Volume 1 Issue 3

REPUBLIC OF KENYA

KENYA WATER INSTITUTE KEWI Fountain Of Water Knowledge

WEEKLY Newsletter

March 18-24 , 2023

Water and Sanitation Principal Secretary Dr. Kipronoh Ronoh is welcomed by Chair KEWI Governing Council Brig. (Rtd) Stephen Njung'e Kihu (3rd right), KEWI CEO Dr. Leiro Letangule (2nd right) and other Government officials at Lodokejek Primary School, Samburu County.

KEWI Joins in the 31st World Water Day Celebrations

BY KEWI TEAM

The Kenya Water Institute's Governing Council Chairperson Brig. (Rtd) Stephen Njung'e Kihu and Chief Executive Officer Dr. Leiro Letangule led staff and students in commemorating World Water Day on March 22, 2023.

Brig. (Rtd) Kihu and Dr. Letangule participated in the national celebration ceremony hosted by the Ministry of Water, Sanitation, and Irrigation at Lodokejek Primary School in Samburu County under the theme "Accelerating Change."

Dr. Kipronoh Ronoh , Principal Secretary for Water and Sanitation, presided over the national celebration, which was attended by the chairpersons and chief executive officers of water sector institutions, development partners, and members of the community, among other stakeholders.

HIGHLIGHTS

CALL FOR APPLICATION

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KEWI Marks the 31st World Water Day

Above: KEWI Deputy Director Academic Affairs Mr. Eric Wamiti and below Kisumu Campus Principal Mr. Paul Rarieya lead staff and students in a tree planting exercise to commemorate World Water Day.

At the ceremony, Dr. Ronoh called for adoption of decentralized waste water treatment and reuse technology which he noted that is cost effective and can enable the water to be recycled and used for irrigation among other uses compared to the conventional technology.

With the national celebrations taking place in Samburu County where KEWI was ably represented by the Chair of the Council and the Chief Executive Officer, it was also all systems go at the four campuses of the Kenya Water Institute where staff and participants immersed in various activities to mark and celebrate the World Water Day.

At the Nairobi Campus, members of staff and students held a successful tree planting exercise within the Campus under the guidance of the Deputy Director Academic Affairs, Mr. Eric Wamiti.

The activity involved the planting of several types of trees as a means of beautifying the Institute grounds and, ultimately, helping in water conservation through the regulation of precipitation, evaporation, and floods.

Similarly, at the Kisumu Campus, Mr. Paul Rarieya led the staff and students to plant trees in the Kajulu River Catchment, a ceremony attended by Kisumu County Deputy Governor Dr. Mathew Owili.

Dr. Owili advised the attendees to take joint action to successfully safeguard fresh water resources.

"As we commemorate this day, we must collaboratively accelerate action to safeguard and manage fresh water resources through collaborative efforts by the community, local government, and sector actors," said the deputy governor.

Dr. Owili said that the county government was finishing the gazettement of water catchment areas in order to safeguard them from encroachment and contamination.

During the activity, up to 100 seedlings were planted as part of the Institute's responsibility to raise awareness about the importance of protecting and restoring water catchment areas.

On the other side, the celebratory event at KEWI's Chiakariga Campus was headed by Principal Mr. Jacob Gitonga, who led the staff and students in cleaning and dislodging the Kijege Spring intake at Kijege Hill in Chiakariga.

Under the guidance of one of the members of the community, the team helped clean the spring which is a vital source of water for the community since it is relied on by the

Compiled By Pius Kimani, Dorine Eva, John Waweru, and Korir Kipkirui

CONSULTANCY

Institute Pens Agreement to Strengthen Community Public Health

KEWI Chief Executive Officer Dr. Leiro Letangule (in red tie), Deputy Director Academic Affairs Mr. Erick Wamiti (left), Consultants Mr. Francis Venzi and Ms. Michele Mwikali during the contract signing for a consultancy on Training and Development of Curriculum and Materials for Community Sensitization for Low Cost Improved Pit Latrines.

BY PIUS KIMANI

The Kenya Water Institute has launched a series of strategic initiatives to promote and improve health and sanitation in communities in Kenya.

The Institute has sought the services of a consultant to support the delivery of a health project whose goal is to improve public health and the technical skills of Kenyan youth through the transfer of sanitation technologies.

The contractual agreement signed on Friday 17th March 2023 by the Chief Executive Officer Dr. Leiro Letangule and the Consultant Mr. Francis Venzi aims to enhance the technical knowledge and skills of key personnel, stakeholders, and beneficiaries on green toilet system which are ideal for use in areas with no drainage systems and little water. Aside from the green toilet system, essential personnel will be trained on low cost safe pit latrines technologies.

The empowered individuals will be required to promote the improvement of sanitation in households and communities, thereby providing safe and sanitary circumstances for all residents. They will also be expected to share their knowledge with other stakeholders and community members in order to raise awareness and ownership.

The training and empowerment are also aimed at developing a pool of green toilet system entrepreneurs within the communities.

The project's target participants includes KEWI faculty members, Oloolaiser Water and Sewerage Company Limited staff, women, youth, farmers, community health workers, and manual septage emptiers.

The consultant is expected to create a curriculum for community sensitization for low-cost improved pit latrines as well as materials for community sensitization in order to achieve ownership and community involvement, as well as installation, management, and maintenance for green toilets system.

In addition, the consultant is anticipated to offer trainer training for Institute's faculty and Oloolaiser Water and Sewerage Company staff. Providing faculty members with the essential knowledge and skills aims to improve the development and delivery of sanitation courses at the Institute, as well as the delivery of practical training to students.

Furthermore, because the project will be trialled in informal settlements under the authority of the water company, including workers from Oloolaiser Water and Sewerage Company in the green toilet training would improve the practical delivery of the training.

In signing the contract, Dr. Letangule emphasized the importance of the task, claiming that it will bring much-needed improvement to Kenyan communities' hygiene and sanitation needs.

He praised the African Development Bank for providing the Institute with a grant in the amount of Kenya Shillings 4.5 million for the project's implementation.

The signing was attended by Deputy Director Academic Affairs, Mr. Eric K. Wamiti, Ag. Principal Supply Chain Management Officer, Mr. James Mutio, and the Assistant Training and Curriculum Development Consultant Ms. Michele Mwikali.

Institute Secures Funding for Groundwater Development

BY EDITORIAL TEAM

The Kenya Water Institute secured funding amounting to €26,325 (approximately Kshs. 3.7M) for a project under the collaborative programme DUPC3 between the Ministry of Foreign Affairs of the Netherlands and the IHE-Delft Institute for Water Education.

The project, titled Groundwater Sustainable and Equitable Development under Constraints of Ecosystem Conservation and Saltwater Intrusion Prevention in Large Deltas (GWS-SENCE), will take place in the Lamu Delta over a duration of five years.

The project, which includes IHE-Delft, International Groundwater Resources Assessment Centre (IGRAC), and other Kenyan partners, aims to promote sustainable and equitable groundwater resource development through applied research, joint learning, dialogue, and capacity building. The contract was signed on 12th January, 2023.

To ensure its success, the project will be carried out under four components namely; Partnership and Joint Learning, Research and Advocacy, Education and Training, and Institutional Strengthening.

KEWI's role in the project will include field research, training, institutional strengthening, and community capacity building. The Kenyan partners include the University of Nairobi, Kenya Marine and Fisheries Institute, Ministry of Water, Sanitation and Irrigation, Water Resources Authority, and Regional Centre for Groundwater.

Under the first component of joint learning, a workshop for representatives of the partnering institutions is scheduled for April 2023 and will see the representatives of each of the partnering institutions convene at Netherlands for the meeting. The Kenya Water Institute will be represented by the Chief Executive Officer Dr. Leiro Letangule and the Deputy Director Corporate Services Mr. Eric Wamiti.

The major benefits KEWI expects to get from the project include enhanced capacity for groundwater hydrology and technology, improved groundwater supply for the case study area, updated curriculum for groundwater training and information exchange between the different participants and the KEWI staff involved in the project.

The community will benefit from enhanced groundwater monitoring systems, development of models for saltwater intrusion prevention, sustainable groundwater development, and equitable use of groundwater resources, especially for marginalized groups and groundwater dependent ecosystems.

United Nations Educational, Scientific and Cultural Organization

IHE DELFT Institute for Water Education in partnership with UNESCO

HARAMBEE REPUBLIC OF KENYA

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TRAINING

KEWI Registers Increased Female Enrolment in Technical Programs

BY PIUS KIMANI

A collaboration between the Kenya Water Institute and the Danish International Development Agency has resulted in increased enrolment in technical courses by female students through the DANIDA-TVET Project.

Since the Institute began implementing the project, 102 female students have enrolled into typically male-dominated technical programmes in construction and water management which were traditionally male dominated.

The Kenya Water Institute (KEWI) is providing training in Plumbing and Pipefitting as well as Wastewater Management Technologies as part of the project. Among the 102 female students enrolled, 58 are studying Wastewater Management Technology, while 44 are studying Plumbing and Pipefitting.

Seven (7) of the students are young mothers who have received project support to help them successfully complete their training. To ensure that this group of students completes their studies, the project has put aside funds as a special stipend to aid in the facilitation of learning for young mothers, an initiative that has encouraged female students to pursue technical courses.

The trainees will be recruited into the created Ambassador Corps and Women's Network at the completion of the one-year training, an organization that works to encourage women to grow and succeed in sustainable jobs in the construction and water sectors.

Students will also have the option to learn practical skills in the chosen sectors, which could lead to self-employment and position them as change agents.

Through TVET access, training outcomes, and sustainable development competences, the cooperating institutions hope to promote enhanced gender balance and equitable opportunities in Kenya's construction and water sectors through the DANIDA-TVET initiative.

As one of the collaborating institutions, KEWI has ensured a gender responsive recruitment, training, and learning environment to assist the country in achieving the water sector's skills-based needs.

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KEWI Hailed for Championing Gender Representation

BY DORINE EVA

The Kenya Water Institute (KEWI) has been hailed by Women in Real Estate (WIRE) for championing female representation in leadership and for enhancing deliberations around gender issues.

With an aim to familiarize and plan accordingly for the upcoming gendered activities for the KEWI and DANIDA-TVET scholarship project, Prof. Wanjiku Chiuri, a Gender Expert from WIRE beseeched KEWI to continue enhancing gender mainstreaming as a way of statistically bridging any parity that may exist.

Prof. Chiuri was leading a team of officers from the organization to sensitize KEWI's Gender Mainstreaming Committee on gender related issues which include but are not limited to gender awareness, analysis and equality.

To build up on this, WIRE which dedicates her efforts to advancing the achievements of women in real estate through networking and mentoring, in conjunction with the Gender Mainstreaming Committee will conduct a baseline survey in May 2023 through a group focused approach to come up with implementable action plans.

Above and below: A sensitization forum for the KEWI Gender Mainstreaming Committee. The sensitization was facilitated by the Women in Real Estate Organization.

Further to this, the Institute will monitor and document the experiences of the female students especially the mothers from admission to date and later carry out a gender sensitization meeting with both students and the staff.

The request comes at a time when KEWI is offering training to 102 female and 97 male students respectively on selected programs in partnership with the Danish International Development Agency (DANIDA) under the DANIDA-TVET project.

One of the outcomes of the project is to promote an improved gender balance and equal opportunities in the construction and water sector in Kenya through TVET access, training outcomes, and sustainable development competencies. KEWI as one of the partnering institutions has ensured a gender responsive recruitment, training, and learning environment.

TRAINING

Water Service Providers Gain Insights on Non-Revenue Water

BY PIUS KIMANI

Forty (40) officers from water utilities have undergone on the job training to gain more knowledge and skills on service delivery, proper operation and maintenance of their respective water utility infrastructures.

The training meant to build capacity of the officers from seven water service providers with hands on practical experience in management of Non-Revenue Water (NRW).

The participants gained more knowledge on important areas such as the use of leak detection equipment, pressure management of the system, and flow measurement by the use of ultrasonic flow metre (UFM).

Further, they were trained on meter installations, testing and reading and use of geographical information system (GIS) to map water infrastructure.

The training drew representation from Malindi, Kilifi, Isiolo, Muranga and Nanyuki Water and Sanitation companies and was conducted in Malindi and Nanyuki by facilitators from the Kenya Water Institute.

Water Service Providers engage in discussions and practical training during a four days training on Non-Revenue Water.

Quote of the Week

"The best time to plant a tree is twenty years ago. The second best time is today"

- Stephen M.R Covey

Kitui Campus and Matinyani FC Draw in a Friendly Match

BY ABIGAEL SONGOK

In a thrilling friendly match held at the Kitui High School grounds on 17th March 2023, KEWI Kitui Campus male soccer team and Matinyani FC displayed their sporting excellence, with all players bringing to the front their best legwork skills.

KEWI, under Coach Timothy Mutunga opened the lead when Stephen Kiema scored the first goal at the 17th minute in the first half.

The prolific striker converted a header to the joy of the spectators. Most of the subsequent attempts to score, however, got cleared by the opponents who also equalized during the last minutes of the first half.

However, the second half saw both teams put extra work that led to two extra goals from each team to bring the match to a draw by the blow of the whistle. KEWIs Stephen Kiema put in his second goal which was later on complemented by a score from the attacking winger Simon Safari.

The match officiated by Mr. Munyoki Ngala, the coach of the host team comes at time when KEWI is preparing for the Kenya Technical Institutions Sports Association games which will begin on 2nd April, 2023.

KEWI Kitui Campus male soccer team at a friendly match with Matinyani FC.

OUR TECHNICAL SERVICES

Kenya Water Institute offers drilling services to various clientele.

The services offered include Ground Water Assessment, Borehole Drilling, Pump Troubleshooting and Repair in the various water related fields including pumps, boreholes and distribution systems.

THE EXPERT'S VIEW

Beyond Climate Change: Adopting Effective Last Mile Water Distribution Systems

BY VIRGINIA NANETIA

Kenya is a country particularly vulnerable to the effects of climate change due to its reliance on agriculture and on natural resources.

Drought, flooding, biodiversity loss, and health impacts are some of the consequences Kenya has experienced in the recent years occasioned by the drastic changes in climate patterns.

To address these challenges, the Kenyan government has developed a National Climate Change Action Plan which includes strategies for reducing greenhouse gas emissions, adapting to the impacts of climate change, and building resilience in vulnerable communities.

Moreover, the country has explored alternative sources of water to cope with post-climate change challenges and ensure effective water distribution models from these alternative sources. The approach includes encouraging community participation, investing in research and development, promoting sustainable practices, enhancing water infrastructure, and establishing partnerships with other countries, organizations, and the private sector.

These approaches have enhanced the availability of water in areas where water scarcity is a challenge. However, challenges remain, particularly in ensuring the sustainability of these alternative sources of water and in addressing the impacts of climate change on water resources.

Counties in Kenya have become key drivers in ensuring access to safe and reliable water in this post-climate era through diversifying water sources, implementing water conservation measures, constructing and maintaining water infrastructure, and monitoring water quality standards, partner with the national government, development partners and other stakeholders to promote innovative solutions such as solar -powered desalination and water banking.

Governments should explore new approaches by reinforcing, reinventing and replacing some approaches currently in application by adapting practices from model countries like Israel and the Middle East and North Africa (MENA) regions. Particularly the counties should put emphasis on:

Desalination in large-scale and also smaller decentralized desalination units that can supplement traditional sources of water to rural communities which entirely depend on saline borehole water.

Water recycling: Treated wastewater is another alternative source of water that can be used for non-potable purposes such as irrigation, toilet flushing, and industrial processes.

Drip irrigation which reduces water waste and is particularly effective in arid regions.

Water tiered pricing system where there are two or more tiers, with each tier having a different price per unit of water. The first tier is usually the lowest price and applies to the basic needs of households or small businesses. As water consumption increases, users move into higher tiers, where the price per unit of water increases. Water tiered systems are commonly used by water utilities to promote conservation and efficient use of water. They

Beyond Climate Change: Adopting Effective Last Mile Water Distribution Models

provide an incentive for customers to reduce their water consumption and to invest in water-saving technologies, such as low-flow showerheads and toilets, and efficient irrigation systems. The revenue generated by higher-tier pricing can be used to fund water conservation and efficiency programs, infrastructure upgrades, and other water-related initiatives.

Water conservation education on topics such as water-saving technologies, adopting drought-resistant crops, and water-wise landscaping among others.

These approaches offer promising avenues for addressing the challenges of post -climatic change and ensuring effective last mile water distribution systems.

In Kenya, more public-private partnerships can be established to leverage the resources and expertise of both the public and private sectors. These partnerships will help increase access to safe and reliable water, particularly in underserved areas, and to promote sustainable water management practices in the face of climate change.

In Kenya, public-private partnerships have been established to improve last-mile water distribution systems from alternative sources of water. The Water Services Trust Fund and Athi Water Services Board are two examples of these partnerships. The WSTF provides grants and technical support for water infrastructure projects in underserved areas and promotes the use of alternative sources of water. The AWSB works with the private sector to provide water and sanitation services and has implemented various measures to promote effective last mile water distribution systems from alternative sources of water.

Kenya is particularly vulnerable to the impacts of climate change, and to address these challenges, the Kenyan government has developed a National Climate Change Action Plan that includes strategies for reducing greenhouse gas emissions and building resilience in vulnerable communities. The country has explored alternative sources of water, such as desalination, water recycling, and drip irrigation, to cope with post-climate challenges and ensure effective last mile water distribution systems. However, challenges remain, particularly in ensuring the sustainability of these alternative sources of water and in addressing the impacts of climate change on water resources.

Counties in Kenya play a crucial role in ensuring access to safe and reliable water in this post-climate era through developing water sources, implementing water conservation measures, constructing and maintaining water infrastructure, and monitoring water quality standards. National and county governments should explore new approaches by adapting practices from model countries like Israel and the MENA regions.

Public-private partnerships have been established to increase access to safe and reliable water, particularly in underserved areas, and to promote sustainable water management practices in the face of climate change. The Water Services Trust Fund and Athi Water Services Board provide grants and technical assistance to support sustainable management of water resources and effective last mile water distribution systems from alternative sources of water.

To accelerate effective last mile water distribution systems from available alternative sources of water, scaling up and diversifying public-private partnerships can be explored, especially targeting individuals, commercial ventures, and small-scale households. The adoption of sustainable practices, investing in research and development, promoting sustainable practices, enhancing water infrastructure, and establishing partnerships with other countries, organizations, and the private sector are all promising avenues for addressing the challenges of post-climatic change and ensuring effective last mile water distribution systems.

The writer, a holder of BEng. Mechanical and Processing, is a Trainer in Water Engineering Courses at the Kenya Water Institute.

KEWI Staff, Students Commemorate World Water Day

PICTORIAL

KEWI Staff, Students Commemorate World Water Day

Long - Term Programmes

Diploma in Water Engineering Technology (DWET) Diploma in Wastewater
Diploma in Water, Sanitation Engineering Technology (DWSET)
Diploma in Water Resources Management Technology (DWRTM)
Diploma in Irrigation and Drainage Engineering Technology (DIDET)
Diploma in Information Communication Technology (DICT)-KNEC
Diploma in Water Laboratory Technology (DWLT)
Certificate in Wastewater and Sanitation Engineering Technology (CWSET)
Certificate in Water Resources Management Technology (CWRMT)
Certificate in Information Communication Technology (CICT)- KNEC
Certificate in Water Laboratory Technology (CWLT)
Certificate in Water Engineering Technology (CWET)
Drilling Operations and Management (DOM)
Plumbing and Pipe Fitting (PPF)
Water Operators Course (WOC) in:

- Water Supply
- Meter Reading
- Sewerage Operations

Short - Term Programmes

Use of Earth Observation Tools and GIS for Water Resources Management
Entrepreneurship and Financial Management for Water Managers
Operation and Maintenance of Water Supply Networks
Metering and Installation of Water Supply Networks
Leak Detection & Repair techniques
Drilling Operations and Management (DOM)
Operation & Maintenance of Pumping Stations
Pump Selection, Installation and Maintenance
Plumbing, Pipe Fitting and Solar Water Heating
Instrumentation for Water and Wastewater Systems
Water Governance, Management and Technology
Application of GIS for Water Utilities Mapping
Drilling Operations and Management
Water Quality Sampling and Testing
Microbiological Water Quality Assessment
Integrated Water Resources Management
Non-Revenue water
Water Management
Customer Care

Vision

A Technical Centre of Excellence in Training, Research, Innovation and Consultancy in the water, Sanitation and Irrigation Sector.

Mission

T o offer Competency-Based Training, Research, Innovation, Consultancy and Outreach Services in the Water, Sanitation and Irrigation Sector for sustainable development.

Core Values

Good Corporate Governance
Professionalism
Customer Focus
Innovativeness
Inclusivity
Patriotism
Integrity

GET IN TOUCH WITH US

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Repair of pumps boreholes and distribution systems

Your feedback is crucial for our improvement

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