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KEWI and Nandi County Forge Capacity Building Partnership Framework



KEWI CEO Dr. Leiro Letangule (left), Water & Sanitation PS Dr. Kipronoh Ronoh (2nd left) and Nandi County Governor Stephen Sang (2nd right)

BY PIUS KIMANI

Kenya Water Institute (KEWI) has established a collaborative framework with the County Government of Nandi that aims to see the two parities conduct joint capacity building activities.

Once formalized, the partnership will see KEWI take a leading role in capacity building for the devolved

government unit specifically on areas related to water resources management within the county for the benefit of its residents.

Terming the agreement as insightful, KEWI Chief Executive Officer Dr. Leiro Letangule and Nandi County Governor H.E Stephen Sang, who signed the documents on behalf of the Institute and the County Government respectively further termed the

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KEWI and Nandi County Forge Capacity Building Partnership Framework



Moments of the signing of the Memorandum between KEWI and the County Government of Nandi.

agreement as a hallmark of partnership. H.E Sang said that the agreement will mark a significant step forward in the county's collective efforts to improve water management, enhance sustainability and ensure the availability of clean water resources for all.

Sang was excited about the prospects of the collaboration with KEWI stating that the positive impact that it will have on the water sector in the county will be monumental.

"If we were to use either county or national government equipment to sink boreholes instead of using private contractors as we have done in the past, the cost of sinking one borehole will be cut by half," stated Governor Sang while

expressing his optimism in the newly forged partnership.

Dr Letangule on his side noted that KEWI was moving with speed to collaborate with county governments to offer its training services as a mean to enhance a robust water sector. He expressed his willingness and commitment to work with the county government and other water bodies in the county to complete proposed water projects across the county in order to raise water connection coverage that currently stands at 11,000 out of targeted over 200,000 households by offering the services contained in the collaborative framework signed by the two parties.

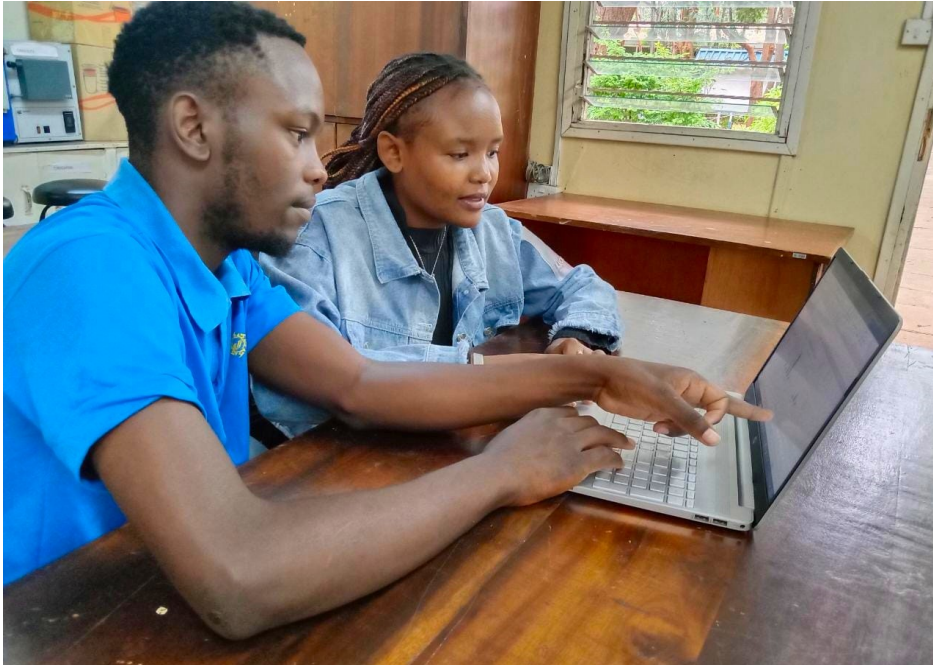
The MOU was signed during a meeting attended by Water, Sanitation and Irrigation Principal Secretary Dr. Paul Ronoh who was meeting among others the governor and members of parliament from the region at County Headquarters. The meeting saw the participants agree to create a common approach on several proposed water projects across the count so as to increase the number of household connected with water.

The PS hailed the MOU noting that robust collaboration areas within the partnership will see drastic reduction of Non Revenue Water as KEWI will offer insight on how to reduce unaccounted water

A Journey of Growth: Mentorship that matters

through training on Reduction of Non-Revenue Water.

Below: Mathew Ngatia and Gichungo Maureen at the Campus in Chiakariga.



BY KORIR KIPKIRUI

Mathew Ngatia, a second-year student at KEWI Chiakariga Campus, pursuing Diploma in Water Engineering Technology under the mentorship of Mr. Simon Ndeweni a lecturer at the campus, has gained valuable skills in remote sensing and Geographic Information System (GIS), data analysis, visualization, manipulation, computer proficiency, research, querying, and modeling.

Using GIS and Q-GIS software, the student successfully extracted Tharaka South Sub-County map.

In remote sensing, he has learnt to retrieve rainfall data for Tharaka South Sub-County without visiting a meteorological station. Analyzing ten years of daily and monthly precipitation data, he has described rainfall patterns, identified rainy and dry seasons, determined the driest month and analyzed dry seasons, determined the driest month, and analyzed the duration of the longest and

the shortest rainy seasons.

Mr. Ngatia developed expertise in data visualization, creating hyetographs using bar and line graphs to represent annual rainfall trends. Additionally, he acquired data manipulation skills, calculating average monthly rainfall over a decade.

Proficiency in Microsoft Excel and Word allowed him to format data, insert information, and design charts. Moreover, he has improved his research and report-writing abilities.

Further, he has actively participated in the Collaborative Mapping project led by United Nations Development Program (UNDP). This partnership involved KEWI, Pwani University, National Drought Management Authority (NDMA), Tana River County Departments, Civil Society Organizations (CSOs), private sector entities, and community members. expertise to contribute to the project goals.

Towards this, Mr. Ndeweni's guidance has helped him acquire practical skills in various water engineering technology areas. Participating in the UNDP Collaborative Mapping project

A Journey of Growth: Mentorship that matters



Mr. S. Ndeweni, KEWI Chiakariga Campus Lecturer during a past UNDP Program

alongside KEWI, Pwani University, NDMA, Tana River County Departments, CSOs, private sector entities, and community members has further enriched his learning experience.

Gichungo Maureen, currently a second-year student at KEWI Chiakariga Campus, pursuing Diploma in Water Engineering Technology says that practical skills are of utmost importance to her.

Recently, she also had the incredible opportunity to participate in the same workshop organized by UNDP, which focused on tackling

water scarcity in Tana River County.

This workshop provided her with invaluable insights into critical areas such as collective intelligence, solution mapping, and the creation of dynamic maps.

The experience was truly enriching as she had the privilege to learn directly from experts in diverse fields. Guiding her throughout this journey was her mentor, Mr. Ndeweni, who is not only her lecturer but also a source of inspiration.

In addition to the workshop, Mr Ndeweni has been actively engaged in rainfall analysis in Tharaka

South for the past decade. Under his expert guidance, she had the opportunity to acquire essential practical skills in Geographic Information System (GIS).

Moreover, she was able to enhance her proficiency in important Information Technology tools like Microsoft Excel and PowerPoint, which are invaluable in the field of water engineering.

The entire experience was characterized by collaborative brainstorming sessions, where she learnt a tremendous amount from her lecturer's mentorship and guidance.

"I am truly grateful for the knowledge and practical skills I gained through the workshop and the support provided by Mr. Ndeweni." Maureen says.

WATER FACT

Where the waters do agree, it is quite wonderful the relief they give.

-Jane Austen

Chiakariga Campus Analyses Rainfall Patterns and Trend for Rainwater Harvesting

BY KORIR KIPKIRUI

Kenya Water Institute Chiakariga Campus Research Team, comprising both lecturers and students, was dedicated to mentoring and fostering the transfer of research skills among water engineering technical students, underscoring the significance of practical skills.

Recently, the team did research on analysis of Rainfall Patterns and Trends for Rainwater Harvesting in Tharaka South Sub County.

Water is a vital resource for various human activities, and its availability is primarily determined by rainfall in a catchment area. Excessive or insufficient rainfall events can lead to flooding or drought, respectively.

Rainwater harvesting has emerged as a sustainable approach to meet domestic water supply needs worldwide, especially in arid and semi-arid regions.

Tharaka South Sub County in Kenya heavily relies on rainwater as its primary freshwater source, but has faced severe droughts in recent years.

Understanding rainfall patterns and trends is crucial for developing effective

rainwater harvesting policies and strategies.

Daily rainfall data from 2013 to 2022 was analyzed and summarized into monthly precipitation patterns. Bar graphs were generated to visualize and compare the rainfall distribution across different years.

These graphs provided insights into the consistency or fluctuations in precipitation during specific months, enabling the identification of anomalies or trends.

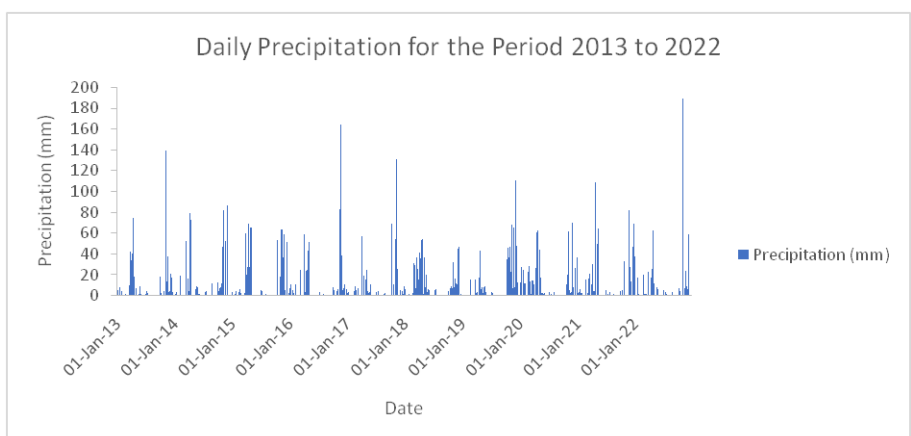
The study revealed that Tharaka South experiences relatively low annual precipitation, with a high number of rainy days distributed throughout the year.

variability necessitates exploring alternative water sources such as surface water and groundwater.

However, these sources are limited in the area, highlighting the importance of rainwater harvesting as a means of capturing and storing water during heavy rainfall for use during drought periods.

The findings emphasize the need for sustainable water abstraction and storage technologies in Tharaka South Sub County to manage limited water resources effectively.

Rainwater harvesting systems offer an affordable and efficient solution for collecting and storing rainwater. They can also mitigate flash flood problems caused by heavy

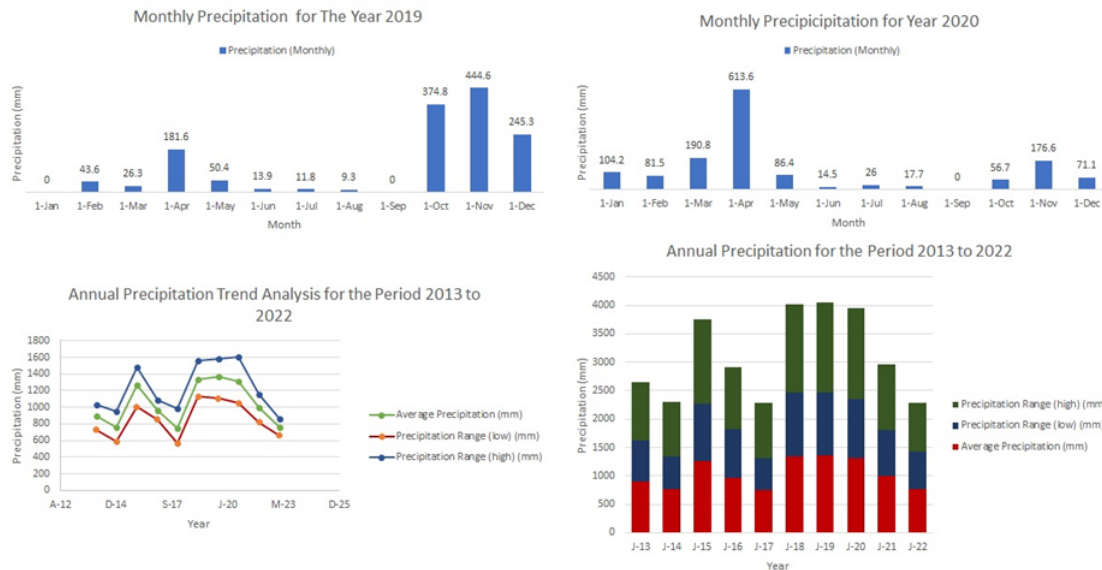


This indicates the unpredictable nature of rainfall patterns in the region. The combination of low rainfall and high inter-annual

downpours.

The research outcomes will inform decision-making processes, policy reforms, and the design of rainwater

Chiakariga Campus Analyses Rainfall Patterns and Trend for Rainwater Harvesting



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Mathew Ngatia
(Student) and Maureen
Gichungo (Student)

harvesting systems in the region, promoting water sustainability in domestic, agricultural, and industrial sectors.

Towards this, analyzing ten years of rainfall data in Tharaka South Sub County provides valuable insights for developing rainwater harvesting policies and strategies.

The study highlights the challenges posed by low rainfall and high inter-annual variability, emphasizing the importance of alternative water sources and sustainable water management practices.

By promoting rainwater harvesting and implementing appropriate policies, the region can address water

scarcity issues and ensure the availability of water for various sectors sustainably.

Quote of the Week

“Continuous improvement is better than delayed perfection.”

-Mark Twain

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Round Up of the Week's Events

KEWI Conducts Elections on Students Council



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 (DWRMT)
 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 (CWLTL)
 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

To 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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