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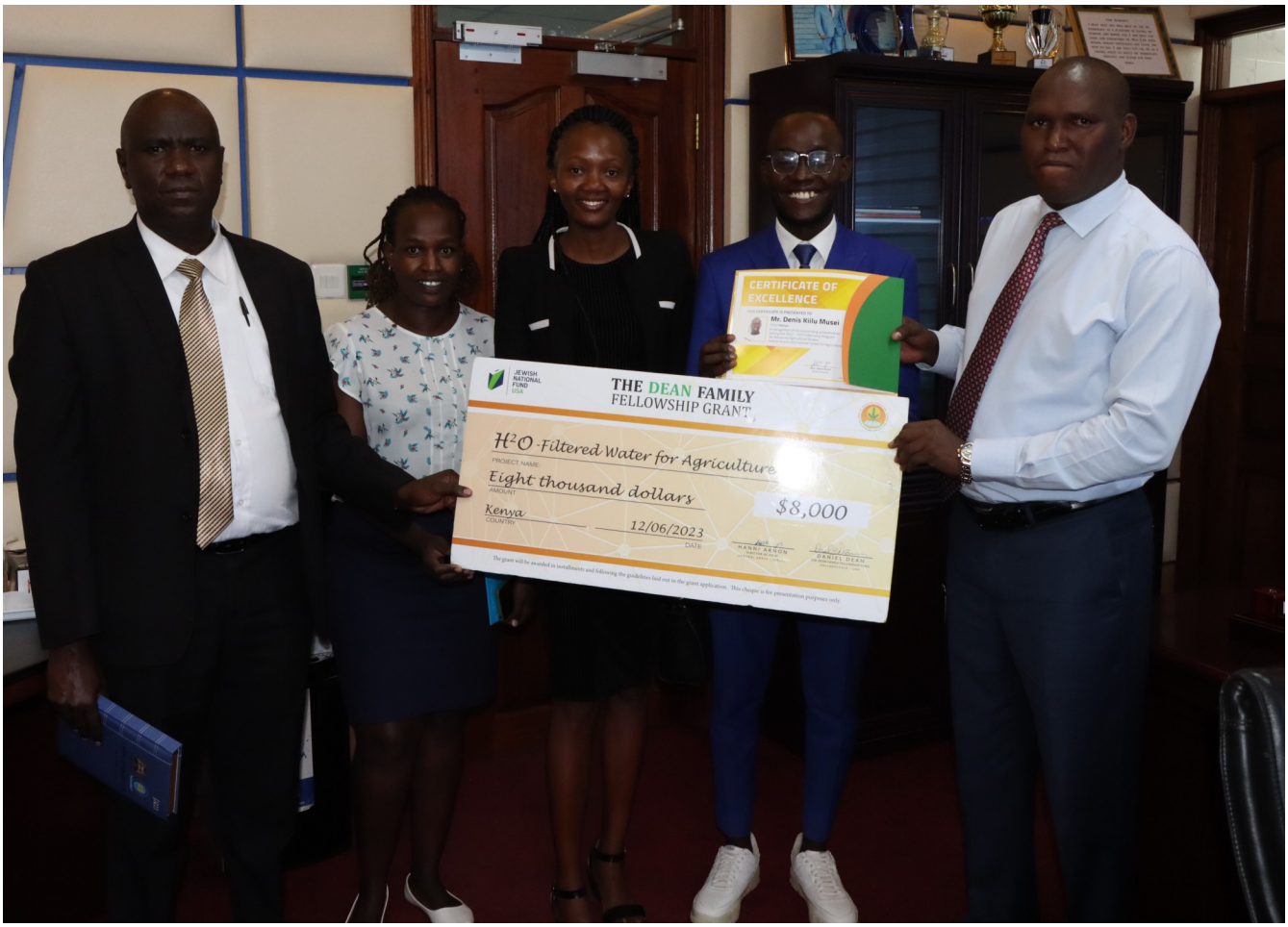
REPUBLIC OF KENYA

KENYA WATER INSTITUTE KEWI Fountain Of Water Knowledge

WEEKLY Newsletter

July 08-14, 2023

Young Water Engineer Seeking to Change Ways of Farming



AICAT Scholarship beneficiaries during a courtesy call at KEWI CEO's Office.

BY PIUS KIMANI

Any other day, Ann Monicah Gitagia and Denis Musei Kiilu would have passed as two of the many students taking their courses at Kenya Water Institute (KEWI), Nairobi Campus.

They would have still passed as two of the many guests who frequent the institute to seek information. Nairobi campus doubles up as headquarter of the institute that offers diverse training programs related to water. But both of the two assertions have a degree of truth.

The two were former students and had on this day arrived as the guests of the

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2 Young Water Engineer seeking to change ways of farming

4 Importance of Surveying

6 DI Students meet their sponsors.

7 KEWI Calls for Application

Young Water Engineer Seeking to Change Ways of Farming

Ann Monica Gitagia and Dennis Musei Kiilu with KEWI CEO Dr. Letangule.

institute and were to be hosted by KEWI Chief Executive Officer Dr. Leiro Letangule.

The two in confident gaits strode along the pavement leading to the Water Resource Centre building at KEWI. Musei in his hands grasped firmly a sizeable placard which he held close to him. It must have been something dear to him or to the two of them. I would later understand that it was a dummy cheque they had been given for a financial grant they had received for a project. Monicah held onto and brown envelope.

The two would later be joined by Mr. Henry Kobia, Senior Principal Registrar and Soyian Sadera, an Administrator in the office of the Academic Affairs for a brief meeting with the CEO. Monicah and Musei, I would later learn, had arrived to brief the CEO of their trip to Israel. The two who have since graduated from KEWI were among a pool of lucky beneficiaries of a scholarship program run by Arava International Centre for Agricultural Training (AICAT) in collaboration with training institutions in which KEWI is a member.

I later caught up with Monicah who gave me an insight of their visit to the institute. A 2021 Diploma graduate in Water Engineering, Monicah spoke highly of KEWI as a place where her background in water training was molded.

Interviewer: How was it being at Kenya Water Institute and what exposure did you get there that enriched your course?

Monicah: KEWI really molded my passion in water training. The 3 years I trained in KEWI gave me a rare chance of understanding the dynamics of a market that is supposed to absorb a water engineer like me. In general, being at KEWI was an awesome experience and I got a chance to acquire knowledge and skills that are so applicable in the water sector.

Monicah who is now entering the job market feels that water sector is a rich field that can accommodate all water graduates. This, she believes is possible especially now that water is becoming a scarce and all is being done to conserve the rare commodity by bringing all players like water engineers, plumbers, drilling experts, advanced irrigation experts etc on board.

"Water Engineering is a blue collar job and has an open job market. All eligible graduates with the right skills and knowledge have their space." She asserts.

MAIN

Young Water Engineer Seeking to Change Ways of Farming

Monicah hints that with the expanding opportunities in the water sector like working with the NGOs and government both national and county, in their respective areas of water attention, water graduates have other opportunities to gainfully earn from their training.

This can be by bidding for tenders in water sector through Access to Government Procurement Opportunities (AGPO), offering consultancy services etc.

This helps create a ready market for water graduates both in public and private sector.

"However, tribalism and corruption within the sector and lack of enough and and lack of enough and modern resources to measure up to global standards pose as threats to truly free water labor market."

Monicah who was among a batch of lucky AICAT beneficiaries delightfully explains to me how she got a rare chance of spending almost an year in Arava , Israel.

During her stay, Monicah narrates how they would work in the farms days in and out and visiting areas that were of interest to her training to learn firsthand, the benefits of modern agricultural practices.

Dr. Letangule confers a point with the young engineers.

of modern agricultural practices.

"After going through a rigorous vetting exercise here in Kenya, I was among those picked to gain extra knowledge in Israel. It was quite an eye opener and a huge boost to my training in water engineering. I was able to see and experience a specific plant growing from the early stage to harvesting." Monicah explains.

Talking of the exposure she got while in Israel, Monicah feels that its time the country adopts a system of farming that not only uses advanced agricultural technology but one that conserves the meager resources that we have.

Interviewer: What do you think should be done to address the food shortage in the country especially now that we are facing the real consequences of climate change?

Monicah: My stay in Israel made me realize that we can use the resources we have prudently to increase our agricultural yields and feed our nation. Climate change is

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Expert's View

The Importance of Surveying: Chaining and Leveling of Erosion Gullies

BY SIMON NDEWENI

For water engineering students, proficiency in chaining and levelling techniques is invaluable. These skills enable students to accurately measure erosion gullies, assess their severity, and design erosion control measures. The data gathered through surveys form the foundation for erosion control and runoff management strategies in water-scarce regions.

These highlights the significance of surveying techniques, specifically chaining and levelling, in understanding and managing erosion gullies in arid and semi-arid areas for water engineering students. Chaining provides accurate measurements of gully dimensions and cross-sectional profiles while leveling determines relative heights, elevations, and slope gradients within the gullies.

Chaining allows students to determine gully dimensions and create cross-sectional profiles. These profiles aid in designing erosion control structures and ensuring effective water conveyance and storage within the gullies.

Leveling provides insights into flow pathways, areas of water accumulation, and suitable drainage systems. Students can optimize the design of water conveyance structures by understanding slope gradients and utilizing the potential energy of the runoff water.

Hands-on surveying techniques bridge the gap between theoretical knowledge and practical field applications.

Water engineering students gain hands-on experience in data collection, equipment handling, and problem-solving, enhancing their understanding of erosion gully management challenges.

This practical application prepares students to develop innovative solutions suitable for arid and semi-arid regions.

Chaining and levelling techniques are particularly crucial for understanding runoff generation during the rainy season and collecting and storing water for domestic and agricultural use during the dry season. Accurate measurements of gully dimensions help estimate runoff volumes that can be stored, leading to the design of appropriate storage structures. Levelling facilitates the identification of natural flow pathways, aiding the design of drainage systems for effective water collection and diversion.

In conclusion, surveying techniques, including chaining and levelling, play a vital role in understanding erosion gullies and managing water resources in arid and semi-arid areas.

These techniques enable water engineering students to design erosion control measures, optimize water conveyance systems, and collect and store runoff water for domestic and agricultural use.

Proficiency in surveying skills prepares students to address the unique challenges of water engineering in water -scarce regions, contributing to sustainable water management and supporting the needs of communities and agricultural practices during the dry seasons.

Young Water Engineer Seeking to Change Ways of Farming

Ann Monica Gitagia and Dennis Musei Kiilu at KEWI Nairobi Campus.

dealing a catastrophic blow to our agricultural sector but our exposure here is supposed to herald new beginnings in creating a revolution in agricultural practices.

From using drip irrigation systems, fertilizer dosing, use of tunnels to grow crops, using smart packaging methods etc, we can be able to conserve a lot of resources which otherwise go to waste and cumulatively affect our food production.

Monicah, who has teamed up with his friend Musei, have had to walk their talk. During their sojourn in Israel, the two participated in an AICAT forum that required participants to send their business proposals. After going through a series of trainings on business planning and financial analysis, their proposal won and they walked home with a grant of 8000 dollars (Approximately Ksh 1.1 Million). The funding will be released in phases towards a water filtering project they will be running in Eburru Mbaruk ward, Gilgil Constituency in Nakuru County.

Eburru sits along the Rift Valley bed and is characterized by volcanic elements. With almost no rivers running with the area, inhabitants of this area rely on water collected from the active gaseous wells in the area where they condense the vapors into water for their daily consumptions.

Monicah further explains that her passion to impact the residents of this area was activated during her internship training sessions. Having noted that farming in the area was getting affected by lack of consistent water; Monicah was impelled to come up with an innovation that would help address the problem.

By use of innate filter, the surface runoff water will be filtered and cleaned for agriculture. This will be by use of activated carbon. Monicah explains that her first hand experience where a farmer planted 100 trees and only 7 survived really got her thinking. She believes that the project will help farmers increase the rate of conserving the amount of runoff water they use to increase their food productivity.

Monicah believes that the project will help improve water quality, increase crop yield, initiate sustainable water management practices, and enhance economic empowerment by improving water quality among other loads of benefit.

Monicah winds up our conversation by challenging all KEWI graduates to come up with innovative solutions that would be of benefit to the country and that would help address emerging climatic challenges.

She won't go without giving a part on the back to all those who have enhanced her journey as a water engineer

"It's a big thank you to KEWI and AICAT for the chances given to us to show our potential and we are ready to implement the same in changing our society into a better one."

TRAINING

Kisumu Campus DI Students meet their Sponsors

A group photo of DI sponsored students in Kisumu Campus.

BY JOHN WAWERU

The Kenya Water Institute (KEWI) Kisumu Campus Danish Sponsored students were privileged to meet their team of sponsors from Denmark. The team from 3F included Mr. Jasper Nielsen, Mr. Bsorn Haar, Mr. Daniel Mwaura and Mr. Linioln Aweza from Sugar Industry.

The team encouraged students to remain focused on their studies and work hard to nurture valuable practical skills to offer quality labor services in the water sector and to be job creators.

The team was pleased by demonstrations showcased by students ranging from solid waste management to water conservation and their prowess in the use of plumbing equipment.

The students are now in their second semester of study pursuing Craft Certificate in Plumbing and Pipefitting Technology and Waste Water Management Technology Courses. Kisumu campus Principal Mr. Paul Rarieya who hosted the delegation encouraged students to make use of available resources in the institute and work hard to ensure a sustainable workforce in the water sector.

WATER FACT

69% of freshwater on Earth is trapped in glaciers.

Quote of the Week

"Before you are a leader, success is all about growing yourself. When you become a leader, success is all about growing others."

-Jack Welch.

EDITORIAL TEAM

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CALL FOR APPLICATION

REPUBLIC OF KENYA

MINISTRY OF WATER, SANITATION & IRRIGATION

KENYA WATER INSTITUTE

Diploma in Water Engineering Technology

REQUIREMENTS

KCSE Mean Grade C-(minus) or a division (ii) in KCSE with at least a D(plain) in any of the sciences (Mathematics,Physics, Chemistry or Physical science and Biology) or Geography

TUITION FEE PER SEMESTER

Ksh. 23,100

DURATION

3Years/6 Semesters

CAMPUS

Nairobi, Kisumu, Chiakariga,Kitui

APPLY NOW

Pick the application form from our Nairobi, Chiakariga, Kitui or Kisumu campuses

OR

Apply via the application form from our website

www.kewi.go.ke

All application letters to be addressed to

The Director, Kenya Water Institute,

P.O BOX 60013-00200 NAIROBI not later than 18th August 2023

Round Up of the Week's Events

KEWI Chiakariga Campus Students on Survey practicals.

Round Up of the Week's Events

Danish Industry Sponsors visit to Nairobi Campus

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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OTHER SERVICES OFFERED

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

Your feedback is crucial for our improvement

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