



**RWB**  
Rwanda Water  
Resources Board

# RWANDA WATER RESOURCES BOARD

NEWSLETTER SEPTEMBER 2023 EDITION

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# FORWARD

Dear valued Stakeholders, Partners, and Readers

We are delighted to present our monthly newsletter, wherein we highlight the key events and advancements of September 2023.

One of the primary highlights is the publication of the Annual Water Storage Status Report, for the fiscal year 2022/2023. This report has underscored and emphasized the pressing need for additional water infrastructure to support and sustain agriculture and other vital economic activities.

As September came to a close, we marked a significant milestone with signing of contract between Rwanda Water Resources Board and Sinohydro Corporation Ltd.

This groundbreaking agreement paves the way for the construction of the Muvumba Multipurpose Dam, a project set to serve the community by providing hydropower, irrigation and water supply solutions in the Nyagatare District.

Moreover, our dedicated staff members have actively participated in various capacity-building initiatives designed to enhance our expertise and competence in managing and developing water resources projects.

Our unwavering commitment remains strong in ensuring the availability of sufficient and well-managed water resources for sustainable development.

We also remain dedicated to reducing soil erosion and mitigating the adverse impacts associated with flooding and landslide risks.

We express our gratitude to our esteemed stakeholders, partners, and readers for your continuous support in our mission.

Best Regards,

**DR. EMMANUEL RUKUNDO**  
**DIRECTOR GENERAL**



## RWB STAFF ATTEND A TRAINING IN SOUTH KOREA ON “MASTER PLAN FOR WATER RESOURCES DEVELOPMENT IN MBUYE, RUHANGO DISTRICT”

Rwanda Water Resources Board (RWB) staff attended a training program in South Korea organized by SAMAN Corporation as part of the project ‘Master Plan for Water Resources Development in Mbuye, Ruhango District.’

This training was conducted from 9th to 18 September, aiming at strengthening the Rwanda Water Resources Board staff capabilities to develop a master plan for sustainable water development in Ruhango District.

The “Master Plan for Water Resources Development in Mbuye, Ruhango District” Project is under Implementation Plan signed between Rwanda Water Resources Board and Korea Environmental Industry and Technology Institute (KEITI) signed on 18th April 2023.

The primary goal of this project is to assess the feasibility of developing a multipurpose dam for domestic water supply, irrigation, livestock watering and hydropower while ensuring the sustainability of the resources and building resilience against climate change and variability





## ALERTING LANDSIDE EVENTS: RWB HOSTS HESOTECH GMBH CEO

September 8th, 2023, Evariste Nsabimana, the Deputy Director General of the Rwanda Water Resources Board (RWB), hosted the Rhineland-Palatinate Business delegation. The delegation was led by Dr. Sonnenschein, CEO of Hesotech GmbH, which is currently engaged in a project focused on monitoring landslides in Rwanda through advanced technology.

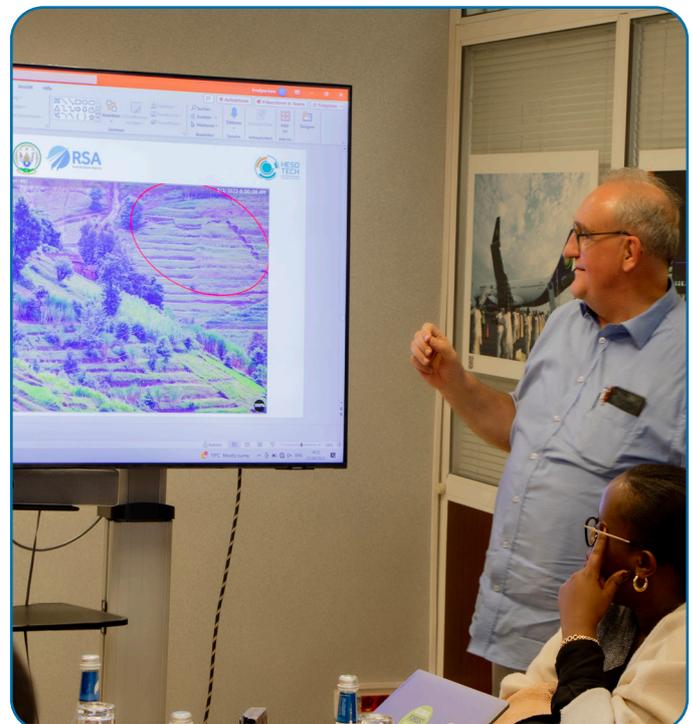
The discussions centered around potential synergies and opportunities for long-term partnerships between Rwanda Water Resources Board and Hesotech GmbH).

Dr. Sonnenschein also introduced the project titled: "Piloting an optical surveillance technology for landslide monitoring in Rwanda, which is being implemented by Hesotech GmbH.

This project involves a multi-disciplinary team including experts from Germany, Rwanda and Malaysia to develop a system to monitor landslides based on the most advanced AI technology.

**"The pilot demonstrated great success and value during the 2023, May 2nd and 3rd disaster, with most critical field evidence, live-data capturing and highly valuable for early warnings and dissemination."** Said The CEO of Hesotech, Dr Sonnenschein

The Deputy Director General of Rwanda Water Resources Board, Evariste Nsabimana, affirmed RWB's interest in partnering with Hesotech GmbH in the fight against landslide.





## RWB'S STAFF TRAINED ON GROUNDWATER MODELS

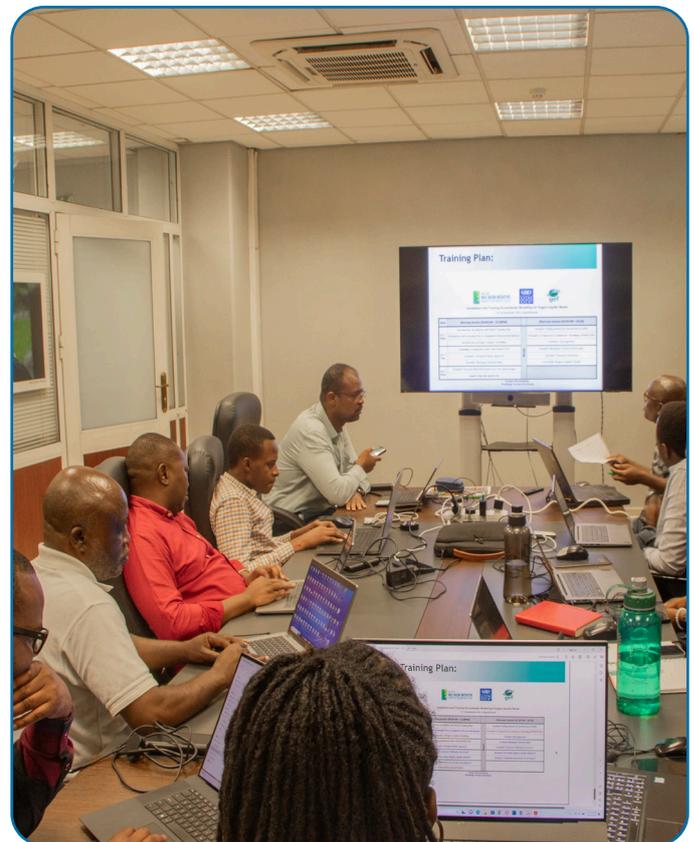
Rwanda Water Resources staff attended a training organized by Nile Basin Initiative as part of the project: **Enhancing Conjunctive Management of Surface and Groundwater Resources in Selected Transboundary Aquifers: Case Study for Selected Shared Groundwater Bodies in the Nile Basin.**

This three-day training, took place from 18th to 20th September 2023, taking into account the project's Component 4: Further strengthening Capacity.

As part of the project, Nile Basin Initiative installed and trained Rwanda Water Resources Board (RWB) staff on the groundwater models developed by the SADA consultants, from 9th September to 10th of October 2023.

The objective of this training was to install geo-equipment and provide national experts in groundwater with the capacity to use groundwater mudflow to model the groundwater.

"This training has been helpful for us, now we are capable of modelling different aquifers of our country." Said Gilbert Niyidufasha, Ground Water Modelling Specialist at RWB.





## RWB, SINOHYDRO CORPORATION LTD SIGN CONTRACT FOR THE CONSTRUCTION OF MUVUMBA MULTIPURPOSE DAM

Rwanda Water Resources Board and Sinohydro Corporation Ltd signed a contract for the construction of Muvumba Multipurpose dam.

The Contract was signed by Director General of Rwanda Water Resources Board, Dr. Emmanuel Rukundo, and Sinohydro Corporation Ltd Country representative, Yang Kai.

“This is a significant milestone in our efforts to enhance water resource management in Rwanda. The Muvumba Multipurpose Dam project will play a crucial role in providing multiple benefits to our communities, from domestic water supply to hydropower, irrigation and beyond.” Said Dr Emmanuel Rukundo

The Muvumba Multipurposedam is set to be constructed on the Muvumba River, 12 Km upstream of Nyagatare town in Nyagatare District.

The Dam will have a height of 39 meters and storage capacity of 55 millions m<sup>3</sup>. The capacity of Hydropower to be installed is 1MW.

It is also set to serve for domestic water supply, irrigation for 9,640 hectares’ net command area covering Tabagwe, Gatunda, Karama, Rukomo, Nyagatare, Rwempasha, Musheru and Rwimiyaga sectors; livestock watering, and flood control.





## RWB RELEASES THE WATER STORAGE STATUS REPORT 2022-2023

Rwanda Water Resources Board (RWB) has released the Water Storage Status Report for the year 2022-2023, providing a comprehensive account of accomplishments, ongoing projects, challenges and recommendations pertaining to water storage in Rwanda.

This report describes all national surface water storages which include natural and artificial water storages and underscores a need for more water storage infrastructures to support rainwater dependent farmers.

“The lack of storage infrastructure means farmers have limited ability to cope with droughts and floods. These limitations are estimated to cost the economy one-third of its growth potential. Investment in appropriate Water storage is an urgent option to increase agricultural productivity and to ensure that farmers have options to cope with the coming climate changes.” Report says

The annual water storage in Rwanda for the fiscal year 2022/2023 is estimated at 225.25 billion cubic meters. The Natural Storage makes 99.96% of the total storage while the Artificial Storage makes 0.04%.

The natural water storage in Rwanda, encompassing various lakes such as Kivu, Burera, Ruhondo, Muhazi, Rweru, Cyohoha, Sake, Kilimbi, Mirayi, Rumira, Kidogo, Mugesera, Nasho, Mpanga, Ihema, Mihindi, Rwampanga, and Cyambwe, is estimated to have a total capacity of 225.165 billion cubic meters

The artificial water storage facilities include water ponds storages mainly used for small scale irrigation, Valley dams for livestock watering and dams used for Irrigation, hydropower generation and domestic water supply.

Among the anticipated water storage projects are Nyabarongo II Multipurpose Dam, Muvumba Multipurpose Dam, Akanyaru Multipurpose Dam, Rusizi III Dam, Warufu Dam and Bakokwe Dam.

### Challenges

- Reservoir sedimentation has become a significant problem within existing water storage infrastructures. Sediment deposition in reservoirs limits the active life of reservoirs by reducing reservoir storage capacity for irrigation, water supply, hydropower and flood risk reduction. water quality, etc. This can be minimized by controlling erosion in the

- The lack of buffer zones is another issue observed in many existing dams. This is a big issue that need to be discussed at high level for water resources protection;
- Most of Irrigation dams are managed by local farmers with limited technical knowledge;

Therefore, the key recommendation is to engage all relevant stakeholders in the mitigations measures for sedimentation control, water quality issues and maintenance of existing infrastructures.

### Recommendations

Water storage development in Rwanda is key to adaptation to climate change. Therefore, its implementation requires the collaboration of different institutions, stakeholders using water and the Ministry of Environment having water resources in its attribution.





# RWB

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Resources Board

Nyarugenge Pension Plaza

Toll Free: 9977 | [www.rwb.rw](http://www.rwb.rw) | [info@rwb.rw](mailto:info@rwb.rw) X: @RwandaWater

