



**MINISTRY OF WATER, SANITATION & IRRIGATION  
KENYA WATER INSTITUTE**

# **NRW CONFERENCE 2024**

*Non-Revenue Water Management,  
Innovation & Sustainability Conference 2024*

**Dates:** 4th - 5th, April 2024

**Venue:** Kenya Water Institute, Nairobi

**Theme: Sustaining Water Security Through Accountability**



Kenya's Water and Sanitation Sector has made great gains since the sector reforms occasioned by the Water Act 2002. The Water Act 2016 further enhanced the Sector by aligning with the Constitution 2010, thereby providing a comprehensive planning framework for Water Supply and Sanitation (WSS). The water sector, vital for sustaining life and fostering economic growth, faces a critical challenge—Non-Revenue Water (NRW). NRW, encompassing losses from leaks, theft, and inefficient distribution, stands as a significant impediment to ensuring equitable access to clean water as envisioned in sustainable development goal (SDG) number 6.

Kenya is home to a population of approximately 47.6 million as of the 2019 Census (Kenya National Bureau of Statistics), with an intercensal growth rate of 2.2%. The Government of Kenya has set water supply and sanitation sector goals as presented in the National Water and Sanitation Investment and Financing Plan (NAWASIP). The Government seeks to achieve universal access to safe and affordable water supply and sanitation for all Kenyans by 2030, with 100% access to safe water; 40% of urban households will be connected to sewers, while 60% will have access to decentralized and other non-sewer sanitation. Currently, 73% of households have access to improved water services. However, this figure varies widely from County to County, ranging from 32% in some Counties to nearly 100% in Nairobi County.

Water sustainability is a critical global challenge that requires immediate attention and innovative solutions. As the world's population continues to grow, urbanize, and industrialize, the water demand is escalating, placing tremendous

pressure on existing water resources. Concurrently, climate change is altering precipitation patterns, exacerbating water scarcity in some regions, and intensifying extreme weather events in others. This complex scenario necessitates a multifaceted approach to ensure the sustainable management of water resources. In this context, innovation emerges as a key driver for addressing the various dimensions of water sustainability. From technological advancements to policy reforms and community-based initiatives, innovative solutions are essential to safeguarding our water ecosystems for future generations.

However, the challenge of Non-Revenue Water (NRW) casts a shadow on Kenya's journey towards achieving water security, economic prosperity, and sustainable development. The impact of NRW resonates deeply within the fabric of Kenya's development narrative. Its repercussions ripple through the country's socio-economic landscape, impacting public health, economic growth, infrastructure resilience, and environmental sustainability. Moreover, the adverse effects of NRW are intricately entwined with Kenya's aspirations outlined in Vision 2030, posing challenges to realizing a globally competitive and prosperous nation. In this context, understanding the ramifications of NRW on the sustainable development agenda of Kenya becomes imperative. Exploring the multifaceted repercussions and formulating strategies to mitigate these losses are pivotal steps toward ensuring equitable access to clean water, fostering economic growth, and advancing the nation's development goals as envisioned in the Government's Bottom-up Economic Transformation Agenda (BETA).

According to Impact Report No. 14 released by the Water Service Regulatory Board (WASREB), Non-revenue water in Kenya stands at 45% of the total amount of water produced by the regulated water utilities in Kenya. This translates to a revenue loss of Ksh. 10.2 Bn annually. Given the high levels of NRW reported by the water utilities, Kenya must embark on a collective effort to establish innovative mechanisms, particularly to mitigate against this to guarantee universal access by 2030. Non-revenue management requires a multifaceted approach driven by innovative solutions for physical losses, revenue collection, water management, and ethical challenges to facilitate the quest for equitable access to water for all. This further includes infrastructure rehabilitation, investment in modern technologies like smart metering, active leak detection, community engagement to curb illegal connections, and policy reforms to improve governance and regulation within the sector.

Real-time leak detection and infrastructure maintenance can significantly influence distribution system integrity and reduce physical losses. Inaccuracies in customer billing can be eliminated by investing in an appropriate application of smart metering and other telemetering techniques. Extreme events associated with Climate change further exacerbate the NRW equation mainly due to damage to water infrastructure resulting from prolonged rainfall, and floods. Data and analytics tools, and alternative data sources, such as crowd-sourced information, GIS, and satellite imagery associated with water demand, supply, and water infrastructure will enhance monitoring. Big data and AI present an avenue for non-revenue

reduction by optimizing distribution systems operational parameters, demand forecasting, and leak detection hence effective management of NRW. It is noteworthy that Public-private sector collaboration in water policy implementation, infrastructure development, management, training, research, water education, and innovation, infuses efficiency and expertise potentially reducing Non-Revenue Water.

In light of this, The Ministry of Water, Sanitation & Irrigation and Kenya Water Institute has organized a two (2) day Non-revenue Water Management Conference, Innovation and Sustainability from the 4th to 5th of April 2024. This will be held at Kenya Water Institute, Nairobi, South C.

The conference aims to bring together water service providers, national and county government, private practitioners in the water sector, academia, CSOs, policymakers and experts in the water sector, water users, manufacturers, commercial enterprises, and all other water sector players to share knowledge, experiences, and best practices related to non-revenue water, innovation, and sustainable water practices. The conference will create a platform for sharing insights and experiences on successful NRW reduction strategies and technologies, discuss policies and regulatory frameworks and that support NRW reduction initiatives, Showcase cutting-edge technologies and innovations for water management, provide sessions to discuss crosscutting issues in the water sector and workshops to provide insights in water audits, and to facilitate networking opportunities for collaboration and partnerships among industry players.

The overall theme of the Conference is “**Sustaining water security for accountability**”.

The conference has five (5) Thematic Areas:

## 1. Policy, Regulation, and Governance

- a) **Sub-theme 1:** Regulatory Frameworks for NRW management
- b) **Sub-theme 2:** Incentives and Penalties for Utilities
- c) **Sub-theme 3:** Collaborative Governance Models in Non-Revenue water management.
- d) **Sub-theme 4:** Regulatory and Ethical Issues in NRW

## 2. Financial Models and Investment Strategies

- a) **Sub-theme 1:** Financial Sustainability and Cost Recovery Mechanisms
- b) **Sub-theme 2:** Funding Strategies for NRW Reduction Initiatives
- c) **Sub-theme 3:** Public-Private Partnerships (PPPs) in NRW Management
- d) **Sub-theme 4:** Innovative business models and strategies to improve on operational efficiency of water utilities

## 3. Technology and Innovation

- a) **Sub-theme 1:** Smart Metering and Advanced Metering Infrastructure
- b) **Sub-theme 2:** Data Analytics and Artificial Intelligence
- c) **Sub-theme 3:** Internet of Things (IoT) for Remote Monitoring

## 4. Research and Capacity Building

- a) **Sub-theme 1:** Capacity Building Initiatives for NRW Reduction
- b) **Sub-theme 2:** Collaborations in NRW Research and Capacity Building

## 5. Water management

- a) **Sub-theme 1:** Alternative water management technologies; Desalination, pumping, water harvesting
- b) **Sub-theme 2:** Wastewater Management and Reuse for Water Security and Climate Resilience
- c) **Sub-theme 3:** Roles of Gender and youth, in non-revenue water management

**“The Non-Revenue Water Conference aims to be a catalyst for transformative change in the country’s water sector. By uniting stakeholders, it endeavours to drive actionable steps, foster collaborations, and implement sustainable solutions to reduce NRW, ultimately ensuring efficient water distribution and accessibility for all Kenyans.”**



- Applicants are invited to submit Abstracts for oral presentations on the indicated thematic areas to [nrwsustainability2024@kewi.or.ke](mailto:nrwsustainability2024@kewi.or.ke).

## Submission Guidelines

1. Abstracts should be written in clear and concise English Language;
2. Abstracts should have a maximum of 300 words; must have a clear and concise Title, a Brief Introduction (Purpose), Methodology, Results and Conclusions;
3. Authors can submit Case Studies, Best Practices, Innovations, and New Knowledge;
4. No References, Tables, or Graphics should be included in the Abstract;
5. Abstracts should be aligned with the Conference Theme and Sub-Themes;
6. Authors must indicate the respective Sub-Themes;
7. Authors are not limited in the number of Abstracts they can submit;
8. Provide Your Details - Name, Title, Affiliation, Brief Bio, and Passport Photo.

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- Co-branding in all Event and Communication Collateral;
- An Exhibition Tent at the Exhibition Area;
- Opportunity to share Customized Messages on the KEWI Social Media Platform;
- Opportunity for Post Event Publicity on all Post Event Articles and Adverts;

#### Delegate Ticket

Registration Fee:  
Kshs.30,000.00

#### Young Water Professional Ticket

Registration Fee:  
Kshs.20,000.00

## Exhibitions

An Exhibition Area will be located at the venue. Exhibitors will be provided with an exhibition booth, a power socket, a table, and two chairs. Each exhibitor will be required to provide their décor and draping. To participate, a Fee of Kshs.50,000.00 will be charged to facilitate the same. A second exhibition booth will be available in the exhibition area at an extra cost of Kshs 30,000.00.

## Security

Event Tickets and Exhibition Area Badges will be provided and will be checked at each point of entry to the Event Hall. Exhibitors must make arrangements to safeguard their property in the exhibition area.

## Schedule of Events

<i>Item</i>	<i>Dates</i>
■ Conference Adverts/ Communication	14/02/2024
■ Call for Abstracts and Exhibitions	14/02/2024
■ Evaluation of Abstracts	On rolling basis
■ Notification of Acceptance of Abstracts	10/03/2024
■ Deadline for Submitting PowerPoint for Oral Presentations	26/03/2024
■ Preliminary Conference Programme	28/03/2024

*To participate as a speaker/presenter kindly send an email to:*  
[nrwsustainability2024@kewi.or.ke](mailto:nrwsustainability2024@kewi.or.ke)