Encontro Técnico AESABESP
37º Congresso Nacional de Saneamento e Meio Ambiente

AESABESP 40 Anos
Associação dos Engenheiros da Sabesp

International Careers in the Water Sector

Connecting Expertise, Impact, and Cooperation

Activity 03 – University Meeting

Thursday, 21 October 2026 | São Paulo, Brazil

Speaker: MUORIA, Mary Wangari | Nairobi City Water & Sewerage Company

Learning through service

My first encounter in water sector

1989- Nairobi City Council (Sewage Treatment Plant – laborer)-Learning, growing and embracing new responsibilities. observing processes I did not yet understand. Ordinary level certificate holder.

The spark: Curiosity about wastewater treatment, public health and sanitation.



Engaged in Part time learning – Enrolled in secretarial course

2004 - Nairobi City Water & Sewerage Company —Growing through utility operations, customer service and institutional responsibilities.

Enrolled for a Business Management degree course, then MBA.

Grown through ranks to the Management position I am in today.



WATER SECTOR: THEN AND TODAY

From expanding supply and infrastructure → to reliable, sustainable and customer-centred services

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THE 1980s

🏗️ Infrastructure
Build dams, treatment plants and pipelines

💧 Water supply
Expand access and increase supply

🏛️ Government-led
Public institutions drive service delivery

📋 Manual systems
Paper records, billing and customer processes

🚰 Basic sanitation
Focus on sewerage and waste disposal

👷 Technical skills
Engineering and infrastructure expertise

TODAY

🌍 Climate resilience
Plan for droughts, floods and changing demand

💧 Non-Revenue Water
Reduce physical and commercial losses

♻️ Sanitation & wastewater
Reuse, recovery and circularity

📱 Digital transformation
Data, smart systems and digital channels

❤️ Customer-centred utilities
Design services around customer experience

🧠 Skills & leadership
Technical, digital, social and institutional skills

THE WATER SECTOR TRANSFORMATION

The role of a modern water utility is broader than supplying water.

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1 FROM SUPPLY TO SERVICE

Reliability, continuity, quality and customer experience become central measures of performance.

2 FROM ASSETS TO RESILIENCE

Utilities must manage climate risks, droughts, floods, ageing infrastructure and changing demand.

3 FROM VOLUMES TO EFFICIENCY

Reducing Non-Revenue Water, improving metering and using data are critical to sustainability.

4 FROM WASTE TO RESOURCE

Wastewater treatment increasingly supports reuse, resource recovery and circular economy approaches.

5 FROM MANUAL TO DIGITAL

Smart meters, analytics, digital billing and multiple customer communication channels reshape operations.

6 FROM TECHNICAL TO MULTI-SKILLED

Modern utilities need engineering, digital, customer service, leadership and institutional capabilities.

THE SHIFT: “How do we provide more water?” → “How do we provide reliable, sustainable and customer-centred services?”

Key lessons from the journey

Technical knowledge matters—but it must translate into better services for people.

Customers judge utilities by:-

- **Reliability** - Water when customers need it.
  - Supply continuity, adequate pressures, safe water, reduced interruptions and prompt notification of planned shutdowns.
- **Responsiveness** — Listening and acting.
  - Timely complaint resolution, clear escalation procedures, accurate feedback and accountability across regional business centres.
- **Transparency: Explaining decisions**
  - Clear bills, understandable tariffs, honest updates on interruptions and transparent service commitments.
- **Trust** — Building a partnership with customers. Consistent service, fair treatment, fulfilment of commitments and meaningful community engagement.

Water challenges are interconnected: supply, sanitation, finance, infrastructure, climate, governance and behavior.

Professionals grow fastest when they learn from other disciplines, utilities and countries.

Experience becomes more valuable when it is shared.

International Careers in Water

It is not limited to working for an international organization.

It can mean taking local expertise into international forums—or bringing global knowledge home.

Career pathways: identify a clear and specific area of expertise eg utility management, engineering, sanitation expertise, regulation, NRW research, academia, development programs, innovation and **customer experience**.

Build International visibility – Join professional networking platforms, IWA, X (follow water experts, organisations, conferences etc), Youtube (follow conferences, webinars etc)

International careers are built through competence, credibility, relationships and a willingness to contribute.

International exposure → international collaboration → international projects → knowledge exchange → professional networks → international employment/opportunities

THINK GLOBAL • SOLVE LOCAL • SHARE EVERYWHERE

Building an International Career

Combination of the technical water knowledge with utility management, customer experience, commercial services and leadership.

- **Learning** – International courses, Learn to work across disciplines.
- **Participation** – attend professional events eg water congresses, regional conferences, global events etc.
- **Networks** – Join professional associations and international networks eg IWA
- **Sharing knowledge** – Collaborations WOP(Water Operator Partnerships) for mentorship and operational efficiency improvement.
- **Collaborating** - Volunteer to present, mentor, research and collaborate.
- **Leading** - Develop communication, leadership and digital skills alongside technical expertise.



Water Sector in Kenya



SECTOR OVERVIEW

The water sector in Kenya is responsible for the sustainable management and delivery of water supply and sanitation services to all Kenyans, supporting public health, economic growth and environmental sustainability.

Population
~ 55 million (2024)

Water coverage (piped)
~ 62% (national average)

Sanitation coverage
~ 34% (national average)

Per capita water use
~ 70 litres/day (urban)
(vs. recommended 100 l/day)

KEY PLAYERS

Ministry of Water, Sanitation and Irrigation (MWSI)
Policy, regulation and overall sector coordination

WASREB
Water Services Regulatory Board (Regulation and oversight)

WSPs (Water Service Providers)
e.g. Nairobi Water & Sewerage Co. Ltd, Tana Water, Athi Water, among others (Service delivery)

WRC
Water Resources Authority (Water resources management)

County Governments
Part of the devolved water and sanitation functions

KEY ACHIEVEMENTS & PROGRESS

- Expansion of water supply and sanitation infrastructure across the country.
- Improved regulatory framework and sector reforms.
- Increased access to clean water in urban and rural areas.
- Growing investment in water and sanitation projects (PLWSP, WSSP, among others).

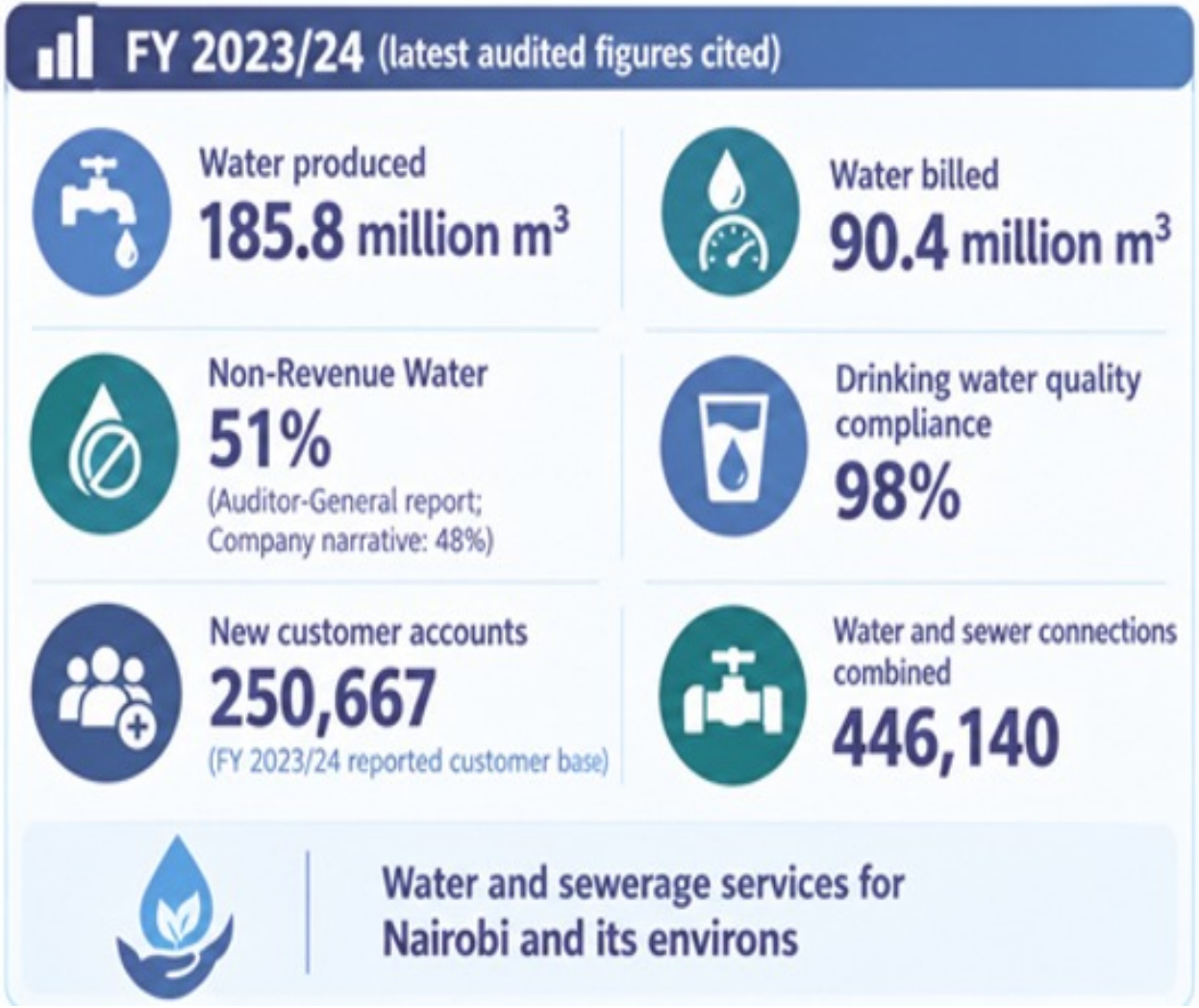
VISION

"A water secure Kenya with universal and sustainable access to safe water and adequate sanitation services."

CLEAN WATER | HEALTHY PEOPLE | PROSPEROUS COMMUNITIES

Key City Statistics

- Size 696km²
- **Official Census (2019):** 4.3M
- Current population estimate 5.6M
- Growth 3.4% annual
- Water demand: 900m³ pd
- Water produced: 525m³pd



Strengths to build on • Challenges to overcome

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72%
water coverage

96%
drinking-water quality

18 hrs/day
average supply

48%
non-revenue water

STRENGTHS

- **Strong legal and regulatory framework**
  Water Act 2016; performance benchmarking by WASREB.
- **Expanding access and improving quality**
  Recent national indicators show progress in coverage and drinking-water quality.
- **Skilled professionals and sector institutions**
  Utilities, regulators, counties and water works agencies provide an established delivery structure.
- **Partnerships and innovation**
  Opportunities in digital monitoring, climate resilience, financing and community engagement.

KEY CHALLENGES

- **High non-revenue water**
  Water lost through leaks, theft and commercial/data gaps reduces revenue for reinvestment.
- **Unequal and unreliable access**
  Rural, informal and arid areas face gaps in coverage, continuity and affordability.
- **Ageing infrastructure and investment needs**
  Growing demand requires rehabilitation, storage, treatment and network expansion.
- **Climate, sanitation and governance pressures**
  Droughts/floods, low sewerage coverage, fragmented coordination and political interference.

Source: WASREB IMPACT 18 (FY 2024/25); WASREB Strategic Plan 2023–2027. National indicators are sector averages.

PRIORITY: Convert sector strengths into better service through NRW reduction, resilient infrastructure, stronger accountability and customer trust.

Run for water conservation

Nairobi Water

NEWSLETTER

www.nairobiwater.co.ke

Issue - 0033







RUN FOR NATURE, RUN FOR WATER: NAIROBI WATER CHAMPIONS THE NDAKAINI MAZINGIRA HALF MARATHON

Nairobi Water is championing the Ndakaini Mazingira Half Marathon to be held on 10 October 2026 at Ndakaini Dam in Murang'a County. Themed **"Save Green | Save Blue"**, the event seeks to highlight the critical link between environmental conservation and water security.

The half marathon is expected to draw more than 10,000 participants across four race categories (21KM, 10KM, 5KM and 2KM) and will include

The marathon is also a call to action for Nairobi Water staff to become ambassadors for water conservation by taking part in the run, supporting conservation efforts, engaging with communities and managing waste responsibly. The rallying call is "RUN FOR NATURE, RUN FOR WATER."

Innovation in Action: How NCWSC Leveraged Digital Technology

Turning a customer-facing process into a faster, more transparent and more convenient service



National Innovation Award • NCWSC

01

AUTOMATED APPLICATION

Water and sewer connection applications moved from manual processing to an online process.

02

DIGITAL LOCATION & PAYMENT

Customers can identify premises digitally and make payments through electronic channels.

03

CLEARER CUSTOMER CHOICES

Connection categories, costs and material specifications are made available to support informed applications.

04

MEASURABLE SERVICE IMPACT

Connection timelines were reduced from 30 days to 14 days — demonstrating that innovation can improve cu

LESSON: Innovation is valuable when technology translates into faster service, transparency and customer trust.

Water is a Career and a Calling

WATER CONNECTS PEOPLE, HEALTH, ECONOMIES AND THE FUTURE

Every litre delivered safely is the result of people, systems, knowledge and cooperation.

A career in water is therefore bigger than a job title—it is an opportunity to create public value.

ASANTENI!