KNUST RWESCK
Regional Water & Environmental Sanitation Centre Kumasi

Kwame Nkrumah University of Science and Technology

Newsletter

JULY-AUGUST EDITION 2023

Project News

- RWESCK Acquire New Laboratory Equipment to Improve Water Quality Testing
- Quality Assurance Agency for Higher Education Visit to RWESCK

Research News

- Tackling Floods in West Africa

Education News

- 4 Member Group Represents RWESCK at the AII4WASH Summer School in South Africa

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Project News

RWESCK Acquire New Laboratory Equipment to Improve Water Quality Testing

The Regional Water Environmental and Sanitation Centre, Kumasi (RWESCK) laboratory serves as an experimental hub tailored for students enrolled in Science and Engineering programs at the Kwame Nkrumah University of Science and Technology, as well as other universities across Ghana.

In measures to ensure quality research and standard water testing, the Centre has brought in about 20 new laboratory equipment to foster experiments. The laboratory chief technician, Mr. Kingsley Osei-Bonsu stated that the lab is open to the public and not only students and lecturers.
“Some labs are set for students or teaching purposes but ours is not run like that. Outsiders can also bring their samples for analysis, that is why we have equipment with big storage for storing more or large samples”. He said.

Some of the equipment includes a Microbial Incubator, Lab Freezers, Incubating Shaker, Auto Clave, freezing Incubator, Furnace, Distillation Unit, Memmert Oven, Fume Hold, and many more. The Centre boasts cutting-edge scientific instruments, offering students the opportunity to engage with advanced equipment, thereby ensuring that RWESCK remains at the forefront of scientific research.

Project News

Quality Assurance Agency for Higher Education Visit to RWESCK

The Regional Water and Environmental Sanitation Centre, Kumasi (RWESCK) was one of the facilities evaluated in Kwame Nkrumah University of Science and Technology's (KNUST) journey towards international accreditation with the Quality Assurance Agency for Higher Education (QAA) in the United Kingdom.

The QAA review team inspected the Centre, particularly the laboratory. Their meeting with the university leadership, students, academic staff, and stakeholders provided valuable insights into academic excellence and institutional development. They were impressed by the accessibility of the laboratory equipment at the Centre and its accessibility to the students.

They evaluated the institutions' adherence to international standards, including site visits and Virtual Learning Environment (VLE) demonstrations. The assessment will lead to key findings, recommendations, and features of good practice, strengthening KNUST's commitment to academic excellence and global recognition.

Education News

4 Member Group Represents RWESCK at the All4WASH Summer School in South Africa

The ALL4WASH Summer School took place in South Africa's Limpopo Province. With the theme "ALL4WASH- Achieving Social Inclusion through Water Quality Management," the program aimed to educate participants about water quality's connection to social inclusion through a combination of lectures and practical sessions.

The two-week programme engaged participants in enlightening lectures by experts from various countries. These discussions provided deep insights into global challenges and advancements in water quality management. The lectures also focused on hands-on training, where participants worked with water samples from different sources, analysing physicochemical parameters and microbial content. A significant highlight was a visit to the Venda water treatment plant, offering participants real-world exposure to water treatment processes and challenges in delivering clean drinking water to communities.

Lilian Brago Boampong is a participant from RWESCK.
“I have broadened my knowledge of the involvement of women in the WASH sector. I learnt that women and girls are mostly affected by inadequate sanitation conditions due to physiological or biological factors so there is a need to amplify women's voice in water scarcity response strategies and expand women's ability to make strategic life decisions in the context where this ability was initially denied”

Research News

Tackling Floods in West Africa

Extreme rainfall and resulting floods pose a significant threat in West Africa, especially in the densely inhabited Guinea coastal zone. There are signs of a rise in losses and destruction due to floods in the past few decades. Climate change and population projections estimates strongly indicate that this pattern is likely to persist and may even worsen in the future.
In a bid to curb this, the Future Risks of Urban and Rural Flood (FURIFLOOD) project in West Africa sought to generate flood risk maps for the basin and include mitigation solutions for the flooding events.

The project aims to generate scientific knowledge regarding climate drivers of current and future extreme events related to flooding in West Africa and integrate this with case studies to better understand risks and impacts. The study will be conducted through field surveys and hydrodynamic models using HECRAS 2D and TELEMAC 2D.
"The flood risk maps are to inform policy and decision-makers about the current and future flooding events in the basin which can inform policy documents about the management of the flood in the basin and also to find ways for indigenous inhabitants in the basin to adapt to the flooding which may occur" project member, Miss Vida Akyeampong explained.

As part of the study, a three-member team from Munich, Germany, visited Kumasi to conduct field surveys in flood-prone areas using drone measurements to enhance the accuracy of the Digital Elevation Models (DEM) used in hydrodynamic basin modelling which is essential for creating flood risk maps. RWESCK in collaboration with Prof. Leonard Amekudzi, Provost of the College of Science, KNUST is working on the hydrology component.

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