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KENYA WATER INSTITUTE KEWI Fountain Of Water Knowledge

WEEKLY Newsletter

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KEWI Signs an MOU with WaterKiosk Africa, Receives a Water Desalination Machine

KEWI Governing Council Chairperson Hon. Patrick Mbangula (left) and WaterKiosk Africa Director Mr. Samwel Kinyanjui after signing a MOU at KEWI Headquarters in Nairobi. KEWI CEO Dr. Leiro Letangule looks on.

BY P. KIMANI

Kenya Water Institute (KEWI) and WaterKiosk Africa (WKA) have consolidated their partnership by signing a Memorandum of Understanding (MOU) at KEWI Headquarters, Nairobi that establishes a framework of collaboration between the two organizations. This came in the same day when KEWI received a solar water desalination plant that will boost both the training and research, and business development aspect of the institution.

The signed MOU establishes matters capacity building, visibility, business development, knowledge and technology transfer, mitigating climate change and establishing better and more resilient communities that properly utilize natural resources as some of key collaborative tenets.

Addressing both KEWI and WKA teams during the event; KEWI Governing Council Chairperson Hon. Patrick

HIGHLIGHTS

KEWI Signs an MOU with WaterKiosk Africa, Receives a Water Desalination Machine

WaterKiosk Africa (WKA) Director Mr. Samwel Kinyanjui explains a point to KEWI CEO Dr. Letangule and KEWI Council Chairperson Hon. Mbangula about the water desalination machine at KEWI Nairobi.

Mbangula lauded the momentous occasion and termed it as one that will go a long way in enriching the training and research aspect of KEWI.

Hon. Mbangula said that KEWI will be the leading institution in disseminating knowledge in regards to new technologies emerging in the water sector going by the engagements and partnerships it was signing with institutions that offer or create such technologies.

He expressed his admiration of the contents of the MOU saying that KEWI was indeed keen on walking the talk in regards to its core mandate of offering relevant trainings within the water sector

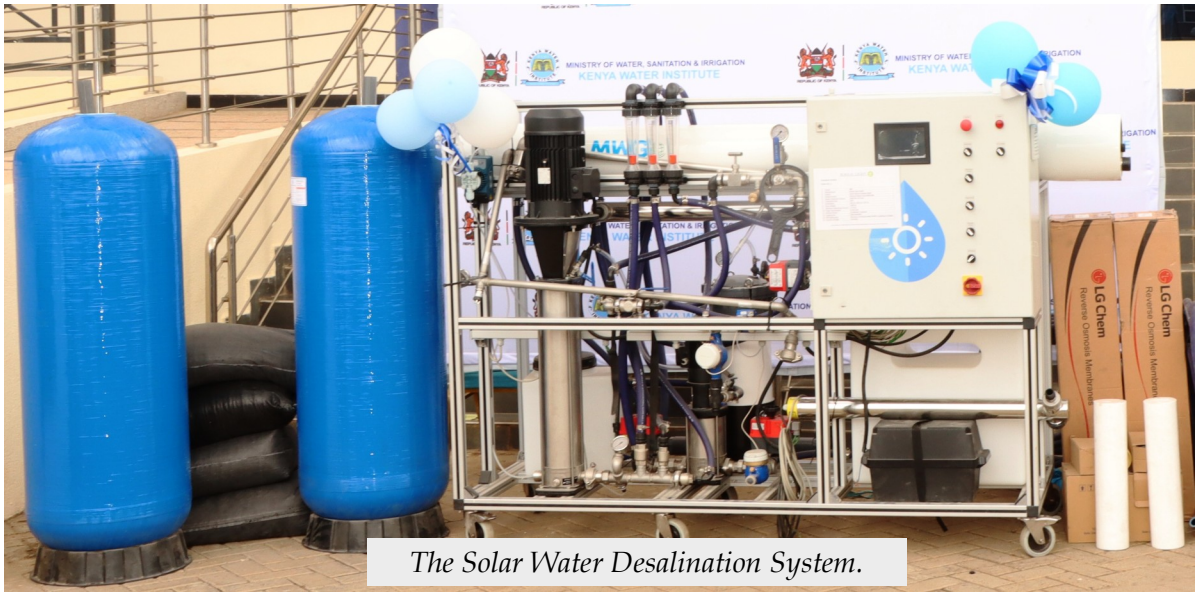
"This MOU makes KEWI walk the talk in terms of incorporating technology in its operations since it is cognizant of the technological advancements happening within the water sector," he said.

On his part, WKA director Mr. Samwel Kinyanjui said that his organization was elated to sign such an MOU with KEWI as it was consolidating the fact that Public-Private Partnership model of engagement can bring huge benefits to all partners involved.

"We have worked with KEWI before since all our water analyses are done at KEWI Water Quality Laboratories and thus this partnership will further enrich our history of partnership. We are coming very fast as a private organization since we are away of the fact that time is money," Mr. Kinyanjui asserted.

KEWI Chief Executive Officer Dr. Leiro Letangule further termed the agreement as a game changer in regards to training and research within KEWI. He noted that such a partnership was not only going to help elevate the status of KEWI as a centre of excellence when it comes to offering trainings on new technologies within the water sector but also be a conscious organization keen on driving changes in communities in collaboration with WKA and other similar organizations.

KEWI Signs an MOU with WaterKiosk Africa, Receives a Water Desalination Machine



The Solar Water Desalination System.

"We are keen to see that the MOU is implemented fully so that we can reap fully the benefits that come with this kind of relationship," he said.

The MOU states Trainings and capacity building, internship and industrial attachments, students visits and staff exchange programs , organizing and participating in conferences , workshops, exhibitions and outreach for visibility purposes as some of the key areas of partnership.

The agreement further points out joint research and proposal development, business development sharing of physical facilities and equipments and knowledge and technology transfer as some other areas of collaboration.

Speaking separately during the handover of the multimillion water treatment system, both Hon. Mbangula and Dr. Letangule promised their commitment to see that the institute will ensure it implements its end of the bargain.

"Apart from reaping the many benefits that come with having this state of the art machine installed here, we shall market this technology and solution out there for the benefit of both of us," they said

The premium German made machine manufactured by Boreal Light GmbH Company among many other solutions delivers high quality hygiene drinking and sanitation water from any kind of high saline and polluted water resources. Once fully installed and powered to operate, the solar powered plant which has a capacity of cleaning 20, 000 liters of water per day will see KEWI roll out a water bottling unit in the near future.

This move termed as an equal partner arrangement and which will be captured extensively in a separate agreement on particulars and aspect of the machine will go a long way in boosting the business development and profit sharing aspect of the MOU under the Business development clause.

Mr. Kinyanjui noted that the plant was a holistic project bearing in mind that its effluents were environmentally friendly and that both its consumables and running cost were very affordable to sustain it.

"As an organization keen on renewable energy space and developing research competencies around this area, we are very happy to have this project take shape. The machine apart from possessing the abilities of being monitored remotely also runs off grid and it's dependent on solar energy," he said.

RESEARCH

Institute partner with AfDB on a Water Saving and Sanitation Technology

Kitui Campus team setting-out a SATO VIP latrines construction site.

BY ABIGAEL SONGOK

Kenya Water Institute (KEWI), through the Ministry of Water, Sanitation and Irrigation (MWSI), has received grant funding from the African Development Bank (AfDB) towards improving public health and enhancing the technical skills of youth in Kenya through sanitation and technology transfer.

The funding is under the Policy and Human Resources Development Grant (PHRDG). Under this funding agreement, it is expected that the AfDB, in partnership with KEWI, will build a foundation to roll out this water- saving sanitation technology in the three pilot areas of Kitui, Kisumu, and Tharaka Nithi Counties.

A designated team at the KEWI Kitui Campus conducted the setting-out exercise for the Sato VIP latrines construction. The Campus Principal, Mr. Matara Kaburi, during the exercise, appreciated the partnership between KEWI and AFDB.

"The Campus is one of the beneficiaries among the other five primary schools in the county. This process is to ensure the forthcoming construction remains within the legal boundary by bringing the dimensions of a plan to the real situation. The activity consists of establishing the exact location and measurements of the house to be built. The first activity of setting out is to clear the ground of any debris, vegetation, and other obstruction," he said.

On the same day, the Rural Electrification and Renewable Energy Corporation (REREC) Kitui three-person team paid a courtesy call to the institute. The team donated both exotic and indigenous trees, including Senna, Casuarina, Acacia, and Eucalyptus, to support the forthcoming National Tree Planting Day so as to spearhead Kenya's green energy drive. Led by Mr. Kinyili Kitema, he emphasized the importance of trees as an ideal source of renewable energy if they are properly managed.

RESEARCH

Research Team Embark on Data Collection for IHE-Delft Project

KEWI team and other participants during the inception workshop on a IHE-Delft sponsored project in Lamu County

BY SHELDON YEGON

Kenya Water Institute took part in the GWS-SENCE (Groundwater Sustainable and Equitable Development Under Constraints of Ecosystem Conservation and Saltwater Intrusion Prevention in Large Deltas) inception workshop and reconnaissance study in Lamu County, where the team visited several sites earmarked for data collection.

The GWS-SENCE project, which is being sponsored by the IHE-Delft, is being implemented in collaboration with the University of Nairobi and the Kenya Marine and Fisheries Institute by Kenya Water Institute.

Among the areas visited were Matondoni, Amu Island, Shela, Mpeketoni, Witu, Mokowe, Mkunubi, and Pate Island.

The visit's goal was to get to know the local community, the county and local administration, the business community, the community forest association, and the players in the water sector prior to the main field work activity that was supposed to start early the next year.

Water levels and quality criteria were measured, together with socioeconomic information about the region, during the visit that brought together the people and partner organizations.

Lamu County is a great catchment for Kenya Water Institute, and in the recent past we have had few students from the area. The stakeholder's workshop therefore provided an opportunity to tell the community about the Institute, the courses and the services KEWI offers.

One question that emerged from the workshop was the institute's ability to provide the courses online in order to serve individuals who may not be able to attend in person due to employment obligations.

RESEARCH

Raising the Next Crop of Skilled Researchers in Water Sector; Students Experiences

BY CHIAKARIGA CAMPUS TEAM

Collaborating with the African Development Bank (AfDB), the Kenya Water Institute (KEWI) is actively propelling the Green Toilet System project in Tharaka Nithi County (KEWI Chiakariga) and Kajiado County (Oloolaiser Water and Sewerage Company). This pioneering initiative focuses on treating human waste innovatively, repurposing it as humanure, and significantly contributing to sustainable sanitation solutions.

Students played a pivotal role in the success of this project, participating in data collection through the efficient ODK Toolkit—a powerful tool for field data acquisition. This engagement aimed to enhance KEWI students' research, community engagement, and data collection skills. It provided a unique opportunity for students to partake in real-world research, directly addressing urgent sanitation and environmental challenges. Their unwavering commitment and contributions undeniably influenced the triumph of this initiative.

This collaborative effort between students and mentors marks a significant stride in advancing both academic excellence and practical solutions to critical issues.

Elijah Njoroge while collecting data on SATO Project

Below are experiences from some of the students who actively participated in the exercise

Elijah Njoroge, Diploma in Water Engineering Technology.

"Green toilet system is a technology which has come to replace the ancient technology on latrine systems, this technology is separating the fecal matter from urine and this fecal matter will be later used as manure after treatment hence conserving the environment and having sanitation issues addressed at the same time.

Being part of the research team has really helped me to gain more skills in the field of water and sanitation.

The method of data collection used was by the use of ODK toolkit which is a user friendly application; the nature of this app is that it can be able to store more data. I also gained skills which will help me in future when it comes to data collection using ODK toolkit.

The involvement with the locals was good and also gave me a chance to see how the people live. Some of the challenges that I met during the data collection are language barrier, hostile people and some people were not willing to give out their views and names.

RESEARCH

Raising the Next Crop of Skilled Researchers in Water Sector; Students Experiences

The research will be addressing the issue of climate change. If the community accepts and embraces the use of GTS, the issue of climate change would be dealt with comprehensively. This is by using the humanure and other organic fertilizers hence preventing global warming. Due to the safety of GTS and its usability, the issue of sanitation and hygiene will be dealt with. Through the theoretical knowledge I had been taught in class, I was able to use it in the field. The research helped me to understand more that water and sanitation is one and that when the levels of sanitation are low the availability of water is also low.

The impact of the project to the community is that it will help to improve the levels of sanitation and also when the fecal matter is treated people will use the matter as manure hence improving their living standard through agriculture.

My acknowledgement goes to the KEWI GTS research team led by Lillian and her team for the mentorship and giving me the opportunity to be the part of the research team. The success of research is as the result of the assistance you offered to me and the entire team.

My aspiration to the field of water and sanitation is to see that every household in our communities has access to clean water and safe sanitation systems. The experience I have gained from this research is that I can be able to introduce safe sanitation system in my community to deal with the challenges that are there.

Joan Ruth Letangule, Diploma in Water Engineering Technology

The research project on Green Toilet Systems carries with it significant importance in tackling sanitation and environmental challenges by exploring sustainable solutions. These systems aim to minimize water usage, promote waste recycling, and reduce pollution, contributing to improved sanitation practices and a healthier environment.

Working closely with experienced mentors in water and sanitation provides invaluable guidance, allowing you to tap into their wealth of knowledge and practical insights. Through mentorship, you gain a deeper understanding of industry nuances, best practices, and potential challenges. This hands-on learning experience not only accelerates your professional growth but also fosters a supportive network, enhancing your ability to contribute meaningfully to water and sanitation initiatives.

Mentorship plays a pivotal role in shaping practical skills by providing real-world context and personalized guidance. Experienced mentors offer insights derived from their own experiences, helping you navigate challenges and refine your approach. This direct transfer of practical knowledge accelerates skill development, offering a nuanced understanding of industry intricacies that goes beyond theoretical learning.

Additionally, mentors often share lessons from their own mistakes, offering valuable perspectives that contribute to a well-rounded skill set. The ODK (Open Data Kit) Toolkit facilitates a hands-on data collection process by offering me-friendly interfaces

RESEARCH

Raising the Next Crop of Skilled Researchers in Water Sector; Students Experiences

for designing forms, enabling our field teams to gather data directly on mobile devices.

This empowered us to engage actively in the collection process, ensuring real-time data capture with minimal manual effort. According to my personal experience, mobile based tools which is also ODK tools are commonly used for building forms, collecting data, and managing submissions in various fields, including environmental and sanitation projects like the Green Toilet System. We typically gained expertise through hands-on experience, training, and utilizing resources provided by the ODK community.

Engaging with the local community during the green toilet system data collection is crucial for a comprehensive and successful project. Conducting informational sessions, seeking input, and addressing concerns foster community trust and collaboration. Additionally, involving community members in data collection can enhance accuracy and relevance, ensuring the green toilet system meets the specific needs of the local context.

This approach promotes a sense of ownership and sustainability within the community. Interacting with community members during the green toilet system data collection process often unveils both challenges and valuable insights. Challenges may include initial skepticism or resistance due to unfamiliar technology, cultural considerations affecting data interpretation, or logistical issues in coordinating involvement. On the flip side, these interactions provide insights into community preferences, sanitation practices, and environmental concerns.

Building trust, addressing misconceptions, and adapting data collection methods based on community feedback are crucial aspects of navigating these challenges and ensuring the success of the green toilet system implementation. Participation in the Green Toilet System Research Project contributes to climate change adaptation in the water sector by promoting sustainable water management practices.

I would like to appreciate KEWI, my mentors, African Development Bank and the entire organizing team for providing this valuable learning opportunity.

Extra information by Simon Ndeweni and Korir Kipkirui

Quote of the Week

"Failure is simply the opportunity to begin again, this time more intelligently."
-Henry Ford.

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Round Up of the Week's Events

Moments during the National Validation Workshop on KEWATRI Bill, 2023 at KEWI Nairobi

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

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OTHER SERVICES OFFERED

Water Quality Laboratory Services
Drilling and Test Pumping Services
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Conferencing Services
Troubleshooting of pumps boreholes and distribution systems
Repair of pumps boreholes and distribution systems

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