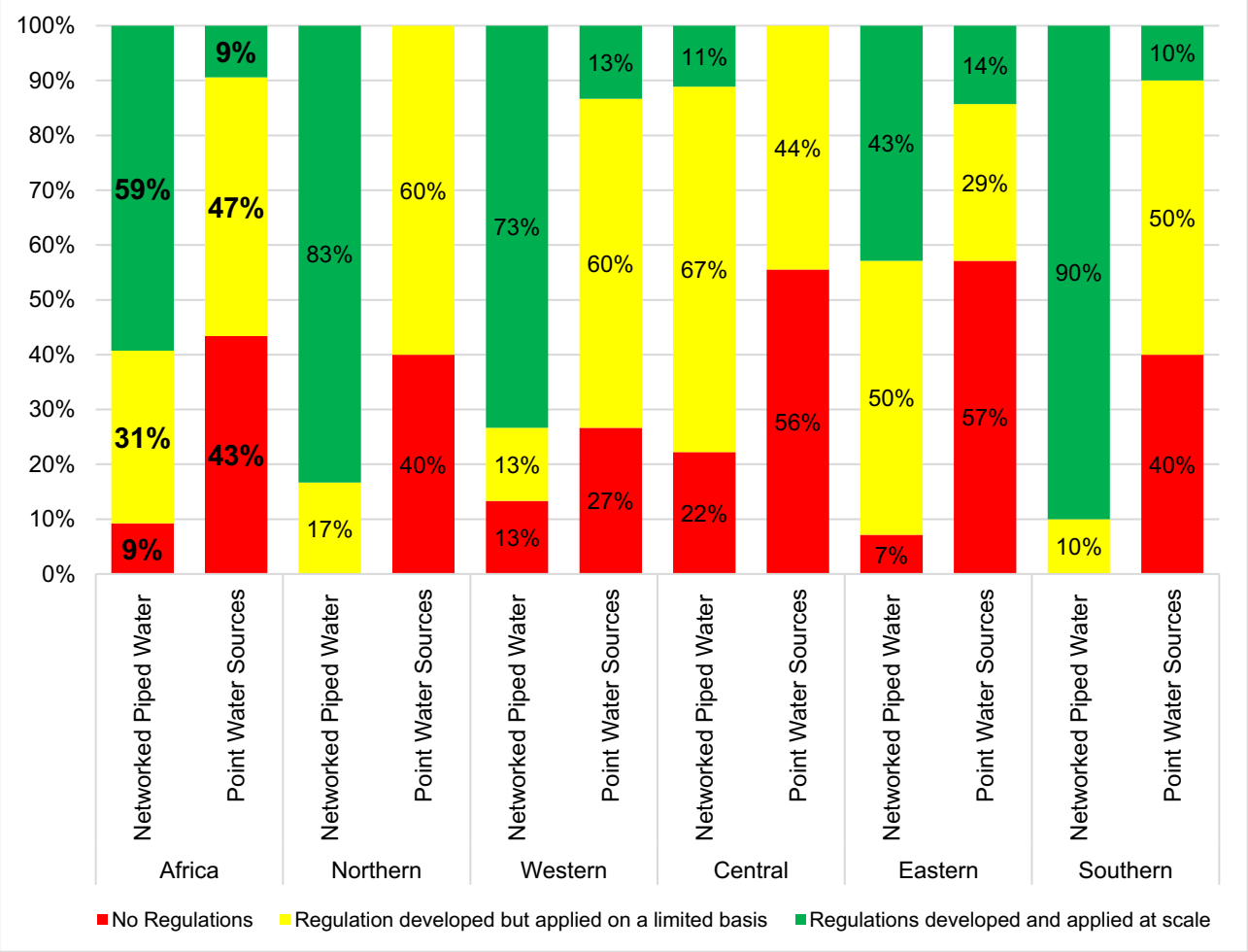
Critically, however, other service providers such as the Community Water and Sanitation Agency, Metropolitan, Municipal, and District Assemblies (MMDAs), private water operators, water committees, and private vacuum tankers are regulated by other actors. Of note, Ghana's MMDAs hold several important regulatory responsibilities, including

[8] Other service delivery types such as household water supply, water tankers, packaged water, and communal sanitation are not included in this report but are mentioned in the country reports where particular progress has been made in developing regulations or standards and guidelines and other regulatory mechanisms.
[9] Scoring: 0 = There are no regulations for this type of service provision; 1 = Regulations developed but rarely applied or only applied on a limited basis; 2 = Regulations developed and applied at scale.

developing and enforcing by-laws for drainage and sanitation, regulating private sanitation service providers, and oversight over and tariff approval for water committees. MMDAs perform a considerably more limited set of activities than the PURC. This has resulted in the regulatory mechanisms that exist for other WSS service providers (i.e., water committees, MMDAs, private vacuum tanker operators) and service delivery types (i.e., point water sources, onsite sanitation) not being applied in a structured or consistent manner and, ultimately, not being meaningfully regulated.

Networked piped water supply services are often the focus of regulatory activities, with few countries regulating point water sources at scale. Most regulatory actors focus on the piped water supply services provided by the main service providers in their country (i.e., a national utility), with other water supply service delivery types such as point water sources regulated to a considerably lesser extent, if at all. Figure 15 provides an overview of the progress made across Africa and each region in developing and applying regulations or standards and guidelines for piped water supply and point water sources. [10] It shows how across Africa, 59% of countries are regulating networked piped water supply services at scale compared to just 9% for point water sources. The progress regulating each service delivery type varies considerably among regions. Southern Africa is the best-performing region for networked piped water supply (90% of the countries apply regulations at scale). Central Africa, on the other hand, has made the least progress, with 11% and 0% of the countries regulating networked piped water supply and point water sources at scale, respectively. Although significant challenges remain, Tanzania, Botswana, Rwanda, Senegal and Cape Verde stand out as good examples in the development and application of regulations and oversight for point water sources. Tanzania, for example, has a provision within its regulatory framework to ensure that water quality is being monitored by the Water Authority in those areas where the utility cannot reach with networked piped water supply (see Box 15).

Figure 15: Percentage of Countries Regulating Piped Water Supply and Point Water Sources by Region



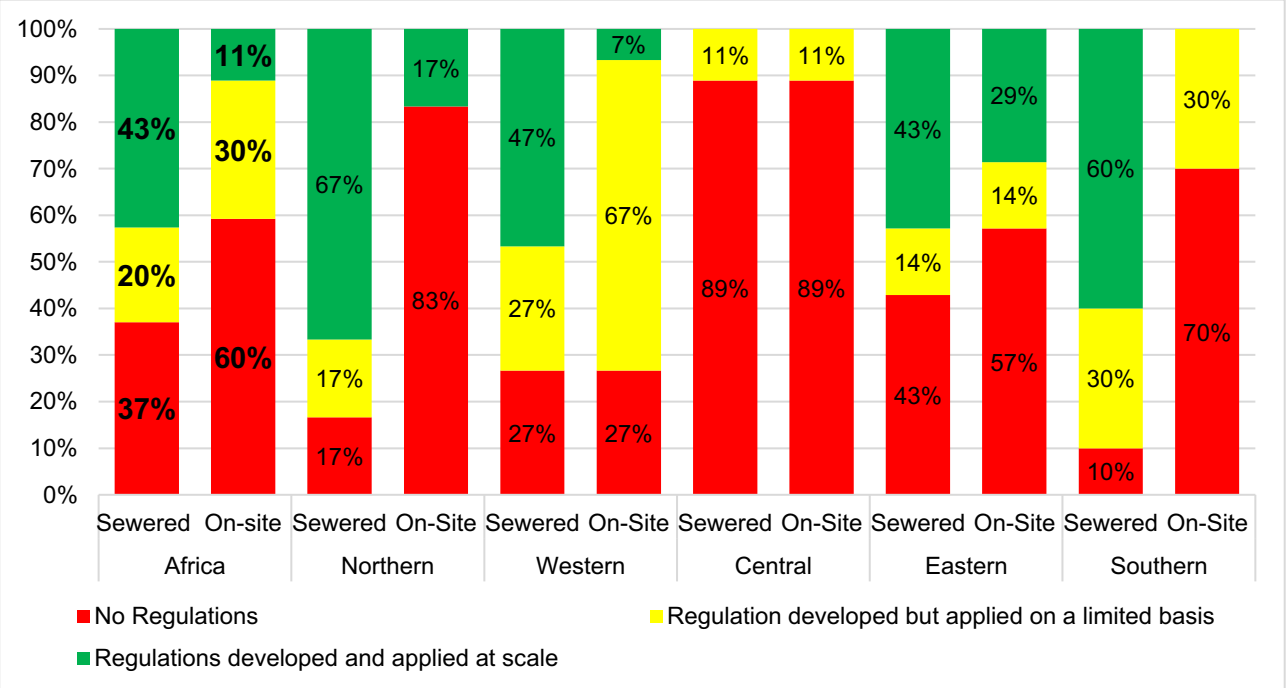
[10] For Tunisia, Morocco and Algeria, even though the mandate of the regulator includes both networked piped water supply and point water sources, it was not possible through this study to identify the extent to which these regulations are being applied.

Box 15: Tanzania regulatory arrangements for non-conventional water sources

Although significant challenges persist (i.e., in regulating small informal providers in peri-urban areas), Tanzania is one of the few African countries that has taken several steps to regulate water supply sources other than networked piped water supply. Informal water supply providers, such as water tankers and private boreholes, exist in areas where the water utility has not been able to reach. Even if these are not directly regulated by the Energy and Water Utilities Regulatory Authority, the main regulatory actor, they must be registered under the Water Authority, which is in charge of monitoring the water quality standards. In this regard, in 2013, the Energy and Water Utilities Regulatory Authority issued Guidelines for Regulation of Water Tanker Services and Guidelines for Regulation of Private Boreholes Services. Following implementation of the Guidelines in selected service areas, the Guidelines have been reviewed and Rules have been prepared for application in service areas of all water utilities. With regard to water kiosks, they are required to operate in accordance with Guidelines for Operation and Management of Water Kiosks issued by the Energy and Water Utilities Regulatory Authority.

Less progress has been made regulating sanitation services compared to water supply and regulatory activities principally focus on sewered sanitation. Figure 16 highlights relative progress across Africa and each region in developing and applying regulations at scale for sewered and onsite sanitation. Regulations or standards and guidelines have been developed for key aspects of onsite sanitation in just 39% of the countries and are being applied at scale in only 11%. While pressing gaps remain, slightly better progress is evident for sewered sanitation, with 63% of countries having developed regulations or standards and guidelines and 43% of countries applying these at scale. This discrepancy between sewered and onsite sanitation occurs despite sewered sanitation serving just 13% of Africa's population, compared to the 47% of Africans that use onsite sanitation facilities of varying levels of quality. Central Africa stands out as having made the least progress. Although some upper-middle-income Central African countries have invested considerable resources in increasing the sewerage network (i.e., Gabon, Equatorial Guinea), these services are still highly unregulated and majorly subsidised by the government.

Figure 16: Percentage of Countries Regulating Sewered and Onsite Sanitation by Region



Several factors can cause or contribute to regulatory activities being focused on conventional service delivery types and especially networked piped water supply. There is no one single factor causing the greater emphasis on regulating water supply services over sanitation and the focus on 'conventional' service delivery types (piped water supply, sewered sanitation). Indeed, across the continent, a diversity of often mutually reinforcing factors are evident. Four core factors standout:

I. **Limited Prioritisation of Sanitation.** Water supply services are usually prioritised over sanitation, with many governments focusing their efforts on developing water projects over sanitation (Monstadt

& Schramm, 2017).This prioritisation of water supply service provision often transfers across to the development of regulations and regulatory mechanisms as well as the relative emphasis given by regulatory actors in applying these.

II. ***Regulatory Mandates.*** Regulatory mandates and functions are often more clearly defined for water supply over sanitation as well as for the national or regional utilities that mainly provide networked piped water services over other WSS service providers. The lack of clear regulatory mandates for non-conventional service delivery types means there is often an insufficient legal backing to enable or promote effective regulation.

III. ***Historical Service Delivery Type Bias.*** The WSS sector has, since the early 20th century, been focused on implementing networked piped water supply systems and sewered sanitation. These service delivery types have historically been considered 'best-practise' in developed countries and replicated in other contexts without allowing for modification. Consequently, formal institutions, planning documents, strategies and regulations have often reflected aspirations that follow these models (Monstadt & Schramm, 2017). Although important conversations around the importance of considering all technologies and service delivery types has now been around for several years, in many countries, the historical service delivery type bias prevails. Linked to this, training resources and capacity building initiatives have often been skewed towards conventional service delivery types, neglecting non-conventional technologies.

The growing momentum around regulating onsite sanitation in several countries is a promising and crucial development. Despite the fact that most African countries rely on on-site sanitation facilities, greater progress has been made in developing and applying regulations for sewered sanitation. However, Tanzania, Mauritius, Seychelles, Rwanda, Senegal, and Egypt have developed regulatory mechanisms for on-site sanitation across most aspects in the sanitation service chain and are applying these at scale.[11] Rwanda provides a particularly interesting case-study in regulating on-site sanitation at scale as, while gaps remain, it is one of the few countries with a long-standing track record of prioritising the regulation of onsite sanitation (see Box 16).

Box 16: Rwanda's Inclusive Regulatory Arrangements for Different Sanitation Solutions

Rwanda far outperforms most African countries in sanitation provision (69% of the population access at least 'basic' sanitation), especially considering its relative level of economic development. This success is reflected in Rwanda's approach of reaching all with onsite sanitation services. As a result, Rwanda has nearly eliminated open defecation, and the vast majority of the population (96%) utilises on-site facilities of varying levels of quality. This pragmatic approach is reflected in Rwanda's regulation of sanitation services.

Unlike many African countries that place greater emphasis on sewered sanitation, Rwanda has focused on regulating the onsite sanitation solutions used by an overwhelming majority of its population. Although some gaps exist, the following comparatively comprehensive arrangements have been developed across the service chain:

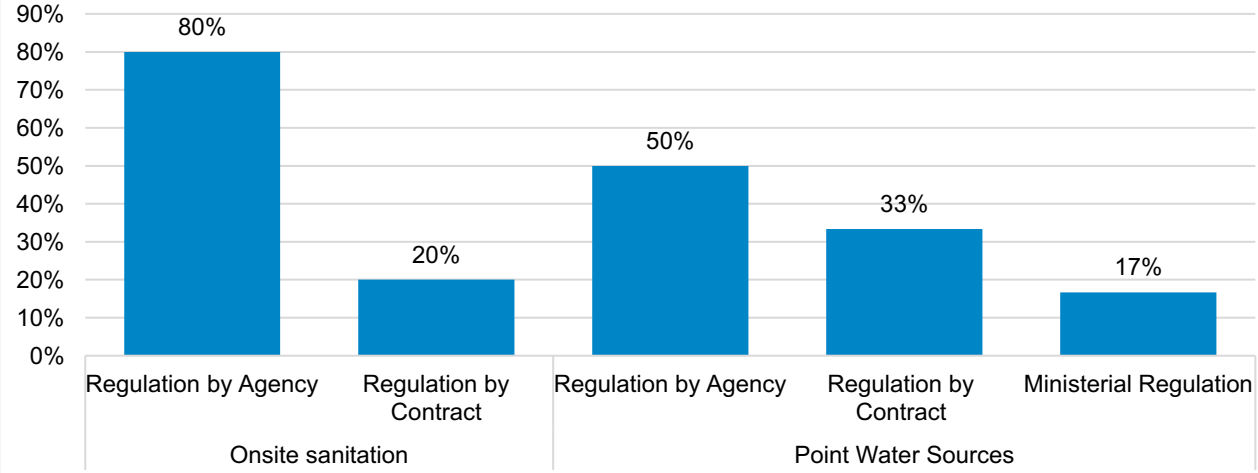
- **Containment.** Districts act as regulators, providing standards for on-site sanitation facilities and septic tanks. To enforce such regulations, households are required to get construction permits.
- **Emptying and Transportation.** Service providers can be municipalities or the private sector through contracts with the districts. The Rwanda Utilities Regulatory Authority regulates emptying and transportation services, and several key performance indicators are included in the contracts signed by the district with private service providers. Some gaps exist, including the absence of manual or portable pump emptying services in regulations and tariffs for emptying are unregulated.
- **Treatment.** Districts are the service providers. Dedicated faecal sludge treatment plants do not exist. Nevertheless, the Rwanda Environmental Management Authority monitors the treatment process and effluent quality and pre-treatment effluent quality. The main regulatory instruments used include licences issued by the Rwanda Environmental Management Authority that govern decentralised wastewater treatment. Standard operating procedures for faecal sludge treatment are missing.
- **Re-Use.** A Ministry of Agriculture permit is required to re-use sludge or treated wastewater. However, treated sludge or wastewater re-use is not currently practised.

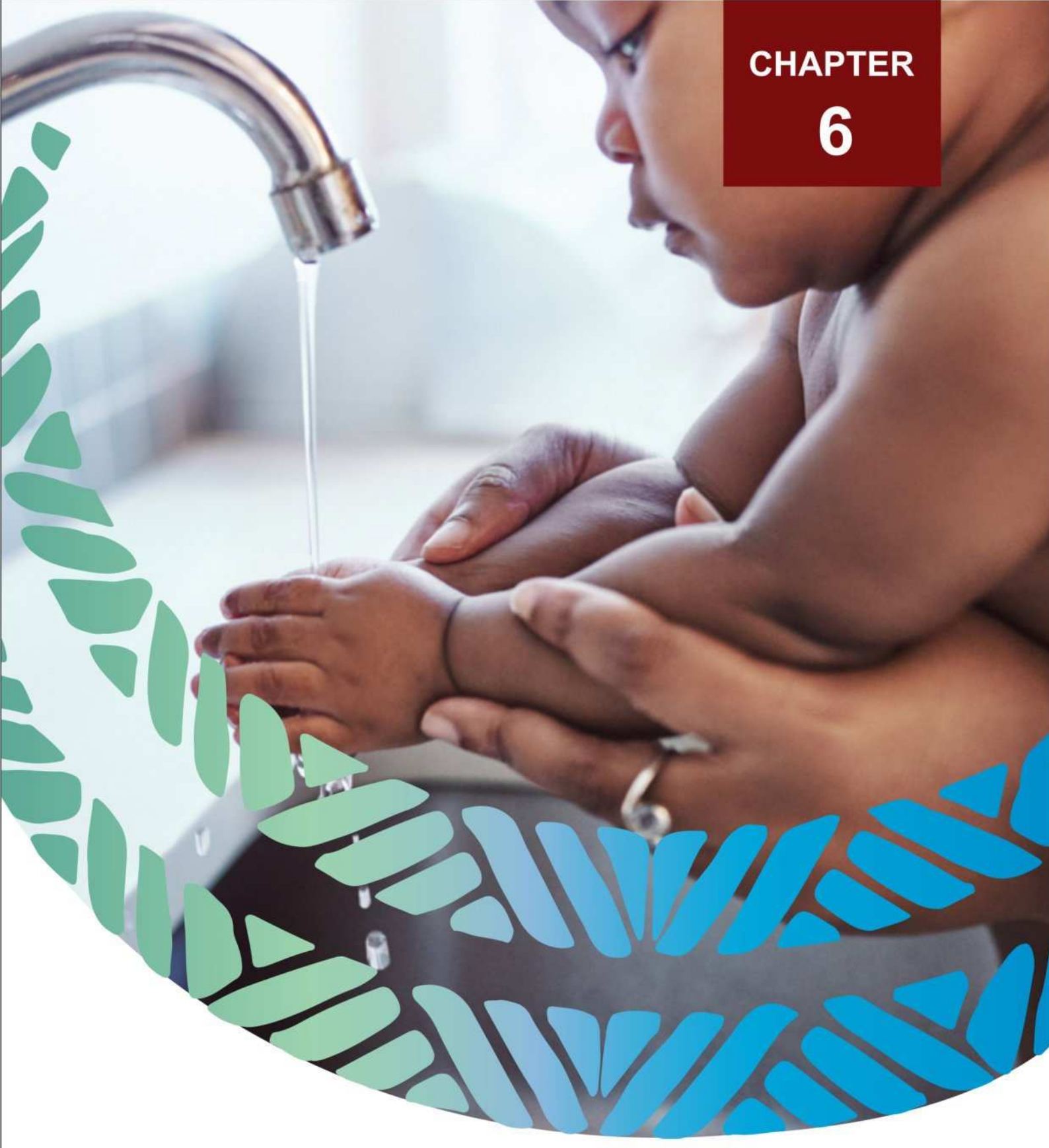
[11] Major challenges do, nevertheless, remain in ensuring adequate service delivery performance. For example, ensuring the formalisation of on-site sanitation service providers (i.e. vacuum tankers, manual pit emptiers), enforcing and monitoring technical parameters of sanitation facilities, ensuring the quality of sludge treatment and regulating the potential re-use of sub-products from the treatment process.

Rwanda has also developed a draft policy document that includes the principles of City-Wide Inclusive Sanitation to tackle urban sanitation comprehensively, considering all the stages of the sanitation service chain and further regulatory developments to improve sanitation service delivery.

Regulation by agency and – to a lesser extent – regulation by contract, are the regulatory models where the greatest progress has been made in regulating onsite sanitation and point water sources. Figure 17 shows the regulatory model for the six separate countries regulating on-site sanitation and point-water sources at scale, respectively. It highlights that regulation by agency is the predominant regulatory model in 80% of the countries where onsite sanitation services are regulated at scale and 50% of countries where point water sources are regulated at scale. Figure 17 also highlights that regulation by contract is the predominant regulatory model in 20% of the countries where onsite sanitation services are regulated at scale and 33% of countries where point water sources are regulated at scale. This relationship is telling as 37% of African countries are applying regulation by agency and 28% are applying regulation by contract (see Table 6). Nevertheless, the overall sample of African countries regulating onsite sanitation (six) and point water sources (six) at scale is too low to draw firm conclusions.

Figure 17: Regulatory Models and the Regulation of On-Site Sanitation and Point-water Sources





CHAPTER

6

REGULATORY MECHANISMS

ESAWAS
REGULATORS ASSOCIATION

6. REGULATORY MECHANISMS

A regulatory mechanism is an intervention or process used by a regulatory actor to guide and influence the behaviour and performance of key stakeholders within the WSS sector, including service providers. The existence of 16 individual regulatory mechanisms were examined across four areas:

I. ***Standards and Guidelines.*** Whether standards and guidelines have been developed for quality of service, tariff setting, planning and reporting, citizen involvement, and environmental protection, and whether developed standards and guidelines adequately consider pro-poor aspects.
II. ***Monitoring and Performance Reporting.*** Whether there is adequate monitoring and reporting by service providers and the regulatory authority, and whether an appropriate set of service quality, economic efficiency and operational sustainability indicators are tracked.
III. ***Incentives.*** Whether regulatory authorities are applying financial and reputational incentives to WSS service providers.
IV. ***Sanctions.*** Whether regulatory authorities can suspend or remove the license of WSS service providers and apply fines to WSS service providers for breaching regulations.

Table 11 details the 16 regulatory mechanisms investigated across these four areas. For each of these, a simple Yes or No grading was utilised to enable the aggregation of country findings to the regional and continent-wide levels. Consequently, noteworthy variations do exist in the performance against each of these aspects for countries that have received the same score. Explanations and illustrative examples of these differences are presented throughout this section. It is critical to note that this assessment principally focused on the existence of these regulatory mechanisms in relation to the primary regulated WSS service providers in each country (i.e., national utilities, large private operators) rather than for smaller, deconcentrated and sometimes informal service providers such as water committees or private vacuum tanker operators and pit emptiers. As is highlighted throughout this section, a considerably less developed set of regulatory mechanisms have been developed for these types of service providers and the services they provide.

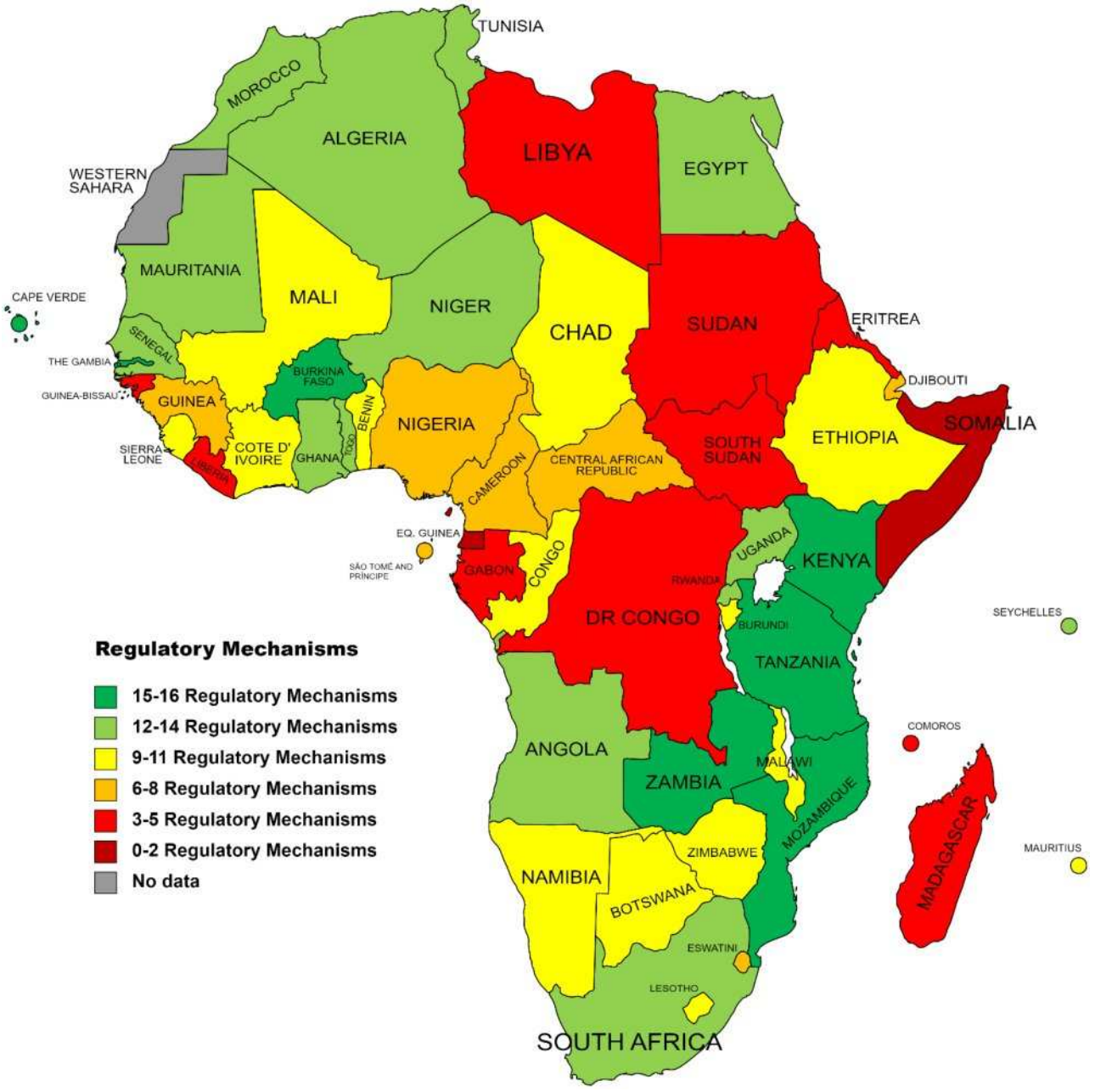
Table 11: Regulatory Mechanisms Examined

Regulatory Mechanism	Aspect
Standards and Guidelines	Whether standards and guidelines exist for **service levels** and **water quality**.
	Whether standards and guidelines exist for **tariff rates, tariff setting** and **tariff adjustments**.
	Whether standards and guidelines exist for the **planning** activities of WSS service providers (i.e., business planning, financial projections, accounting, annual reporting).
	Whether standards and guidelines exist for **citizen involvement** and **complaints mechanisms**.
	Whether standards and guidelines are designed to help ensure **poorer** and **potentially marginalised** populations receive affordable services.
	Whether standards and / or guidelines exist for **environmental protection**.
Monitoring and Performance Reporting	Whether appropriate **quality of service** indicators are periodically tracked by the regulator.
	Whether appropriate **economic efficiency** indicators are periodically tracked by the regulator.
	Whether appropriate **operational sustainability** indicators are periodically tracked by the regulator.
	Whether regulated service providers regularly (i.e., annually) **submit reports** and **data** to regulatory actors.
	Whether regulatory actors annually **inspect** and **audit** regulated service providers.
	Whether annual **reports are** produced on sector and regulated **service provider performance**.
Incentives	Whether regulatory actors use **financial incentives** to promote improved service provider performance.
	Whether regulatory actors use **reputational incentives** to promote improved service provider performance.
Sanctioning	Whether regulatory actors have the ability to issue **fines** to service providers.
	Whether regulatory actors have the ability to **suspend**, **remove**, or **transfer** service provider licenses.

Varying levels of progress have been made across Africa in developing and applying regulatory mechanisms for WSS service provision. Annex 8 details the performance of each African country against these 16 mechanisms. Figure 18 provides a summary of each country's performance concerning the development and application of 16 regulatory mechanisms across these four areas. It highlights substantial variations in performance across African countries. Overall, 7 countries (13%) have developed 15 or 16 of the regulatory mechanisms investigated, 14 (26%) have developed 12 to 14, 14 (26%) have developed 9 to 11, 7 (13%) have developed 6 to 8, 11 (20%) have developed between 3 and 5, and 2 (4%) have developed 0 to 2.

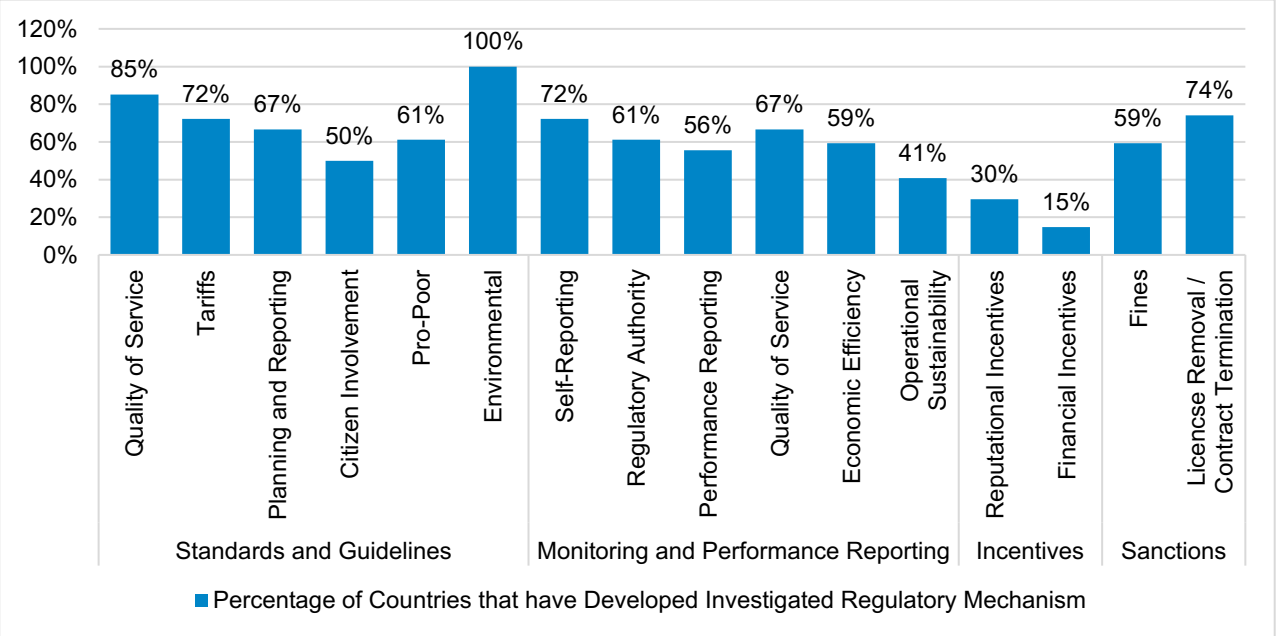
Burkina Faso, Cape Verde, the Gambia, Kenya, Mozambique, Tanzania, and Zambia stand out as the countries that have made the greatest progress in developing and applying regulatory mechanisms. Conversely, the greatest challenges exist in the Congo Republic, the DRC, Eritrea, Equatorial Guinea, Guinea-Bissau, Gabon, Libya, Somalia, South Sudan, and Sudan.

Figure 18: Overview of Regulatory Mechanisms for Water Supply and Sanitation Service Provision



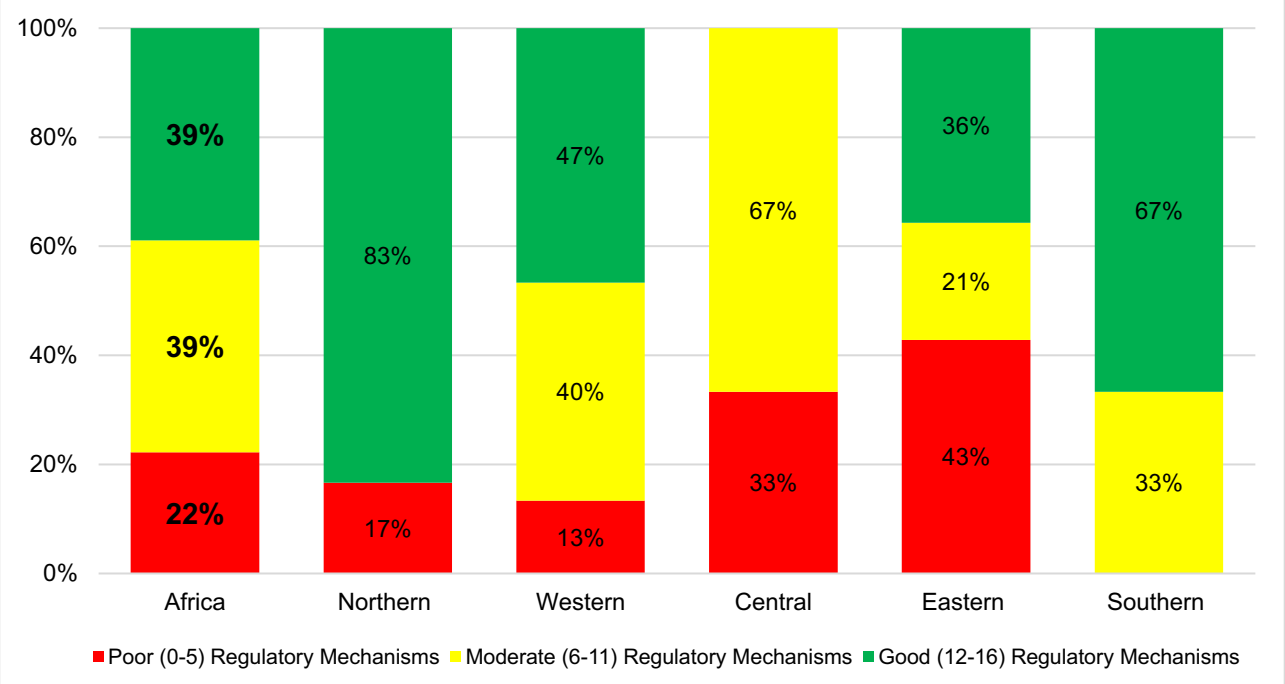
Significant variations exist in the development and application of each of the 16 investigated regulatory mechanisms. Figure 19 details the percentage of the 54 African countries included in this study that have developed each of the 16 regulatory mechanisms investigated. It highlights that the greatest progress has been made in the area of standards and guideline development and especially standards for environmental protection (100% of countries) and quality of service (85%). Important progress is also evident regarding the ability of regulatory actors to sanction service providers; however, these sanctioning powers are rarely utilised in most countries (see Sub-Section 6.4.). The greatest challenges are evident in regulation by incentives, with only 30% and 15% of countries utilising financial and reputational incentives, respectively. Widespread challenges are also evident concerning regulatory actors tracking an appropriate set of operational sustainability indicators (41%), performance reporting (56%), and development of standards and guidelines for citizen involvement (50%) and pro-poor aspects (61%).

Figure 19: Regulatory Mechanisms for Water Supply and Sanitation Service Provision



Significant regional variations exist in the progress made developing and applying regulatory mechanisms for WSS service provision. Figure 20 notes the percentage of countries across Africa and each region that have developed either a poor (0 to 5), moderate (6 to 11) or good (12 to 16) set of regulatory mechanisms. It highlights considerable variations in performance among regions. Of note, Central Africa performs considerably worse than any of the other regions, while broadly comparable performance is evident across Western and Southern Africa. The best performance is evident in Northern Africa.

Figure 20: Regulatory Mechanisms for Water Supply and Sanitation Service Provision – Regional



Where a comprehensive set of regulatory mechanisms have been developed and are effectively applied, this has typically followed an iterative process over many years. When enacted, legal instruments immediately empower existing, or newly established, regulatory actors with an extensive set of regulatory responsibilities and functions. It usually takes regulatory actors many years following the enactment of legal instruments to properly fulfil their functions. Several reasons exist for this, including the substantive processes of building the requisite human and financial capacities, formulating context-specific regulatory tools, and developing acceptance for regulatory activities that, in some cases, can face significant political

push-back. For example, the Water Regulator of Namibia was established in 2017 following a 2013 legal instrument that specified its overall mandate and top-level functions (i.e., tariff and operational target setting, monitoring, advising government). However, five years later, the Water Regulator of Namibia is largely not performing these functions, and, in the meantime, several actors perform responsibilities originally earmarked for it. In fact, no African regulator has developed and properly operationalised a set of regulatory mechanisms that fully realise their intended impacts. This will always be an evolutionary process that must respond to changing sector priorities and capabilities. Nevertheless, many older dedicated regulatory actors have benefitted from being in place for several years or even decades and progressively developing and applying a more expansive set of regulatory mechanisms. For example, Kenya's Water Services Regulatory Board has made impressive progress regulating licensed service providers and recently published guidelines setting out its ambitions for the provision and regulation of services in rural and underserved areas. Zambia also provides an illustrative example of this (see Box 17).

Box 17: Zambia's Regulatory Mechanisms that Evolved Over Time

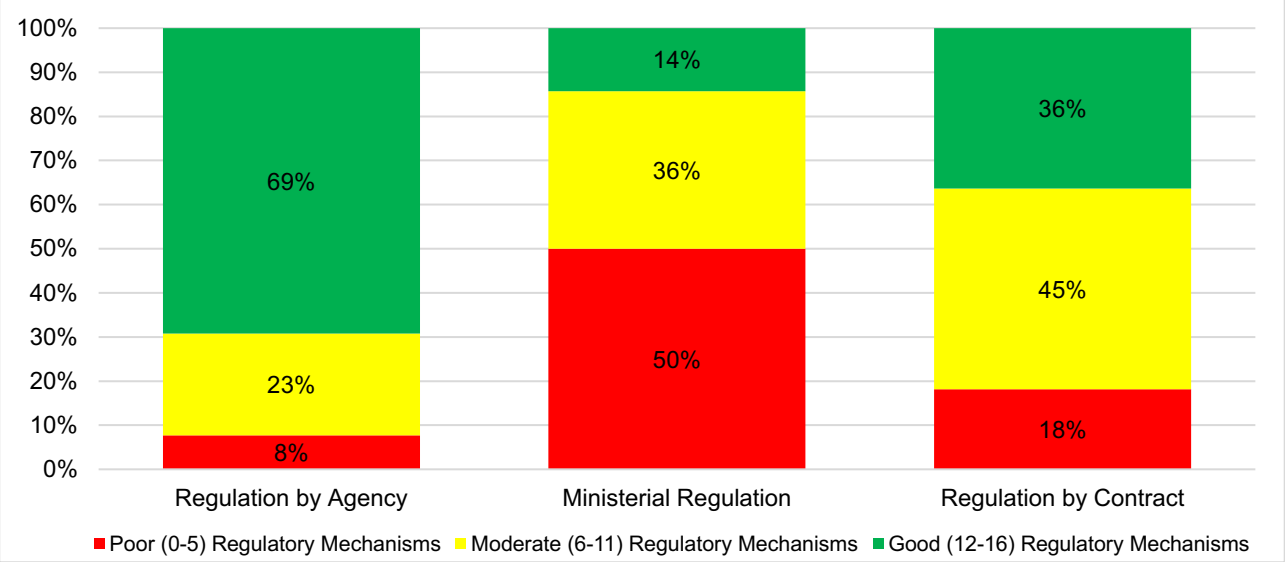
Zambia has a well-developed regulatory arrangement for WSS service provision, based on **regulation by agency**. The National Water Supply and Sanitation Council (NWASCO) is an autonomous regulator solely responsible for WSS regulation, and its existence as a dedicated regulatory actor solely focused on WSS has helped to ensure that WSS regulation receives the required attention to facilitate its effective application. NWASCO has developed and applies an impressive set of regulatory mechanisms that span standards and guidelines, monitoring and performance reporting, regulation by incentives, and sanctions and enforcement. NWASCO's powers are set out in the Water Supply and Sanitation Act, 1997, and the legal backing for these has not changed in 25 years. Nevertheless, NWASCO's performance of its regulatory responsibilities for WSS service provision has evolved over the last two decades, with increasing capacity, a growing range of regulatory mechanisms and the focus of activities being refined over time. Key milestones in this process include:

I. 2002 – Development of guidelines for 11 areas.
II. 2004 – Introduction of measures to ensure consumer involvement in the tariff setting process.
III. 2005 – Utilisation of part-time inspectors to enhance the monitoring of commercial utilities.
IV. 2008 – Introduction of regulation by incentives.
V. 2011 – Establishment of NWASCO Resources and Knowledge Centre.
VI. 2017 – Launch of the MyWhatSan Quick Fix complaints resolution platform.
VII. 2018 – Development of frameworks for the provision and regulation of rural WSS and urban onsite sanitation.

Arrangements where regulation by agency is the predominant form have generally made the greatest progress in developing and applying regulatory mechanisms. Figure 21 presents the average number of regulatory mechanisms in place for each regulatory model (disaggregated according to the primary regulatory model) applied in more than 10 countries.[12] It shows how no one predominant regulatory model is associated with the development and application of a comprehensive set of regulatory mechanisms in all instances. The development of a certain regulatory arrangement or the application of a given regulatory model does not guarantee effective WSS regulation. Nevertheless, **regulation by agency performs considerably better** than the other regulatory models, with 69% countries where this is the predominant regulatory model having developed at least 12 of the 16 of the investigated regulatory mechanisms. Equally notably, only one country (Liberia) where the predominant regulatory model is regulation by agency has developed five or less of the investigated regulatory mechanisms. Conversely, ministerial regulation performs the worst, with just 14% of the countries where this is the predominant regulatory model having developed at least 12 of the 16 investigated regulatory mechanisms and 50% of countries having developed five or less. Regulation by contract performs more moderately, with 45% of countries where this is the predominant regulatory model having developed at least 12 regulatory mechanisms.

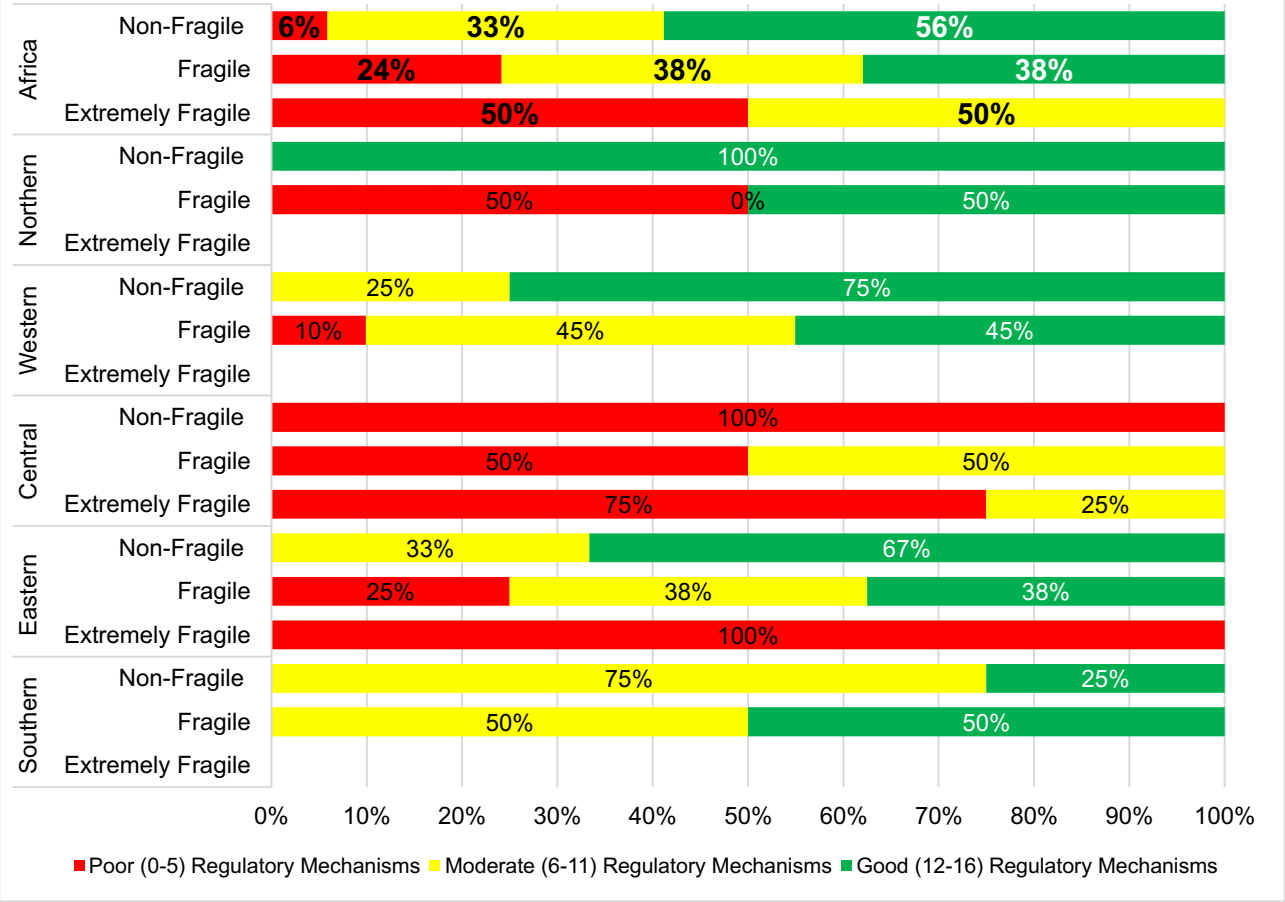
[12] Self-regulation is not included in Figure 21 because it is predominant regulatory form in just one country.

Figure 21: Regulatory Mechanisms for Water Supply and Sanitation Service Provision – Predominant Regulatory Form



The degree of fragility impacts the development and application of regulatory mechanisms significantly. Figure 22 details each country's degree of fragility (as measured by the OECD Fragility Framework) and compares this against the number of the 16 investigated regulatory mechanisms that have been developed. This shows a clear linkage between the degree of fragility and the development of regulatory mechanisms. Most notably, 50% of countries classified as 'extremely fragile' have developed just 0 to 5 of the investigated regulatory mechanisms compared to 24% and 6% for countries classified as 'fragile' and 'non-fragile', respectively. Conversely, 56% of non-fragile countries have developed 12 to 16 of the investigated regulatory mechanisms and a further 33% have developed 6 to 11.

Figure 22: Regulatory Mechanisms for Water Supply and Sanitation Service Provision – Fragility



The following sub-sections provide more specific information on the development and application of regulatory mechanisms across the four areas investigated:

I. Standards and guidelines.
II. Monitoring and performance reporting.
III. Regulation by incentives.
IV. Sanctioning.

6.1. STANDARDS AND GUIDELINES

Standard and guideline development represents the category of regulatory mechanisms where the greatest progress has been made across Africa, albeit with several pressing gaps remaining. For this area of regulatory mechanism, the study focused on whether standards and guidelines have been developed for five areas (service quality, tariff setting, planning and reporting, citizen involvement and complaints, environmental protection), as well as whether separate guidelines have been developed on pro-poor aspects, or if pro-poor considerations are evident across other standards and guidelines. No attempts were made to investigate the degree to which these standards and guidelines were being complied with or enforced. Table 12 details whether each African country included in the study has developed standards and guidelines for each of the six areas investigated.

Overall, standards and guideline development represents an area of moderate to good performance across most countries, with the average country having developed at least 4 of the six aspects of standards and guidelines investigated. Nevertheless, two sets of broad challenges remain:

I. ***Variance among Countries and Regions.*** Considerable variations exist among countries and regions in developing appropriate standards and guidelines. Many countries and regulators have made impressive progress developing standards and guidelines, with 21 countries having formulated these across all six areas investigated. Conversely, nine countries have developed standards and guidelines for two or less of the aspects studied. The most progress has been made in developing standards and guidelines in Northern Africa (average of 5 of the six aspects of standards and guidelines investigated developed), followed by Southern, Eastern, and Western Africa, all with an average of 4. Conversely, as with each of the other sets of regulatory mechanisms investigated, Central Africa performs the least (average of just 3), with especially poor performance in the Central African Republic, Chad, the DRC, and Equatorial Guinea.
II. ***Variance between Service Providers and Service Delivery Types.*** As sub-sections 5.1. and 5.2. highlighted, regulatory activities across Africa are primarily orientated to the main WSS service providers in most countries and the piped water supply and sewered sanitation services they provide. This is reflected in the standards and guidelines developed. For example, while onsite sanitation is receiving increased attention from regulatory actors in many countries, important gaps typically exist in the standards and guidelines developed for the different stages of the sanitation service chain.

Box 18: Mauritania's Specifications for Delegated Drinking Water Service Provision

The Regulatory Authority in charge of regulating the water supply sector in Mauritania developed standard specifications for delegating drinking water service provision in 2008. This document is used as a basis for structuring the delegated contracts with private operators managing piped water schemes in rural areas and includes specifications related to the following key aspects governing private sector participation:

- Duration modification and termination of the delegation.
- Obligations of the delegated service provider (operation and maintenance, relations with users, expenditures under its responsibility, bookkeeping, reporting and staffing).
- Obligations of the Mauritanian Government (sector Ministry, the regulatory agency and the municipalities).
- Financial arrangements (annual budgeting, water tariff setting and revisions, service provider investments).
- Arrangements for private connections (demand and financing, organisation or works).
- Audits and conflict resolutions (auditing of the accounts, conflict resolution).

Although these specifications only apply to a small proportion of rural piped water schemes in Mauritania (serving 7% of the rural population), this is an example of clear and comprehensive standards and guidelines annexed to delegated contracts and publicly available.

The greatest progress has been made in developing environmental protection standards, while comparatively limited progress has been made in formulating standards and guidelines in several other areas. The most progress has been made in developing standards and guidelines for environmental protection, with 100% of countries having developed standards and guidelines addressing this aspect of regulation. This is followed by quality of service (85%) and tariff setting (72%). Notably less progress has been made concerning standards and guidelines for planning and reporting (67%), citizen involvement and complaints (50%), and either formulating separate guidelines explicitly focused on pro-poor aspects or ensuring pro-poor considerations are made across standards and guidelines (61%). Box 18 details Mauritania's specifications for delegated drinking water service provision, while Box 19 details the wide-ranging standards and guidelines developed in Ghana for key aspects of WSS service provision (focusing on steps taken to reduce economic inequities in water supply services).

Box 19: Ghana – Pro-Poor Guidelines and Water Fund

Ghana has developed an extensive set of standards and guidelines for various aspects of WSS service provision, including quality of service, tariff setting, environmental protection, citizen involvement and complaints, and planning and reporting. As is the case in many African countries, some measures and guidelines are embedded across these to address important pro-poor aspects. For example, urban water supply tariffs are set by Ghana's multi-sectoral regulatory agency, the Public Utilities Regulatory Commission (PURC), based on a rising block tariff designed to ensure low-income households are not priced out of the services provided by Ghana Water Company Limited.

Ghana has gone a step further than most African countries in this area, with the PURC developing a Pro-Poor Water Fund and formulating 2018 Guidelines and Procedures for Accessing Pro-Poor Water Funds. The overall objective of this fund is to reduce the burden for those who face the greatest deprivation in water supply, particularly those spending a high proportion of their household income on water purchased from secondary and tertiary suppliers. Applications are judged on a series of technical, financial, managerial, innovation and learning criteria, and the pro-poor guidelines are based on several guiding provisions:

I. **Rigorous Selection and Assessment.** The policy requires grants to follow a transparent selection procedure based on a thorough screening, review and approval process.
II. **Recipients.** Grants are only provided to local communities in which access to potable water is a challenge.
III. **Exclusions.** Grants are not extended for activities normally supported by other NGOs or Foreign donors.
IV. **Consultation and Coordination.** Proposed interventions in a specific district or community require full consultation and close coordination with the concerned community involved in the proposed project.
V. **Approval Mechanism.** All amounts earmarked for disbursement under the grant require the approval of the PURC Board.

Significantly, efforts to increase the financial equitably of water supply services are built into institutional arrangements for water supply service provision. Of note, the Public Utilities Regulatory Commission (Amendment) Act, 2010 (Act 800) specifies that 20% of the PURC's levy is to be used for pro-poor water programmes, while Ghana Water Company Limited has established low-income consumer support units and dedicated departments focused on water supply services in low-income areas. Ultimately, efforts in this area have been shown to impact the financial equitably of services.

Table 12: Standards and Guidelines Developed

Region	Country	Quality of Service	Tariffs	Planning	Citizen Involvement	Pro-Poor	Environmental Protection
Northern	Algeria	✓	✓	✓	✓	✓	✓
	Egypt	✓	✓	✓	✓	✗	✓
	Libya	✓	✓	✗	✗	✗	✓
	Mauritania	✓	✓	✓	✓	✓	✓
	Morocco	✓	✓	✓	✓	✓	✓
	Tunisia	✓	✓	✓	✓	✓	✓
Western	Benin	✗	✓	✓	✓	✓	✓
	Burkina Faso	✓	✓	✓	✓	✓	✓
	Cape Verde	✓	✓	✓	✓	✓	✓
	Cote d'Ivoire	✓	✓	✓	✓	✓	✓
	Gambia	✓	✓	✓	✓	✓	✓
	Ghana	✓	✓	✓	✓	✓	✓
	Guinea	✓	✓	✗	✗	✗	✓
	Guinea-Bissau	✗	✗	✗	✗	✗	✓
	Liberia	✓	✗	✗	✗	✓	✓
	Mali	✗	✓	✓	✗	✓	✓
	Niger	✓	✓	✓	✗	✓	✓
	Nigeria	✓	✓	✗	✗	✗	✓
	Senegal	✓	✗	✓	✓	✓	✓
	Sierra Leone	✓	✓	✓	✓	✗	✓
	Togo	✓	✗	✓	✗	✓	✓
Central	Burundi	✗	✓	✗	✗	✓	✓
	Cameroon	✗	✗	✓	✗	✗	✓
	CAR	✗	✗	✓	✗	✗	✓
	Chad[13]	✓	✓	✓	✓	✓	✓
	Congo Republic	✓	✓	✓	✓	✓	✓
	DRC	✗	✗	✗	✗	✗	✓
	Equatorial Guinea	✗	✗	✗	✗	✗	✓
	Gabon	✓	✓	✗	✗	✗	✓
	Sao Tome and Principe	✓	✗	✓	✗	✗	✓
Eastern	Comoros	✓	✓	✗	✗	✗	✓
	Djibouti	✓	✓	✓	✓	✓	✓
	Eritrea	✓	✓	✗	✗	✗	✓
	Ethiopia	✓	✓	✗	✓	✗	✓
	Kenya	✓	✓	✓	✓	✓	✓
	Madagascar	✓	✓	✗	✗	✓	✓
	Mauritius	✓	✓	✓	✓	✓	✓
	Rwanda	✓	✓	✓	✓	✓	✓
	Seychelles	✓	✓	✓	✓	✓	✓
	Somalia	✓	✗	✗	✗	✗	✓
	South Sudan	✓	✗	✗	✗	✗	✓
	Sudan	✓	✗	✗	✗	✗	✓
	Tanzania	✓	✓	✓	✓	✓	✓
	Uganda	✓	✓	✓	✓	✓	✓
Southern	Angola	✓	✓	✓	✗	✓	✓
	Botswana	✓	✓	✓	✗	✓	✓
	Eswatini	✓	✗	✗	✗	✗	✓
	Lesotho	✓	✓	✓	✓	✗	✓
	Malawi	✓	✗	✗	✗	✓	✓
	Mozambique	✓	✓	✓	✓	✓	✓
	Namibia	✓	✓	✓	✗	✓	✓
	South Africa	✓	✗	✓	✓	✓	✓
	Zambia	✓	✓	✓	✓	✓	✓
	Zimbabwe	✓	✓	✓	✗	✗	✓
Totals		**46 countries (85%)**	**39 countries (72%)**	**36 countries (67%)**	**27 countries (50%)**	**33 countries (61%)**	**54 countries (100%)**

[13] Key governmental stakeholders in Chad specified that standards and guidelines had been developed across each of the six areas investigated but were unable to share these.

6.2. MONITORING AND PERFORMANCE REPORTING

Monitoring and performance reporting represent areas of moderate performance, albeit with substantial variations in the breadth and depth of activities undertaken. For this regulatory mechanism category, the study focused on reporting by service providers to regulatory actors, regulatory actors' monitoring activities, performance reporting, and whether an appropriate set of service quality, economic efficiency, and operational sustainability indicators are regularly tracked. This principally focused on the arrangements in place – and their application – for each country's primary WSS service providers (i.e., national or regional utilities, large private operators). Most countries have relatively explicit requirements regarding monitoring and performance across the areas investigated; however, this is an area of largely moderate performance, with none of the indicators performing especially well. Nevertheless, there are many impressive practices in this area, particularly concerning the service providers benchmarking reports produced by several regulators.

Considerable regional variations exist in the monitoring and performance reporting of WSS service providers. Table 13 details, for each country, whether the primary WSS service provider regularly shares data and / or reports with regulatory actors, regulatory actors monitor WSS service providers or validate submitted data, and whether performance reports are produced on WSS service provider performance by regulatory actors or WSS service providers themselves. Northern, Western, and Southern Africa stand out as performing especially well across the three investigated aspects, with at least two-thirds of countries in these regions meeting each of the three criteria. As with most of the elements investigated, Central Africa performs particularly poorly. Significant challenges are also evident in Eastern Africa, where, for example, reports on service provider performance are only produced in 29% of countries.

Significant differences exist in service providers' data sharing and reporting to regulatory actors. Nearly all WSS service providers are supposed to periodically submit data to a regulatory actor, regardless of regulatory form. However, primary WSS service providers regularly (i.e., annually) submit data to regulatory actors in only 72% of African countries. Of these countries, substantial variations exist in the extent to which data shared is shared in line with requirements. In many countries where data is received from service providers on vital elements of their performance, regulatory actors face persistent challenges in receiving this data in a consistent and timely manner. This challenge is especially pronounced in contexts where there are a large number of formalised service providers. For example, in Rwanda, data is not frequently shared on key performance indicators by the many licensed private service providers for piped water supply facilities in rural and small-town contexts. Kenya is a notable exception. Consistent emphasis and reporting from the Water Services Regulatory Board on the submission of data by Kenya's 93 formalised water services providers has resulted in the percentage of these service providers providing the required data rising to 98% in 2019/20 from around only 25% in 2005/06.

Substantial variations also exist in the indicators regularly monitored and tracked for each country's primary WSS service providers. This study focused on whether ten key indicators are regularly monitored and tracked for each country's primary WSS service providers. These ten indicators are further sub-divided as follows:

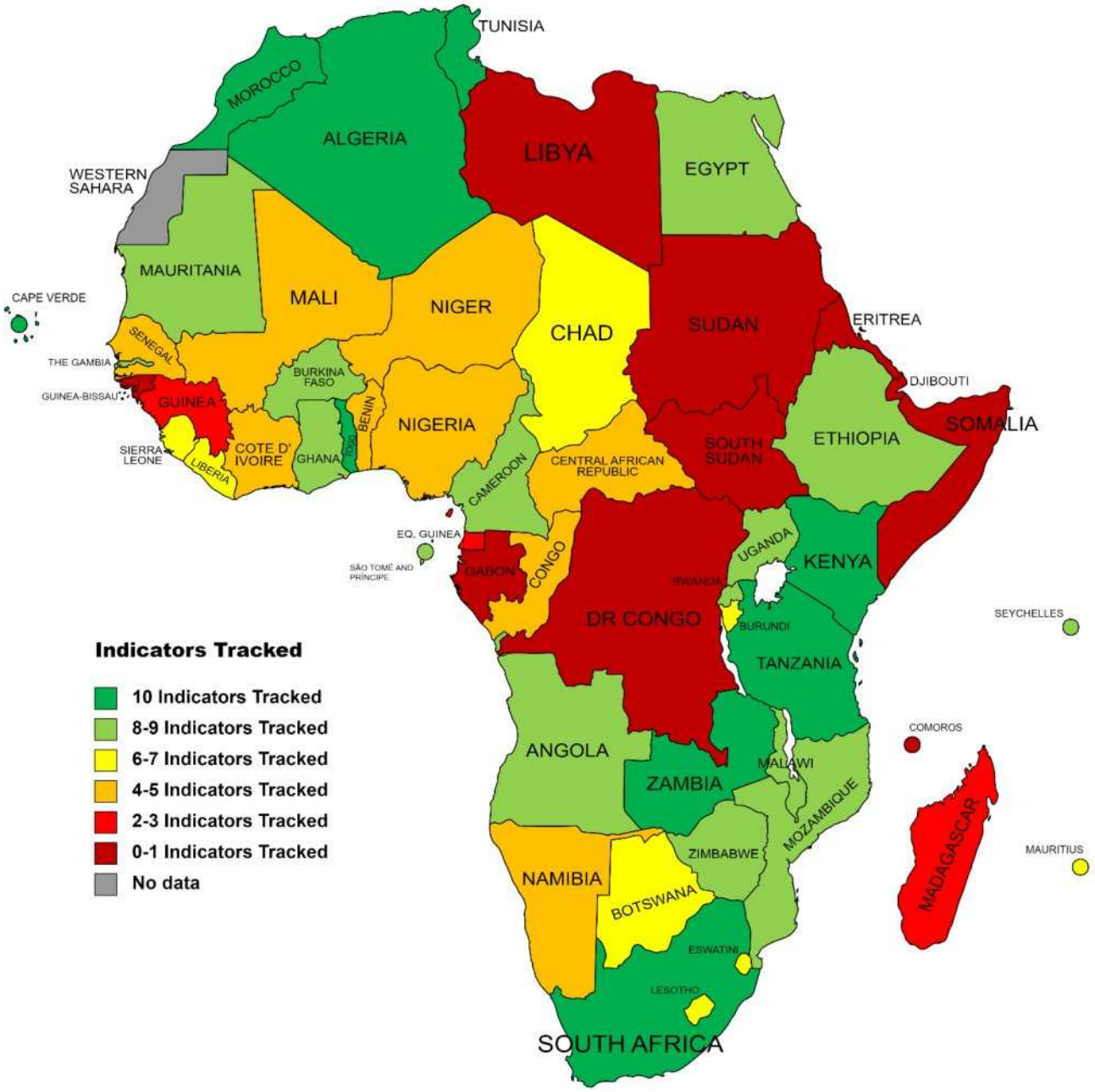
I. **Quality of service –** water coverage, sanitation coverage, hours of supply, water quality.
II. **Economic efficiency –** metering ratio, non-revenue water, O&M cost coverage by revenue, revenue collection efficiency.
III. **Operational sustainability –** staff cost as a proportion of O&M, staff per 1,000 connections.

Figure 23 specifies the number of these indicators (or proxy indicators) regularly monitored and tracked in each country. As with most of the aspects of regulatory mechanisms investigated, it highlights considerable variations in performance among countries. Overall, 9 (17%) track all ten of the WSS indicators investigated, 15 (28%) track between 8 and 9, 8 (15%) track 6 to 7, 9 (17%) track 4 to 5 indicators, 3 (6%) track 2 to 3, and 10 (19%) track only between 0 or 1 indicators. Algeria, Cape Verde, Kenya, Morocco, Mozambique, South Africa, Tunisia, Tanzania, Togo and Zambia stand out as the countries that have made the greatest progress in regularly tracking a diverse and comprehensive set of WSS indicators. Conversely, the greatest challenges exist in Comoros, Djibouti, the DRC, Eritrea, Gabon, Libya, Somalia, South Sudan, and Sudan.

Table 13: Service Provider Reporting, Regulatory Actor Monitoring, and Performance Reporting

Region	Country	Service Provider Shares Performance Data with Regulatory Actor	Regulatory Actors Monitors Service Provider / Validates Data	Reports on Service Provider Performance Produced by Regulatory Actor or Service Provider
Northern	Algeria	✓	✓	✓
	Egypt	✓	✓	✓
	Libya	✗	✗	✗
	Mauritania	✓	✓	✓
	Morocco	✓	✓	✓
	Tunisia	✓	✓	✓
Western	Benin	✓	✓	✓
	Burkina Faso	✓	✓	✓
	Cape Verde	✓	✓	✓
	Cote d'Ivoire	✓	✓	✗
	Gambia	✓	✓	✓
	Ghana	✓	✓	✓
	Guinea	✗	✗	✓
	Guinea-Bissau	✗	✗	✗
	Liberia	✓	✗	✗
	Mali	✓	✓	✓
	Niger	✓	✓	✓
	Nigeria	✗	✗	✓
	Senegal	✓	✓	✓
	Sierra Leone	✓	✓	✗
	Togo	✓	✓	✓
Central	Burundi	✓	✗	✓
	Cameroon	✓	✗	✓
	CAR	✓	✗	✓
	Chad	✓	✓	✗
	Congo Republic	✗	✗	✗
	DRC	✗	✗	✗
	Equatorial Guinea	✗	✗	✗
	Gabon	✗	✓	✗
	Sao Tome and Principe	✓	✗	✗
Eastern	Comoros	✗	✗	✗
	Djibouti	✗	✗	✗
	Eritrea	✗	✗	✗
	Ethiopia	✓	✗	✗
	Kenya	✓	✓	✓
	Madagascar	✗	✗	✗
	Mauritius	✓	✗	✗
	Rwanda	✓	✓	✓
	Seychelles	✓	✓	✗
	Somalia	✗	✗	✗
	South Sudan	✗	✓	✗
	Sudan	✗	✓	✗
	Tanzania	✓	✓	✓
	Uganda	✓	✗	✓
Southern	Angola	✓	✓	✓
	Botswana	✓	✓	✗
	Eswatini	✓	✓	✗
	Lesotho	✓	✓	✓
	Malawi	✓	✓	✓
	Mozambique	✓	✓	✓
	Namibia	✓	✗	✗
	South Africa	✓	✓	✓
	Zambia	✓	✓	✓
	Zimbabwe	✓	✓	✓
Totals		**39 countries (72%)**	**22 countries (61%)**	**30 countries (56%)**

Figure 23: Monitored and Tracked Water Supply and Sanitation Indicators



The greatest progress has been made in monitoring and tracking quality of service indicators, while the most extensive improvements are required in the monitoring and tracking of key operational sustainability indicators. Table 14 details which of the 10 investigated indicators are being tracked in each country, while Figure 24 presents the percentage of countries regularly tracking each of the 10 indicators investigated. Overall, Figure 24 highlights that the greatest progress has been made tracking quality of service indicators. The greatest challenges exist concerning operational sustainability indicators. Generally, moderate performance is identified in the tracking of key economic efficiency indicators. Of the specific indicators investigated, the most progress has been made concerning water coverage, water quality, metering ratio, and hours of supply, while especially pressing challenges exist regarding the operational sustainability indicators of staff cost as a proportion of O&M and staff per 1,000 connections.

Figure 24: Indicators Tracked – Totals

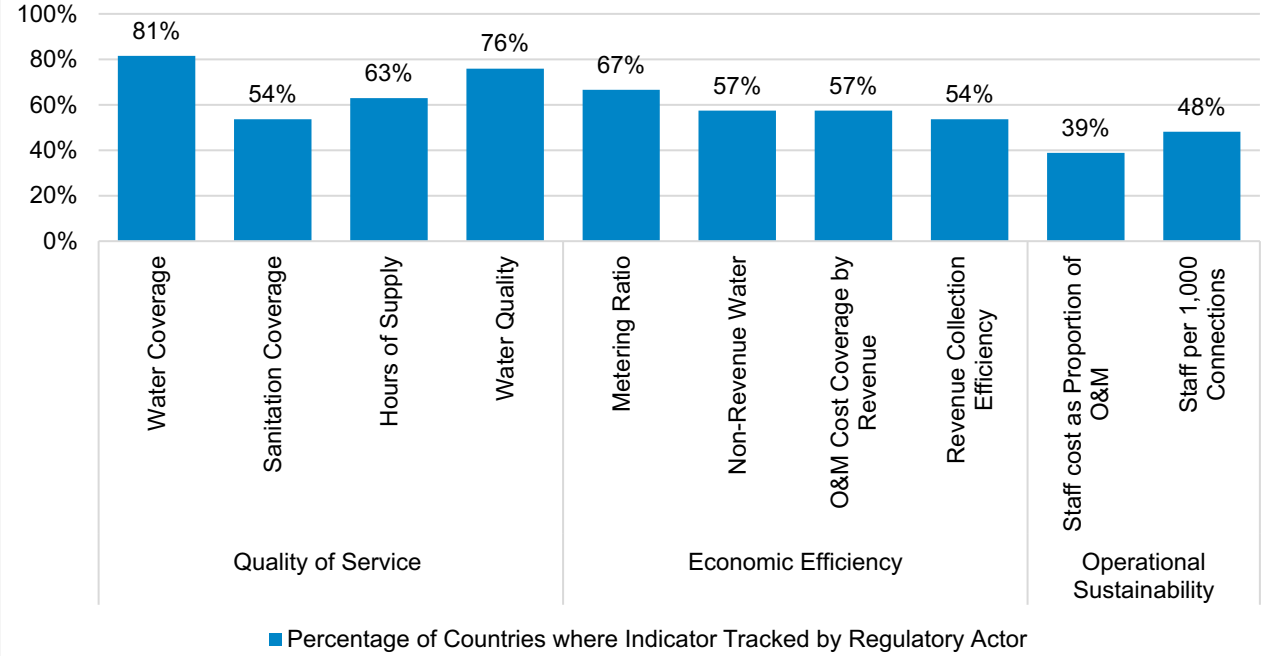


Table 14: Tracked Indicators

Region	Country	Water Coverage	Sanitation Coverage	Hours of Supply	Water Quality	Metering Ratio	Non-Revenue Water	O&M Cost Coverage by Revenue	Revenue Collection Efficiency	Staff cost as a Proportion of O&M	Staff per 1,000 Connections
Northern	Algeria	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Egypt	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗
	Libya	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗
	Mauritania	✓	✓	✓	✓	✓	✗	✓	✓	✓	✗
	Morocco	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Tunisia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Western	Benin	✓	✗	✗	✓	✓	✓	✗	✗	✗	✓
	Burkina Faso	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
	Cape Verde	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Cote d'Ivoire	✓	✓	✓	✗	✗	✗	✗	✓	✗	✗
	Gambia	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓
	Ghana	✓	✗	✗	✗	✓	✓	✓	✓	✓	✓
	Guinea	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗
	Guinea-Bissau	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗
	Liberia	✓	✓	✗	✓	✓	✗	✗	✓	✗	✓
	Mali	✓	✗	✓	✓	✓	✗	✗	✗	✗	✓
	Niger	✓	✗	✓	✓	✓	✗	✗	✗	✗	✓
	Nigeria	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗
	Senegal	✓	✓	✗	✗	✓	✓	✗	✗	✗	✗
	Sierra Leone	✓	✗	✓	✓	✓	✓	✗	✓	✗	✗
	Togo	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Central	Burundi	✓	✓	✗	✓	✓	✗	✗	✗	✓	✓
	Cameroon	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗
	CAR	✓	✗	✓	✓	✓	✗	✗	✗	✗	✓
	Chad	✓	✓	✓	✓	✗	✗	✓	✓	✗	✗
	Congo Republic	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗
	DRC	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	Equatorial Guinea	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗
	Gabon	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗
	Sao Tome and Principe	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓
Eastern	Comoros	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	Djibouti	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	Eritrea	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	Ethiopia	✓	✗	✓	✓	✓	✓	✓	✓	✗	✓
	Kenya	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Madagascar	✓	✗	✗	✓	✗	✗	✓	✗	✗	✗
	Mauritius	✓	✓	✓	✓	✗	✓	✓	✗	✗	✓
	Rwanda	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓
	Seychelles	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗
	Somalia	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	South Sudan	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	Sudan	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	Tanzania	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Uganda	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗
Southern	Angola	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓
	Botswana	✗	✗	✓	✓	✓	✓	✓	✓	✓	✗
	Eswatini	✓	✓	✗	✓	✗	✓	✓	✗	✓	✓
	Lesotho	✓	✗	✓	✓	✓	✓	✓	✓	✓	✗
	Malawi	✓	✗	✓	✓	✗	✓	✓	✓	✓	✓
	Mozambique	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓
	Namibia	✗	✗	✗	✓	✓	✓	✓	✓	✗	✗
	South Africa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Zambia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Zimbabwe	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗

The breadth and depth of regulatory actors' monitoring, inspections and audits of service providers also vary considerably. In nearly all African countries, regulatory actors are mandated to monitor, inspect and audit the performance of WSS service providers. In 61% of countries, regulatory actors monitor, inspect and / or audit WSS service providers annually. There are considerable variations in the activities performed. In some instances, this represents an intensive and periodically performed exercise. For instance, in Egypt, between the Holding Company and the Water and Sanitation Companies or, in Algeria, between the national utilities and their subsidiary companies. Conversely, in other countries, monitoring and inspections are less intensive and less-well structured. For example, in Guinea, only a limited number of indicators are self-reported by the national utility, with no audits or inspections done to verify data, and data on the performance of other service providers is collected only through one-off reports, rather than regularly monitored. The number of formalised service providers under the purview of a regulatory actor can be a crucial factor in influencing the extent or frequency of monitoring and inspections. In Kenya, for example, the large number of licensed water services providers (around 90) impedes the Water Services Regulatory Board's ability to conduct annual in-depth monitoring and inspections visits, with roughly only half of all licensed services providers subject to monitoring and inspections visits each year. Similarly, in Rwanda, the Rwanda Utilities Regulatory Authority is responsible for conducting independent audits as required. However, on average, the regulatory agency conducts inspections once every three years to all service providers.

Box 20: Egypt – Monitoring and Performance Reporting of Wastewater and Sanitation

The Egyptian Water and Sanitation Regulatory Authority (EWRA) is in charge of overseeing service delivery. To help ensure the long-term viability of services at the required level of quality and efficiency, EWRA has established a well-defined set of performance indicators. Management Information Systems (MIS) have been developed to enable EWRA to conduct structured performance monitoring, benchmarking, and utility certification on a regular basis. Importantly, the assessed indicators span not just water supply services but also include several critical wastewater and sanitation indicators. Key wastewater service delivery and wastewater treatment efficiency indicators include:

- Coverage of wastewater services divided into three categories (wastewater network, on-site sanitation, and no service).
- Percentage of treatment levels classified as "no treatment," "primary treatment," and "secondary treatment".
- Percentage of overflows per 100-kilometer network.
- Wastewater treatment efficiency (determined by the effluent's compliance with physical, chemical, and biological (bacteriological) standards).

The information and data gathered by EWRA is then used to produce an Annual Information Report that also includes recommendations from EWRA with a view to enhancing sector legislation enforcement and overall sector performance.

In some countries, highly impressive annual performance reports are produced for WSS service providers; however, this is not done in most countries. Table 15 at the end of this sub-section details the reports produced on service performance in each country where these are produced. Overall, in 54% of countries annual reports are produced detailing service providers performance. Four main types of annual performance reports were identified:

I. ***Benchmarking Reports.*** In several countries, highly impressive benchmarking reports detail the performance of the primary WSS services providers against wide-ranging quality of service, economic efficiency, and operational sustainability indicators. The exact nature of the benchmarking and the scope and depth of indicators detailed naturally varies among countries. These reports are most commonly produced by dedicated regulatory actors where regulation by agency is applied. The reports produced by regulatory actors for Cape Verde, Kenya, Zambia, Egypt, Mozambique, and Tanzania stand out as particularly good examples. In several instances (i.e., Zambia, Kenya), benchmarking reports place noticeably greater emphasis on water supply than sanitation; however, in Egypt, important steps have been taken to include wastewater and sanitation in performance reporting (see Box 20).

II. ***Multi-Sectoral Performance Reports.*** In several countries, multi-sectoral regulatory agencies produce annual reports detailing the performance of the different sectors (i.e., water supply and sanitation, energy, telecommunications) and service providers under their purview. These typically include some benchmarking of service provider performance over time; however, the need to present information on multiple sectors often reduces the level of detail given to WSS service provider

performance. This is the case, for example, in Ghana, Rwanda, and Mauritania where the annual reports of regulatory actors provide considerably less detail on service provider performance than the dedicated benchmarking reports produced in some countries.

III. ***Annual Sector Performance Reports.*** In some countries, the ministry responsible for WSS produces a report providing a broad overview of the WSS sector. This often includes information and data on service provider performance alongside descriptions of projects undertaken, policy initiatives, and analysis of challenges and opportunities. The level of detail on service provider performance varies. Uganda's sector performance report provides detailed benchmarking data on regulated service providers, while Liberia's latest report (from 2018) focuses primarily on national outcome indicators and steps necessary for improvement, with only limited benchmarking data included for Liberia Water and Sewer Corporation. Annual sector performance reports are typically made publicly available; however, this does not happen in all cases (i.e., Tunisia).

IV. ***Service Provider produced Annual Performance Reports.*** In many countries where regulatory actors do not produce performance reports, annual performance reports are developed by large national or regional utilities (i.e., the Eswatini Water Services Corporation). These typically provide an overview of activities performed (i.e., infrastructure performed), presentation of key financial data, and an overview of performance against some key quality of service, economic efficiency, and operational sustainability indicators. However, this information is often not sufficiently detailed, for example, not covering a wide range of indicators or benchmarking performance against past years, sector standards, or internationally comparable service providers (i.e., national utilities in other countries). Whether these annual performance reports are formally approved by a regulatory actor and made publicly available varies considerably among countries.

A key feature of particularly impressive and helpful annual performance reports is the benchmarking of WSS service providers - against each other, over time, against sector or international standards, and against comparable service providers (i.e., other national or regional utilities in Africa). Additionally, reports produced by regulatory actors can have a wider benefit to the sector by noting key developments related to WSS regulation more broadly. Reports produced by regulatory actors are usually made publicly available, while annual performance reports developed by WSS service providers themselves are typically harder to access. For example, in Ghana, the Public Utilities Regulatory Commission's annual reports are publicly available on its website, while more detailed annual performance reports from Ghana Water Company Limited are shared selectively with key sector stakeholders. Box 21 provides an overview of the comprehensive annual benchmarking report produced by Cape Verde's National Water and Sanitation Agency and Multi-Sector Economic Regulatory Agency.

Box 21: Cape Verde's Annual Benchmarking Report

As part of the institutional reform process that created National Water and Sanitation Agency and Multi-Sector Economic Regulatory Agency, Cape Verde also introduced a comprehensive monitoring and benchmarking process for all regulated service providers. This includes municipal WSS departments, the national water and electricity utility (Electra), the five intermunicipal companies (utilities operating on one or two islands), and private water supply and sewerage companies. All service providers are required to report extensive data on technical and financial performance annually using the WSS sector information system, and the National Water and Sanitation Agency and Multi-Sector Economic Regulatory Agency review the data and conduct audits for verification.

The annual WSS sector report (*Relatório Anual dos Serviços de Água e Saneamento em Cape Verde*, or RASAS) includes a summary of WSS sector institutional frameworks and activities; aggregated data on indicators such as coverage, volumes billed, and complaints at the national level for water and sanitation; and detailed data on service provider performance. Service providers are benchmarked on 15 indicators of service quality for water supply and sanitation and 16 economic and financial indicators. These include coverage, continuity of service, costs and profitability, but also energy consumption and women in leadership positions. The value for each indicator is reported along with a performance rating using an easily interpretable traffic light format. Data is reported both individually by service provider and by indicator, allowing for easy comparisons of the ratings attained by each provider. The report also benchmarks service providers on the amount of submitted data?, highlighting that reporting was a challenge when the process was introduced in 2017 but has improved over time, and includes a reliability score along with each data point.

Limited monitoring and performance reporting are generally conducted for smaller and informal service providers. The information presented so far in this sub-section relates to the primary WSS service

providers in each country (i.e., national or regional utilities, large private operators), but not covering smaller, deconcentrated service providers such as private vacuum tanker operators or water committees. In a small number of countries, measures are being taken to begin collecting data on the activities of smaller service providers such as these in a consistent and structured manner, and to integrate this information into reporting activities. For example, in Tanzania, there is a section in the Energy and Water Utilities Regulatory Authority's performance reports dedicated to reporting on every aspect of the sanitation chain. Although the information is very limited, not collected at a significant scale, and does not represent a systematic benchmarking between service providers, it is a valuable first step to monitoring small sanitation service providers' performance. However, in an overwhelming majority of African countries, the sheer number of smaller, deconcentrated service providers and challenges regarding their informal nature mean that their monitoring by regulatory actors is very limited (if performed at all) and not undertaken in a structured manner. Linked to this, most performance reports produced by regulatory actors make no attempt to integrate data on the performance of water committees and private vacuum tanker operators.

Table 15: Performance Reporting

Region	Country	Actor	Performance Reporting
Northern	Algeria	Ministry of Water Resources	Reportedly produces performance reports but these are not publicly available.
	Egypt	Egyptian Water Regulatory Authority	Detailed annual reports that benchmark WSS service provider.
	Libya	Ministry of Water Resources	Reports not periodically produced on General Company for Water and Wastewater performance.
	Mauritania	The Regulatory Authority	Detailed performance reports on private service providers.
	Morocco	Ministry of Interior	Reportedly produces performance reports but these are not publicly available.
	Tunisia	Ministry of Agriculture, Water Resources and Fisheries	Reportedly produces performance reports but these are not publicly available.
Western	Benin	Ministry of Water and Mines, Ministry of Health	Produces separate annual reports detailing sectoral performance.
	Burkina Faso	National Office for Water and Sanitation	Quarterly performance report on a series of service quality, economic efficiency, and operational sustainability indicators.
	Cape Verde	National Water and Sanitation Agency; Multisector Economic Regulatory Agency	Jointly produce comprehensive annual sector performance reports benchmarking service providers; performance for wide range of technical and economic indicators for both water supply and sanitation.
	Cote d'Ivoire	National Office of Drinking Water; National Office of Sanitation and Drainage	Reports not periodically produced on Water Distribution Company of Cote d'Ivoire.
	Gambia	Public Utilities Regulatory Authority	Annual reports on the performance of regulated service providers, including the National Water Supply and Electricity Company.
	Ghana	Public Utilities Regulatory Commission	Annual reports focused on Ghana's energy sector and the urban water supply sector.
	Guinea	Ministry of Energy, Hydraulics, and Hydrocarbons	Reports not periodically produced on Guinea Water Company.
	Guinea-Bissau	Ministry of Energy, Industry and Natural Resources	Reports not periodically produced on Electricity and Water for Guinea Bissau.
	Liberia	National Water, Sanitation and Hygiene Commission	Reports not periodically produced on Liberia Water and Sewer Corporation.
	Mali	Malian Company of Management of Drinking Water	Comparatively comprehensive annual report on its own performance. Performance reports not produced by regulatory actors.
	Niger	Company of Water Exploitation of Niger	Annual performance report on its own performance. The Regulatory Authority for the Water Sector does not publish regular performance reports.
	Nigeria	Federal Ministry of Water Resources	Federal Ministry of Water Resources and National Bureau of Statistics directly conduct an annual survey on?.
		State Ministries or Regulatory Agencies	State regulatory institutions may produce annual reports, but this varies widely.
	Senegal	Ministry of Water and Sanitation	Annual sector review reports consolidate data from departments responsible for water and sanitation.
	Sierra Leone	Sierra Leone Electricity and Water Regulation Commission	Annual report is developed but includes no information on performance indicators.
	Togo	Regulatory Authority for Electricity	Annual reports on service provider performance.

Central	Burundi	Burundi Water and Electricity Production and Distribution Company	Annual report on its water and electricity production and distribution.
	Cameroon	Cameroon Water Utilities Corporation	Annual report on its own performance.
	CAR	Central African Water Company	Annual report on its own performance.
	Chad	Ministry of Urban and Rural Hydraulics	Annual reports not produced on performance of service providers such as the Chadian Water Company.
	Congo Republic	Water Sector Regulatory Body	Do not produce reports on the performance of WSS service providers on a consistent basis.
	DRC	Various Ministries	Do not produce reports on the performance of WSS service providers on a consistent basis.
	Equatorial Guinea	Ministry of Fishing and the Water Resources; Ministry of Health and Social Welfare	Do not produce reports on the performance of WSS service providers.
	Gabon	Regulatory Agency for Drinking Water and Electric Energy	Does not produce annual reports specifying the performance of the Energy and Water Company of Gabon.
	Sao Tome and Principe	Various Ministries	Do not produce annual reports on sector and regulated service provider performance.
Eastern	Comoros	Ministry of Energy and Water Resources	Reports not periodically produced on National Water Company performance.
	Djibouti	National Office of Water and Sanitation	Reports not periodically produced on WSS service provider performance.
	Eritrea	Ministry of Lands, Water and Environment	Reports not periodically produced on WSS service provider performance.
	Ethiopia	Ministry of Water and Energy	Annual performance reports not produced at the federal level, and not done in a structured or consistent manner at the sub-national level.
	Kenya	Water Services Regulatory Board	Comprehensive annual reports produced presenting key information on the sector and benchmarking licensed service provider performance.
	Madagascar	Ministry of Water Resources	Reports not periodically produced on WSS service provider performance.
	Mauritius	Central Water Authority and Wastewater Management Authority	Performance reports produced on their own performance. Performance reports not produced by regulatory actors.
	Rwanda	Rwanda Utilities Regulatory Authority	Produces annual multi-sectoral performance report that includes data on the Water and Sanitation Corporation.
	Seychelles	Public Utilities Commission	Produces an annual report of its performance. Performance reports not produced by regulatory actors.
	Somalia	State Ministries	Does not produce annual reports on sector and regulated service provider performance.
	South Sudan	Ministry of Water Resources and Irrigation	Reports not periodically produced on South Sudan Urban Water Corporation performance.
	Sudan	Ministry of Irrigation and Water Resources	Produces reports compiling information from the state-level. These focus on WSS interventions rather than service provider performance.
	Tanzania	Energy and Water Utilities Regulatory Authority	Annual benchmarking reports provide in-depth overview of service provider performance.
	Uganda	Ministry of Water and Environment	Compiles service reported data in to detailed annual sector performance reports.
Southern	Angola	Ministry of Energy and Water	Quarterly newsletter outlining performance of 17 public water companies across several key performance indicators.
	Botswana	Water Utilities Corporation	Comprehensive annual reports on its own performance. Performance reports not produced by regulatory actors.
	Eswatini	Eswatini Water Services Corporation	Comprehensive annual reports on its own performance. Performance reports not produced by regulatory actors.
	Lesotho	Lesotho Electricity and Water Authority	Annual reports covering Water and Sewerage Company performance.
	Malawi	Water Services Association of Malawi	Annual reports benchmarking performance of Malawi's five parastatal water boards.
	Mozambique	Water Regulatory Authority	Annual benchmarking reports ranking private operator performance.
	Namibia	NamWater	Annual reports detail financial performance and water quality performance only. Performance reports not produced by regulatory actors.
	South Africa	Department of Water and Sanitation	Comprehensive annual performance reports on water service authority performance.
	Zambia	National Water Supply and Sanitation Council	Comprehensive annual sector performance reports that benchmark commercial utility performance.

	Zimbabwe	Zimbabwe National Water Authority	Annual performance reports on its own performance. Performance reports not produced by regulatory actors for Zimbabwe National Water Authority.
		Government of Zimbabwe	Comprehensive benchmarking report on urban local authorities.

6.3. INCENTIVES

Most countries do not apply reputational and financial incentives for WSS service providers to promote improved performance. For this category, the study focused on whether reputational and financial incentives are applied to WSS services providers. Reputational incentives encompass publicly available reports that benchmark WSS service providers against each other, past performance, and international and national standards, as well as the provision of awards recognising exemplary or improved performance. Financial incentives principally entail formal processes for increasing tariffs for reaching given performance targets and modifying key contractual terms such as contract duration. This aspect of the study focused on the primary WSS service providers in each country (i.e., national or regional utilities, large private operators) as the structured and ongoing use of reputational and financial incentives for smaller, deconcentrated service providers such as water committees and private vacuum tanker operators is very limited. Overall, the application of incentives was the worst-performing regulatory mechanism category investigated with only 30% of countries applying reputational incentives and just 15% applying formalised financial incentives.

Box 22: South Africa – Recently Re-Established Reputational Incentives

In South Africa, the Department of Water and Sanitation developed Blue Drop (drinking water services) and Green Drop (wastewater) certification programmes. These assess and measure an organisation's ability to provide acceptable drinking water and wastewater services by auditing and benchmarking the performance of participating water services institutions against a set of audit criteria. The results of these audits were published in annual Blue Drop and Green Drop reports and linked to an annual awards ceremony. This served as an important reputational incentive for water services institutions, and the process has been linked to improved performance. By way of example, municipal provider performance in drinking water services management consistently improved in the years following the initiation of the Blue Drop audits, and a sharp increase occurred in the municipal water systems scoring over 95% (and therefore being awarded the prestigious Blue Drop). The Green Drop programme was suspended in 2014 and the Blue Drop programme was suspended in 2015.

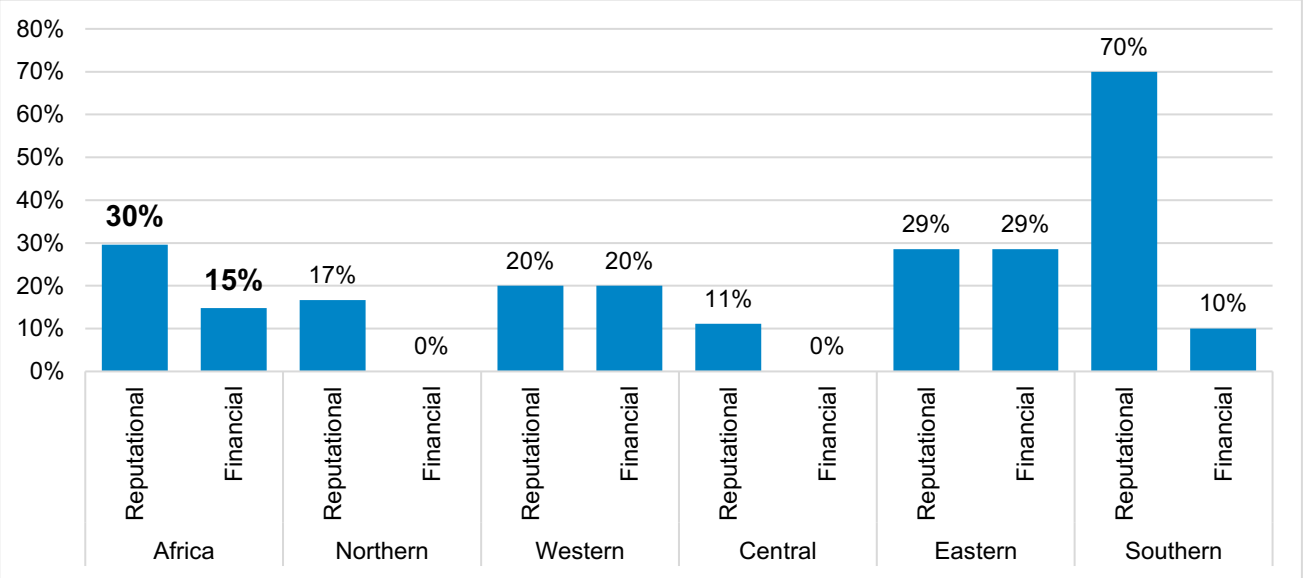
These programmes, however, have recently recommenced with Green Drop audits taking place in 2021 and the Blue Drop audits recommencing in 2022. Significantly, the recent Green Drop audits have compared the performance of local government and privately-run wastewater systems against a series of aspects grouped into five areas:

I. Capacity Management.
II. Environmental Management.
III. Financial Management.
IV. Technical Management.
V. Effluent and Sludge Compliance.

These results are presented in highly visual and comparative manner, benchmarking the performance of participating actors against each other as well as the results from past Green Drop audits. Ultimately, however, the latest Green Drop report highlights that since the last Green Drop audit for performance in 2013, there has been a decline in performance, with average Green Drop scores decreasing in all but one province.

Noteworthy regional variations exist in the application of reputational and financial incentives. Figure 25 details the percentage of countries for each region regarding where regulatory actors have developed and apply reputational and financial incentives to WSS service providers. It highlights several clear regional trends. In the first instance, it highlights the limited utilisation of financial incentives across all five regions, with the Western Region being the only one where financial incentives are used in more countries than reputational incentives. Figure 25 also highlights the particularly limited usage of incentives in Central Africa, with the reputational incentives (performance reports) used by Burundi's Regulatory Authority for the Drinking Water and Energy Sectors being the only example of regulation by incentives identified.

Figure 25: Reputational and Financial Incentives – Regional



Several examples of comprehensive reputational incentives exist; however, this regulatory mechanism is rarely applied. Reputational incentives are applied in 30% of countries, representing one of the least well performing regulatory mechanisms investigated. Table 16 provides an overview of the reputational incentives used by different African countries. Of the countries where reputational incentives are utilised, two sets of reputational incentives were identified:

I. ***Service Provider Benchmarking.*** The production of detailed, publicly accessible reports that benchmark the performance of WSS service providers is the main reputational incentive utilised across Africa. These are produced in 30% of countries (all countries where reputational incentives are applied). The nature of the benchmarking varies among countries and is, in many cases, influenced by service delivery arrangements. In countries with several licensed and comparable service providers (i.e., Kenya, Zambia), service provider performance is generally benchmarked against each other, over time, and against sector standards. Conversely, where there is a clear lead service provider, such as a national utility (i.e., Ghana, Rwanda), these reports generally provide a less a detailed benchmarking, typically noting changes in performance over time and judging performance against agreed standards. Either way, these reports can play a vital role in detailing service providers' overall performance as well as specifying key areas requiring improvement or heralding aspects of excellence.

II. ***Awards.*** In a very limited set of countries, awards are provided to service providers to publicly recognise exemplary performance or significant improvements. These can cover just one or two areas (i.e., the annual overall awards for commercial utility CEO performance and water stewardship in Zambia), or a much broader set of categories. For example, in Mozambique, where awards are granted to the regulated entities with the best performance in the benchmarking reports.

In several instances, these two main forms of reputational incentives are linked together. For example, in Zambia, the National Water Supply and Sanitation Council's annual urban and peri-urban sector performance reports benchmark the performance of Zambia's 11 commercial utilities and detail which commercial utility CEOs won the 'CEO of the Year' award. Box 22 provides an overview of the comprehensive reputational incentives applied by South Africa's Department of Water and Sanitation.

Table 16: Reputational Incentives – Country Specific

Country	Regulatory Actor	Reputational Incentive(s) Applied
Egypt	Egyptian Water Regulatory Authority	Good performance by water and sanitation companies is associated with higher levels of support and ongoing assistance from the Holding Company for Water and Wastewater.
Cape Verde	National Water and Sanitation Agency; Multisector Economic Regulatory Agency	Benchmarking of service providers against national standards and each other in annual sector reports.
Gambia	Public Utilities Regulatory Authority	Recently introduced an incentive mechanism to provide financial rewards to the National Water Supply and Electricity company for meeting performance targets. Primarily focused on electricity but includes targets for non-revenue water and water quality.
Burundi	Regulation Authority of the Drinking Water and Energy Sectors	Exchange sessions are organised between stakeholders in regulated sector to congratulate and recognise operators for good performance.
Kenya	Water Services Regulatory Board	Annual reports benchmark the performance of licensed water service providers against each other and over time. Awards are also given to licensed water service providers for a range of categories.
Seychelles	Ministry of Agriculture, Environment and Climate Change	Reputational incentives are informal but powerful, with poor WSS service performance attracting substantial public and media criticism.
Tanzania	Energy and Water Utilities Regulatory Authority	The ranking of Water Supply and Sanitation Authorities according to key performance indicators. The rankings are published yearly on the Energy and Water Utilities Regulatory Authority's website.
Angola	Ministry of Energy and Water	Quarterly newsletters represent light-touch reputational incentive by detailing performance of public water companies against key performance indicators.
Botswana	Ministry of Land Management, Water and Sanitation Services	Minister issues a Certificate of Excellence to loyal and effective operators within the water supply and sanitation sector to recognise exemplary performance.
Malawi	Water Services Association of Malawi	Annual benchmarking report represent light-touch reputational incentive by benchmarking performance of Malawi's five parastatal water boards against a series of indicators.
Mozambique	Water Regulatory Authority	Awards are granted to regulated entities with the best performance and annual reports benchmark the performance of different WSS service providers.
South Africa	Department of Water and Sanitation	Awards are provided as part of the Blue and Green Drop audits and handed out in ceremonies. Blue and Green drop reporting is a further reputational incentive.
Zambia	National Water Supply and Sanitation Council	Annual sector reports benchmarking commercial utilities and detail areas of exemplary performance. Awards are given for water stewardship and CEO performance.
Zimbabwe	Various Ministries	Annual awards are given to urban local authorities and rural district councils based on good performance. Urban Local Authority service level benchmarking report is a further reputational incentive but is not developed on annual basis.

Especially limited progress has been made in applying financial incentives to WSS service providers. As Figure 27 highlights, across all five regions, very limited progress has been made in developing and applying formal financial incentives, with only 15% of countries applying financial incentives. Indeed, of the 16 regulatory mechanisms investigated, this is the one where the least progress has been made. Nevertheless, Table 17 provides an overview of the reputational incentives used by different African countries, and four main variations of formal financial incentives were identified:

I. ***Tariff Setting.*** In a small set of countries, good performance by WSS service providers is linked to the tariff setting or approval process. This is most commonly seen through WSS service providers being allowed to apply marginally higher tariffs if they achieve certain performance benchmarks (usually linked to cost recovery). Box 23 provides an overview of the sanitation surcharge applied at scale by Zambia's National Water Supply and Sanitation Council. Equally, in some countries, financial disincentives linked to tariff setting are utilised. For example, in Cape Verde, the multi-sector regulatory agency can reject applications for tariff increases or approve only lower tariffs if service providers do not meet performance criteria. In a larger set of countries, good performance was reported to influence

the tariff setting or tariff approval process; however, in these countries, a formalised mechanism or criteria does not exist linking improved performance and tariff setting.

II. ***Contract Extension or Renewal.*** In some countries where regulation by contract or a regulation by agency hybrid is practised, good performance by private WSS service providers is formally linked to the extension or renewal of contacts. For example, if service providers demonstrate good performance in Madagascar, the Ministry of Water, Sanitation and Hygiene allows for contract renewals without opening a new tendering process.

III. ***Tax Exemption.*** In Burkina Faso, good performance from the national utility (the National Office for Water and Sanitation) can result in it being exonerated from some taxes to the national government. This was the only example of this form of financial incentive identified.

IV. ***Monetary Awards.*** In Tanzania, monetary awards for specific tasks have been used as a financial incentive for those utilities that rank amongst the top positions in benchmarking reports. For example, the best performing utilities were recently awarded resources to spend on water meters and improve non-revenue water.

Table 17: Financial Incentives – Country Specific

Country	Regulator	Financial Incentive(s) Applied
Burkina Faso	Ministry of Environment, Energy, Water and Sanitation	Varies according to the type of contract (i.e., with the national utility or smaller providers). However, for the national utility, there are instances where they have been exempted from paying taxes to the government).
Cape Verde	Multisector Economic Regulatory Agency	Can reject applications for tariff increases or approve only lower tariffs if service providers do not meet performance criteria, for example, on efficiency.
Gambia	Public Utilities Regulatory Authority	Produces an annual report that includes moderately detailed information on the National Water Supply and Electricity Company's performance, including tracking of some data points over time. This represents a light-touch reputational incentive.
Ghana	Public Utilities Regulatory Commission	Produces an annual report that includes moderately detailed information on Ghana Water Company Limited's performance. This represents a light-touch reputational incentive.
Mauritius	Ministry of Energy and Public Utilities	Uses a revenue requirement approach to regulation. The regulator defines the total revenue the provider can realise from collections in a given period to cover a certain level of costs. This incentivises cost efficiency because any efficiencies result in additional revenue that can be used to cover costs.
Seychelles	Ministry of Agriculture, Environment and Climate Change	Annual performance-based bonuses are proposed by the Public Utilities Commission CEO and board. The Ministry has the power to approve or deny them based on the utility's performance.
Tanzania	Energy and Water Utilities Regulatory Authority	Monetary awards for specific tasks have been used as financial incentives for those utilities that rank amongst the first positions in the benchmarking reports.
Uganda	Ministry of Water and Environment's Water Utilities Regulation Department	Approval of conditional grants for high-performing service providers and performance-based bonuses for service provider staff.
Zambia	National Water Supply and Sanitation Council	The sanitation surcharge is a 2.5-5% levy on customers' monthly water bills granted to commercial utilities for good O&M cost coverage of above 100%. Revenue from the levy is to be used for sanitation extension projects rather than covering the day-to-day costs of the commercial utilities.

Box 23: Zambia – Substantive and Long-Standing Financial Incentive through a Sanitation Surcharge

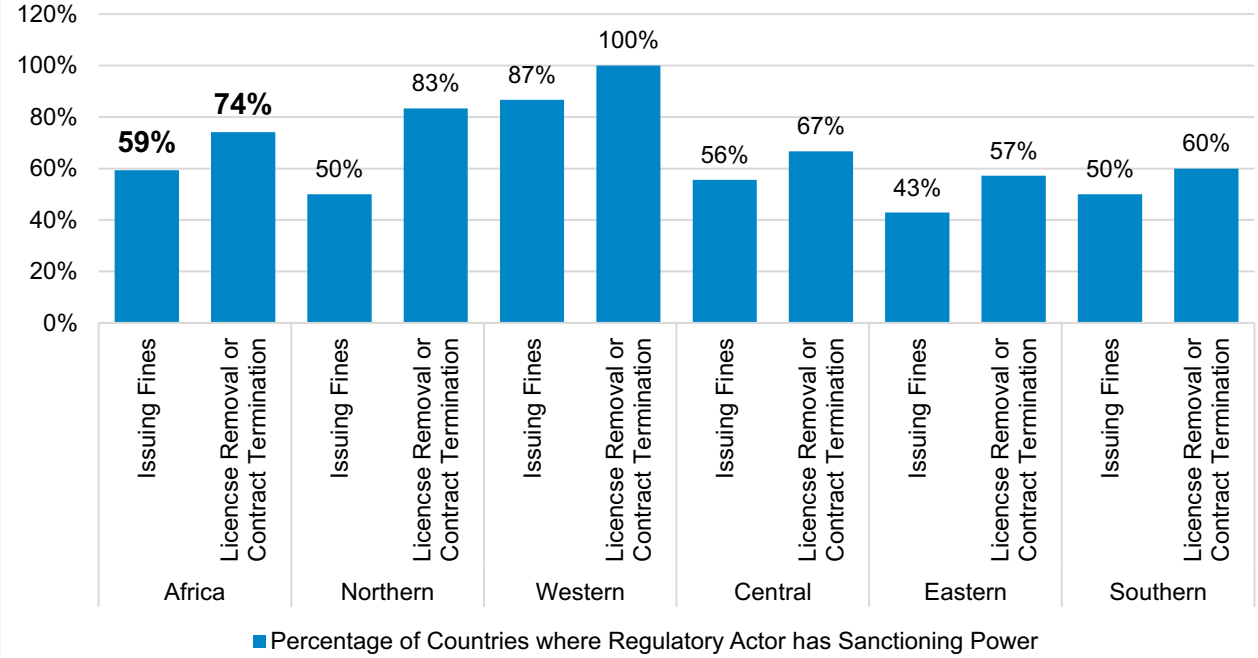
Since its commencement in 2000, Zambia's National Water Supply and Sanitation Council (NWASCO) has employed a variety of regulatory mechanisms. While these helped to improve sector performance, improvements in service delivery were slower than anticipated or desired. In 2008, NWASCO advanced its regulatory regime by introducing financial incentives to stimulate better performance and innovation amongst Zambia's 11 commercial utilities and to induce efficiency gains. The sanitation surcharge is the formal financial incentive utilised by NWASCO. It is a levy of up to 5% on all a commercial utility customers' monthly water bill. Commercial utilities apply for the right to utilise the sanitation surcharge on a case-by-case basis, and this is generally approved if they have achieved at least 100% O&M cost coverage. To date, six of Zambia's 11 commercial utilities are applying the surcharge as part of their tariff structure. As of 2020, over ZMW 87 million (equivalent to roughly US$5 million) has been collected through the sanitation surcharge, providing commercial utilities with a reasonable source of additional revenue specifically dedicated for sanitation extension projects.

6.4. SANCTIONS

Most regulatory actors hold powerful sanctioning powers; however, these are rarely utilised. For this regulatory mechanism category, the study investigated whether regulatory actors could suspend or remove the license of WSS service providers or terminate their contract and apply fines to WSS service providers for breaching regulations, as well as whether these powers are utilised. Table 18 at the end of this section details in which African countries regulatory actors can and cannot apply each of these sanctions. This focuses on the primary WSS service providers in each country (i.e., national or regional utilities, large private operators). Overall, regulatory actors in 74% of countries can suspend or remove the license of WSS service providers or terminate their contract and regulatory actors in 59% of countries are capable of issuing fines to service providers for breaching regulations.

Regional variations exist in regulators' sanctioning powers. Figure 26 details the number and percentage of countries for each region and across Africa that can suspend or remove the license or contract of WSS service providers and issue fines to WSS service providers. It highlights how these powers are most commonly held by regulators in Western and Northern Africa, with lower percentages of regulatory actors in Southern, Eastern, and Central Africa holding these sanctioning powers.

Figure 26: Sanctions – Regional



Most regulatory actors are not utilising their powers to fine service providers, remove or transfer licenses, or terminate contracts. Despite generally being empowered with comprehensive sanctioning powers, only limited examples exist of regulatory actors regularly using these powers in a structured or consistent manner. The most commonly cited reason for not using sanctioning powers was the lack or shortage of alternative service providers. Indeed, in many cases, the ability to terminate a service provider's contract or remove the license of a national or regional utility purely exists on paper as there are no alternative service providers to manage or deliver services. Consequently, regulatory actors are unable to utilise this power without causing substantial disruption to services. This is a particularly pressing consideration in instances of monopoly service provision under national or regional utilities and when services are provided via 'fixed' assets (i.e., sewered vs. onsite sanitation). However, it has very real implications for most service providers. For example, a shortage of experienced private operators in rural and small-town settings can create significant barriers to addressing performance concerns. Other less frequently cited factors impeding the use of sanctions include the limited impact of fines on service provider performance, political consideration, and the capping of fines at relatively low thresholds. Box 24 details the proactive utilisation of sanctions by Kenya's Water Services Regulatory Board, one of the few regulators in Africa to consistently use its sanctioning powers.

Box 24: Kenya's Consistent use of Sanctions

Kenya's Water Services Regulatory Board (WASREB) has made significant progress since its establishment in 2003 in developing and applying a comparatively advanced set of regulatory mechanisms (see Figure 10). Kenya's Water Act, 2016 empowers WASREB to issue fines to water services providers for breaching or contravening regulations made under this act. Moreover, the Water Act enables WASREB to revoke the license of a water services provider or place a water service provider under a 'special regulatory regime' for a series of reasons, including failure to meet the criteria for licensing, refusing, failing or neglecting to provide services for which they were licensed, and failing to comply with any conditions for licensing.

Crucially, unlike many other regulatory actors across Africa, WASREB has proven willing to use the sanctioning powers at its disposal to penalise non-compliant service providers and, in turn, improve WSS service delivery. Of note, WASREB frequently fines licensed water service providers when non-compliance is identified; fines for non-compliance were levied on four water service providers in 2021 and another nine were denied financial support as a result of non-compliance. In 2021, WASREB came close to revoking two service providers' licenses; however, it has a clear preference for replacing the board or senior management of water service providers instead of utilising its power to suspend their license completely.

The application of sanctions and punitive measures has altered the behaviour of service providers. Utilities that were denied financial support as a result of the non-compliance, have subsequently fixed the identified non-compliances and are now in good standing. Furthermore, those that were sanctioned on non-compliance with the approved tariff and were required to rebate customers, have complied and even adjusted their billing systems to forestall any likely challenges in the future. Nevertheless, challenges in conducting the required in-depth monitoring and inspections of Kenya's large number of licensed service providers (nearly 90) impede the further application of sanctions by WASREB.

Regulatory actors generally hold sanctioning powers other than issuing fines that they are usually more willing to utilise. Within the context of the above-cited barriers to using stronger sanctioning powers, it is important to note that many regulatory actors hold other sanctioning or enforcement powers that they are often more willing to utilise. Three main sanctioning powers were identified other than issuing fines, namely license suspension or removal, and contract termination:

I. ***Issuing Written Orders.*** Regulatory actors are usually mandated to issue written orders to service providers that, in theory, they are legally obliged to comply with. These can typically cover aspects related to provisions included in key legal instruments. For example, in South Sudan, the Ministry of Water Resources and Irrigation cannot suspend the license of the South Sudan Urban Water Corporation. However, whenever deemed necessary and appropriate, the Minister can issue a general or specific directive to the Board of the South Sudan Urban Water Corporation, provided such directives are not inconsistent with the provisions of the South Sudan Urban Water Corporation Act, 2011. Moreover, the Board of the South Sudan Urban Water Corporation is legally required to act in accordance with such directives.

II. ***Dismissing Senior Personnel.*** Many regulatory actors are also mandated to dismiss senior service provider personnel or managers. For example, in Sudan, each State Assembly can sanction officials at the State Water and Sanitation Corporations and the State Ministry of Housing if they are not providing an adequate service.

III. ***Modifying Service Areas.*** Where there are multiple regulated service providers and the regulatory authority determines their service areas, changes to a provider's service area can be made in response to poor performance, transferring systems and customers (and the revenue they provide) to a higher-performing utility. For example, in Uganda, the Ministry of Water and Environment's Water Utilities Regulation Department is mandated to review and adjust service areas of the National Water and Sewerage Corporation and the six regional Umbrellas of Water and Sanitation (regional utilities) to ensure customers receive quality services.

Table 18: Sanctioning Powers

Region	Country	Fining Service Providers	License Removal / Contract Termination
Northern	Algeria	✓	✓
	Egypt	✗	✓
	Libya	✓	✗
	Mauritania	✓	✓
	Morocco	✓	✓
	Tunisia	✓	✓
Western	Benin	✗	✓
	Burkina Faso	✓	✓
	Cape Verde	✓	✓
	Cote d'Ivoire	✓	✓
	Gambia	✓	✓
	Ghana	✓	✓
	Guinea	✓	✓
	Guinea-Bissau	✓	✓
	Liberia	✓	✓
	Mali	✓	✓
	Niger	✓	✓
	Nigeria	✓	✓
	Senegal	✓	✓
	Sierra Leone	✓	✓
	Togo	✓	✓
Central	Burundi	✗	✓
	Cameroon	✓	✓
	CAR	✓	✗
	Chad	✓	✓
	Congo Republic	✓	✓
	DRC	✓	✓
	Equatorial Guinea	✗	✗
	Gabon	✗	✓
	Sao Tome and Principe	✗	✗
Eastern	Comoros	✗	✗
	Djibouti	✗	✗
	Eritrea	✓	✓
	Ethiopia	✓	✓
	Kenya	✓	✓
	Madagascar	✗	✓
	Mauritius	✗	✓
	Rwanda	✓	✓
	Seychelles	✓	✓
	Somalia	✗	✗
	South Sudan	✗	✗
	Sudan	✗	✗
	Tanzania	✓	✓
	Uganda	✗	✓
Southern	Angola	✓	✓
	Botswana	✓	✗
	Eswatini	✗	✗
	Lesotho	✗	✗
	Malawi	✗	✓
	Mozambique	✓	✓
	Namibia	✓	✓
	South Africa	✓	✓
	Zambia	✗	✓
	Zimbabwe	✗	✗

CHAPTER

7

REGULATORY ENVIRONMENT

ESAWAS
REGULATORS ASSOCIATION

7. REGULATORY ENVIRONMENT

Three dimensions of the regulatory environment that influence the effectiveness and legitimacy of regulatory institutions were investigated. The study focused on:

I. The autonomy of regulatory institutions.
II. Public participation in the development and application of regulations and regulatory mechanisms.
III. Transparency through the sharing of relevant data and reports.

Each of these can influence regulatory institutions' effectiveness and legitimacy; however, these are not necessarily correlated with the number of regulatory mechanisms applied or the extent of WSS regulation.

Autonomy helps ensure regulatory decisions are made based on technical considerations without undue political influence or bias. Two particularly critical aspects of autonomy examined were regulatory actors' ability to set and adjust tariffs without government approval and the ability of regulatory actors to finance their operations independently of central government budgets.

Citizen participation in the development and application of regulations helps ensure regulations are responsive to customer needs and enhances the legitimacy of the regulator's actions. Finally, making data and information linked to regulatory activities and service provider performance available to the public helps citizens understand the basis of regulatory decisions and the level of services they are provided. This involves publicly sharing various types of documents, including tariffs and overviews of the tariff setting and adjusting processes, regulations, standards and guidelines, licenses and contracts, overviews of the application of regulatory mechanisms, and reports on service provider performance.

Although many countries have strengthened their regulatory environment, widespread challenges persist. Table 19 highlights African countries performance against three quantitative dimensions of the regulatory environment: (i) regulatory authorities have autonomy to set tariffs independent of government; (ii) regulatory authorities have independent financing mechanisms; and (iii) regulatory reports and/or data are routinely made publicly available. There is no region where a majority of countries meet any of these three criteria, except for the publication of regulatory reports and data in Southern Africa (50%). Overall, Western and Southern Africa perform most strongly on these dimensions of the regulatory environment, followed by Eastern Africa, with the greatest challenges in Northern and Central Africa.

Unsurprisingly, the countries that perform best on one or both of the elements of autonomy tend to be those with dedicated regulatory agencies or bodies established as autonomous from government. 16 African countries (30%) have regulatory actors that set or approve tariffs independently of governmental actors. Of these, 15 (94%) practice regulation by agency.[14] In the Congo Republic, for example, the Water Sector Regulatory Body can adjust tariffs and approve the tariff schedule and revision formula before delegation contracts are signed between service providers and the Ministry of Energy and Hydraulics. The autonomy of regulatory actors in tariff setting and adjustment can be particularly important in ensuring the financial sustainability of services while balancing affordability concerns. It can avoid situations such as in many Nigerian states, where state ministries or agencies have not updated tariffs for long periods due to political sensitivities, resulting in extremely low tariffs and a downward spiral of low service provider revenues and poor service performance.

[14] Regulatory arrangements based on ministerial regulation and, to a large extent, forms of regulation by contract are automatically excluded from meeting this criterion.

Table 19: Autonomy and Transparency

Region	Country	Lead Regulatory Actor is Autonomous to set Tariffs Independently from Government	Lead Regulatory Actor is Financially Independent of Government	Regulatory Actor Produces and Makes Publicly Available Reports on Service Provider Performance
Northern	Algeria	✗	✗	✗
	Egypt	✗	✗	✗
	Libya	✗	✗	✗
	Mauritania	✗	✓	✓
	Morocco	✗	✗	✗
	Tunisia	✗	✗	✗
Western	Benin	✗	✗	✓
	Burkina Faso	✗	✗	✗
	Cape Verde	✓	✓	✓
	Cote d'Ivoire	✗	✗	✗
	Gambia	✓	✓	✓
	Ghana	✓	✓	✓
	Guinea	✗	✗	✗
	Guinea-Bissau	✗	✗	✗
	Liberia	✓	✗	✗
	Mali	✓	✓	✓
	Niger	✓	✓	✗
	Nigeria	✗	✗	✗
	Senegal	✗	✗	✗
	Sierra Leone	✓	✓	✓
	Togo	✗	✗	✓
Central	Burundi	✗	✓	✗
	Cameroon	✗	✗	✗
	CAR	✗	✗	✗
	Chad	✗	✗	✗
	Congo Republic	✓	✗	✗
	DRC	✗	✗	✗
	Equatorial Guinea	✗	✗	✗
	Gabon	✓	✗	✗
	Sao Tome and Principe	✗	✗	✗
Eastern	Comoros	✗	✗	✗
	Djibouti	✗	✗	✗
	Eritrea	✗	✗	✗
	Ethiopia	✓	✗	✗
	Kenya	✓	✓	✓
	Madagascar	✗	✗	✗
	Mauritius	✗	✗	✓
	Rwanda	✓	✓	✓
	Seychelles	✗	✗	✗
	Somalia	✗	✗	✗
	South Sudan	✗	✗	✗
	Sudan	✗	✗	✗
	Tanzania	✓	✓	✓
	Uganda	✗	✗	✓
Southern	Angola	✗	✓	✓
	Botswana	✗	✗	✗
	Eswatini	✗	✗	✗
	Lesotho	✓	✓	✓
	Malawi	✗	✗	✗
	Mozambique	✓	✓	✓
	Namibia	✗	✗	✗
	South Africa	✗	✗	✓
	Zambia	✓	✓	✓
	Zimbabwe	✗	✗	✗
Totals		**16 countries (30%)**	**15 countries (28%)**	**18 countries (33%)**

In most countries, the primary regulatory actor is dependent on wider budgeting processes through central government. In 28% of countries a primary regulatory actor for WSS service provision receives most of its funding through independent sources such as a levy on the revenue of certain WSS service providers. However, it is important to note that financial autonomy is largely only relevant to independent regulatory agency arrangements. Ministries and sub-national governments are inherently not structured to be financially independent in terms of their regulatory functions. Of the 20 countries where regulation by agency is the predominant regulatory form, 15 countries (75%) have financially autonomous regulators. Table 20 details how these regulatory actors are financed. Dedicated funds for WSS regulation from the central government (as is the case in Cote d'Ivoire, Senegal, and Burundi, amongst others) can provide regulatory authorities with a reliable source of funding; however, these do not provide financial autonomy.

Table 20: Overview of Financing Mechanism for Financially Autonomous Regulatory Actors

Country	Regulator	Financing Mechanism
Angola	Regulatory Institute for Electricity Services and Water Supply	Revenue is based on the regulatory fees paid by the EPAS (cost of regulatory function). The regulatory fee to be paid is to be recalculated on a yearly basis.[15]
Burundi	Regulatory Authority for the Drinking Water and Energy Sectors	Partially financed through fees collected from operations.
Cape Verde	National Water and Sanitation Agency; Multisector Economic Regulatory Agency	Are authorised to finance their operations by collecting contributions from regulated entities and charging fees for licensing and other services.
Gambia	Public Utilities Regulatory Authority	Main source of income is fees charged to regulated service providers.
Ghana	Public Utilities Regulatory Commission	A regulatory levy on energy that goes through the Ghana Grid Company. It receives 0.12 and 0.08 Ghanaian Pesewas per kilowatt hour of electricity and standard cubic feet of natural gas transmitted. 67% of this is to be used for the PURC's activities and 33% for PURC pro-poor water programmes.
Kenya	Water Services Regulatory Board	4% levy on the tariffs paid by consumers to licensed water services providers.
Lesotho	Lesotho Electricity and Water Authority	Funded via licenses from electricity and water supply and sewerage operators, and a levy paid by customers. From January to May 2022, levies accounted for 82.2% of funds, compared to 17.8% from licenses. 90% of funds were from licenses or levies linked to electricity, while 10% came from licenses or levies linked to water supply.
Mauritania	Regulatory Authority	In theory, a combination of annual tax levies (calculated as a percentage of private operators' turnover) and fees from private operators. In practice however, with tax levy exemptions for the water sector, it relies solely on fees from other regulated sectors (i.e., telecommunications).
Mali	Regulatory Commission for Electricity and Water	A regulatory fee that urban operators are required to pay (currently 1% of all water and electricity bills)
Mozambique	Water Regulatory Authority	Regulatory levy of 3% of the gross annual revenue of formalised service providers. 40% of this fee is remitted to the Ministry of Finance, with the remaining 60% left to finance the Water Regulatory Authority.
Niger	Regulatory Authority for the Water Sector	A levy of 2.5% on the annual revenue of any service provider holding a delegation contract.
Rwanda	Rwanda Utilities Regulatory Authority	0.3% levy on the annual turnover of service providers and monies collected from licensees and fines.
Sierra Leone	Sierra Leone Electricity and Water Regulation Commission	Primarily funded by a 1% annual levy on the gross operating revenue of regulated suppliers and other sources such as grants and donor programmes. The government also provides financial support, covering 39% of its funds in 2020.
Tanzania	Energy and Water Utilities Regulatory Authority	Financed via a levy on regulated service providers (98.1%) and licence fees, application fees and penalties (2.9%).
Zambia	National Water Supply and Sanitation Council	2% levy on commercial utilities' turnover and application fees from licenses issued.

[15] The calculation for determining this levy is: The Net Regulatory Remuneration at the End of the Year X = The Net Regulatory Remuneration at the End of the Year X-1 PLUS Investments made based on the Management Entity's Investment Plan in Year X PLUS Change in Working Capital in Year X MINUS Technical Depreciation for Year X.

Few countries apply substantive measures to ensure public participation when developing and applying WSS regulations. Most countries have some mechanisms to ensure public participation when developing and applying WSS regulations. However, these are typically very light touch, simply comprising requirements to consult with members of the public and other key stakeholders during the development of regulations or establishing complaints mechanisms. Nevertheless, some impressive mechanisms for ensuring public participation have been developed. These include:

I. ***Formal Voluntary Oversight Structures.*** A very small set of countries have established community-based volunteer groups to help oversee and monitor WSS service providers. For example, in Zambia, the National Water and Sanitation Supply Council established water watch groups comprising voluntary community members to increase consumer representation and protection by proactively engaging them in the regulatory process as "the eyes of the regulator and the voice of the voiceless" (NWASCO, 2008). These groups perform several important regulatory roles, spanning holding public meetings with consumers, reviewing and validating complaints, sensitisation, and submitting periodic reports to the National Water Supply and Sanitation Council.

II. ***Representation in Oversight or Policy-Making Institutions.*** Several countries have institutions overseeing regulatory authorities and service providers and/or providing high-level direction on WSS policy and regulations. These bodies typically comprise ministries and other government bodies relevant to the WSS sector but, in some cases, also include representatives of civil society or consumer associations. Ethiopia's highly decentralised regulatory structures apply this approach at the ground level, with Water Boards required to include multiple representatives of the public being the primary regulator of utilities.

III. ***Substantive Public Consultations.*** Public consultations are seen in most countries in the development of regulations. However, in some countries, more substantive steps are taken to ensure the involvement of members of the public in decisions on WSS regulation or service provision. For example, in Kenya, the Water Services Regulatory Board has developed a Consumer Engagement Guideline specifying a series of roles and responsibilities for water action groups (comparable to Zambia's water watch groups), water service providers, the Water Services Regulatory Board and civil society organisations in consumer engagement.

IV. ***Consumer Groups.*** In some countries, consumer groups have legal personhood and represent consumers' interests in several areas, including aspects related to WSS regulation. This is the case for Tanzania (see Box 27) and Rwanda, where the Rwanda Consumer's Rights Protection Organisation accounts for the consumers' voice and have had an active role in developing and enforcing regulations. Similarly, in Zimbabwe, consumer groups such as the Combined Harare Residents Association have played an important role in holding service providers accountable for the quality of services delivered.

Box 25 details the important steps taken in Tanzania to promote increased public participation in WSS regulation.

Box 25: Tanzania's Comprehensive Public Participation Mechanisms

Tanzania has comprehensive public participation mechanisms for regulatory mechanism development and enforcement. Participation is ensured at various stages:

- **License Issuing.** The licensing process is publicised in the media and is open for public consultation. All comments received must be addressed before issuing a license.
- **Tariff Review.** Before utilities submit a tariff application, they must consult with the customers and relevant stakeholders. A representative from the Energy and Water Utilities Regulatory Authority (EWURA) must be present to collect the comments, and these are analysed and addressed if pertinent.
- **Regulatory Instrument Development.** All the relevant stakeholders (i.e. service providers, governmental actors, local authorities, consumers) are consulted, and their comments must be considered before instruments are formally issued.

Utilities are also obliged to prepare a customer service charter, which is a document that must have previously been approved by EWURA, setting minimum service standards, including a clear and transparent procedure for receiving and settling complaints from customers. Utilities must ensure that the contents of this document are well disseminated so customers are aware of their rights. Finally, the EWURA Consumer Consultation Council is a board that collects

consumers' interests and provides their inputs in various stages of the regulatory process. The council can comment on service provision performance and raise issues identified by users to EWURA.

Regulatory reports and data on WSS service provider performance are made publicly available in 33% of countries; however, the quality, accessibility, and frequency of published information vary widely. Countries such as Cape Verde, Egypt, Kenya, Mauritania, Tanzania, Uganda, and Zambia publish extensive data on the performance of regulated service providers and contextualise this with reports detailing regulatory activities undertaken and key issues observed regarding service provider performance. Standards and guidelines are also often made public. In several countries (i.e., Uganda, Liberia), sector review reports are produced focused on overall access to WSS services and activities undertaken in the sector more broadly, but these often contain some detail on regulation and service provider performance. These reports vary in frequency and quality but are not associated with a particular regulatory form. Countries that practice regulation by contract are, in many cases, less transparent – key requirements for service delivery are determined in service providers' contracts rather than standalone regulations, and contracts are typically not publicly available. For example, in Algeria and Morocco, regulatory reports are not publicly available and are managed confidentially in line with contractual arrangements.

Autonomy, participation, and transparency are far from the only factors shaping the regulatory environment. While this study focused on autonomy, participation, and transparency, many factors that underpin overall state capacity also play an important role in shaping the environment for regulation. As with any government function, financial resources and technically skilled public servants are essential for WSS regulation. Countries with scarce government resources and a lack of personnel with specific financial and technical backgrounds relevant to WSS regulation are much more likely to struggle to effectively regulate WSS services, even with strong measures in place to ensure autonomy, participation and transparency. This is a critical constraining factor, which has prevented progress in strengthening WSS regulation in many fragile contexts. Similarly, a stable political environment enables regulatory authorities to focus on refining regulatory frameworks and applying them effectively, while countries experiencing conflict or frequent changes to the legal framework create a much more difficult context for regulation.

CHAPTER

8

ESTABLISHING AND IMPROVING WATER SUPPLY AND SANITATION REGULATION

ESAWAS
REGULATORS ASSOCIATION

8. ESTABLISHING AND IMPROVING WATER SUPPLY AND SANITATION REGULATION

A series of building blocks need to be in place and be sufficiently advanced to enable effective WSS regulation. There is no one-size-fits-all approach to effective WSS regulation. Various frameworks can be used to regulate WSS services, and any framework must be selected, designed and subsequently strengthened based on local contextual factors rather than simply importing international best practices.

As Figure 27 illustrates, regulation can be seen to sit at the centre of the service delivery triangle that also comprises policymakers, service providers, and users. Regulation can both influence and be influenced by policy makers, service providers and users, and there are a wide range of factors linked to each of these that can influence the strength of each building block of effective WSS regulation.

Figure 27: Regulation and the Service Delivery Triangle. Adapted from: SIWI, UNICEF, WHO, IDB, 2021.

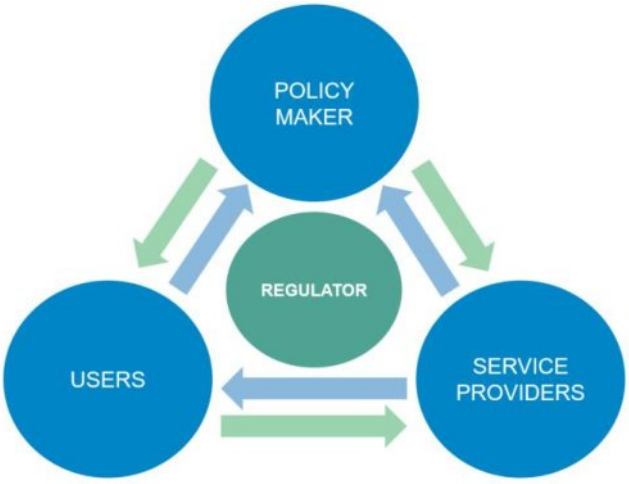
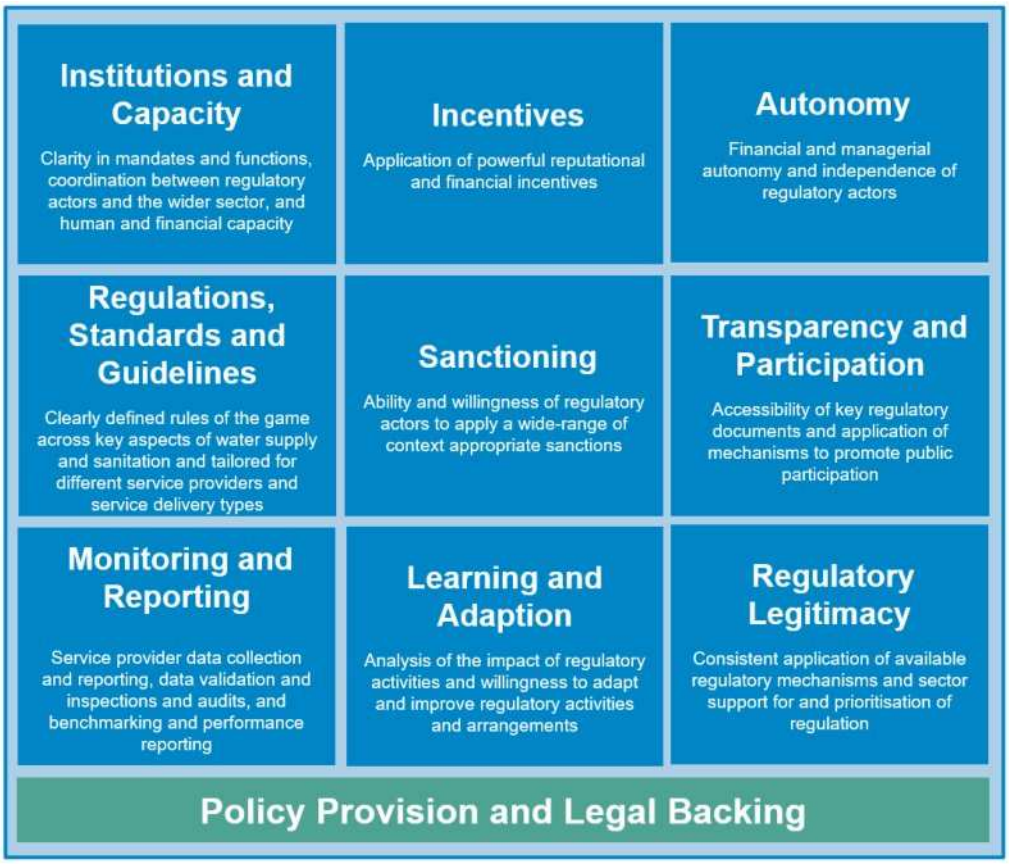


Figure 28 presents core elements of an effective regulatory system, showing the different components that should be in place and sufficiently robust into a series of building blocks. These require a foundation of policy provision and legal backing as an enabling environment.

Building blocks are utilised to reduce the complexity when considering the wide-ranging elements that need to be in place to ensure effective WSS regulation and develop or design measures to establish or improve WSS regulation. These building blocks are suitably broad to ensure their applicability to the different regulatory frameworks utilised across Africa. While some regulatory arrangements typically perform better than others for some or many of these building blocks, these can – and should – be strengthened for whichever regulatory arrangement is in place today or implemented moving forward.

Figure 28: Building Blocks of Effective Water Supply and Sanitation Regulation



Framing WSS regulation as a series of building blocks can be used for various purposes. The building blocks of effective WSS regulation specify features or elements crucial in enabling the effective regulation of WSS services. In doing so, they can be used for a diversity of purposes. These include assessing or diagnosing the current strengths and weaknesses of WSS regulation in a given country or context, defining a desired future state of WSS regulation, and formulating objectives, strategic priorities or interventions for improving or reforming WSS regulation.

A series of regulatory areas need to be addressed and performed across these building blocks. There are several areas of regulation that regulatory actors must address to ensure the delivery of safe, reliable, and equitable services: (i) tariff setting / price regulation; (ii) service quality regulation; (iii) competition regulation; (iv) consumer protection regulation; (v) environmental regulation; and (vi) public health regulation (SIWI, UNICEF, WHO, IDB, 2021). The building blocks of effective regulation do not directly reflect these areas of regulation. Instead, these are considered vital cross-cutting regulatory elements.

Significant interlinkages exist between building blocks – strengthening one building block can enable improvements across a regulatory system. Each building block of effective WSS regulation does not exist in isolation. A wide-ranging set of broader factors influence these building blocks and, in turn, the effectiveness of WSS regulation. Their strengths, weaknesses and overall performance are closely connected. Deficiencies in one building block undermine other building blocks while strengthening or improving a key aspect of one building block enables subsequent improvements across many other building blocks. For example, improvements in the breadth, depth and quality of data reported by WSS service providers can allow the more effective application of incentives and sanctions, facilitate regulatory actors to learn from their activities and adapt accordingly, and enable detailed information on the performance of WSS service providers to be made publicly available (increased transparency). Likewise, improving human and financial capacity can heighten the ability of regulators to apply and develop more effective mechanisms and learn from and adapt their regulatory activities, and even foster improvements in the broader regulatory environment. In turn, each of these improvements can increase the legitimacy of regulatory actors and WSS regulation. Ultimately, regulation should be viewed as an interconnected eco-system, where reform or improvements to one area or institution, can have positive (and negative) impacts on another area or actor.

A series of common areas require improvement in each building block of effective WSS regulation in many African countries. Viewing WSS regulation as a set of building blocks, each comprising a series of elements, helps to identify the key steps required to establish, strengthen and expand regulatory activities across Africa.

The following sub-sections provide a short overview of each building block before detailing a series of common areas that require improvement across many African countries.

8.1. POLICY PROVISION AND LEGAL BACKING

High-level policy provisions are typically crucial in bringing about necessary reforms to regulatory arrangements, while legal instruments can enable effective WSS regulation by precisely specifying regulatory actors' mandates, preventing overlapping or competing responsibilities, empowering regulatory actors with the required functions and authority, and laying the foundations for a robust regulatory environment based on financial and managerial autonomy. Key areas requiring improvement in many African countries include:

- Ensuring national WSS policy documents specify priorities and measures to strengthen WSS regulation.
- Enacting or amending legal instruments to clearly articulate regulatory actors' mandates and functions. This is especially relevant for sanitation.
- Ensuring legal instruments cover all service service providers, service delivery types, and demographic areas.
- Developing strategic frameworks setting out objectives, interventions, institutional responsibilities, costs, and sources of funding for achieving regulatory priorities.

8.2. INSTITUTIONS AND CAPACITY

To be effective, regulators must have sufficient capacity and skills to identify and respond to problems and challenges in the areas they regulate and consistently apply developed regulatory mechanisms to all service providers under their purview. Key areas requiring improvement in this area in many African countries include:

- Establishing dedicated regulatory actors with the opportunity to develop the specialised skills required for WSS regulation compared to policymaking. Linked to this, reducing fragmentation and overlaps in institutional arrangements and mandates for WSS regulation.
- Progressively and sustainably building the financial, human and material capacity of regulatory actors.
- Enhancing coordination and collaborative action among regulatory actors to maximise cost-efficiencies and the resources available.

8.3. REGULATIONS, STANDARDS AND GUIDELINES

Regulations, standards, and guidelines represent the 'rules of the game', defining the standards and expectations that service providers and other key WASH sector stakeholders can be held accountable to. Core areas for improvement in this building block include:

- Developing standards and guidelines for citizen involvement and complaints mechanisms, planning and reporting, tariff setting and adjustments, and pro-poor considerations.
- Ensuring standards and guidelines move beyond only accounting for the largest service providers and the services they provide to consider other service providers and service delivery types.

8.4. MONITORING AND REPORTING

Accurate and reliable data is required to effectively apply regulatory mechanisms, monitor change over time, adapt regulatory activities to maximise their effectiveness, and increase levels of transparency and citizen understanding of service provider performance and the status of the WSS sector. The absence of accurate, reliable and timely data is a common constraining factor preventing the effective application of all regulatory mechanisms. Common aspects requiring strengthening include:

- Promoting formalised service providers to submit timely and reliable data and reports covering key quality of service, economic efficiency and operational sustainability indicators.
- Strengthening data verification mechanisms and ensuring periodic monitoring and inspections of service providers.
- Creating a formal role for users in service provider monitoring.
- Regulatory actors producing detailed annual reports benchmarking service provider performance.

8.5. INCENTIVES

Reputational and financial incentives can effectively promote service provider compliance with standards and regulations and improved performance. However, this represents the worst-performing regulatory mechanism area. Key aspects for improvement include:

- Producing publicly available reports benchmarking service provider performance against each other, sector standards, and past performance for a diversity of quality of service, economic efficiency and operational sustainability indicators.
- Issuing of awards to recognise exemplary service provider performance or considerable improvements.
- Developing and applying powerful financial incentives such as increased tariffs (i.e., surcharge), monetary awards, or preferable contractual conditions to reward improved service provider performance and achieving certain performance standards.

8.6. SANCTIONING

Sanctions are a vital part of any regulatory system, providing a deterrent to help ensure regulations are complied with and indicating that non-compliance will not be tolerated. Across Africa, most regulators hold comparatively expansive sanctioning powers but for a range of reasons, these are rarely utilised. The core area for improvement in this area concerns developing and refining a more complete or flexible set of sanctioning powers short of removing a service provider's licenses or terminating a contract that can *realistically* be applied in a consistent and structured manner.

8.7. AUTONOMY

Autonomy helps to ensure regulatory actors develop and apply regulations and regulatory mechanisms based on a balanced and fair consideration for the rights and needs of users and the environment, as well as the operational and financial sustainability of service providers. In many African countries, this is endangered through regulatory actors being closely connected to – or part of – Ministries responsible for WSS and reliance on funding from the central government. Key areas for strengthening include:

- Developing financing models for regulators that provide a consistent financial resource base and reduce or eliminate reliance on wider government budgeting processes.
- Ensuring legal instruments and institutional arrangements safeguard the financial and managerial autonomy of regulatory actors.

8.8. TRANSPARENCY AND PARTICIPATION

Citizens need to be familiar with – and have the opportunity to influence – regulatory decision-making processes and the standards expected of key WASH sector stakeholders. Several good practice examples exist; however, in most countries, limited steps have been taken to meaningfully heighten the levels of transparency and participation in the development and application of regulations. Key aspects for improvement include:

- Develop well-defined processes to regularly include the perspective of citizens in the development of regulations, including considering different groups or demographics and both current and future consumers.

- Establish mechanisms such as formal voluntary oversight structures and consumer groups to give consumers a meaningful role in ensuring compliance with regulations and standards and holding various stakeholders accountable.
- Produce, make publicly available, and widely disseminate annual reports on service provider performance as well as key regulatory documents such as standards and guidelines, regulatory tools, and approved tariffs.

8.9. REGULATORY LEGITIMACY

Public, service provider and policymaker trust and legitimacy are integral to effective regulation and ensuring the continued influence of regulators. A key area requiring improvement in many countries concerns the consistent, fair and proportionate application of regulatory mechanisms, and open and transparent decision-making are crucial to sustaining confidence in regulators and regulatory activities. Regulators must also be accountable to elected representatives, users, and service providers through the periodic review of performance and the instigation of governance frameworks.

8.10. LEARNING AND ADAPTION

To ensure the effectiveness of regulatory activities, regulators and the wider WASH sector must be willing to learn from their past and ongoing activities and adapt accordingly to reflect successes and failures as well as broader changes in the WASH sector. Key areas for strengthening include:

- Instigating processes such as surveys or feedback sessions with users and regulated entities to receive feedback on the application of regulations.
- Adopting a proactive, forward-looking approach to identify potential issues or new developments and ensuring the willingness and skills to adapt institutional arrangements, mandates and functions, and regulatory arrangements to account for changing WSS needs and priorities.

CHAPTER

9

FURTHER ACTIONS

ESAWAS REGULATORS ASSOCIATION

9. FURTHER ACTIONS

Implementing effective regulation requires advocacy and strengthening in order to be responsive to evolving sector dynamics. This report, and the regional and country reports that it is based on, provides an overview of the status of WSS regulation across 54 African countries. This includes quantitative and qualitative information on a series of critical elements related to the effective regulation of WSS services:

I. Policy provision and legal backing.
II. Regulatory models utilised.
III. Regulated service providers and service delivery types.
IV. Regulatory mechanisms (standards and guidelines, monitoring and performance reporting, incentives, sanctions).
V. Regulatory environment.

For each of these, the focus was on capturing information on all African countries to provide a summary overview of the existing status of WSS regulation in each country and determine cross-cutting findings. Whilst a series of good-practice or illustrative case studies provide country-specific information in several areas, this study did not conduct a deep dive into a narrower set of aspects of regulation, emerging developments in regulation of WSS services, or enabling or constraining factors, among others.

Table 21 details possible intervention and research areas that may be inspired for further actions by various stakeholders (including ESAWAS), from the findings that this study simply scratched the surface of.

Table 21: Areas for Further Actions

Aspect of Regulation	Areas for Further Actions
Policy Provision and Legal Backing	• Establish improvements required to policy and legal frameworks to create/strengthen the enabling environment for regulation, organising the WSS sector and accelerating access to services. • Outline or promote implementation of guidance such as the Africa Sanitation Policy Guidelines (ASPGs) to strengthening policy and legal frameworks for WSS. • Preparation of strategy documents to guide and support the strengthening or reform of regulatory arrangements or the expansion of regulatory activities to new service providers and service delivery types.
Regulatory Model	• Examine the extent to which the regulatory model influences the performance of the WSS sector • Establish the applicability of a particular regulatory model to a specific type of service provider (multi-tiered approaches to regulation). • Explore the impacts when regulatory mandates and functions are split across many institutions or combined in a single institution. • To what extent do regulatory mandates influence the regulatory model adopted. • Develop or promote guidance on attributes of effective regulation regardless of model.
Regulated Service Providers	• Expand the mandates and activities of regulatory actors beyond the largest service providers (i.e., national and regional utilities, large private operators) to include smaller, deconcentrated service providers such as private vacuum tanker operators. • Research, document and disseminate examples of effective arrangements and mechanisms for regulating smaller, deconcentrated service providers such as water committees and private vacuum tanker operators and the lessons that can be drawn from these • Develop or promote guidance for professionalising and formalising smaller, deconcentrated service providers, particularly in the sanitation sector. • Explore the impacts when service provider mandates and functions are split across many institutions or combined in a single institution.
Regulated Service Delivery Types	• Expand the mandates and activities of regulatory actors to move beyond regulating piped water supply and sewered sanitation services to incorporate other prevalent service delivery types such as point water sources, water tankers, sachet water, household water supply, onsite sanitation and communal sanitation. • Research, document and disseminate examples of effective arrangements and mechanisms for regulating point water sources and onsite sanitation services and the lessons that can be drawn from these

Regulatory Mechanisms	• Explore which regulatory mechanisms have the greatest bearing on the performance of WSS service providers • Develop or promote guidance on developing effective mechanisms for regulation • Develop strategies and partnerships to strengthen performance monitoring and reporting at a continent level • Research, document and disseminate the impact of regulatory incentives and sanctions for sector performance
Regulatory Environment	• Develop and promote guidance on strengthening regulatory autonomy for decision-making • Develop and promote guidance on consumer engagement and public participation in regulatory processes
Enabling and Constraining Factors	• Explore strategies that regulators have used to respond to challenges, and how effective have they been • Establish emerging practices and aspects for regulation • Develop capacity development interventions (including formalised training in regulation) to strengthen the execution of mandates by sector actors • Explore the establishment of an Africa-wide WSS regulators association for strengthening regulation at scale across the continent through collaboration
Impact of Regulation	• Gather, document and disseminate evidence on the impact of regulation regardless of form

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ANNEX 1: ANALYTICAL FRAMEWORK

Table 22 presents the analytical framework administered in 54 countries. This was supplemented on guidance on the scoring and qualitative information required for each indicator.

Table 22: Analytical Framework

Enabling and Constraining Factors	Key Enabling Factors	Summary of factors supporting the effective monitoring and / or regulation of WSS services.	
	Key Constraining Factors	Summary of factors preventing the effective monitoring and / or regulation of WSS services.	
Policy Provision and Legal Backing	Ministry of Institution	Detail the Ministry(ies) or institutions responsible for water supply and sanitation policy formulation	Name
	Water Policy	Scoring for the degree to which water supply regulation is addressed in the most recent policy	Scoring (0,1, 2)
			Description
	Water Act, decree or legal instrument	Is there an instrument that gives legal support to the implementation of the water policy? Score for the degree to which water supply regulation is addressed.	Scoring (0,1, 2)
			Description
	Sanitation Policy	Scoring for the degree to which water supply regulation is addressed in the most recent policy	Scoring (0,1, 2)
			Description
	Sanitation Act, decree or legal instrument	Is there an instrument that gives legal support to the implementation of the sanitation policy? Score for the degree to which sanitation provision regulation is addressed	Scoring (0,1, 2)
			Description
	Sector Strategies	Summarise aspects of key sector strategies relating to water supply and sanitation regulation in the most recent policy documents.	Description
	Sector Objectives	Latest top-level sector objectives regarding water supply and sanitation service provision	Description
Regulatory Form	Regulation by Agency	Is there a national regulatory agency or entity with responsibility for regulating water supply and sanitation?	Yes / No / NA
		What is the name of this entity?	Name
		Is this entity solely responsible for water supply and sanitation regulation or does it have a wider remit covering other sectors?	Yes / No
			Describe
		If the responsibility of water and sanitation is split among various institutions, provide details.	Yes / No
			Urban Water
			Rural Water
			Urban Sanitation
			Rural Sanitation
		When was/were this/these entity(ies) established?	Year
		How was/were this/these entity(ies) established?	Short Description
		What main functions do these entity(ies) carry out?	Description
		Name the entity that the main regulatory actor(s) report to	Name
		Detail the mechanisms used to hold the regulatory agency in question accountable	Short Description
		Does the regulatory agency have an explicit function focused on informing broader policy development in the WSS sector?	Yes / No
	Ministerial Regulation	Is/Are there a Ministry(ies) responsible for regulating/monitoring oversight of at least some aspects in the water supply and sanitation sector?	Yes / No
		Is this ministry solely responsible for water supply and sanitation regulation/monitoring oversight or does it have a wider remit covering other sectors?	Yes / No
			If No then name the other sectors
		Is there a specific Department (or equivalent) within the Ministry responsible for water supply and sanitation regulation/monitoring oversight ?	Yes / No
			Name
		Does responsibility for regulation/ monitoring oversight of water and sanitation come under the same ministry?	Yes / No
			All sub-sectors are regulated/ overseen by the same ministry
			Urban Water
			Rural Water
			Urban Sanitation
			Rural Sanitation
		Provide a broad overview of the functions of this entity related to regulation of services?	Description
	Regulation by Contract	Is regulation by contract practiced in the water supply and sanitation sector for service provision?	Yes / No
		How was regulation by contract established for the water supply and sanitation sector (or specific aspects of the sector)?	Short Description
			Name(s)

		What entity(ies) have responsibilities for determining the key performance indicators and provisions to be set out in the contracts?	Description(s)
		What entity(ies) have responsibilities for ensuring compliance with / enforcing provisions and Key Performance Indicators set out in the contracts?	Name(s)
			Description(s)
		Who arbitrates conflicts between contracting parties?	Name(s)
			Description(s)
		Detail the entity that the main regulatory actor(s) report to (i.e., Ministry, Office of the President, etc.)	Name(s)
		To what extent is regulation by contract applied for water supply and sanitation service provision	Scale (limited, moderate, predominant)
			Description
	Sub-National Regulation	Is municipal / local government / sub-national regulation practised in the water supply and sanitation sub-sector?	Yes / No
		How was municipal / local government / sub-national regulation established for aspects of the water supply and sanitation sector?	Short Description
		Are there recognised set of functions for this/these entity(ies)?	Description
Regulated Sub-Sectors	Informal Settlements Water	Is water supply to informal settlements included in the existing regulatory framework?	Score (0, 1, 2)
			Description
	Informal Settlements Sanitation	Is sanitation service provision to informal settlements included in the regulatory framework?	Score (0, 1, 2)
			Description
	Water Resources	Are there entity(ies) responsible for issuing and enforcing water resources regulations?	Yes / No
			Name(s)
			Functions
	Environment	Are there entity(ies) responsible for issuing and enforcing environmental regulations?	Yes / No
			Name(s)
			Functions
	Standards	Are there entities responsible for setting standards for the water supply and sanitation sector?	Yes / No
			Name(s)
			Functions
Regulated Service Providers	Water supply service providers - urban	Detail the main types of service providers in urban contexts (i.e., public utility, private operators, private vendors).	Per Service Provider - Type of entity, Legal constitution, Contracting mechanism, Scale
		Detail service providers regulated for the urban water sub-sector.	Service provider type
			Service provider type, Regulatory actor, Regulatory form
	Water supply service providers - rural	Detail the main types of service providers in rural contexts (i.e., water committee, local government, public utility, private operators).	Per Service Provider - Type of entity, Legal constitution, Contracting mechanism, Scale
		Detail service providers regulated for the rural water sub-sector	Service provider type
			Service provider type, Regulatory actor, Regulatory form
	Sanitation service providers - urban	Detail the main types of service providers in urban contexts (i.e., public utility, (in-)formal private operators) providing services across the sanitation chain.	Per Service Provider - Type of entity, Legal constitution, Contracting mechanism, Scale
		Detail service providers regulated for the urban sanitation sub-sector.	Service provider type
			Service provider type, Regulatory actor, Regulatory form
	Sanitation service providers - rural	Detail the main types of service providers in rural contexts (i.e., utility, local government, (in-)formal private operators providing services across the sanitation service chain.	Per Service Provider - Type of entity, Legal constitution, Contracting mechanism, Scale
		Detail service providers regulated for the rural sanitation sub-sector	Service provider type
			Service provider type, Regulatory actor, Regulatory form
Regulated Service Delivery Types	Networked Piped Water Supply	Are there specific regulations for piped water supply systems? Mention the relevant regulations.	Score (0, 1, 2)
			Description
	Point Water Sources	Are there specific regulations for point water sources such a boreholes or communal water points? Mention the relevant regulations.	Score (0, 1, 2)
			Description
	Household Water Supply (Self-Supply)	Are there specific regulations for household water supply sources such as self-supply, rainwater harvesting systems and household water treatment? Mention the relevant regulations.	Score (0, 1, 2)
			Description
	Sewered (Off-Site) Sanitation	Are there specific regulations for sewered sanitation, this includes not only conventional sewerage but condominial and simplified systems. Are the regulations different	Score (0, 1, 2)
			Description

		depending on the type of system? Mention the relevant regulations.	
	Non-Sewered (On-Site) Sanitation	Are there specific regulations for onsite sanitation technologies (i.e., latrines, septic tanks, poor-flush latrines, small scale treatment plants)? Mention the relevant regulations.	Score (0, 1, 2) Description
	Communal (shared) sanitation	Are there specific regulations for communal sanitation alternatives such as public toilets or shared facilities? Mention the relevant regulations.	Score (0, 1, 2) Description
	Other	Where applicable, detail and provide a score for any other WSS service provision types that regulations have been developed for (i.e., institutional water supply and sanitation, etc.).	Score (0, 1, 2) Description
Regulatory Mechanisms - Standards and Guidelines	Quality of Service	Do standards and / or guidelines exist for service levels (inc. water quality)? Note any distinctions in the services and service providers that these standards and guidelines apply to.	Yes / No Description
	Tariffs	Do standards and / or guidelines exist for tariff rates (inc. tariff setting and adjustments)? Note any distinctions in the services and service providers that these standards and guidelines apply to.	Yes / No Description
	Planning and Reporting	Do standards and / or guidelines exist for planning an/or reporting (i.e., business planning, financial projections, accounting, annual reporting)?	Yes / No Description
	Citizen Involvement and Complaints	Do standards and / or guidelines exist for citizen involvement and complaints mechanisms?	Yes / No Description
	Pro-Poor	Are standards and guidelines designed to help ensure poorer and potentially marginalised populations receive affordable services? Note if there are any subsidy related regulations. Note any distinctions in the services and service providers that these standards and guidelines apply to.	Yes / No Description
	Environment	Do standards and / or guidelines exist for environmental protection?	Yes / No Description
Regulatory Mechanisms - Monitoring and Performance Reporting	Self-Reporting	Do regulated service providers submit reports and data to the regulatory actors (on a regular basis)?	Yes / No Description
	By Regulator	Do regulatory actors inspect and audit regulated service providers on a regular basis?	Yes / No Description
	Performance Reporting	Are reports regularly produced on the performance of the sector and regulated service providers that are published and disseminated to the public?	Yes / No Description
Regulatory Mechanisms - Indicators Tracked	Quality of Service	Are the following indicators concerning quality of service periodically tracked by the regulator?	Water coverage Sanitation coverage Hours of supply (or other measure of continuity) Drinking water quality Other
	Economic Efficiency	Are the following indicators concerning economic efficiency periodically tracked by the regulator?	Metering ratio (or other equivalent measure) Non-revenue water O&M Cost Coverage by revenue Revenue collection efficiency (or other measure of revenue efficiency) Other
	Operational Sustainability	Are the following indicators concerning operational sustainability periodically tracked?	Staff cost as proportion of O & M costs (or other equivalent measure) Staff per 1000 connections (or other equivalent measure) Provide details of indicators not mentioned here, but applied in your country
Regulatory Mechanisms - Incentives	Financial	Are there financial incentives that regulatory actors provide to service providers to promote good performance?	Yes / No Description
	Reputational	Detail any financial incentives applied by regulatory actors in the water supply and sanitation sector.	Yes / No Description
Regulatory Mechanisms - Sanctioning	Fines	Do regulatory actors have the ability to issue fines to service providers if they do not comply with the regulations?	Yes / No
		Are these regulatory mechanisms frequently enforced? Or do they exist in the regulations but are rarely applied?	Description

	Suspension/ Removal/ Transfer of Licenses or Contract Termination	Do regulatory actors have the ability to suspend, remove or transfer the licenses of service providers if they do not comply with the regulations or terminate their contracts?	Yes / No
		Are these regulatory mechanisms frequently enforced? Or do they exist in the regulations but are rarely applied?	Description
Regulatory Environment	Autonomy	Does the regulatory body have the autonomy to adjust tariffs (and other regulations) without governmental approval?	Yes / No
		Is the regulator(s) financially independent of the government (i.e., by collecting license fees paid by service providers and / or regulatory levies paid by customers and collected by service providers)?	Yes / No
			Description
		How are the regulator's funding mechanisms parameters determined?	Description
	Public Participation	What steps are taken to ensure public participation in the development of regulations and regulatory mechanisms?	Description
		What steps are taken to ensure public participation in the application of regulations and regulatory mechanisms?	Description
	Transparency	Are regulatory reports or data published and made accessible to the general public?	Yes / No
			Description

ANNEX 2: BACKGROUND DATA

Table 23 present background data on water supply and sanitation coverage as well as several economic and demographic indicators.

Table 23: Background Data[16]

Region	Country	JMP - Water Supply Coverage (at least 'basic')	Country Reported – Water	JMP – Sanitation Coverage (at least 'basic')	Country Reported – Improved Sanitation	GNI per Capita (US$)	Population (millions)	Rural Popu-lation (%)	Popu-lation Density (people per km^2)
Northern	Algeria	94.44%	99% Improved Water Source (2020)	85.96%	97% Improved Sanitation (2020)	$11,090.00	43.85	26.30%	18.40
	Egypt	99.44%	100% Improved Water Source (2018)	97.32%	99% Improved Sanitation (2018)	$12,220.00	102.33	57.20%	102.80
	Libya	99.89%	98% Improved Water Source (2016)	92.11%	95% Improved Sanitation (2020)	$11,480.00	6.87	19.31%	3.91
	Mauritania	71.68%	58% Improved Water Source (2019)	49.83%	63% Improved Sanitation (2019)	$5,416.86	6.67	44.67%	4.51
	Morocco	90.40%	93% Improved Water Source (2018)	87.25%	68.1% Improved Sanitation (2018)	$3,030.00	36.91	36.46%	82.70
	Tunisia	97.55%	99% Improved Water Source (2020)	97.44%	77% Sewered Sanitation (2020)	$10,550.00	11.82	30.43%	76.07
Western	Benin	65.41%	65% National Water Coverage (2020)	16.96%	17% National Water Coverage (2020)	$3,470.00	12.12	51.56%	107.51
	Burkina Faso	47.21%	74% National Water Coverage (2020)	21.66%	25% National Sanitation Coverage (2020)	$2,110.00	20.9	69.39%	76.40
	Cape Verde	88.77%	72% National Water Coverage (2019)	79.12%	85% National Sanitation Coverage (2019)	$6,220.00	0.56	33.35%	137.96
	Cote d'Ivoire	70.91%	80% National Water Coverage (2019)	34.57%	32% National Sanitation Coverage (2019)	$5,300.00	26.38	48.29%	82.95
	Gambia	80.94%	91% National Water Coverage (2019)	46.87%	52% National Sanitation Coverage (2019)	$2,240.00	2.42	37.42%	238.80
	Ghana	85.79%	92% Improved Water Source (2021)	23.70%	59% Household Sanitation Facility (2021)	$5,930.00	31.07	42.65%	136.56
	Guinea	63.96%	53% Improved Water Source (2018)	29.78%	27% Improved Sanitation (2018)	$2,580.00	13.13	63.13%	53.45
	Guinea-Bissau	59.02%	60% Improved Water Source (2019)	18.23%	14% Improved Sanitation (2019)	$1,980.00	1.97	55.80%	69.99
	Liberia	75.26%	74% Improved Water Source (2019)	18.16%	24% Improved Sanitation (2019)	$1,300.00	5.06	47.91%	52.51
	Mali	82.55%	70% Improved Water Source (2018)	45.39%	56% Improved Sanitation (2018)	$2,250.00	20.25	56.09%	16.60
	Niger	46.91%	71% Improved Water Source (2019)	14.75%	22% Improved Sanitation (2020)	$1,230.00	24.21	83.37%	19.11
	Nigeria	77.61%	74% Improved Water Source (2019)	42.72%	60% Improved Sanitation (2019)	$5,000.00	206.14	48.04%	226.34
	Senegal	84.91%	86% National Water Coverage (2021)	56.78%	54% National Sanitation Coverage (2020)	$3,420.00	16.74	51.88%	86.97
	Sierra Leone	63.77%	66% Improved Water Source (2019)	16.51%	55% Improved Sanitation (2019)	$1,690.00	7.98	57.08%	110.52
	Togo	68.58%	75% Improved Water Source (2017)	18.60%	45% Improved Sanitation (2017)	$2,230.00	8.28	57.20%	152.21
Central	Burundi	62.21%	83% Improved Water Source (2017)	45.73%	53% Improved Sanitation (2017)	$780.00	11.89	86.29%	463.04
	Cameroon	65.72%	75% Improved Water Source (2019)	44.63%	58% Improved Sanitation (2018)	$3,780.00	26.54	42.44%	56.16
	CAR	37.20%	58% Improved Water Source (2018)	14.12%	11% Improved Sanitation (2018)	$1,200.00	4.83	57.80%	7.75
	Chad	46.19%	62% National Water Coverage (2021)	12.06%	18% National Sanitation Coverage (2021)	$1,470.00	16.43	76.48%	13.04
	Congo Republic	73.78%	57% National Water Coverage (2018)	20.46%	56% Improved Sanitation (2015)	$3,068.00	5.52	32.17%	16.16
	DRC	45.95%	33% National Water Coverage (2018)	15.39%	14% National Water Coverage (2018)	$1,110.00	89.56	54.36%	39.51
	Equatorial Guinea	64.67%	55% Improved Water Source (2011)	66.31%	71% Improved Sanitation (2011)	$13,340.00	2.26	26.90%	50.02
	Gabon	85.34%	81% Improved Water Source (2017)	49.82%	79% Improved Sanitation (2017)	$14,300.00	2.23	9.91%	8.64

[16] Data presented in this table is sourced from World Bank Open Data for the economic and demographic indicators.

	Sao Tome and Principe	78.23%	89% Improved Water Source (2019)	47.62%	45% Improved Sanitation (2019)	$4,250.00	0.22	25.65%	228.29
Eastern	Comoros	80.21%	93% Improved Water Source (2013)	35.91%	55% Improved Sanitation (2013)	$3,130.00	0.87	70.62%	467.27
	Djibouti	76.05%	93% Improved Water Source (2017)	66.72%	76% Improved Sanitation (2017)	$5,610.00	0.99	21.94%	42.62
	Eritrea	51.85%	68% Improved Water Source (2010)	11.94%	20% Improved Sanitation (2010)	$1,610.00	6.08	64.20%	35.11
	Ethiopia	49.62%	72% Improved Water Source (2019)	8.91%	28.3% Improved Sanitation (2019)	$2,410.00	114.96	78.30%	101.80
	Kenya	61.63%	57% Improved Water Coverage of Licensed Water Service Providers (2020)	32.70%	88% Improved Sanitation Coverage of Licensed Water Service Providers (2020)	$4,500.00	53.77	72.00%	94.48
	Madagascar	53.39%	43% Improved Water Source (2018)	12.31%	17% Improved Sanitation (2010)	$1,500.00	27.69	61.47%	47.60
	Mauritius	99.87%	Not Available	95.50%	Not Available	$5,320.00	1.27	59.24%	623.52
	Rwanda	60.41%	87% National Water Coverage (2020)	68.83%	86% National Sanitation Coverage (2020)	$2,160.00	12.62	82.57%	525.02
	Seychelles	96.85%	96% Improved Water Source (2013)	100.00%	100% Improved Sanitation (2012)	$24,150.00	0.098	42.45%	214.05
	Somalia	56.48%	83% Improved Water Source (2019)	39.31%	77% Improved Sanitation (2019)	$1,240.00	15.89	53.90%	25.33
	South Sudan	40.95%	77% Improved Water Source (2017)	15.84%	22% Improved Sanitation (2017)	$ 1,080.00	11.06	79.80%	17.71
	Sudan	60.45%	Not Available	36.89%	Not Available	$3,860.00	43.85	64.75%	23.71
	Tanzania	60.72%	43% District and Township Centres; 82% Regional centres (2020)	31.76%	32% National Sanitation Coverage (2020)	$2,760.00	59.73	64.77%	67.44
	Uganda	55.86%	71% Improved Water Source (2020)	19.79%	45% Improved Sanitation (2020)	$2,260.00	45.74	75.05%	228.11
Southern	Angola	57.17%	77.4% Improved Water Source (2016)	51.66%	68.9% Improved Sanitation (2016)	$5,900.00	32.87	33.18%	26.36
	Botswana	92.21%	92% Improved Water Source (93%)	80.03%	83% Improved Sanitation (2017)	$15,490.00	2.35	29.12%	4.15
	Eswatini	70.75%	77% Improved Water Source (2019)	64.29%	46% Improved Sanitation (2019)	$7,970.00	1.16	75.83%	67.45
	Lesotho	72.18%	2,238 New Water Connections (2020)	50.32%	172 New Sewerage Connections (2020)	$2,730.00	2.14	70.97%	70.56
	Malawi	70.15%	83% Service Coverage of Water Boards (2017)	26.55%	37% Improved Sanitation (2020)	$1,550.00	19.13	82.57%	202.91
	Mozambique	63.37%	52% Improved Water Source (2021)	37.20%	38% Improved Sanitation (2021)	$1,250.00	31.26	62.93%	39.75
	Namibia	84.27%	93% Improved Water Source (93%)	35.26%	47% Improved Sanitation (2017)	$9,180.00	2.54	47.97%	3.09
	South Africa	93.89%	88% Access to Piped Water (2019)	78.47%	82% Improved Sanitation (2019)	$13,130.00	59.31	32.65%	48.89
	Zambia	65.41%	66% National Water Coverage (2020)	31.90%	33% National Sanitation Coverage (2020)	$3,360.00	18.38	55.37%	24.73
	Zimbabwe	62.67%	77% Improved Water Source (2019)	35.19%	69% Improved Sanitation (2019)	$3,420.00	14.86	67.76%	38.42

ANNEX 3: FACILITY TYPE

Table 24 details the percentage of the population in each country using five main types of water supply and sanitation facilities, as well as the percentage of the population using other water sources and other sanitation facilities.

Table 24: Facility Type[17]

Region	Country	Water Supply			Sanitation			
		Piped	Non-Piped	Other Water Source	Sewered	Septic	Latrine	Other Sanitation Facility
Northern	Algeria	71.86%	27.57%	0.57%	88.19%	5.57%	2.71%	3.53%
	Egypt	99.31%	0.37%	0.32%	74.46%	21.07%	3.41%	1.06%
	Libya	77.96%	21.93%	0.11%	69.31%	8.26%	21.68%	0.75%
	Mauritania	52.98%	32.18%	14.84%	2.76%	14.65%	40.07%	42.52%
	Morocco	80.22%	15.45%	4.33%	58.53%	18.19%	12.07%	11.21%
	Tunisia	92.51%	6.66%	0.83%	59.95%	17.20%	21.82%	1.03%
Western	Benin	36.74%	37.99%	25.27%	0.99%	4.44%	31.19%	63.38%
	Burkina Faso	28.14%	50.35%	21.51%	0.52%	1.98%	51.47%	46.03%
	Cape Verde	89.76%	6.92%	3.32%	27.98%	55.94%	1.63%	14.45%
	Cote d'Ivoire	41.65%	38.20%	20.15%	6.71%	17.28%	33.11%	42.90%
	Gambia	76.88%	12.65%	10.47%	1.63%	22.68%	35.70%	39.99%
	Ghana	34.70%	57.67%	7.63%	3.12%	19.59%	48.43%	28.86%
	Guinea	24.53%	60.71%	14.76%	2.11%	12.32%	43.53%	42.04%
	Guinea-Bissau	34.63%	38.42%	26.95%	1.15%	16.42%	14.25%	68.18%
	Liberia	4.35%	79.62%	16.03%	0.28%	23.98%	23.24%	52.50%
	Mali	49.55%	36.85%	13.60%	1.27%	3.82%	57.63%	37.28%
	Niger	39.91%	28.66%	31.43%	0.64%	5.10%	19.09%	75.17%
	Nigeria	10.14%	72.45%	17.41%	8.97%	21.26%	32.03%	37.74%
	Senegal	75.05%	12.24%	12.71%	8.06%	36.70%	29.31%	25.93%
	Sierra Leone	20.92%	51.87%	27.21%	0.66%	5.77%	47.99%	45.58%
	Togo	25.08%	49.57%	25.35%	0.22%	22.66%	23.02%	54.10%
Central	Burundi	38.24%	43.40%	18.36%	0.26%	4.09%	54.01%	41.64%
	Cameroon	36.08%	42.51%	21.41%	1.10%	12.97%	45.61%	40.32%
	CAR	14.01%	48.88%	37.11%	0.13%	0.13%	29.64%	70.10%
	Chad	19.79%	41.14%	39.07%	0.53%	0.80%	15.97%	82.70%
	Congo Republic	52.75%	31.49%	15.76%	1.29%	14.99%	38.41%	45.31%
	DRC	35.02%	24.38%	40.60%	0.33%	9.13%	26.05%	64.49%
	Equatorial Guinea	40.78%	26.84%	32.38%	10.61%	6.16%	59.42%	23.81%
	Gabon	81.53%	11.48%	6.99%	33.93%	6.16%	44.79%	15.12%
	Sao Tome and Principe	96.98%	1.48%	1.54%	17.16%	7.11%	29.15%	46.58%
Eastern	Comoros	59.50%	31.57%	8.93%	5.30%	5.45%	38.35%	50.90%
	Djibouti	83.13%	7.68%	9.19%	5.15%	11.41%	57.22%	26.22%
	Eritrea	51.76%	17.68%	30.56%	3.05%	5.22%	13.44%	78.29%
	Ethiopia	41.35%	35.01%	23.64%	0.94%	2.33%	14.46%	82.27%
	Kenya	32.67%	38.50%	28.83%	5.64%	5.27%	47.25%	41.84%
	Madagascar	34.88%	21.23%	43.89%	1.17%	6.18%	25.23%	67.42%
	Mauritius	99.86%	0.00%	0.14%	23.23%	6.68%	69.56%	0.53%
	Rwanda	38.36%	44.38%	17.26%	1.22%	0.36%	82.64%	15.78%
	Seychelles	94.51%	2.34%	3.15%	16.77%	82.30%	0.94%	-0.01%
	Somalia	46.98%	37.20%	15.82%	6.08%	4.26%	45.89%	43.77%
	South Sudan	4.44%	73.94%	21.62%	0.77%	0.32%	23.48%	75.43%
	Sudan	46.07%	41.05%	12.88%	1.03%	6.26%	37.97%	54.74%
	Tanzania	37.64%	60.38%	1.98%	0.50%	1.97%	34.86%	62.67%
	Uganda	22.76%	34.37%	42.87%	0.58%	9.66%	40.26%	49.50%
Southern	Angola	42.45%	24.01%	33.54%	12.98%	58.46%	1.22%	27.34%
	Botswana	90.59%	6.35%	3.06%	1.40%	4.97%	79.23%	14.40%
	Eswatini	60.51%	19.75%	19.74%	9.52%	7.31%	69.10%	14.07%
	Lesotho	68.71%	13.87%	17.42%	1.22%	1.17%	69.04%	28.57%
	Malawi	21.68%	70.32%	8.00%	1.74%	2.79%	35.50%	59.97%
	Mozambique	40.68%	32.67%	26.65%	1.07%	9.73%	31.37%	57.83%
	Namibia	81.29%	10.07%	8.64%	34.97%	2.09%	11.00%	51.94%
	South Africa	90.77%	5.89%	3.34%	60.62%	2.78%	29.84%	6.76%
	Zambia	32.37%	39.49%	28.14%	8.10%	7.62%	35.98%	48.30%
	Zimbabwe	27.48%	49.39%	23.13%	26.01%	5.95%	33.47%	34.57%

[17] Data presented in this table is sourced from the Joint Monitoring Programme (2020).

ANNEX 4: REGULATORY MODEL AND ACTORS

Tables 25 to 29 detail the regulatory actors and regulatory models for each African country across urban and rural water supply and sanitation on a region-by-region basis.

Table 25: Regulatory Model Actors Water Supply and Sanitation Service Provision – Northern Africa

Regulation by Agency	Ministerial Regulation	Regulation by Contract	Self-Regulation

Country	Urban Water	Rural Water	Urban Sanitation	Rural Sanitation
Algeria	Ministry of Water Resources			
		Ministry of Water Resources		Ministry of Water Resources
	Algerian Water Company or the National Office Sanitation			
Egypt	Water Regulatory Authority			
Libya	Ministry of Water Resources			
Mauritania	The Regulatory Authority		Ministry of Water Supply and Sanitation	
		Delegated Contracts with Private Operators		
Morocco	Autonomous Agencies			
	Ministry of Interior	Ministry of Interior	Ministry of Interior	Ministry of Interior
	Various Ministries			
Tunisia	Ministry of Agriculture, Water Resources and Fisheries		Ministry of Environment and the National Office for Sanitation	
		Ministry of Agriculture, Water Resources and Fisheries		

Table 26: Regulatory Model and Actors Water Supply and Sanitation Service Provision – Western Africa

Regulation by Agency	Ministerial Regulation	Regulation by Contract	Self-Regulation

Country	Urban Water	Rural Water	Urban Sanitation	Rural Sanitation
Benin	Ministry of Water and Mines		Ministry of Health	
	Ministry of Water and Mines			
Burkina Faso	Ministry of Water and Sanitation	Ministry of Environment, Energy, Water and Sanitation	Ministry of Water and Sanitation	Ministry of Environment, Energy, Water and Sanitation
	Ministry of Economy, Finance and Forecasting		Ministry of Economy, Finance and Forecasting	
	Ministry of Commercial Industry and Artisanship		Ministry of Commercial Industry and Artisanship	
	Communes		Communes	
Cape Verde	National Water and Sanitation Agency			
	Multisector Economic Regulatory Agency			
Cote d'Ivoire	National Office of Drinking Water		National Office of Sanitation and Drainage	
Gambia	Ministry of Health			
	Public Utilities Regulatory Authority	Ministry of Fisheries and Water Resources	Public Utilities Regulatory Authority	
Ghana	Public Utilities Regulatory Commission	Community Water and Sanitation Agency		Community Water and Sanitation Agency
	Food and Drugs Authority			
	Metropolitan, Municipal, and District Assemblies			
Guinea	Ministry of Energy, Hydraulics, and Hydrocarbons	Ministry of Energy, Hydraulics, and Hydrocarbons	Ministry of Energy, Hydraulics, and Hydrocarbons	
			Ministry of Environment and Sustainable Development	
	Ministry of Territorial Administration and Decentralization			
Guinea-Bissau	Ministry of Energy, Industry and Natural Resources			
Liberia	National Water, Sanitation and Hygiene Commission			
	Liberia Water and Sewer Corporation			
	Ministry of Health / National Public Health Institute			
			Local Authorities	
Mali	Regulatory Commission for Electricity and Water	Ministry of Mining, Electricity and Water	Ministry of Environment, Sanitation and Sustainable Development	
	Ministry of Mining, Electricity and Water			
Niger	Regulatory Authority for the Water Sector			Ministry of Hydraulics and Sanitation
	Ministry of Hydraulics and Sanitation			
Nigeria	National Environmental Standards and Regulations Enforcement Agency			
	State Ministries			
	State Regulatory Agencies			
	Federal Ministry of Water Resources			
	National Agency for Food and Drug Administration and Control			
Senegal	National Water Company of Senegal	Rural Boreholes Agency	National Sanitation Agency of Senegal	
			Ministry of Water and Sanitation	
Sierra Leone	Sierra Leone Electricity and Water Regulation Commission			
	Local Government Service Commissions			
	Ministry of Health and Sanitation			
Togo	Ministry of Health			
	Local Authorities			
	Regulatory Authority for Electricity		Regulatory Authority for Electricity	
			National Sanitation and Public Safety Agency	
			National Environmental Management Agency	

Table 27: Regulatory Model and Actors Water Supply and Sanitation Service Provision – Central Africa

Regulation by Agency	Ministerial Regulation	Regulation by Contract	Self-Regulation

Country	Urban Water	Rural Water	Urban Sanitation	Rural Sanitation
Burundi	Regulatory Authority for the Drinking Water and Energy Sectors			
	Ministry of Hydraulics Energy and Mines			
			Ministry of Infrastructure, Equipment and Social Housing	
Cameroon	Ministry of Energy and Water			
	Ministry of Territorial Administration and Decentralisation			
	Local Governments			
	Performance Contract Monitoring Committee			Ministry of Territorial Administration and Decentralisation
Central African Republic	Ministry of Energy and Hydraulic Resource Development			
	Ministry of Energy and Hydraulic Resource Development		Ministry of Energy and Hydraulic Resource Development	
Chad	Ministry of Urban and Rural Hydraulics			
	Ministry of Urban and Rural Hydraulics			
Congo Republic	Water Regulatory Body	Ministry of Environment		
			Ministry of Energy and Hyrdaulics	
	Ministry of Energy and Hyrdaulics			
	Ministry of Health			
Democratic Republic of the Congo	Ministry of Energy and Hydraulics Resources		Ministry of Environment and Sustainable Development	
	Ministry of Health and Public Hygiene			
		Ministry of Rural Development	Ministry of Infrastructure and Public Works	
Equatorial Guinea	G-Proyectos (Semi-Private Company)			
Gabon	Regulatory Agency for Drinking Water and Electric Energy			
	Ministry of Energy and Hydraulic Resources			
Sao Tome and Principe	Ministry of Public Works, Infrastructure, Natural Resources and Environment			
	Ministry of Health			
	Ministry of Planning, Finance, and the Blue Economy			

Table 28: Regulatory Model and Actors Water Supply and Sanitation Service Provision – Eastern Africa

Regulation by Agency	Ministerial Regulation	Regulation by Contract	Self-Regulation

Country	Urban Water	Rural Water	Urban Sanitation	Rural Sanitation
Comoros	Ministry of Energy and Water Resources			
Djibouti	The National Office of Water and Sanitation	The Ministry of Agriculture, Water, Fisheries and Livestock	The National Office of Water and Sanitation	The Ministry of Agriculture, Water, Fisheries and Livestock and Fish Resources
	Ministry of Health			
Eritrea	Water Resources Department of the Ministry of Lands, Water and Environment			
	Sub Zoba Water Resources Committees		Ministry of Health	
Ethiopia	Ministry of Water and Energy			
	Water Boards	Woredas	Ministry of Health	
			Water Boards	Woredas
Kenya	Water Services Regulatory Board			
Madagascar	Ministry of Water, Sanitation and Hygiene			
Mauritius	Ministry of Energy and Public Utilities			
		Central Water Authority	Wastewater Management Authority	
			Local Governments	
			Ministry of Health	
Rwanda	Rwanda Utilities Regulatory Authority			
		Districts		
Seychelles	Ministry of Agriculture, Environment and Climate Change			
	Public Health Authority			
Somalia	Ministry of Energy and Water Resources			
			Ministry of Health	
	State Ministries			
South Sudan	Local Government Councils			
	Ministry of Health		Ministry of Lands, Housing and Urban Development of South Sudan	
	Ministry of Water Resources and Irrigation			
Sudan	States			
	Mahalias / Locality			
Tanzania	Energy and Water Utilities Regulatory Authority			
		Rural Water Supply and Sanitation Agency	Local Governments	
				Rural Water Supply and Sanitation Agency
Uganda	Water Utilities Regulation Department	Local Governments		
		Rural Water Supply and Sanitation Department	Water Utilities Regulation Department	Ministry of Health

Table 29: Regulatory Model and Actors Water Supply and Sanitation Service Provision - Southern Africa

Regulation by Agency	Ministerial Regulation	Regulation by Contract	Self-Regulation

Country	Urban Water	Rural Water	Urban Sanitation	Rural Sanitation
Angola	Regulatory Institute for Electricity Services and Water Supply			
	National Water Directorate of the Ministry of Energy and Water			
Botswana	Ministry of Land Management, Water and Sanitation Services			
			Ministry of Environment, Natural Resources Conservation and Tourism	
	Water Appointment Board			
Eswatini	Ministry of Natural Resources and Energy			
	Ministry of Natural Resources and Energy and Ministry of Finance		Ministry of Health	
Lesotho	Lesotho Electricity and Water Authority		Lesotho Electricity and Water Authority	
	Ministry of Water			
Malawi	Ministry of Water and Sanitation			
	Water Services Association of Malawi		Ministry of Health	
	Local Government Authorities			
Mozambique	Water Regulatory Authority (AURA)			
	Ministry of Health – National Health Direction		Municipalities	
Namibia	Ministry of Agriculture, Water and Land Reform			
	Water Regulator of Namibia		Ministry of Urban and Rural Development	
	Ministry of Health and Social Services			
South Africa	Department of Water and Sanitation			
	Water Services Authorities			
Zambia	National Water Supply and Sanitation Council			
Zimbabwe	Ministry of Lands, Agriculture, Fisheries, Water and Rural Development			
	Ministry of Health and Child Care			
	Ministry of Local Government and Public Works			
	Urban Local Authorities and Rural District Councils			

ANNEX 6: REGULATED SERVICE DELIVERY TYPES

Table 30 presents country-specific data on the extent to which four core service delivery types are regulated. This uses a simple colour-coded traffic light system to present an overview of the extent to which regulations and regulatory mechanisms have been developed for four core WSS service delivery types and whether these are regulated at scale: **0** = there are no regulations or standards for this type of service provision; **1** = regulations and standards developed but rarely applied or only applied on a limited basis; and **2** = Regulations and standards developed and applied at scale. This naturally represents a simplification of the situation within individual countries.

Table 30: Regulated Service Delivery Types

Region	Country	Water Supply		Sanitation	
		Piped Water Supply	Point Water Sources	Sewered Sanitation	Onsite Sanitation
Northern	Algeria	2	1	2	0
	Egypt	2	NA	2	2
	Libya	1	0	1	0
	Mauritania	2	0	0	0
	Morocco	2	1	2	0
	Tunisia	2	1	2	0
Western	Benin	2	0	2	0
	Burkina Faso	2	1	2	1
	Cape Verde	2	2	2	1
	Cote d'Ivoire	2	1	2	1
	Gambia	2	1	1	1
	Ghana	2	1	1	1
	Guinea	1	1	0	1
	Guinea-Bissau	0	0	0	0
	Liberia	2	1	2	1
	Mali	0	0	0	0
	Niger	2	0	0	0
	Nigeria	1	1	2	1
	Senegal	2	2	2	2
	Sierra Leone	2	1	1	1
	Togo	2	1	1	1
Central	Burundi	1	1	1	0
	Cameroon	1	0	1	0
	CAR	1	1	0	0
	Chad	1	1	0	0
	Congo Republic	2	1	0	0
	DRC	1	1	0	0
	Equatorial Guinea	0	0	0	0
	Gabon	1	0	0	0
	Sao Tome and Principe	1	0	0	0
Eastern	Comoros	0	0	0	0
	Djibouti	1	0	1	0
	Eritrea	1	1	0	0
	Ethiopia	1	1	2	0
	Kenya	2	1	2	1
	Madagascar	1	0	0	0
	Mauritius	2	0	2	2
	Rwanda	2	2	0	2
	Seychelles	2	1	2	2
	Somalia	1	0	0	0
	South Sudan	1	0	0	0
	Sudan	1	0	1	0
	Tanzania	2	2	2	2
	Uganda	2	0	2	1
Southern	Angola	2	0	0	0
	Botswana	2	2	2	1
	Eswatini	2	0	2	0
	Lesotho	2	0	1	0
	Malawi	2	0	2	0
	Mozambique	2	1	2	0
	Namibia	1	1	1	0
	South Africa	2	1	2	1
	Zambia	2	1	2	1
	Zimbabwe	2	1	1	0

ANNEX 7: REGULATORY MECHANISMS

Table 31 details the performance of each country in the development or application of each of the 16 regulatory mechanisms investigated.

Table 31: Regulatory Mechanisms

Region	Country	Standards and Guidelines						Monitoring and Performance Reporting						Incentives		Sanctions	
		Quality of Service	Tariffs	Planning	Citizen Involvement	Pro-Poor	Environmental Protection	Data Submission	Monitoring and Inspections	Performance Reporting	Quality of Service Indicators	Economic Efficiency Indicators	Operational Sustainability Indicators	Reputational Incentives	Financial Incentives	Fines	License/Contract Suspension/Termination
Northern	Algeria	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✓
	Egypt	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓
	Libya	✓	✓	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	Mauritania	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓
	Morocco	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓
	Tunisia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓
Western	Benin	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✗	✗	✗	✗	✓
	Burkina Faso	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓
	Cape Verde	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Cote d'Ivoire	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✗	✗	✗	✗	✓	✓
	Gambia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
	Ghana	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✗	✓	✓
	Guinea	✓	✓	✗	✗	✗	✓	✗	✗	✓	✓	✗	✗	✗	✗	✓	✓
	Guinea-Bissau	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓
	Liberia	✓	✗	✗	✗	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✓
	Mali	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✓	✓
	Niger	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✓	✓
	Nigeria	✓	✓	✗	✗	✗	✓	✗	✗	✓	✓	✗	✗	✗	✗	✓	✓
	Senegal	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✓	✓
	Sierra Leone	✓	✓	✓	✓	✗	✓	✓	✓	✗	✓	✓	✗	✗	✗	✓	✓
	Togo	✓	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓
Central	Burundi	✗	✓	✗	✗	✓	✓	✓	✗	✓	✓	✗	✓	✓	✗	✗	✓
	Cameroon	✗	✗	✓	✗	✗	✓	✓	✗	✓	✓	✓	✗	✗	✗	✓	✓
	CAR	✗	✗	✓	✗	✗	✓	✓	✗	✓	✓	✗	✗	✗	✗	✓	✗
	Chad	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✗	✗	✗	✗	✓	✓
	Congo Republic	✓	✓	✓	✓	✓	✓	✗	✗	✗	✓	✗	✗	✗	✗	✓	✓
	DRC	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓
	Equatorial Guinea	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗

Region	Country	Standards and Guidelines						Monitoring and Performance Reporting						Incentives		Sanctions	
		Quality of Service	Tariffs	Planning	Citizen Involvement	Pro-Poor	Environmental Protection	Data Submission	Monitoring and Inspections	Performance Reporting	Quality of Service Indicators	Economic Efficiency Indicators	Operational Sustainability Indicators	Reputational Incentives	Financial Incentives	Fines	License/Contract Suspension/Termination
	Gabon	✓	✓	✗	✗	✗	✓	✗	✓	✗	✗	✗	✗	✗	✗	✗	✓
	Sao Tome and Principe	✓	✗	✓	✗	✗	✓	✓	✗	✗	✓	✓	✓	✗	✗	✗	✗
Eastern	Comoros	✓	✓	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	Djibouti	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	Eritrea	✓	✓	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓
	Ethiopia	✓	✓	✗	✓	✗	✓	✓	✗	✗	✓	✓	✗	✗	✗	✓	✓
	Kenya	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
	Madagascar	✓	✓	✗	✗	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓
	Mauritius	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	✗	✓	✗	✗
	Rwanda	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓
	Seychelles	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	✓	✓	✓
	Somalia	✓	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	South Sudan	✓	✗	✗	✗	✗	✓	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗
	Sudan	✓	✗	✗	✗	✗	✓	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗
	Tanzania	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1	✓	✓	✓	✓
	Uganda	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✗	✓	✓	✗	✓
Southern	Angola	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✗	✓	✗	✓	✓
	Botswana	✓	✓	✓	✗	✓	✓	✓	✓	✗	✗	✓	✓	✓	✗	✓	✗
	Eswatini	✓	✗	✗	✗	✗	✓	✓	✓	✗	✓	✗	✓	✗	✗	✗	✗
	Lesotho	✓	✓	✓	✓	✗	✓	✓	✓	✓	✗	✓	✓	✗	✗	✗	✗
	Malawi	✓	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓
	Mozambique	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
	Namibia	✓	✓	✓	✗	✓	✓	✓	✗	✗	✗	✓	✗	✗	✗	✓	✓
	South Africa	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
	Zambia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓
	Zimbabwe	✓	✓	✓	✗	✗	✓	✓	✓	✓	✓	✓	✗	✓	✗	✗	✗