



REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

WATER UTILITY REGULATION DEPARTMENT

ANNUAL REGULATOR'S REPORT

Regulators



WATER UTILITY PERFORMANCE, FY 2023/24

JANUARY, 2025

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List of Acronyms & Abbreviations

AFUR	African Forum for Utility Regulators	PC	Performance Contract
AFWASA	African Water Association	PSP	Public Stand Post
AMCOW	African Ministers' Council on Water	PWPs	Public Water Points
BMGF	Bill & Melinda Gates Foundation	REMIS	Regulation Management Information System
CUWS	Central Umbrella Water Authority	RWSD	Rural Water Supply Department
DAWASA	Dar Es Salaam Water and Sanitation Authority	SCADA	Supervisory Control and Data Acquisition
ESAWAS	Eastern and Southern Africa Water and Sanitation Regulators Association	SDGs	Sustainable Development Goals
EUWS	Eastern Umbrella Water Authority	SWUS	South Western Umbrella Water Authority
FSTPs	Faecal Sludge Treatment Plants	UGX	Ugandan Shillings
FY	Financial Year	UNBS	Uganda National Bureau of Standards
KIS Ltd	Kalangala Infrastructure Services Limited	UNICEF	United Nations Children's Fund
KPIs	Key Performance Indicators	UPMIS	Utility Performance Management and Information System
LWB	Lilongwe Water Board	USD	United States Dollar
LWSC	Lusaka Water and Sanitation Company	UWSD	Urban Water and Sewerage Department
MCM	Million Cubic Meters	WASAC	Water and Sanitation Corporation Ltd
MWE	Ministry of Water and Environment	WASCO	Water and Sewerage Company
NCW&SC	Nairobi City Water and Sewerage Company	WHO	World Health Organisation
NRW	Non-Revenue Water	WIN	Water Integrity Network
NUWS	Northern Umbrella Water Authority	WSUP	Water & Sanitation for the Urban Poor Advisory
NWSC	National Water and Sewerage Corporation	WURD	Water Utility Regulation Department
O&M	Operation and Maintenance	WUPI	Water Utility Performance Index
OCR	Operating Cost Coverage Ratio	ZAWA	Zanzibar Water Authority
OPEX	Operating Expenses		
OR	Operating Ratio		



Executive Summary

This report presents Water Utility Regulation Department's evaluation of the FY2023/24 performance of Uganda's water utility sector, which currently serves 24.33 million Ugandans through 907 gazetted supply schemes. In terms of key achievements, revenue collections increased significantly from UGX 484.3 billion to UGX 601.7 billion, and service coverage expanded by 7%. Additionally, water production reached 172.38 million cubic meters, and a Meter Testing and Calibration Centre is being established in Entebbe. The Regulation Management Information System (REMIS) is also under development.

Despite these accomplishments, the sector faces several key challenges. High Non-Revenue Water (NRW) increased to 38.5%, with particularly high levels in Kampala at 38.98%. There is suboptimal cost recovery, with an average Operating Cost Coverage Ratio (OCR) of 109%, and persistent arrears, with government institutions accounting for 45% of NWSC's outstanding debt. Water quality compliance gaps were also noted in bacteriological testing.

The report outlines several key strategies to address these challenges, including policy and regulatory reforms such as a revised Tariff Policy, targeted investments aimed at professionalising rural water management, and expanded water quality monitoring to meet national and global standards. Further, intensified regulatory enforcement is focused on enhancing metering regulation and strengthened performance monitoring through benchmarking and compliance audits.

Financially, the average Operating Cost Coverage Ratio (OCR) stands at 109%, and collection

efficiency improved to 87%, despite high arrears. Pro-poor approaches include initiatives such as subsidising connection fees and establishing public water points. However, challenges involve unregulated water vendors who charge higher than recommended prices and inactive public water points.

Operational efficiency was highlighted by achieving 61,976 new connections, representing 80% of the annual target. Overall non-revenue water stood at 38.5%, and aggregated metering coverage averaged 96%. Utilities collectively averaged 17 hours of water supply per day, and the average water quality compliance rate was 95%.

Commercial viability showed the average active connection rate was 84%, with the total volume of water sold reaching 114.4 million cubic meters, a 4% improvement. The average collection efficiency improved to 86%.

In terms of financial sustainability, varying levels were observed among utilities, with some showing excessive staff costs. Utilities achieved 33.75% of their annual investment budget. Collaboration with partners including Water for People, World Bank, and ESAWAS, and benchmarking of NWSC with utilities in Eastern and Southern Africa were noted.

Strategic priorities for the future include harmonizing data with UBOS and implementing REMIS, adopting advanced metering and methods to reduce NRW, improving revenue collection mechanisms and tariff reforms, and integrating sanitation planning into broader water supply strategies.



Overall, the report emphasizes the need for improved operational efficiency, financial sustainability, and service delivery to ensure sustainable access to clean water and sanitation for all Ugandans.

Foreword by the Minister of Water and Environment



Hon. Sam Cheptoris
Minister of Water and
Environment



Our vision is clear: a water and sanitation sector that is efficient, resilient, and inclusive, aligned with Uganda's Vision 2040 and the Sustainable Development Goals (SDGs).

Water and sanitation are the lifeblood of national development, underpinning public health, economic growth, and environmental sustainability. A country cannot industrialise, modernise agriculture, or build resilient communities without a robust, well-regulated water supply and sanitation sector. As a government, we are unwavering in our commitment to delivering reliable, accessible, and affordable water services to every Ugandan, ensuring that no one is left behind in our pursuit of socio-economic transformation.

This Annual Regulator's Report for FY 2023/24 presents a comprehensive performance assessment of the water utility sector, capturing the strides made in expanding service coverage, enhancing financial sustainability, and improving operational efficiency. The Water Utility Regulation Department (WURD) has upheld its mandate, overseeing nine contracted water authorities managing 907 gazetted supply schemes, now serving 24.33 million Ugandans, a 7% increase from the previous year. Regulatory oversight will be further strengthened through the establishment of a Meter Testing and Calibration Centre in Entebbe, ensuring accurate billing and revenue protection, and implementing the Regulation Management Information System (REMIS) to enhance real-time monitoring, compliance, and decision-making.

While revenue collections have increased significantly—from UGX 484.3 billion to UGX 601.7 billion—the sector continues to grapple with high Non-Revenue Water (NRW), suboptimal cost recovery, and inefficiencies in utility operations. NRW rose to 38.5%, demanding urgent interventions in infrastructure rehabilitation, advanced metering systems, and enforcement against illegal water use. Addressing these inefficiencies remains central to ensuring the financial viability of utilities and the long-term sustainability of service delivery.

In response to these challenges, the Ministry is spearheading key policy and regulatory reforms, including a revised Tariff Policy to balance affordability and financial viability, targeted investments in professionalised rural water management, and expanded water quality monitoring to meet national and global safety standards.

Our vision is clear: a water and sanitation sector that is efficient, resilient, and inclusive, alignment with Uganda's Vision 2040 and the Sustainable Development Goals (SDGs). I commend the Water Utility Regulation Department, development partners, and all stakeholders for their dedication and urge continued collaboration to accelerate progress toward universal access to safe and affordable water for all Ugandans.

Foreword by the Permanent Secretary, Ministry of Water and Environment



Dr. Alfred Okot Okidi
Permanent Secretary



The number of gazetted towns increased to 907, with the National Water and Sewerage Corporation (NWSC) managing 277, the six Umbrella Water Authorities overseeing 599, Kalangala Infrastructure Services Ltd managing 7 schemes and Buikwe District Local Government operating 24 schemes

The Water Utility Regulation Department (WURD) stands as the fulcrum of efficiency, financial sustainability, and equity in Uganda's water supply and sanitation services. As this Annual Regulator's Report for FY 2023/24 illustrates, our approach to performance-based regulation continues to drive sector-wide improvements in service delivery, cost efficiency, and compliance enforcement.

We have made significant progress in strengthening regulatory oversight through structured performance contracts, the expansion of regulated water authorities, and the adoption of a data-driven decision-making mechanism. The number of gazetted towns increased to 907, with the National Water and Sewerage Corporation (NWSC) managing 277, the six Umbrella Water Authorities overseeing 599, Kalangala Infrastructure Services Ltd managing 7 schemes and Buikwe District Local Government operating 24 schemes. However, financial sustainability remains, with the average Operating Cost Coverage Ratio (OCR) at 109%, highlighting inefficiencies in revenue generation and expenditure management. Collection efficiency improved to 87%, yet arrears remain high, with government institutions accounting for 45% of NWSC's outstanding debt.

To address these financial constraints, we are accelerating regulatory digitalisation, a milestone that will be achieved through the rollout of the Regulation Management Information System (REMIS). This system is poised to standardise data reporting, enhance real-time performance tracking, and eliminate inconsistencies in regulatory assessments. The establishment of a Meter Testing and Calibration Centre is another critical step toward minimising revenue losses due to meter inaccuracies and ensuring tariff fairness.

Nonetheless, systemic challenges persist. Non-Revenue Water losses, delays in infrastructure investments, and inadequate climate resilience measures threaten the sustainability of water utility operations. The Ministry, represented by the Water Utility Regulation Department as a member of ESAWAS strives to align Uganda's regulatory framework with global best practices in utility performance management. Furthermore, as we refine tariff structures, professionalise rural water operations, and enforce stricter financial accountability measures, we must also ensure that utilities achieve full operational cost recovery without compromising affordability for consumers.

The road ahead demands fiscal discipline, operational innovation, and collaborative partnerships. I therefore reaffirm our commitment to prudent financial stewardship and institutional strengthening to safeguard Uganda's water resources. I commend WURD, development partners, and all stakeholders for their unwavering support and call upon sector actors to embrace evidence-based regulation and investment strategies that guarantee long-term resilience, sustainability, and universal access to safe water and sanitation services.

Foreword by the Commissioner, Water Utility Regulation Department



**Eng. Christopher
Tumusiime**
Commissioner



Utility
performance
monitoring has
also improved,
with water
production
reaching 172.38
million cubic
meters (MCM)
and metering
coverage
averaging 96%

The Water Utility Regulation Department (WURD) is mandated to uphold technical efficiency, operational integrity, and financial sustainability in Uganda's water supply and sanitation services, in line with the Water Act, Cap 152. This Annual Regulator's Report presents the output of a rigorous, data-driven evaluation of utility performance, regulatory compliance, and sectoral challenges. It presents insights into the trajectory of the sector and the strategic interventions required to ensure resilient, equitable, and high-quality service delivery.

During FY2023/24, WURD continued to enforce performance-based regulation across nine contracted water utilities, ensuring that water service providers operate within acceptable standards of water supply continuity, metering efficiency, revenue collection, and water quality compliance.

FY 2023/24 marked significant progress in the regulation of Uganda's water sector, strengthening service delivery and accountability. Service coverage has expanded to 907 gazetted water supply schemes, now serving 24.33 million Ugandans—a 7% increase in access. Utility performance monitoring has also improved, with water production reaching 172.38 million cubic meters (MCM) and metering coverage averaging 96%. The establishment of the Meter Testing and Calibration Centre in Entebbe enhances metering accuracy, minimises billing disputes, and strengthens revenue assurance. Moreover, the rollout of the Regulation Management Information System (REMIS) is expected to improve real-time oversight, data accuracy, and decision-making. These efforts reinforce our commitment to a well-regulated, efficient, and sustainable water sector.

Despite these milestones, several technical and operational bottlenecks persist. Non-Revenue Water (NRW) increased from 27.5% to 28.7%, with urban centres such as Kampala experiencing alarmingly high NRW levels at 38.98%, necessitating urgent pipeline integrity assessments, metering recalibration, and strengthened enforcement against illegal water use. Additionally, water quality compliance gaps have been observed in bacteriological testing in some utilities, reinforcing the need for rigorous source protection, optimised disinfection protocols, and frequent water quality monitoring.

The financial sustainability of utilities remains a critical concern, as the average Operating Cost Coverage Ratio (OCR) stands at 109%, indicating inefficiencies in expenditure control and cost recovery. While annual revenue collections surged by 24.2% to UGX 601.7 billion, persistent arrears—particularly from government institutions—continue to strain utility cash flows. Ensuring a cost-reflective tariff structure while maintaining affordability for consumers will be central to sustaining sector growth.

In the coming year, WURD will intensify regulatory enforcement, with a strong focus on enhancing metering regulation to improve accuracy and minimise non-revenue water losses. Additionally, performance monitoring will be strengthened through rigorous benchmarking, compliance audits, and periodic regulatory reviews, ensuring alignment with regional best practices under the Eastern and Southern Africa Water and Sanitation Regulators Association (ESAWAS). These efforts will enhance service efficiency, promote accountability, and drive sector-wide improvements. The future outlook of water regulation is to ensure that an enabling environment of quality water and sanitation service levels are achieved and maintained.

I extend my appreciation to all utility service providers, development partners, and other regulatory stakeholders whose collaboration strengthens our mission. I particularly extend gratitude to **Water for People, Uganda** for their support in the processes that have resulted into the publication of this report and look forward to continued collaboration.

Water Utility Regulation Department (WURD)



The dedicated team of WURD staff members

The Water Utility Regulation Department operates under a performance-based regulatory framework guided by the Water Act, Cap 152. The regulatory mandate aligns with this framework to ensure acceptable water supply service standards for consumers without compromising the enabling environment for water utilities. The current regulation framework for provision of water supply and sanitation services in Uganda is currently executed by the Ministry of Water and Environment, represented by the Water Utility Regulation Department.

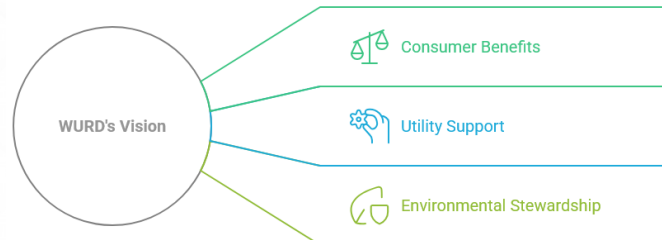
The department is also increasingly getting involved in the regulation of sanitation services. Uganda's fast-growing population underscores the critical need for the adoption of effective sanitation technologies to ensure safe and reliable services across the entire sanitation service chain, including containment, emptying and transportation, treatment, and disposal. Another novel engagement has been in the implementation of the national framework for operation and maintenance of rural water infrastructure.

In executing this mandate, WURD has enjoyed strategic partnerships and collaborations with development partners, civil society and other government agencies. The partners include Water for People, World Bank, Eastern and Southern Africa Water and Sanitation (ESAWAS), WSUP Advisory, and Uganda National Bureau of Standards (UNBS), among others. Although WURD still faces regulatory challenges, such partnerships provide a progressive future landscape.

Strategic Overview of WURD

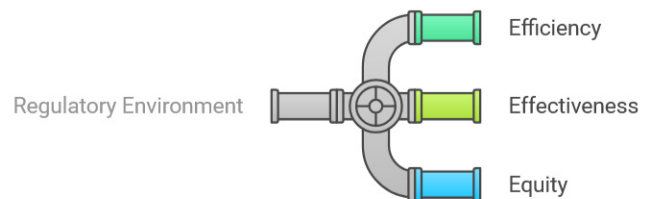
Our Vision

To be the best government regulator of water and sanitation services for the benefit of consumers, utilities and the environment



Our Mission

To ensure that effective regulation of water supply and sanitation service provision results in sustainable, reliable, affordable and non-discriminatory service delivery to all Ugandans



What We Do

The Water Utility Regulation Department (WURD) is responsible for ensuring that water supply and sanitation services across Uganda comply with established standards. Through regulatory mechanisms such as gazetting, performance contracts, tariff reviews, and continuous monitoring of technical and service quality, WURD fosters a regulatory framework that promotes efficiency, fairness, and consumer protection. Additionally, we are dedicated to resolving disputes between service providers and consumers while upholding the fundamental human right to water and sanitation.

Key Focus Areas

Contracting

- Gazetting
- Performance contracts to Water Authorities

Tariffs

- Receive and review tariff proposals for approval by Minister

Technical quality regulation

- Review performance of Water Authorities on service quality

Competition

- Dispute resolution between service providers

Customer protection

- Receive and resolve consumer complaints (mainly appeals)

Highlight of WURD Performance in FY 2023/24

During the Financial Year 2023/24, the WURD made significant strides in advancing regulatory compliance, operational efficiency, and stakeholder engagement. Key achievements include the performance assessment of all nine Water Authorities to ensure adherence to regulatory standards and the development of the Regulation Management Information System (REMIS), which is aimed at enhancing data management and real-time monitoring for informed decision-making.

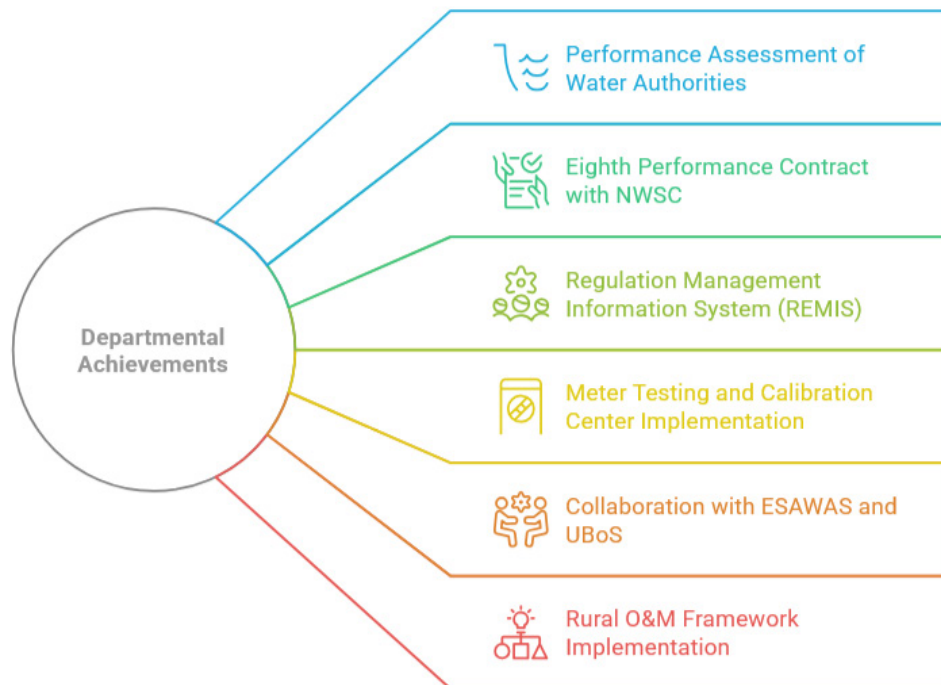
Additionally, the implementation of a Meter Testing and Calibration Centre in the central region (Entebbe) aimed at improved water meter management by water utilities also progressed. The process for developing and executing the Eighth Performance Contract with NWSC was also successfully implemented. The department also fostered strategic collaborations with key partners,

such as the Eastern and Southern Africa Water and Sanitation Regulators Association (ESAWAS) and the Uganda National Bureau of Standards (UNBS), to strengthen regulatory capacity and align with best practices.

Furthermore, WURD actively participated in the implementation of the Rural Water Operation and Maintenance (O&M) framework aimed at the sustainability of rural water supply systems by introducing professional practices. The WURD staff also participated in several technical trainings mainly supported under the consultancy assignment on professionalisation of Umbrellas and ESAWAS. These milestones collectively underscore the department's dedication to enhancing water service delivery and ensuring sustainable resource management.



The WURD staff also participated in several technical trainings mainly supported under the consultancy assignment on professionalisation of Umbrellas and ESAWAS



Brief about the Water Utilities

National Water and Sewerage Corporation

National Water and Sewerage Corporation (NWSC) is a Public Utility established by the National Water and Sewerage Corporation Act, Cap.317, Laws of Uganda. NWSC is mandated to operate and provide water and sewerage services in areas entrusted to it on a sound commercial and financially viable basis. To date, a total of 277 water supply areas have been gazetted to NWSC and are currently being operated under the Eighth Performance Contract (PC 8) from July 1, 2024 to June 31, 2027.

The NWSC tariff structure is governed by the Water Act, Cap. 152 and the NWSC Act, Cap 317. This tariff structure is uniform across all towns and service areas under its jurisdiction but differentiated by customer categories.

Umbrella Water Authorities

The six Umbrella Organisations of Water and Sanitation (Central, Eastern, Northern, Mid-Western, South-Western and Karamoja) were established as Water Authorities in 2017 to provide management and operations services to piped water supply schemes gazetted to them in addition to providing technical backstopping support to member schemes. A total of 599 water supply areas have been gazetted to the 6 respective Umbrellas and 328 water supply areas are being directly managed by NWSC while 271 water supply areas are being optimised to facilitate

direct management. Currently, the Umbrella Water Authorities are operating under the Second Performance Contract which commenced in July 1, 2023 and will end in June 31, 2026

The tariff structure for the Umbrella Water Authorities is governed by the Tariff Policy for Small Towns, Rural Growth Centres and Large Gravity Flow Schemes, 2009 and the Water Act, Cap 152.

Buikwe District Local Government

Buikwe District Local Government operates under a 5-year Performance Contract with Key Performance Indicators. The Water Authority manages 24 mini-solar powered piped water supply systems and currently implements a tariff structure governed by the Tariff Policy for Small Towns, Rural Growth Centres and Large Gravity Flow Schemes, 2009 and the Water Act, Cap 152.

Kalangala Infrastructure Services Limited (KISL)

Kalangala Infrastructure Services Limited was appointed a water supply and sewerage authority in August 2009 through a 20-year Public Private Partnership Agreement which includes development, operation and maintenance of water supply on the Kalangala Islands. The water authority manages 7 piped water supply schemes on Bugala Island, and the tariff structure is governed by the Tariff Policy for Small Towns, Rural Growth Centres and Large Gravity Flow Schemes, 2009 and the Water Act, Cap 152.



Performance Assessment

Introduction

This report is organised in different sections based on the core regulatory functions. These include; Contracting/Gazetting, Tariff Implementation, Technical Quality Assurance of performance – technical, commercial and financial aspects, and related aspects. The report provides the status of performance of utilities for FY 2023/24.

Contracting

The Government of Uganda, represented by the Minister of Water and Environment has currently entered performance contracts with nine Water Authorities which include; National Water and

Sewerage Corporation (PC8), 6 respective Umbrella Water Authorities (PC1) that include; Central, Eastern, Karamoja, Northern, Mid-Western and South-Western; Buikwe District Local Government (PC1) and Kalangala Infrastructure Services Limited, a Public Private Partnership agreement (PC1) which covers development, operation and maintenance of water supply systems in Kalangala District's Bugala Island. By the end of FY 2023/24, the total number of gazetted water supply areas stood at 907, an increase from 864 in FY 2022/23.

Table 1 shows the different water authorities showing with different aspects relating to gazetted Water Authorities.

Table 1: Basic characteristics about Contracted Water Authorities FY 2023/24

Water Authority	Date of PC Expiry	No. of Gazetted Water Supply Areas (No.)	Total Connections (No.)	Water Billed (Millions m ³)	NRW %	Annual Revenue Collections (Ugx Billions)	Population Served (No.)
NWSC	June 30th 2027	277	943,984	108.23	38.3	587.24	18,275,057
Umbrella Water Authorities (6No.)	June 30th 2026	599	118,981	3.91	41.4	14.10	5,954,112
Umbrella-Northern	June 30th 2026	115	17,551	0.97	31.2	2.61	1,517,140
Umbrella-Central	June 30th 2026	147	31,066	1.35	42.4	3.16	1,633,220
Umbrella-Eastern	June 30th 2026	88	22,747	1.03	57.7	2.56	699,337
Umbrella-Karamoja	June 30th 2026	37	4,607	0.01	34.6	0.44	286,501
Umbrella-Mid-western	June 30th 2026	79	24,207	1.30	39.6	4.31	689,885
Umbrella-South-western	June 30th 2026	133	15,536	0.77	22.2	2.15	1,128,029
Kalangala Infrastructure Services Limited (KIS)	Sept 30th 2024	7	1,648	0.08	26.7	0.315	22,876
Buikwe District Local Government	June 30th 2029	24	840	0.03	13.8	0.114	78,000
Overall		907	1,062,186	113.9	38.5	601.7	24,330,045

Table 1 also provides a comparative overview of the performance of different water authorities, highlighting key operational and financial aspects that reflect the scale and efficiency of service delivery. The data offers insights into customer reach, resource utilisation, and revenue generation, while also revealing a significant concern in terms of high levels of non-revenue water. This indicates inefficiencies in water management and distribution, which, if left unaddressed, can lead to financial losses, service gaps, and sustainability challenges. Strengthening operational strategies and enhancing system efficiency will be crucial in mitigating these issues and improving overall performance.

Tariff Regimes Implemented

A tariff is a pricing system that establishes charges for consumers. These are set by service providers based on usage, cost coverage requirements, and standard of service. Water tariffs are crucial for Water Authorities to sustain their financial health while ensuring services remain affordable for consumers. In Uganda, water tariffs are governed by the tariff policy of 2009 for both networked and non-networked water supply systems. Tariff setting is the responsibility of Water utilities/authorities while the review and approval is the responsibility of the Minister as provided in the Water Act. Tariffs are reviewed in order to balance the financial sustainability of service providers and affordability as well as social equity for the different consumer categories.

The Ministry, in a bid to harmonize tariff setting principles for all Water Authorities, conducted a review and an update of the existing tariff Policy. The new policy emphasises the need to have a comprehensive tariff setting process that includes among others; stakeholder consultation, cost reflective tariffs, cross subsidisation within the utility (uniform tariff across the different customer categories) and periodic indexation to prevent tariff erosion. Tariff setting guidelines were also developed to streamline the tariff development process. The draft tariff policy is slated for presentation to the Top Policy Committee for technical approval.

During the FY 2023/24, the Ministry received and reviewed tariffs from the 9 contracted utilities/water authorities. The review is based on the need to strike a balance between financial sustainability of water service providers with equity, and affordability of the customers. From the review of tariffs, the following observations were identified:

- Significant disparities exist in operational costs among different utilities, highlighting the need for investment in accurately determining the cost of providing water supply services across various regional utilities.
- High levels of operational inefficiencies persist, as evidenced by high non-revenue water losses. Prioritising investment in system and infrastructure upgrades, along with routine preventive maintenance, is essential to improving efficiency in water supply services.
- With the exception of NWSC, other water authorities charge tariffs that do not support cost recovery and lack cross-subsidisation mechanisms. As a result, these utilities heavily depend on government subventions. To enhance financial sustainability, priority should be given to expanding the customer base through network extensions and system upgrades.
- Rapid assessments conducted by the Ministry indicate a rise in self-supply and increased reliance on unsafe alternative water sources. This trend is largely driven by affordability challenges among consumers, underscoring the need for careful consideration in tariff setting to ensure both accessibility and sustainability.

In the FY 2023/24, the approved tariffs implemented by the Utilities/Water Authorities are summarised in Table 2.

The tariff structure for NWSC is uniform across all 277 towns and service areas however the tariff bands are differentiated by customer groups. The Corporation undertakes annual indexation of the tariffs in accordance with the NWSC Act to guard against tariff erosion caused by macro-economic factors like inflation, foreign exchange rates and economic development factor. Whereas indexation happens annually, it remains the responsibility of the Minister to grant approval of the application.

The tariff structure for other Water Authorities is governed by the Tariff Policy of 2009 and the Water Act, Cap 152. The Umbrella tariffs are relatively low with limited cross subsidisation. It should be noted that the Umbrellas heavily depend on subventions. The Umbrella Water Authority service areas comprise of small towns and rural growth centres with high need for safe and clean water services. Most of the water supply systems under Umbrellas are unable to breakeven with the approved tariffs. It is therefore desirable that revenue inadequacies resulting from tariff be matched with appropriate subsidies to cushion the utilities.

Table 2: Tariff regimes implemented by Gazetted Water Authorities – FY 2023/24 (18% VAT exclusive)

Tariff Structure for National Water and Sewerage Corporation								
Category	Public Stand Pipes		Domestic Customer	Institution/ Government	Commercial <1500 m³/ Month	Commercial >1500 m³/ Month	Industrial <1000 m³/ Month	Industrial >1000 m³/Month
	UGX per 20 ltr Jerrycan	Tariff UGX per m³						
	21	1,060						
Tariff Structure for Umbrella Water Authorities								
Category	Public Stand Pipes		Pumping (Grid)	Pumping (Solar)	Gravity Flow Schemes			
	UGX per 20 ltr Jerrycan	Tariff UGX per m³	Tariff UGX per m³	Tariff UGX per m³	Tariff UGX per m³			
Central	42	2,120	2,990		2,545		1,950	
South-Western	17	848	2,990		2,990		2,118	
Mid-Western	42	2,120	2,050 – 2,990		2,050 – 2,990		1,690 – 2,990	
Karamoja	42	2,119	2,542 – 2,996		2,500 – 2,542		2,119	
Northern	42	2,119	2,999		2,500		N/A	
Eastern	20–42	1,000 – 2,119	2,500 – 2,950		2,500 – 2,950		2,050 – 2,560	
Tariff Structure for Kalangala Infrastructure Services								
Category	Public Stand Pipes			Domestic Consumer		Commercial Consumer		
	UGX per 20 ltr Jerrycan	Tariff UGX per m³		Tariff UGX per m³		Tariff UGX per m³		
	42	2,100		3,600		3,727		
Tariff Structure for Buikwe District Water and Sanitation Authority								
Category	AQ-Taps/Public Stand Pipes		Pumping (Grid)		Pumping (Solar)		Gravity Flow Schemes	
	UGX per 20 ltr Jerrycan	Tariff UGX per m³	Tariff UGX per m³		Tariff UGX per m³		Tariff UGX per m³	
	50	2,500	3,390		2,500		1,500	

Pro-Poor Approaches and Challenges in Water Service Delivery

The Ministry of Water and Environment in a bid to provide equitable water supply services, developed a Pro-Poor Strategy in 2006. The Strategy was aimed at streamlining the provision of efficient and effective water and sanitation services for all Ugandans. The Pro-Poor Strategy outlined specific strategies to be adopted and implemented by the different sub-sectors specifically targeting people whose cost of living per day is below the poverty line of USD 1.77.

The current key pro-poor initiatives include:

- **Subsidisation of Connection Fees:** Reducing the financial barrier for low-income households to connect to water services.
- **Public Water Points (PWP):** Establishing and promoting various types of PWPs at subsidised tariffs to ensure broader access.
- **Expansion of Piped Water Networks:** Extending infrastructure to low-income settlements to improve service delivery.

A total of 32,288 public stand posts (PSPs) across the country were developed to serve the vulnerable groups. As provided for by the strategy, the PSPs are expected to charge UGX 50 per 20 litre jerrycan of water. However, compliance to charging UGX 50 remains challenging for utilities with some PSP attendants charging fees ranging between UGX 100 – UGX 400. The poor therefore continue to pay more per unit volume of water compared to other consumer categories.

Utilities have come up with several innovative approaches aimed at improving service delivery to vulnerable communities including:

- **Increasing Block tariffs piloted in the Eastern Region:** This initiative subsidises the first unit of water consumption at UGX 1,000 per cubic meter, with a progressive increase in the tariff as consumption rises.
- **Equitable Services in Mid-Western Region:** This strategy focuses on ensuring access to potable water for vulnerable households by exploring improved rates of connection and greater access to services for low-income customers.

Despite these efforts, WURD performance review meetings revealed some challenges that still persist:

- **Regulation of Water Vendors:** Public Standpipes (PSPs) are often operated by vendors without formal contracts, leading them to charge exploitative fees that can be 2–3 times higher than official tariffs.
- **Investment Disparities:** Utilities frequently prioritise investment in water supply infrastructure in urban centres where demand is highest, neglecting low income areas due to funding limitations.
- **Inactive Public Water Points:** There are currently 4,413 inactive public water points under NWSC and 273 under Umbrella Water Authorities, leaving many vulnerable communities without access to safe drinking water.
- **Declining Infrastructure Development:** A notable decrease in the construction of new public water points has been encountered by the challenges related to managing this type of connection. This is evidenced by the high number of inactive connections. Consequently, a number of vulnerable persons are left with no option but to access services from private connections at higher fees than the public connections.

It is therefore imperative that review and update the 2006 Pro-Poor Water and Sanitation Strategy to facilitate equitable access to water supply and sanitation services through policy guidance that aligns to the current changing trends is done.



It is therefore imperative that review and update of the 2006 Pro-Poor Water and Sanitation Strategy to facilitate equitable access to water supply and sanitation services through policy guidance that aligns to the current changing trends is done

Technical Quality Regulation

This section provides an assessment of the key performance indicators outlined in the performance contracts. It evaluates operational efficiency across various areas, including the establishment of new water connections, non-revenue water (NRW), metering accuracy, continuity of water supply, and compliance with water quality standards. Additionally, the technical quality assurance also assesses commercial performance metrics, such as active connections, water sales, and the efficiency of billing and revenue collection. Financial sustainability is another critical area of focus, alongside performance in other key areas like adherence to reporting requirements and sanitation regulations.

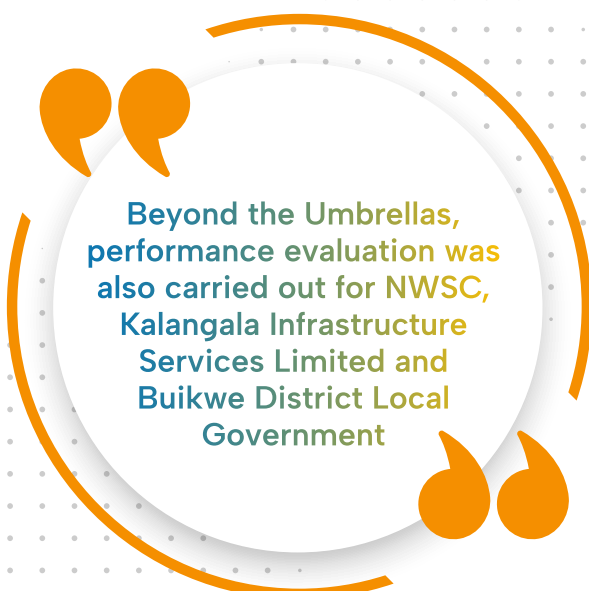
Effective technical regulation ensures that Uganda's nine water utilities deliver safe, reliable, and efficient services in compliance with service standards. This section provides an evaluation of utility performance based on key performance indicators. An annual performance assessment of all 9. Water Authorities was conducted for the reporting period FY 2023/24. The primary objective was to evaluate operational processes, assess performance achievements, and derive valuable lessons and experiences while providing actionable recommendations to enhance water supply and sanitation services across the country.

The assessment focused on the six Umbrella Organisations of Water and Sanitation, utilising performance data from the Utility Performance Management and Information System (UPMIS) and submitted progress reports. Actual performance on Key Performance Indicators (KPIs) was measured against baseline values and annual targets outlined in accordance with the respective Performance Contracts. Additionally, performance benchmarking was conducted based on annual achievements, though this exercise was limited to the Umbrella Water Authorities due to the unique characteristics of individual utilities.

Beyond the Umbrellas, performance evaluation was also carried out for National Water and Sewerage Corporation (NWSC), Kalangala Infrastructure Services Limited and Buikwe District Local Government. These assessments were based on submitted progress reports on KPIs specified in their Performance Contracts.

Following performance reviews of the reports, tailored engagements were made for the respective 9 utilities spearheaded by the Performance Review Team that included key partners outside the department (civil society, internal audit, support to utility management division of UWSD, RWSD and Ministry of Finance Planning and Economic Development) as provided for in the Performance Contracts.

The subsequent sections provide key insights and recommendations derived from the performance assessment and the engagements.



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Operational Efficiency

Introduction

This section presents a composite analysis of operational efficiency for nine water utilities: Central Umbrella, Eastern Umbrella, Mid-Western Umbrella, South-Western Umbrella, Northern Umbrella, Karamoja Umbrella, National Water and Sewerage Corporation, Buikwe District Local Government, and Kalangala Infrastructure Services Limited (KIS Ltd). The focus areas include Non-Revenue Water (NRW), implementation of new connections, system input metering coverage, continuity of supply, and water quality compliance. The report aggregates performance across utilities to identify trends, highlight achievements, and recommend improvements.

Implementation of New Connections

The nine water utilities collectively achieved **61,976 new connections** in FY2023/24, representing **80% of the combined annual target** of 77,484 connections. This marked a **3.8% decline** from the 64,419 connections recorded in FY2022/23. The performance demonstrates progress in expanding access to water services but also highlights challenges that hindered full target achievement. The results are summarised in Table 3.

Table 3: New connections by the different Utilities for FY 2022/23 and FY 2023/24

Utility	FY 2022/23	FY 2023/24
Eastern	2,326	2,062
Karamoja	452	384
Central	4,457	125
South-Western	3,277	3,230
Mid-Western	761	4,346
Northern	2,443	1,913
Buikwe LG	92	92
KIS	105	107
NWSC	50,506	49,717
Total	64,419	61,976

The utilities' performance varied, with some exceeding their targets and others falling short. For instance, Mid-Western Umbrella Water Authority increased the number of new connections by 471% compared to FY 2022/23. Reflecting effective strategies in customer engagement and infrastructure utilisation. In contrast, some utilities, such as the Central Umbrella, significantly dropped from 4,457 to 125 new connections, underscoring the need for targeted interventions to overcome operational and infrastructure-related challenges.

NWSC, the largest utility, contributed significantly to the total, adding **49,717 connections**. However, this performance represented a **1.5% decline** from the previous year, suggesting a slowdown in growth due to factors such as urban market saturation and high connection costs. Kalangala Infrastructure Services Ltd and Buikwe District, also faced hurdles, with connection rates stagnating or increasing only marginally due to limited demand and infrastructure constraints.

Despite these variations, the aggregated performance points to systemic challenges across all utilities. Declining performance trends, particularly in urban areas served by NWSC, indicate that meeting the growing demand for water connections will require more robust investments and strategic reforms as follows:

- To address these challenges, it is recommended to **streamline connection procedures** by simplifying application and approval processes, thereby reducing delays and improving service delivery.
- Utilities should **invest in infrastructure expansion**; prioritising pipeline extensions and facility upgrades in rural and peri-urban areas to increase accessibility.
- Targeted efforts to **enhance customer outreach campaigns** are essential to raising awareness about the benefits of water connections, boost demand, and foster greater community engagement in the drive for universal water access.

Non-Revenue Water (NRW)

NRW is a crucial performance indicator for water utilities, reflecting both operational efficiency and financial sustainability. It measures the volume of water that is produced but does not generate revenue due to losses from leaks, theft, meter

inaccuracies, or billing inefficiencies. Managing NRW effectively is essential for improving service delivery, optimising resource use, and ensuring the financial viability of water utilities.



Figure 1: Leaking valve contributing to NRW

During FY 2023/24, while a total of 185.3 million cubic meters of water was produced, only 113.9 million cubic meters reached the customers. This resulted into the overall non-revenue water of 38.5%. The NRW performance varied across the different utilities. The NWSC's NRW stood at 38.3% of 175.5 million cubic meters produced with Kampala Water having the highest NRW (42.1% of 108.3 million cubic meters produced) among the NWSC areas. The Umbrella water authorities jointly had 41.7% NRW of the 9.5 million cubic meters produced with Eastern Umbrella Water Authority having the highest water loss of 57.7%. Buikwe District Local Government had the least 13.8% NRW of the 0.04 million cubic produced and Kalangala Infrastructure Services Limited (KIS) had 26.7% NRW of the 0.1 million cubic meters produced as illustrated in Figure 2.

In comparison to the international benchmarks by the Water Utility Performance Index (WUPI) which ranges between 30% to 35% for large utilities, the performance of NWSC and Umbrella Water Authorities requires improvement. Conversely, NRW performance for Buikwe district local government and KIS is promising. It should be noted that 96.3% of the overall water produced is by NWSC while 3.7% is by other utilities.

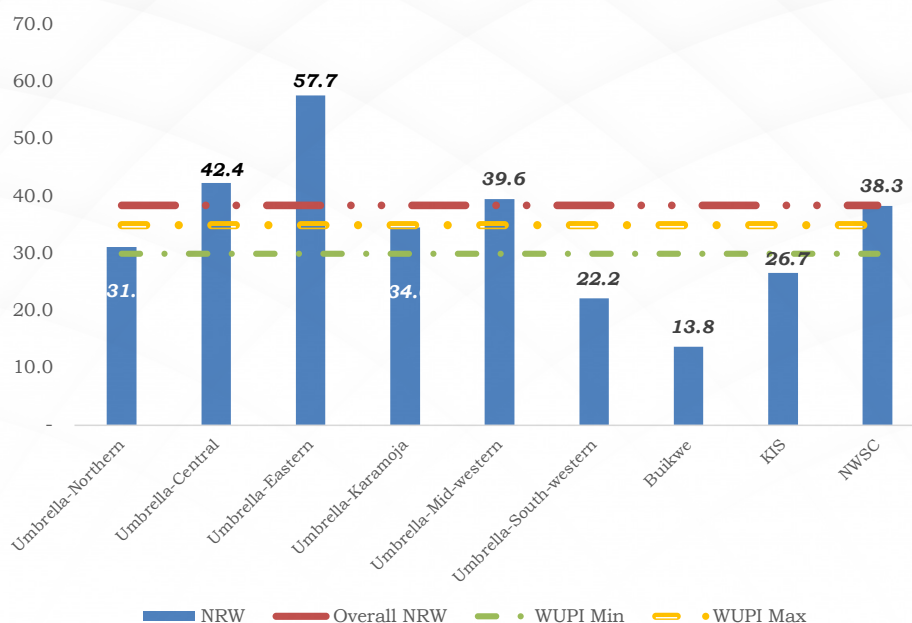


Figure 2: Non-Revenue Water performance for the different Utilities, FY 2023/24

The Utilities were engaged through annual performance reviews. From the performance reviews, the following were highlighted as key contributors to NRW. These have been categorised into physical and commercial losses.

The physical losses were attributed to leaks, delayed or insufficient repairs and poor infrastructure maintenance, particularly in areas with aging systems which exacerbate physical water losses. On the other hand, commercial losses were due to faulty or inaccurate meters, illegal connections and water theft, poor data management, or irregular meter readings.

The utilities are encouraged to address the above factors by prioritising investment in smart metering, improving leak detection and repair processes, and enhancing proper data management practices to effectively reduce NRW.

Implication of NRW on utility financial health

The effect of NRW on the financial health of the Water Authority has been assessed based on the average tariff. The average tariff is generated as the total billed amount divided by the billed volume. With the overall NRW at 38.4% (71.3 million cubic meters), A 5% NRW reduction would yield a saving

of 3.5 million cubic meters. This would result into a potential savings of about UGX 19.1 billion while keeping other factors constant. However, the cost of reducing NRW by 1% needs to be established to facilitate establishment of the economic level of NRW below which there will be negative returns as shown in Table 4.

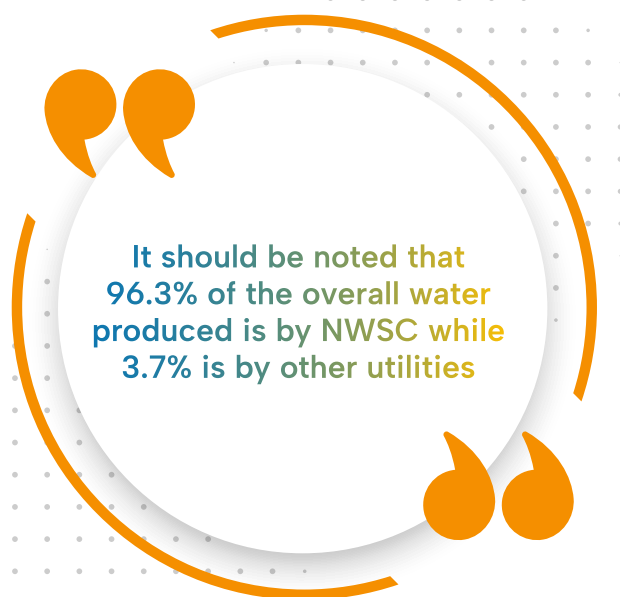


Table 4: Volume of water lost in FY 2023/24 and 5% NRW monetised

Utility	NRW (m³)	Billed amount (UGX)	Billed Volume (m³)	5% NRW Reduction (m³)	Average Tariff (UGX)	Amount Lost (UGX)
Umbrella-Northern	439,985	2,614,183,000	971,160	21,999.25	2,692	59,217,910
Umbrella-Central	993,000	3,159,753,000	1,349,000	49,650.00	2,342	116,294,838
Umbrella-Eastern	1,407,829	2,556,606,313	1,032,769	70,391.45	2,475	174,253,125
Umbrella-Karamoja	80,393	436,546,235	152,155	4,019.65	2,869	11,532,734
Umbrella-Mid-Western	851,789	4,305,785,036	1,300,382	42,589.45	3,311	141,020,882
Umbrella-South-Western	220,796	2,148,135,287	772,118	11,039.80	2,782	30,714,196
Buikwe	4,916	150,931,000	30,820	245.80	4,897	1,203,726
KIS	27,320	266,002,343	75,069	1,366.00	3,543	4,840,336
NWSC	67,303,000	592,728,790,452	108,232,000	3,365,150.00	5,476	18,429,127,145
Overall	71,329,028	608,366,732,666	113,915,473	3,566,451.40	5,341	19,046,669,678

Non-Revenue Water remains a significant challenge for water utilities, impacting both operational efficiency and financial sustainability. The analysis across various water authorities highlights the multifaceted nature of NRW, with physical losses from leaks, commercial losses from metering inaccuracies and unauthorized consumption, and data reliability issues being the primary contributors. While some utilities have made commendable progress in reducing NRW through proactive maintenance, improved metering systems, and enhanced leak detection, others continue to face persistent challenges, particularly in regions with aging infrastructure and ineffective data management practices.

Addressing NRW requires a holistic approach that includes investing in advanced technologies like smart meters, enhancing infrastructure maintenance, improving billing systems, and ensuring accurate and disaggregated data collection. Additionally, fostering staff capacity and instituting regular training will ensure that utilities are better equipped to manage NRW effectively. By prioritising these interventions, water utilities can reduce water losses, enhance revenue generation, and ultimately improve service delivery, leading to a more sustainable and efficient water management system for all.

System Input Metering Coverage

System input metering coverage is the proportion of customer connections with functional meters out of the total water connections. Metering is critical indicator that enables utilities to bridge the gap between water demand and supply of service, and ensures that customers are only charged for amounts they consume. Performance of the utilities on this indicator was measured and the results are as follows:

- In FY2023/24, the aggregated metering coverage across the nine utilities averaged **96%** of 1,062,346 total connections, demonstrating significant progress towards achieving full accountability in water production. Utilities like **Kalangala Infrastructure Services Ltd (KIS Ltd)** and **NWSC** consistently achieved **100% coverage**, showcasing their commitment to accurate data collection and effective resource management.
- Despite this strong performance, minor gaps persisted in certain regions. For instance, **Buikwe District Local Government** achieved **98% metering coverage**, falling marginally short of its 100% target, highlighting the need for continued investment in metering infrastructure and system maintenance. The Umbrellas also generally reported commendable progress albeit with occasional challenges in meter functionality and data reliability, pointing to the necessity of regular calibration and advanced metering systems to ensure consistency and efficiency.

Table 5: Metering efficiency by utilities for FY 2022/23 and FY 2023/24

Utility	FY 2022/23		FY 2023/24	
	Annual Target (%)	Achieved (%)	Annual Target (%)	Achieved (%)
Buikwe DLG	100	99	100	98
KIS	100	100	100	100
NWSC	80	80.12	80	100

Utilities are still faced with challenges such as the low quality of meters on the market which don't function as expected once they are installed on the system. The Water Utility Regulation Department is partnering with Uganda National Bureau of Standards to develop standards for mechanical meters which will address the issue of meter quality. Additionally, the meter calibration centres have been established to aid in regulating adjustments for accuracy. Achieving 100% metering coverage across all utilities is crucial for optimising water resource management, enhancing data accuracy, and ultimately improving accountability and financial sustainability.

Continuity of Water Supply

Continuity of supply is the number of hours per day that a utility provides water to its customers. It is measured by the average hours of water service per day. Continuity of supply is a key indicator of service reliability and customer satisfaction. Utilities are required to supply water to customer for a maximum of 24 hours per day and a minimum of 16 hours per day. In FY 2023/24, the nine utilities collectively averaged **17 hours of supply per day**, demonstrating commendable performance in maintaining stable water availability.

Figure 3 indicates that all utilities with the exception of Karamoja and Central Umbrella Water Authority supplied water for 16 hours or more per day with Kalangala Infrastructural Services Limited reaching 24 hours per day. Whereas most water supply providers maintained the hours of supply from FY 2022/2023 to FY 2023/24, Eastern, Central and Northern Umbrella Water Authorities registered performance declines in FY 2023/24 compared to the previous year.

During the performance reviews, it was identified that underperformance on continuity of supply was attributed to increasing NRW levels. Other challenges like system breakdowns and poor record keeping on hours of supply and downtime with no data being captured are significant. Utilities are urged to improve record keeping and data management for hours of supply and downtime.

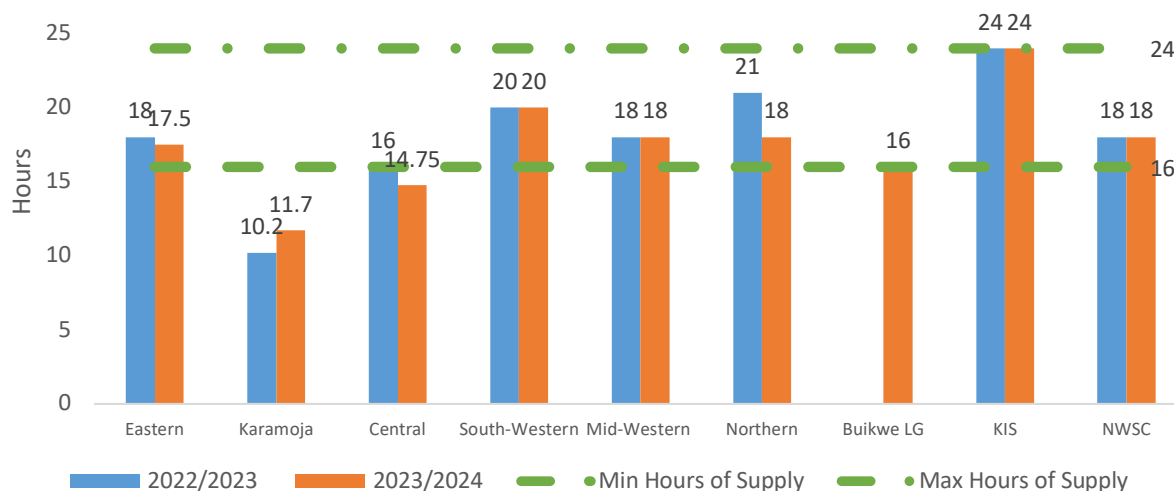


Figure 3: Hours of water supply service by utilities FY 2023/24

The analysis underscores the critical role of infrastructure reliability and proactive system management in ensuring consistent water supply. Utilities should prioritise preventive measures, replacement of aging pipes, rapid response to breakdowns, and capacity upgrades to improve reliability of service. Additionally, adopting real-time monitoring technologies such as SCADA will enable the prompt detection and resolution of service disruptions. Expanding storage capacity through the construction of additional reservoirs and tanks will further bolster resilience, providing a buffer against demand surges and ensuring a stable water supply during system failures.

Water Quality Compliance

Water Utilities are mandated to supply clean and potable water to their customers. Water quality compliance was assessed basing on microbiological tests, a cornerstone of public health and customer trust. Performance remained commendably high in FY 2023/24, with an average compliance rate of **95%** across the nine utilities which is equivalent to the national standards for potable drinking water. With the exception of Northern Umbrella, performance was generally above the national standards for potable drinking water in all utilities.

Several utilities, such as **Central Umbrella, Buikwe Local Government** and **Kalangala Infrastructural Services Limited**, consistently achieved **100% compliance** with national and international water quality standards, reflecting robust treatment processes and effective operational controls. These successes underscore the utilities' commitment to providing safe, potable water and safeguarding public health. Performance declines were registered in Northern Umbrella, Eastern Umbrella and Mid-Western Umbrella.

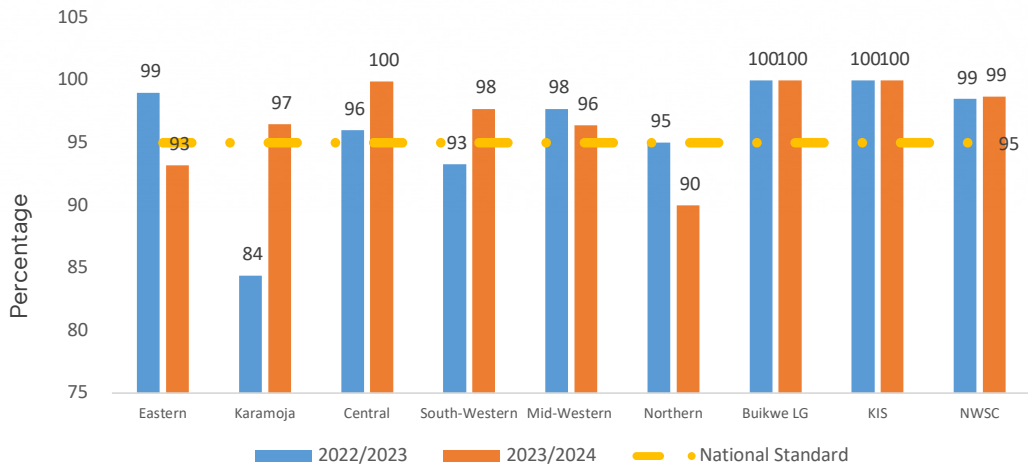


Figure 4: Water Quality Compliance by Utilities for FY 2022/23 and FY 2023/24

However, challenges in **bacteriological compliance** emerged in certain regions, with **Eastern Umbrella** reporting occasional instances of **E. coli contamination**, highlighting vulnerabilities in water source protection and disinfection practices. Such non-compliance poses serious health risks, including potential outbreaks of waterborne diseases, and underscores the need for targeted interventions in these areas.

Whereas water quality compliance across the utilities remains strong, persistent bacteriological challenges in specific regions warrant immediate action. Utilities are therefore required to undertake the following actions:

- Optimise chlorination and filtration processes to effectively eliminate pathogens and improve overall water safety.
- Increasing the frequency of water quality testing is crucial to promptly identify and address potential non-compliance issues.
- Collaborate with local authorities to implement protective measures against contamination from agricultural runoff, improper waste disposal, and other external factors will help safeguard water sources and maintain high-quality standards.

2023/24 WURD Milestones

2nd Africa Water Supply and Sanitation Regulators Conference, October 2023



Regional Performance Assessments



Digitising of Information Management Systems

Dashboard About FAQs Service Areas Schemes

Regulation Management Information System: Dashboard About FAQs Service Areas Schemes Publications

Schemes

These are the approved Schemes.

Show 10 - entries

#	Scheme	Country	Area	District	Province	Village
1	Adjuani	East Mayo	Adjuani	Adjuani	MELUNDA	
2	Adjuani	East Mayo	Adjuani	Adjuani	CESA WARD	IMBUKAGA
3	Adjuani	East Mayo	Adjuani	Adjuani	USA	IMBUKAGA
4	Adjuani	East Mayo	Adjuani	Adjuani	BAKALAN WARD	IMBUKAGA
5	Adjuani	East Mayo	Adjuani	Adjuani	BAKALAN WARD	IMBUKAGA
6	Adjuani	East Mayo	Adjuani	Adjuani	BAKALAN WARD	IMBUKAGA
7	Adjuani	East Mayo	Adjuani	Adjuani	BAKALAN WARD	IMBUKAGA
8	Adjuani	East Mayo	Adjuani	Adjuani	BAKALAN WARD	IMBUKAGA
9	Adjuani	East Mayo	Adjuani	Adjuani	BAKALAN WARD	IMBUKAGA
10	Adjuani	East Mayo	Adjuani	Adjuani	BAKALAN WARD	IMBUKAGA

Showing 1 to 10 of 1278 entries

Previous 1 2 3 4 5 - 122 Next

Construction of Meter Testing and Calibration Centre



Commercial Viability

Active Connections

The active connections indicator measures the proportion of total water connections that are currently in use and receiving services. This metric is essential for assessing a utility's operational efficiency, service accessibility, and customer retention. A high percentage of active connections suggests effective service delivery and customer satisfaction, whereas a lower percentage may indicate challenges such as affordability constraints, supply reliability issues, or service disconnections.

In FY 2023/24, the overall performance of water utilities in terms of active connections was satisfactory, with 889,686 active connections out of 1,062,186 total connections, representing an average activation rate of 84%. This indicates that a majority of customers remain connected to the service. However, there are notable variations among utilities, highlighting both successes and areas requiring improvement.

The Eastern Umbrella recorded the highest percentage of active connections at 99%, demonstrating strong customer retention and service continuity. Similarly, South-Western Umbrella (96%), Buikwe (93%), and KIS (91%) reported commendable performance, with

inactive connections remaining below 10%. These findings indicate efficient operations and a well-maintained customer base in these utilities.

Conversely, NWSC, the largest utility with 943,984 total connections, maintained an 84% active connection rate, aligning with the national average. However, in absolute terms, NWSC reported 153,306 inactive connections, the highest among all utilities. This indicates potential issues related to affordability, water supply reliability, or infrastructure constraints that require further analysis.

The Northern, Mid-Western, and Karamoja Umbrellas all reported an 82% active connection rate, slightly below the national average. While this performance is relatively stable, efforts should be made to further reduce inactive connections and improve service uptake.

The Central Umbrella recorded the lowest active connection rate at 69%, with 9,689 inactive connections—the highest proportion of inactive connections (31%) among all utilities. This high level of disconnections suggests possible supply interruptions, customer affordability challenges, or gaps in service reliability. Addressing these issues will be critical to improving overall sector performance.

Table 6: Number of Active and Inactive Connections for the different Utilities – FY 2023/24

Utility	Total Connections	Active Connections	Inactive Connections	% Inactive
Central	31,066	21,377	9,689	31
Northern	17,551	14,352	3,199	18
Mid-Western	24,207	19,813	4,394	18
Karamoja	4,607	3,800	807	18
Eastern	22,747	22,457	290	1
South-Western	15,536	14,923	613	4
KIS	1,648	1,502	146	9
Buikwe	840	784	56	7
NWSC	943,984	790,678	153,306	16
Total	1,062,186	889,686	172,500	16

The overall performance of water utilities in FY 2023/24 was satisfactory, with an average of 84% active connections. Despite this, addressing inactive connections remains a critical issue, as inactive accounts diminish revenue potential and signal possible service quality gaps. To optimise performance, utilities should focus on reactivating inactive connections through targeted initiatives, including offering reconnection incentives, improving service reliability, and enhancing customer engagement. These measures are essential for sustaining growth and ensuring financial and operational sustainability.

Water Sales

The Water Sales indicator measures the volume of water sold by utilities relative to their set targets. It reflects the efficiency of service delivery, customer demand, and the effectiveness of revenue generation. High water sales performance suggests strong service uptake, reliable supply, and operational efficiency, while underperformance may indicate challenges such as supply disruptions, high non-revenue water (NRW), or limited consumer affordability.

The water sales performance in FY 2023/24 varied across the nine utilities, with an overall mixed trend. Total volume of water sold across the utilities amounted to 114.4 million cubic meters,

representing a 4% improvement from 110.5 million cubic meters sold in the previous year. This indicates improved efforts to meet growing demand and enhance operational efficiency. For instance, the Umbrella Water Authorities collectively improved their water sales by 38%, reaching 6.12 million cubic meters, a notable achievement driven by effective customer engagement and reliable service delivery in regions such as the Eastern Urban Water and Sewerage Services, which surpassed its target by 140%.

Conversely, several utilities experienced significant challenges. Buikwe Water Authority's water sales dropped by 48%, from 59,149 m³ in FY 2022/23 to 30,820 m³ in FY 2023/24, falling drastically short of its annual target. Similarly, Kalangala Infrastructure Services recorded a 5% decline, with sales dropping from 79,362 m³ to 75,069 m³. These shortfalls suggest persistent issues such as high non-revenue water (NRW), customer disconnections, and water supply interruptions.

NWSC demonstrated a steady increase in water sold, rising from 105 million m³ in FY 2022/23 to 108 million m³ in FY 2023/24. However, its NRW remained high at 34%, indicating inefficiencies in distribution, leakages, and metering inaccuracies. This gap between water supplied and water sold continues to impact financial performance and operational sustainability.

Table 7: Water sales by different Utilities for FY 2022/23 and FY 2023/24

Utility	FY 2022/23 Water Sales Volumes (m ³)	FY 2023/24 Water Sales Volumes (m ³)	% Growth
South Western	597,163	798,360	34%
Mid-Western	1,115,925	1,300,224	17%
Central	1,580,929	1,821,443	15%
Northern	872,508	971,160	11%
Eastern	945,567	1032749	9%
Karamoja	176,962	198962	12%
KIS	79,362	75,069	-5%
Buikwe	59,149	30,820	-48%
NWSC	105,155,000	108,232,000	3%
Total Volume Sold	110,582,565	114,460,787	4%

Addressing these challenges requires a multi-faceted approach. Utilities must invest in reducing physical losses through regular maintenance and infrastructure upgrades, enhance commercial processes to reduce illegal connections, and improve metering accuracy. Additionally, customer-focused initiatives, such as flexible payment plans, and enhanced service reliability, will be critical in boosting water consumption and sales. By combining these strategies with robust monitoring and evaluation systems, utilities can achieve sustained growth in water sales and improve overall financial viability.

Collection Efficiency

In FY 2023/24, the average collection efficiency across the nine utilities improved to 86%, up from 80% in the previous year. This reflects notable progress in revenue recovery efforts,

a critical aspect of financial sustainability for utilities. Kalangala Infrastructure Services Ltd achieved 93% collection efficiency, surpassing its target of 90 %, while the Central Umbrella Water Authority (CUWS) reported an impressive 93%, demonstrating effective billing systems and enforcement of payment policies.

However, challenges persist among some utilities, notably the Karamoja Umbrella whose collection efficiency was 69%, well below the target of 75%, highlighting systemic issues such as billing challenges, inadequate enforcement of payment policies, and a weak culture of untimely payments. Additionally, although NWSC reported an improved collection efficiency of 95%, up from 91% in FY2022/23, the utility's total arrears grew by 14.7%, indicating challenges in collecting payments from key debtors, particularly government institutions, which account for 45% of the arrears.

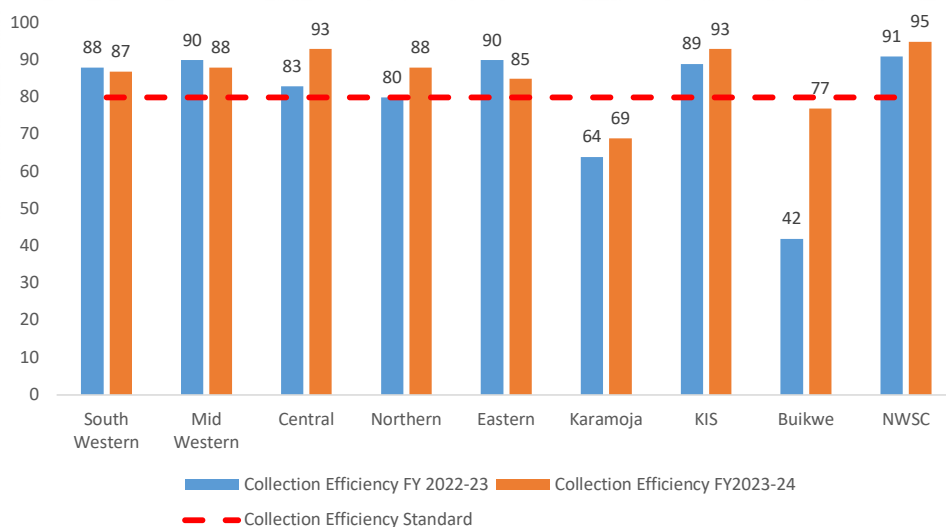


Figure 5: Collection Efficiency for the different Utilities for FY 2022/23 and FY 2023/24

The rising arrears and disparities in collection efficiency highlight the urgent need for targeted interventions. Utilities are encouraged to devise measures that can sustain and improve their collection efficiency, reducing financial risks and ensuring stable cash flows to fund operational and capital investments. The following actions have been proposed:

- Utilities should focus on improving billing accuracy through optimising payment systems to minimise errors and build customer trust.
- Strengthening arrears management by offering flexible payment plans and enforcing penalties for late payments can expedite debt recovery while maintaining customer goodwill.
- Enhancing customer engagement through regular, transparent communication about billing and payment expectations promotes a culture of prompt payments.

Financial Sustainability

Operating Ratio (OR)

The Operating Ratio (OR) is a key financial indicator that measures a utility's ability to cover its operating costs with internally generated revenue. It is calculated as total operating costs divided by total billed revenue. A lower operating ratio (closer to or below 100%) indicates better financial health, as it means the utility is efficiently utilising the internally generated revenue. Conversely, a high operating ratio (above 100%) signals financial distress, suggesting that expenses exceed revenues, which may necessitate external funding or operational efficiency improvements.

In FY 2023/24, water utilities exhibited varying levels of financial sustainability, with some achieving cost recovery while others struggled with high operating ratios.

NWSC demonstrated the strongest financial performance, recording an operating ratio of 70%, meaning it generated 30% more revenue than its operating costs. This indicates strong cost

recovery, operational efficiency, and effective revenue management. Similarly, the Eastern Umbrella WA recorded an OR of 84%, reflecting positive financial performance and cost efficiency. Buikwe also achieved an OR of 91%, indicating that revenue covered operational costs with a slight surplus.

Conversely, several utilities struggled with extremely high operating ratios, reflecting financial challenges. The Mid-Western Umbrella WA had an alarming OR of 226%, meaning operating costs were more than double the generated revenue. The Central (246%) and Northern (211%) Umbrellas faced similar financial distress, highlighting the need for urgent interventions in cost control and revenue enhancement. KIS (194%) and Karamoja (43%) also faced financial difficulties, with Karamoja generating less than half of its operational costs in revenue.

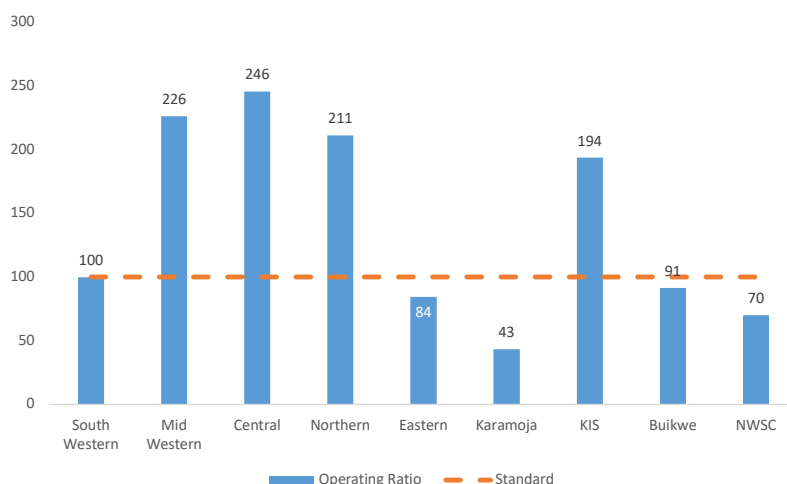


Figure 6: Operating Ratio for the different Utilities for FY 2023/24

Figure 6 visually illustrates the operating ratio performance of different water utilities, comparing actual operating ratios against the standard benchmark of 100%. NWSC, Eastern Umbrella, and Buikwe demonstrated sustainable cost recovery with their operating ratios below or close to the ideal 100% benchmark, while Mid-Western, Central, and Northern Umbrellas exhibited severe financial distress, with

operating ratios exceeding 200%. These results underscore the urgent need for financial discipline, enhanced revenue generation, and stringent cost-control measures to ensure long-term sustainability. Specifically, utilities must manage their staff costs as a ratio to operating expenses to within the acceptable Water Utility Performance Index (WUPI) of between 30% to 35%.

Analysis of Staff Costs to Operating Expenses

An analysis of staff costs to operating expenses (Opex) against the minimum and maximum acceptable benchmarks (30% – 35%), revealed excessive staff costs in some utilities as shown in Figure 7.

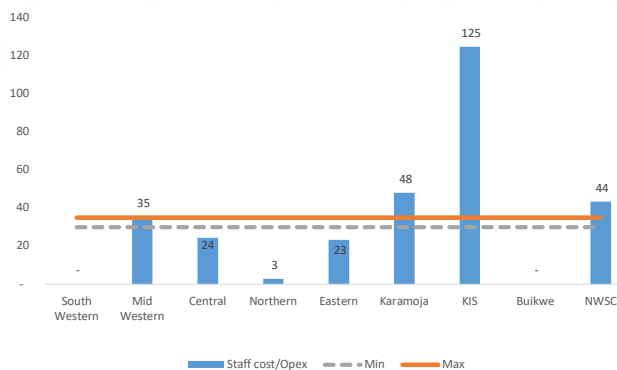


Figure 7: Staff costs as a proportion of Operating Expenses

KIS significantly exceeded the maximum benchmark with staff costs to Operating Expenditure (OPEX) ratio of 125%, indicating that staff expenses surpassed total operating costs by far. This suggests severe financial inefficiencies that may be unsustainable in the long run. Karamoja (48%) and NWSC (44%) also reported high staff costs relative to OPEX, which could strain financial sustainability if not controlled.

South Western Umbrella, Northern Umbrella and Buikwe District Local Government reported negligible staff costs, indicating either efficient cost management or significant reliance on outsourcing, while Central Umbrella (24%) and Eastern Umbrella (23%) demonstrated optimal staff cost management, staying well within the acceptable thresholds.

It is recommended that utilities prioritise cost reduction strategies, improve revenue collection mechanisms, and enhance operational efficiency.

There is also need for financial discipline, enhanced revenue generation, and stringent cost-control measures to ensure long-term sustainability.

Budget for Investment

The Budget for Investment indicator measures the extent to which water utilities utilise allocated funds for capital projects, reflecting their ability to mobilise and deploy financial resources effectively. This metric is crucial in assessing progress toward infrastructure development, service expansion, and long-term sustainability in the water sector. A higher achievement of the investment budget signals improved financial planning and execution, while low performance may indicate challenges in resource mobilisation, fund disbursement, or project implementation.

Investment performance during FY 2023/24 showed substantial improvement, although the adequacy of the targets remains questionable. On average, the utilities achieved 33.75% of their annual investment budget, marking a significant increase from the 7% recorded in FY 2022/23. This improvement indicates an enhanced ability to mobilise and utilise financial resources effectively, with tangible progress in infrastructure development and capacity expansion.

Buikwe and KIS performed well, each surpassing the modest annual target of 5%. While this performance is a positive development, the low target itself raises concerns about the sufficiency of planned investments to meet the growing water supply demands. Such inadequacy in planning could hinder long-term service delivery goals if not addressed.

NWSC's investment performance also reflects the broader sectoral challenges. The increasing operational costs and rising staff-related expenses are also observed.

To ensure sustainable progress, the utilities must adopt more ambitious investment targets aligned with the increasing demand for water services. Prioritising high-impact projects, improving resource mobilisation strategies, and ensuring timely disbursement of funds will be crucial. Addressing these investment challenges will require a strategic shift toward greater financial discipline and innovative funding solutions, such as public-private partnerships and donor support.

Other Performance Areas

Reporting

The aggregated performance of water utilities across regions highlights significant disparities in reporting quality, timeliness, and compliance with regulatory requirements. Utilities such as National Water and Sewerage Corporation and the South Western Umbrella Water Authority (SWUS) stood out as exemplary performers, consistently submitting comprehensive reports. This level of compliance enabled effective regulatory monitoring and decision-making. On the other hand, utilities like the Central Umbrella Water Authority (CUWS) and Northern Umbrella Water Authority (NUWS) exhibited inconsistent reporting practices with data gaps and inaccuracies, which compromised the reliability of performance evaluations.

Delays in report submissions remains a key concern particularly among utilities such as the Eastern Umbrella Water Authority (EUWS). These delays hindered the regulator's ability to conduct timely assessments and implement corrective measures where necessary. Additionally, inability to adopt the proposed standardised reporting templates and methodologies across utilities created inconsistencies in some data presentation, in some cases making it challenging to compare performance across regions.

To address these challenges, a more robust reporting framework is necessary. The full rollout of the Regulation Management Information System (REMIS) is expected to significantly improve data submission processes, validate accuracy, and ensure standardisation. Moreover, utilities should invest in regular capacity-building initiatives for their staff to enhance their ability to produce high-quality and reliable reports. These efforts will strengthen regulatory oversight and promote a culture of accountability among water utilities.

Performance on Sanitation Services

Sanitation services continue to be a critical yet underdeveloped area for many water utilities, with significant challenges hindering progress in achieving broader public health and environmental goals. High operational costs, limited service coverage, and inadequate infrastructure have left many utilities struggling to meet the sanitation needs of their communities, particularly in underserved rural and peri-urban areas. These gaps have exacerbated public health risks and environmental degradation, highlighting the urgent need for targeted interventions.

Utilities have made efforts to provide sanitation services through Faecal Sludge Treatment Plants (FSTPs), which treat and safely dispose off waste collected from households and institutions without sewer connections. However, many of these facilities face issues related to underutilisation and limited geographical coverage. Public toilet facilities, a critical component of sanitation infrastructure in areas with limited household facilities, are also insufficient in most regions, further restricting access to basic sanitation.





Financial challenges have compounded these issues. Revenues generated from sanitation services, such as charges for sludge management and public toilet usage, are often insufficient to sustain operations or fund infrastructure improvements. These financial constraints have limited the ability of utilities to expand and modernise their sanitation facilities.

Addressing these challenges requires a multi-faceted approach. Utilities should integrate sanitation planning into their broader water supply strategies to optimise resources and ensure comprehensive service delivery. Partnerships with development organisations, private entities, and non-governmental organisations can help mobilise the financial and technical support needed to expand services, particularly for vulnerable and low-income communities. Investments in modern sanitation infrastructure, including sewage treatment plants and public toilets, are essential to improving service delivery and reducing operational costs over time. In addition, raising community awareness about proper sanitation and hygiene practices can help drive demand for services and improve public health outcomes.

Finally, the establishment of clear performance metrics and regular audits will provide a strong foundation for continuous improvement in sanitation service delivery. By addressing these critical areas, water utilities can significantly enhance their sanitation services, improving public health, protecting the environment, and enhancing the quality of life for the communities they serve.

Utilities should integrate sanitation planning into their broader water supply strategies to optimise resources and ensure comprehensive service delivery

Key Issues from the Performance Review Meetings

Population Served and Service Coverage

Several discrepancies in population served figures were noted across utilities. These discrepancies often arise from outdated assumptions used to estimate population, such as assuming each Public Stand Post (PSP) serves 200 people and each household connection serves six people. To address this, data should be harmonized with Uganda Bureau of Statistics (UBOS) to improve accuracy, and standard procedures for calculating population served should be established.

Non-Revenue Water (NRW)

NRW levels remain high due to aging infrastructure, frequent pipe bursts, and lack of bulk meters. Additionally, disparities in reported and computed NRW values were observed, indicating potential data inaccuracies. To combat these issues, all strategic points on water systems must be metered, and a revised NRW computation formula using water produced and water billed should be adopted. Segregating commercial losses from physical losses is also essential to implement targeted interventions.

Continuity of Supply

Intermittent water supply remains a challenge in many areas, with no clear methodologies for computing service hours. While some systems achieve consistent supply, others suffer from power shortages and capacity constraints. It is critical to establish clear guidelines for recording and reporting supply hours and address system-specific supply challenges, such as integrating alternative power sources for hybrid systems.

Water Quality Compliance

Water quality compliance is below national standards due to insufficient sampling, lack of chlorine dosing systems, and inadequate source protection. Some systems show significant bacteriological contamination, especially during the rainy season. To improve compliance, the frequency and geographical spread of water quality tests should be increased, and source protection measures, such as fencing, must be implemented.

Collection Efficiency and Revenue Management

Collection efficiency remains low, with increasing arrears partly due to a lack of debt management policies. Many utilities face challenges in recovering revenue from customers, leading to high levels of bad debt. It is imperative to implement a robust debt management policy to categorise and address irrecoverable debts, profile customers for effective recovery strategies, and strengthen measures to enhance revenue collection.

New Connections and Inactive Accounts

Despite achieving targets for new connections, there is a significant increase in inactive accounts. This issue often stems from data inaccuracies, customer relocations, or affordability challenges. To address this, customer databases should be audited and cleaned to remove inactive or duplicate accounts. Utilities should also intensify promotional campaigns to reactivate these accounts and improve overall service coverage.

Data Quality and Reporting

Inconsistent and unreliable data continue to undermine performance reporting. Many reports are submitted late, with data validation processes either weak or absent. To ensure reliability, utilities should strengthen data validation processes at all reporting levels and adopt standardised templates for performance reporting. This will enhance decision-making and regulatory oversight.

Tariff and Financial Sustainability

Current tariffs are not reflective of the actual cost of service, leading to financial deficits. High operating ratios indicate a heavy reliance on subsidies. Utilities must use the tariff determination model to propose cost-reflective tariffs, enabling them to cover operational and maintenance costs sustainably. Additionally, conditional grants should

be monitored and reported separately to assess their impact on financial performance.

Gazetting and System Takeover

The rate of system takeover remains low despite the gazetting of several towns. Resistance from communities accustomed to free water and operational challenges in some gazetted systems hinder progress. Effective community engagement and sensitization campaigns are necessary to build acceptance for regulated water systems. Collaboration with the Ministry of Water and Environment (MWE) is essential to address takeover challenges and ensure smooth transitions.

These issues highlight the need for concerted efforts by all stakeholders to improve operational efficiency and service delivery. Addressing these challenges will require strategic planning, consistent follow-ups, and effective monitoring mechanisms.



Figure 8: WURD Staff during one of the training sessions

Conclusion and Recommendations

The FY 2023/24 saw significant improvements in regulatory compliance, operational efficiency, and stakeholder engagement in Uganda's water utility operations. However, challenges persist in areas such as non-revenue water, data accuracy, water quality compliance, and financial sustainability.

To address these, strategic priorities include harmonizing data with UBOS, implementing the Regulation Management Information System (REMIS), and adopting advanced metering and computation methods to reduce NRW. Infrastructure upgrades, alternative energy integration, and clear monitoring guidelines are essential for ensuring continuity of supply. Additionally, expanding water quality testing and improving source protection measures are critical for maintaining public health standards.

Achieving financial sustainability will require a robust revenue collection mechanism, debt management policies, and tariff reforms to align with service delivery costs. Reactivating inactive accounts and promoting community engagement are key to improving service coverage and acceptance of gazetted systems. Integrating sanitation planning into broader water supply strategies and investing in infrastructure will address gaps in sanitation services. With these interventions, the Water Utility Regulation Department is committed to support the enhancement of service delivery to meet national and global obligations, and ensure sustainable access to clean water supply and acceptable sanitation services for all Ugandans.



Benchmarking Umbrella Water Authorities on Performance Contract 2

This section analyses the performance of water utilities across the six regions based on Key Performance Indicators (KPIs) categorised into operational efficiency, commercial viability, and Financial Sustainability. The data provides insight into the effectiveness of Umbrella Water Authorities operations and highlights areas of strength and opportunities for performance improvements. Due to the differences in the operating environment, the benchmarking compares each utility against the achievement of set targets in the respective performance contract.

KPI	Karamoja	Central	Eastern	Northern	South Western	Mid Western
Operational Efficiency						
Water Production	4	0	4	4	2	4
Non-Revenue Water	4	4	3	4	3	3
Continuity of supply	4	4	4	4	4	4
New Connections	2	0	3	4	4	4
Water Quality compliance (physio-chemical)	0	0	0	0	2	3
Water Quality compliance (Bacteriological)	0	0	0	0	2	0
Commercial Viability						
Water sales	4	3	4	4	2	4
Active Connections	4	2	4	0	4	4
Collection efficiency	0	2	2	0	2	0
Financial Sustainability						
Debt Age	0	4	4	3	4	4
Operating Ratio	0	0	0	0	4	4
Total Actual Scored	22.3	19.6	28.1	22.1	33.8	33.3
Total Score	44.0	44.0	44.0	44.0	44.0	44.0
Total Percentage Score	50.60	44.47	63.88	50.15	76.78	75.66
Ranking based on score	4	6	3	5	1	2

Each region's total score is 44, with the total percentage score calculated as a percentage of the target achieved across all Key Performance Indicators.

The performance ratings are provided with their scores in the table below:

Score	Performance Rating
4	Outstanding Performance
3	Achieving or exceeding the annual target
2	Achieved minimum targets
0	Below minimum target

Scoring and Target achievement

Each Key Performance Indicator was measured in terms of actual performance, percentage of target achievement, and assigned a score. Weighting was not done this time because most KPIs in the second Performance Contract (PC2) have not been weighted yet due to varying differences and challenges in maintaining service levels. To achieve uniformity in reporting and benchmarking, the weight has not been applied in this assessment as well. The benchmarking approach adopted is to compare performance across each region against PC2 set targets to assess the performance under the different KPIs.

- Overall, best performance was registered in the Southwestern Umbrella Water Authority with a total score of 33.8 points out of 44 points translating to 76.78% achievement of all PC2 targets. Excellent performance was registered in continuity of supply achieving 111% of the target of 18hrs per day, new connections with 162% achievement of the annual targets of 2,000 connections, Water Quality Compliance (physiochemical) with 100% achievement of the annual target, active connections (136% target achievement), Debt age (133% target achievement) and operating ratio with 113.7% of the annual target of 112%. Under performance was registered in water production attaining 42% of the annual target of 1.04 million m³, and water sales volume with 45% achievement of the annual target of 1.8 million m³.
- Second best performance was achieved in the Mid-Western Umbrella authority with 31.7 total score translating to 72.37% overall target achievement. The authority performance based on Water Production achieving 108.8% of the target of 1.98 million m³, New water connections with 263% achievement of the annual target of 1,500 connections, Continuity of supply with 100% achievement of annual target 18hrs per day, water sales volume with 106% achievement of the annual target of 1.98 million m³, Active connections surpassing

the annual target of 16,690 by 18.7%. Good performance was registered in operating cost coverage ratio at 93.5% achievement of the annual target of 100%, Non-Revenue Water at 97.1% attainment of the annual target of 33% and Water Quality Compliance (Bacteriological) at 92% achievement of the annual target of 97%.

- Eastern Umbrella Water Authority attained a score of 28.1% translating to 63.88% performance achievement. Excellent performance was achieved in water production with 198% achievement of the annual target of 1.2 million m³, Continuity of supply with 109% achievement of the annual target of 16hrs per day, Water Sales Volume achieving 140% of the annual target of 601,47m, active connections achieving 143% of the annual target of 13,046 connections and debt age achieving 308% of the annual target of 4 months.
- Karamoja came fourth with a score of 22.3 out of the total score of 44 points translating 50.6% performance. Excellent performance was registered in Water production with 306,044 million m³ representing 115% annual target achievement, NRW with 107% achievement of the annual target of 29%, and continuity of supply achieving 106% of the annual target of 16hrs per day, and activity connections and water sales achieving 113% annual target achievement of 2,696 connections and 148,788 million m³ respectively.
- Northern Umbrella Water Authority came fourth with a total of 22.1 scores out of 44 required scores, this translates to 50.15% performance. Excellent performance was registered in non-revenue water in which the umbrella achieved 105.3% of the annual target of 38%, Water Production achieving 105.3% of the target of 1.34 million m³, and active connections in which 105.7% of the annual target of 13,572 was achieved.
- Central Umbrella Water Authority came sixth with a total score of 19.6 points, representing 44.47% of the total score of 44 points. Excellent performance in Central was registered in Non-Revenue Water achieving 101.9% of the annual target of 32%, continuity of supply achieving 96.3% of the annual target of 16hrs per day, Debt ratio with 200% achievement of the annual target of 2 months. Under performance was registered in water production, new connections, water quality compliance and operating ratio.

Collaboration with ESAWAS: Annual Regulators' Conference

During the FY 2023/24, the Ministry of Water and Environment through the Water Utility Regulation Department and in collaboration with Eastern and Southern Africa hosted the 2nd Africa Water Supply and Sanitation Regulators' Conference held at Munyonyo Resort and Conference Centre from 3rd – 5th October 2023. It was attended by more than 150 participants from 44 African countries and over 18 partners supporting regulation. Delegates included representatives of institutions with regulatory mandate, Ministries, Utilities and partners such as AMCOW, AFUR, AfWASA, BMGF, WHO, UNICEF, WIN, WSUP, NIYEL among others. The two and half day conference was followed by the ESAWAS Annual General Meeting on 6th October to discuss the internal operations of the Association.

The 2023 Conference theme was **“Initiatives for Regulatory Impact”** selected in cognisance of the fact that, while implementation of regulation should align with the specific context of a country, the principles of regulation are the same. The theme allowed for sharing of knowledge and experience for adoption and adaptation of good practices. The conference was an opportunity to showcase various initiatives instituted by regulators, policy makers and stakeholders to address sector challenges and create positive lasting impacts in the WSS sector through effective regulation. The conference also served as a podium for gathering evidence on the beneficial role of regulation by demonstrating its impact on WSS service provision.

The conference deliberations highlighted the following key takeaways:

- Data Collection, analysis and interpretation is key to effective WSS regulation

- Commitment to regulate for improved service provision through sound standards and guidelines
- Service resilience and emergency preparedness for sustainability should be at the forefront
- Need to support and incentivise regulatory compliance – including rewarding best performers;
- Consumer feedback should be prioritized to advise improvement of service provision;
- Regulation is a specialized field, therefore there is a need to build the capacity for the stakeholders in the areas of regulation;
- Regulators must have a clear vision and agenda for what needs to be achieved to progress the sector.

The Key Actionable areas were;

- Strengthening regulatory tools for data collection and management (REMIS)
- Development of regulatory frameworks for rural and off grid WSS and service resilient services
- Enhancing technical capacity development of the regulation staff
- Widening regulatory enhancement through strategic partnerships

Benchmarking of NWSC with other Utilities in Eastern and Southern Africa

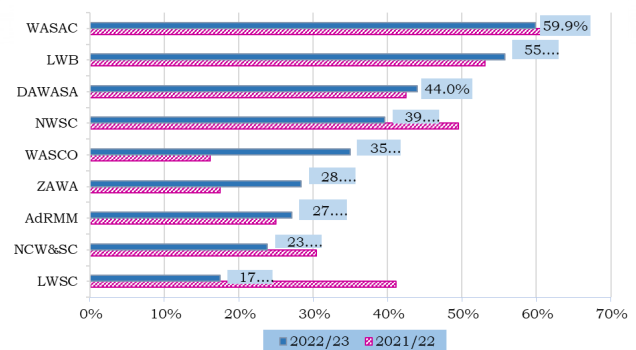
The benchmarking of NWSC with utilities in Eastern and Southern Africa is premised on the fact that large utilities don't have peer utilities within the country that can be comparable. During the FY 2023/24, ESAWAS undertook annual benchmarking of utilities for FY 2022/23. The performance benchmarking included 11 large Utilities. The eleven Utilities considered in this report are: Nairobi City Water and Sewerage Company (NCW&SC) of Kenya; Lusaka Water and Sanitation Company (LWSC) of Zambia; Dar Es Salaam Water and Sanitation Authority (DAWASA) of Tanzania; Águas da Região Metropolitana de Maputo (AdRMM) of Mozambique; Water and Sewerage Company (WASCO) of Lesotho; Water and Sanitation Corporation Ltd (WASAC) of Rwanda; Régie de Production et de Distribution d'Eau et d'Electricité (REGIDESO) of Burundi; Zanzibar Water Authority (ZAWA) of Zanzibar; National Water and Sewerage Corporation (NWSC) of Uganda; Lilongwe Water Board (LWB) of Malawi and Empresa Pública de Águas de Luanda (EPAL) of Angola.

The benchmarking is important in order to design appropriate performance incentives and set minimum targets for key indicators, regulators need to establish where a Utility is coming from (past trends), how it has performed against others (comparative performance) and how it has performed against good practice (industry standards or set acceptable performance).

Therefore, for large or single Utilities that have no comparable peer within a country, regional benchmarking becomes an essential tool to gauge and incentivise performance improvements. While the operating environments may differ from country to country, by benchmarking against similar sized Utilities, lessons can be drawn by both the regulator and the Utility, on how to improve performance.

Overall WUPI

The Overall WUPI is derived by aggregating the three WUPI of Quality of Services, Economic Efficiency and Operational Sustainability. WASAC maintained the first position despite the decline from 66.6% to 59.9%. LWB maintained second position while DAWASA moved from 5th to 3rd position. WASCO and ZAWA made notable improvements while LWSC, NWSC and NCW&SC experienced a significant decline in their overall performance.



The Overall WUPI is derived by aggregating the three WUPI of Quality of Services, Economic Efficiency and Operational Sustainability

Meter Testing and Calibration Centre

Water meters serve as the primary point of interaction between utilities and customers, as they measure the volume of water supplied and determine the corresponding bills. The accuracy and reliability of these meters are fundamental to ensuring fairness in the supply and sale of water. Inaccurate or faulty meters not only lead to revenue losses for utilities but also contribute to disputes over billing, customer dissatisfaction, and regulatory concerns. Additionally, high meter failure rates and substandard meter quality have been identified as key factors affecting meter performance, contributing to high levels of Non-Revenue Water (NRW). The regulator is expected to play a crucial role in addressing these issues by ensuring a fair relationship between utilities and their customers while minimising inefficiencies that could impact financial sustainability and service delivery.

To address these challenges, the regulator is establishing meter testing and calibration centres across the country, with the first station currently being implemented in Entebbe to serve the central region. These facilities will test meters for accuracy, ensure compliance with national standards, and calibrate meters found to be outside the acceptable accuracy range. The stations will accommodate meter sizes ranging from DN15 to DN300 using both manual and semi-automated systems. Plans are underway to extend this initiative to the Northern, Eastern, and Western regions to ensure nationwide coverage. The importation of calibration equipment has been successfully completed, following a pre-import inspection conducted by engineers from the Water Utility Regulatory Department (WURD), marking a significant step towards improving metering accuracy and enhancing customer trust in water billing systems.



Figure 9: Pre-import inspection of equipment by regulation team at Chennai, India

The equipment is currently housed at the contractor warehouse awaiting installation and commissioning as soon as the construction of the calibration station structure is completed.



Figure 10: *Equipment in storage at contractor's warehouse and Construction of calibration house in final stages at Entebbe*

The deployment of the meter testing and calibration system is expected to enhance accuracy by ensuring meters provide precise readings, crucial for correct billing and water balancing, while preventing discrepancies that could lead to overcharging or undercharging customers. It will also support regulatory compliance with Uganda National Bureau of Standards requirements, avoiding legal issues and penalties. Additionally, it will improve cost efficiency by preventing revenue loss from faulty meters, ensuring correct billing, and strengthening the utility's financial performance. Other benefits include increased customer trust and satisfaction through reduced disputes, optimised resource management via accurate water balancing, and extended meter lifespan through timely maintenance.

The impact of the meter testing and calibration system extends across multiple areas, improving operational efficiency, minimising costs, ensuring legal compliance, and strengthening consumer confidence in billing accuracy.

Strengthening WURD'S Capacity

The Water Utility Regulation Department (WURD), established in 2009, plays a vital role in overseeing Uganda's water and sanitation services. To remain effective, continuous capacity building

is essential to enhance staff expertise, improve regulatory efficiency, and adapt to evolving industry standards. With limited fiscal resources for consultancy services, investing in internal training provides a cost-effective and sustainable approach to strengthening institutional knowledge and bridging technical gaps. Prioritising staff development ensures WURD strives towards its regulatory mandate to drive service improvements.

In FY 2023/24, WURD implemented a targeted capacity-building program based on a 2022 needs assessment. The initiative focused on key areas such as technical regulation, regulatory governance, and economic oversight, with additional training under the consultancy assignment for professionalisation of Umbrellas supported under the IWMDP project. Additional training supported by ESAWAS ensured a mix of face-to-face sessions, fieldwork, and consultancy attachments for hands-on learning. However, a critical gap remains in digital transformation and data-driven oversight. As the sector increasingly adopts digital tools for monitoring and compliance, equipping staff with expertise in data analytics and emerging technologies is crucial to strengthening regulatory enforcement and informed decision-making.

Annex

Table 8: Umbrella Performance on salient KPIs over a period of 5 years

Indicators		New Connections	Non-Revenue Water	Continuity of supply (Functionality)	Water quality Compliance	Active Connections	Water sales	Collection efficiency	Operating cost coverage ratio
Umbrellas	Financial Year								
MWUWS	2023/2024	4320	35	18	97	19,813	1,300,382	88	107
	2022/2023	2040	38	18	98	16,112	1,115,925	90	160
	2021/22	1,367	31	18.5	95.2	14,605	971,963	91	81
	2020/21	1,245	31	19	81.5	12,087	720,063	60.2	87.3
	2019/20	2,238	37.5	0	79.575	10,915	228,548	66.6	89.5
CUWS	2023/2024	989	31.4	14.75	97.8	21,712	1,821,443	93	121
	2022/2023	4,457	35	16	95	26,216	1,580,929	88	60
	2021/22	1,357	33.9	16	96	26,803	1,532,850	95	106
	2020/21	1,203	32.6	21.8	94.7	21,209	1,211,568	86.1	163.41
	2019/20	1,041	32.07	21.82	96.09	14,781	1,173,065	94.09	96
EUWS	2023/2024	1,788	38	17.5	95.3	22,457	1,032,749	85	229
	2022/2023	2,338	33	18	97	20,312	945,567	90	78
	2021/22	1,823	30.93333	-	92.5	15,910	828,978	80	113
	2020/21	1,659	36.25	-	92.5	13,156	576,591	103.75	134.5
	2019/20	447	36	8	66	10,956	509,835	82	112
KUWS	2023/2024	481	27	11.7	71.9	3,800	198,788	69	471
	2022/2023	778	24.3	10.2	85	3,338	180,447	64	50
	2021/22	630	29.63	9	89	2,689	159,815	79	127
	2020/21	279	27.5	9	89	2,205	148,258	79	127
	2019/20	370	38	8.5	82	1,922	34,659	46	72.5
NUWS	2023/2024	1,913	29.15	18	91	14,352	971,160	88	100
	2022/2023	2,443	28.1	21	96	14,657	872,508	80	86.12
	2021/22	2,305	28	22	95.41	27,747	583,794	88	87.0925
	2020/21	1355	34	19	90	9,482	405,041	90.6	80.6
	2019/20	978	43	21	82	8,101	487,120	81	115
SWUWS	2023/2024	3,230	28	20	94.8	14,923	792,187	87	95.9
	2022/2023	3,280	21.7	20	93.3	12,177	597,163	88	86
	2021/22	1,958	29	22	88.71	9,014	524,836	85.5	105
	2020/21	2,118	26.75	20	86.75	6,624	385,669	93.25	67
	2019/20	2,567	29	18	88.75	4,482	337,134	77	67

Table 9: NWSC's Performance under the Seventh Performance Contract

Key Performance Indicator	FY 2021/22		FY 2022/2023		FY 2023/24	
Technical						
Non – Revenue Water (%)	Actual Performance	Target	Actual Performance	Target	Actual Performance	Target
Kampala Water	41.25	42	40.8	41.7	39.8	41.2
Central Region	24.26	25	23.35	24	23.2	23
Eastern	24.37	25	23.24	24	20.5	23.5
Northern & Eastern Region	26.41	24.5	23.77	24	24	22
Western & Southwestern Region	28.04	23	28.17	22	25	21
System Input Metering Coverage (%)	78.2	75	78.3	78		80
New Water Connections (No.)	54,697	55,000	50,591	55,000	49,717	55,000
New Sewerage Connection (No.)	575	200	237	250	57	300
Capex Budget Implemented (%)	112	65	**	70	**	75
Commercial						
Water Sales Volume Growth (M ³ Million)	101.9	90	105	95	108.2	100
Collection/Billing Ratio (%)	96	95	91	95	95	95
Average Days Receivables (days)	103	94	120	92	121	90
Financial						
Return on Capital Employment (%)	0.44	1	**	1	**	1
Operating Cost/Revenue (Work Ratio) (%)	76.5	80	83	80	**	80
Quality of Service and Environment						
Compliance to Drinking Water Standards (%)	98	98	99	98	98.5	98
Compliance to Sewerage Standards (%)	74.7	43	74	45	80.9	50
Compliance to Abstraction Permits	50		55	70	**	80
Pro-Poor Orientation						
Pro-Poor Connections Growth	2141	1600	2808	1700	1504	1800
Transparency and Governance						
Audit Recommendations implemented (%)	87	82	88	83	86	84
Customer focus and care						
Customer Satisfaction Index (%)	75	75	75	75	**	75
** = Data not available						

Table 10: Buikwe District Local Government performance

Key Performance Indicators	Unit	Baseline	Target Year 1	Financial Year 2023/24					
				Q1	Q2	Q3	Q4	Actual performance FY2023/24	Achievement (%age)
Technical									
New Connections	No.	160	160	30	30	13	19	92	57.5%
Non-Revenue Water	%	15	15	21	20	12	11.2	16.05	94%
Metering Ratio	%	100	100	98	98	98	98	98	98
Continuity of supply	Hrs/Day	16	16	16	16	16	16	16	100%
Water quality Compliance	%	96.4	100	100	100	100	100	100	100%
Commercial									
Active Connections	No.	709	869	689	719	732	751	751	86.40%
Water sales growth	m³ /Qtr	85,080	104,280	5,891	7,078	8,731	9,120	30,820	29.6%
Collection efficiency	%	66.5	70	76	78	68	84	76.5	109.3%
Financial Viability									
Operating cost coverage ratio	%	100	110	116	118	101	99.4	108.6	98.70%
Budget for investments	%	5	5	5	40	45	45	33.75	675%
Pro-Poor									
Pro-Poor Connections Growth	No.	0	20	30	30	0	0	60	300%
Customer Satisfaction									
Customer Satisfaction	%	75	75	75	75	75	75	75	100%

Table 11: Performance of Kalangala Infrastructure Services Limited

Key Performance Indicators	Baseline	Targets FY2023/24	Financial Year 2023/24					Achievement (%)
			QTR1	QTR2	QTR3	QTR4	Actual Performance FY2023/24	
Technical								
New Connections	166	174	41	20	25	21	107	61%
Non-Revenue Water	17	16	16%	16%	16.1%	16.1%	16%	100%
Metering Ratio	100	100	100%	100%	100%	100%	100%	100%
Continuity of supply	24	24	24	24	24	24	24	100%
Water quality Compliance	100	100	100%	100%	100%	100%	100%	100%
Commercial								
Active Connections	1430	1450	1,576	1,596	1,621	1,642	1,642	113%
Water sales growth	82,458	87,405	20,099	19,001	17,554	18,415	75,069	90%
Collection efficiency	89	90	96%	94%	103%	79%	93%	103%
Financial Viability								
Operating cost coverage ratio			67.5	69.7	82.7	43.5	65.85	
Budget for investments			25%	20%	15%	10%	18%	
Pro-Poor								
Pro-Poor Connections Growth	3	2	0	2	0	3	5	250
Customer Satisfaction								
Customer Satisfaction		75						

Table 12: The Regional Benchmarking KPIs

	Indicator	Definition	Calculation	Acceptable Boundaries	Weight
Quality of Service					
1	Water Coverage	% of total population with access to improved water supply: individual household connection, kiosk, public standposts, communal/ shared tap	[Total Population Served/Total Population in the Service Area]	75–90%	10
2	Sewerage Coverage	% of total population with access to sewerage services	[Total Population Served/Total Population in the Service Area]	40–70%	5
3	Water Quality Residual Cl (w0.4) Bacteriological (w0.6)	% of water samples undertaken meeting quality requirements	% of tests compliant in relation to applicable / national standards	95–99%	15
4	Hours of Supply	Aggregated average number of hours of supply (per town/zone/area etc) in the reporting period	Sum of weighted averages per town	18–23	10
Economic Efficiency					
5	O&M Cost Coverage by Billing	% of costs covered by billed amounts	[Billed Amount/O&M Costs]	100–150%	10
6	Collection Efficiency	% of collected amounts from the billing	[Collected amount/ Billed amount]x100	90–99%	15
7	Staff Cost	% of personnel Cost as a proportion of O&M cost	[Personnel Cost/ O&M Costs] *100	30–35%	5
Operational Sustainability					
8	Staff/1000 Connections	Number of staff per 1,000 water & sewerage connections	[Total Number of Staff x 1,000]/[No. of Water + Sewerage Connections]	5–8	5
9	NRW	% of water that does not produce revenue in a given period	[System Input Volume (imported + produced) –billed Volume]/System Input Volume	30–35%	15
10	Metering Ratio	% of metered customers from the total connections	[Functional Metered Connections]/Total Connections]x100	90–99%	10

Table 13: Performance Boundaries

Component	KPI	Good	Acceptable	Poor
Quality of Service	Water Coverage	>90	90–75	< 75
	Sewerage Coverage	>70	70–40	< 40
	Water Quality	100	>95	< 95
	Hours of Supply	24	23–18	< 18
Economic Efficiency	O&M Coverage	>150	150 – 100	< 100
	Collection Efficiency	>100	99 – 90	< 90
	Staff Cost	<30	30–35	>35
Operational Sustainability	Staff/1,000 Water and Sewerage Connections	<5.0	5.0 – 8.0	>8.0
	NRW	<30	30 – 35	>35
	Metering Ratio	100	99 – 90	< 90

Table 14: Performance of the different Utilities

	KPI	NCW & SC	LWSC	DAWASA	AdRMM	WASCO	WASAC	REGIDESO	ZAWA	NWSC	LWB	EPAL
Quality of Services	Water Coverage [10]	81.5%	94.8%	75.0%	42.5%	59.3%	74.8%	67.7%	89.0%	78.0%	90.85%	34.02%
	Sewerage Coverage [5]	49.2%	17.2%	12.3%	-	4.4%	-	6.6%	12.5%	15.4%	3.2%	-
	Water Quality [15]	97.7%	89.6%	100.0%	100%	73.3%	100.0%	82.7%	91.5%	100.0%	99.7%	-
	Hours of Supply [10]	7	17	19	15	18	21	12	14	18	20	5
Economic Efficiency	O&M Cost Coverage [10]	99.5%	89.7%	83.5%	110.7%	36.9%	186.4%	16.8%	74.9%	128.8%	153.8%	105.6%
	Collection Efficiency [15]	89.5%	91.6%	98.2%	77.0%	101.9%	103.1%	282.0%	86.8%	91.1%	92.31%	68%
	Staff Cost vs O&M Costs [5]	61.4%	39.4%	36.3%	30.0%	21.0%	46.7%	7.1%	33.2%	42.0%	43.0%	73.58%
Operational Sustainability	Staff/1,000 W&S Connections [5]	7.01	3.79	3.62	3.69	3.68	4.70	4.39	1.77	5.00	4.91	3.16
	Metering Ratio [10]	98.0%	68.0%	100%	78.7%	100%	100%	100%	21.3%	100%	100%	23.50%
	NRW [15]	47.3%	57.1%	41.0%	46.7%	58.4%	44.4%	47.0%	30.9%	34.9%	41.46%	72.42%

From the Table above, all the Utilities maintained best performance in Staff/1,000 W&S Connections with nine of them achieving good performance in this indicator. The worst performance was continued to be in NRW and sewerage service coverage where only two utilities (ZAWA and NWSC), and NCW&SC met the acceptable benchmark respectively. Attaining the acceptable and good benchmarks continued to be a challenge in the majority of KPIs.



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