



Republic of Rwanda  
Rwanda Water Resources Board (RWB)

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# NEWSLETTER

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Rwanda Water Resources Board

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## NETHERLANDS EMBASSY DELEGATION VISITS FLOOD INFRASTRUCTURES IN SEBEYA PROJECT



**The delegation from the Embassy of the Kingdom of the Netherlands taking a pose photo at the newly constructed Sebeya lateral dyke in Rubavu District | Photos: Remy Niyingize**

**28th November 2022** - The delegation from the Embassy of the Kingdom of the Netherlands in Kigali visited the flood curbing infrastructures built as part of the ongoing 'Embedding Integrated Water Resources Management Programme (IWMR) known as the Sebeya Project.

This delegation was received by the Rwanda Water Resources Board (RWB) and the International Union for Conservation of Nature (IUCN) on Wednesday, November 23, 2022.

The flood infrastructures include retaining walls, Bukeri diversion channel, Sebeya lateral dyke and retention dam.

These have been constructed in Rubavu District to generate a dampening effect on the floods, primarily mainly by lowering the peak flood downstream.

In recent years, floods caused by Sebeya river used to affect Mahoko Center and other households nearby.



**Sebeya lateral dyke: one of flood curbing structures built by Sebeya project | Photo: Remy Niyingize**

The ongoing Sebeya Project, funded by the Embassy of the Kingdom of the Netherlands in Kigali, spans four districts of Rubavu, Rutsiro, Ngororero and Nyabihu in Western Province.

Other project interventions include the restoration of degraded lands through the construction of radical and progressive terraces, agroforestry, afforestation, gullies rehabilitation, and river bank protections.

## RWB JOINS REGIONAL STAKEHOLDERS FOR THE LAKE VICTORIA'S HYDROSOS IMPLEMENTATION WORKSHOP



**The regional stakeholders posing for a group photo  
| Photos: Remy Niyingize**

**22nd November 2022** - The Rwanda Water Resources Board (RWB) has joined regional stakeholders for a three-day 'Lake Victoria Basin's Hydrological Status and Outlook System (HydroSOS) Implementation Workshop.'

This workshop, taking place in Kigali from 22nd to 24th November 2022, was jointly curated by the World Meteorological Organization (WMO) and Nile Basin Initiative with participating members including Rwanda, Kenya, Burundi, Tanzania and Uganda.



**Panelists  
discussing the  
impacts of the  
Lake Victoria's  
HydroSOS  
implementation**

Its discussions center on the requirements, needs, and capacities of the countries to implement, operationalize and sustain HydroSOS at national and regional scales.

HydroSOS is an important mechanism to help the National Meteorological and Hydrological Services (NMHSs) deliver hydrological products and services for informed decision-making for water resources management.

## WATER PARTNERS' HYBRID WORKSHOP ON INTEGRATED STRATEGIC WATER RESOURCE PLANNING AND MANAGEMENT



Water partners during the hybrid workshop | Photo: Remy Niyingize

**14th November 2022** - Water partners have gathered in a five-day hybrid workshop to validate the draft final report for the study titled 'Integrated Strategic Water Resources Planning and Management in line with the country's Vision 2050.'

The task will be undertaken by Rwanda Green Fund (FONERWA) in collaboration with the Rwanda Water Resources Board (RWB).

It is aimed at implementing the provisions of the 'Water Security for All' sub-program, which entails three themes such as integrated strategic water resource planning and management, catchment restoration, and climate resilient water infrastructure.

Moreover, the 'Water Security for All' sub-program is under the Rwanda Government's Strategic Program for Climate Resilience (SPCR), which was established in 2017 as an investment vehicle to meet #Rwanda's climate change goals and ensure the country is well-equipped to face the challenges brought on by climatic uncertainties.

The SPCR has four sub-programs such as Agricultural-Driven Transformation; Water Security for All - Strengthening Resilience in the Water Sector; Climate Resilient Human Settlements; Stable and Sustainable Landscapes.

## RWB DG'S FIELD VISITS TO SPEED UP SEBEYA PROJECT IMPLEMENTATION



**RWB's DG with Rubavu District's officials before the field visit to Sebeya project's activities | Photo: Rubavu District**

**12th November 2022** - The Director General of the Rwanda Water Resources Board (RWB), Dr. Emmanuel Rukundo has made three-day field visits to all four districts of Nyabihu, Rubavu, Rutsiro and Ngororero in Eastern Province to assess the implementation progress of the Embedding Water Resources Management in Rwanda (EWMR) – Sebeya Project.

Along with the technical team, he has met with district officials such as the Mayor of Nyabihu, Antoinette Mukandayisenga, Vice Mayors in Charge of Economic Development at Rubavu, Deogratias Nzabonimpa, Rutsiro, Etienne Havugimana, and Ngororero, Patrick Uwihoreye.

The purposes included discussions about possible strategies to be adopted in order to speed up the project implementation and set timelines for the completion of the designated activities.

Furtherly, the sustainability of the landscape restoration activities following the completion process.



**Terraces created in Rutsiro District as part of the landscape restoration initiatives | Photo: Remy Niyingize**

### SEBEYA PROJECT DETAILS

Sebeya Catchment is shared between Rubavu, Rutsiro, Nyabihu and Ngororero districts. It has an area of 336 kilometers and has been facing social and environmental challenges as it has some of the steepest slopes and highest mountains.

The Sebeya Catchment Plan found that around 18,000 hectares have been threatened by soil erosion.



**Sebeya Project beneficiaries have received cows as part of Girinka Program**

To address these critical issues, with financial support from the Embassy of the Kingdom of the Netherlands in Rwanda, the Rwanda Water Resources Board in partnership with International Union for Nature Conservation (IUCN), Netherlands Development Organization (SNV), and Rwanda Rural Rehabilitation Initiative (RWARRI) are implementing the Embedding Water Resources Management in Rwanda (EWMR) project – Sebeya Project.

The project's components include restoration of degraded lands in Sebeya and other catchments by radical and progressive terraces, agroforestry, afforestation, gullies rehabilitation, and river bank protection among other interventions; flood retention structures such as walls and dams to combat Sebeya river's floods, development of innovative financing mechanisms and value chains for improved livelihoods through ecological and economic benefits and implementation of knowledge management systems for landscape restoration and integrated water resources management.

This project is being implemented by the community and landowners by using Village Land Use Action Plans (VLUAPs).

[\*\*Click here to have a look at Sebeya Project's photos\*\*](#)

## **RWB KICKS OFF MAPPING GROUNDWATER SOURCES IN EASTERN AND SOUTHERN PROVINCES**



**RWB's technical team and different water partners on the field aimed at mapping groundwater sources in Kirehe District / Photos: Remy Niyingize**

**11th November 2022** - The Rwanda Water Resources Board (RWB) has kicked off the mapping exercise of groundwater sources in efforts to install boreholes that contribute to improving water security in the Eastern and Southern Provinces.

This one-month activity, underway, was funded by UNICEF Rwanda and involves different water sector partners.

It is part of the study titled 'Consultancy to Provide Technical Services for Groundwater Mapping in Rwanda' that will generate a new regional map of groundwater potential to guide the future borehole sitting planning and effective development of groundwater-based water supply projects.

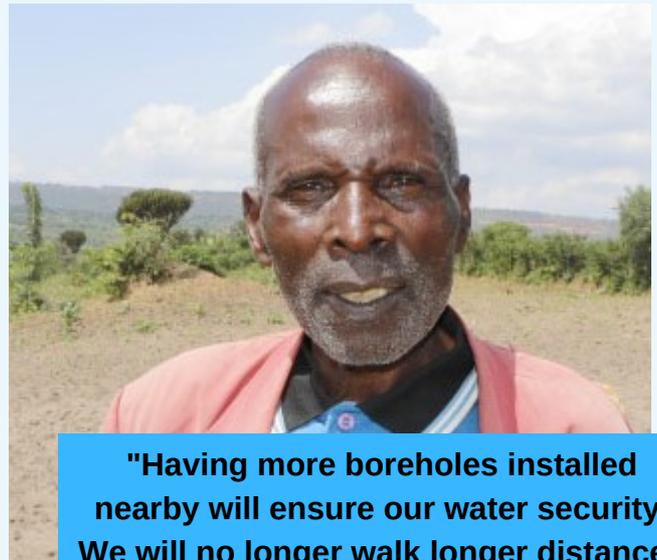
Eight districts currently facing water scarcity include Kayonza, Bugesera, Ngoma in Eastern Province and Kamonyi, Ruhango, Gisagara, Nyanza in Southern Province.

"We have identified more than 200 sites with enough groundwater that can help to establish boreholes in the Eastern and Southern provinces as the country's parts that are more vulnerable to prolonged periods of abnormally low rainfall, leading to a shortage of water," says Bernard Musana, RWB's Head of the Knowledge and Forecasting Hub Department.

He has added that eight borehole sites were found with the capacity to supply 1,000 cubic meters per day, and it is a potential source of water that can be used for small-scale irrigation on 100 hectares and domestic use while contributing to Rwanda's ambition to irrigate 102,284 hectares by 2024.

[Click to see the mapping exercise in photos](#)

Thus far, RWB has recommended the installation of boreholes across the country. According to Musana, the mapping of more groundwater sources will be done in other provinces, and there are ongoing discussions with partners to introduce technologies that increase groundwater drilling skills.



**"Having more boreholes installed nearby will ensure our water security. We will no longer walk longer distances to fetch clean water," testifies Ildephonse Sinayobye, a resident of Bukora Village in Kirehe District.**



**"A number of farmers and cattle keepers are always in need of water. Hence, boreholes will increase the quantity of water," notes Eugenie Mukabutera, a resident of Maranyundo Village in Kirehe District.**

**THE SECOND PROGRAM STEERING COMMITTEE (PSC) MEETING FOR MUVUMBA PROGRAM**

**The second 'Program Steering Committee (PSC) Meeting' for Muvumba Multipurpose Water Resources Development Program (MMWRDP) | Photos: Remy Niyingize**

**8th November 2022:** The Rwanda Water Resources Board (RWB) has hosted the second 'Program Steering Committee (PSC) Meeting' for Muvumba Multipurpose Water Resources Development Program (MMWRDP).

This PSC, which provides the program's strategic guidance, has been chaired by the Permanent Secretary of the Ministry of Environment, Mr. Patrick Karera.

It has been attended by different officials from the Ministry of Environment (MoE) Ministry of infrastructure (MININFRA), Ministry of Finance and Economic Planning (MINECOFIN), Water and Sanitation Corporation (WASAC), Nyagatare District, Nyagatare Province, African Development Bank (AfDB), among others.

During the first phase of this program, funded by AfDB and implemented by RWB, intends to construct a 39 meter-dam, and impound 55 million cubic meters of water in Karame, Gatunda, and Rukomo Sectors in Nyagatare District.

The managed water resources will be used for domestic water supply with 50,000 cubic meters per day, water for livestock and irrigation on 9,000 hectares, and production of hydropower with 1 megawatt.

[Click here for more photos of the event](#)

**INSTALLING BOREHOLES TO IMPROVE RURAL COMMUNITIES' RESILIENCE TO DROUGHT**

**Rwanda Water Resources Board (RWB) has recommended the installation of boreholes across Rwanda so as to avail water for small-scale irrigation and livestock | Photo: Living Water International**

**3rd November 2022** - To cope with the current dry spell, the Rwanda Water Resources Board has recommended the installation of boreholes across the country so as to avail water for small-scale irrigation and livestock.

The recommendation to use groundwater is made at a time of rainfall scarcity in parts of the Eastern and Southern provinces and climate change effects.

The number of rainy days in Rwanda declined by between 35 and 45 days per year due to climate change, according to scientists.

Due to global warming, trend analysis for the period 1971-2016 showed that a temperature increase of 1.4°C has been recorded since 1970. Rwanda's average temperature is higher than the global average (1.09°C).

According to the Rwanda Meteorology Agency (RMA), from September to December 2022, there are higher chances of a decrease in rains compared to the same period in 2021 and previously.

Farmers in parts of Eastern and Southern provinces which are more vulnerable to prolonged periods of abnormally low rainfall, leading to a shortage of water, are already facing the drought effects.

Effort is being made to cut dependence on rain-fed agriculture, especially by devising other effective ways of food production that cannot be affected by unpredictable weather patterns.

By installing more boreholes to tap groundwater, it is hoped, rural communities' resilience to drought will improve.

Bernard Musana, the Head of the Knowledge and Forecasting Hub Department at Rwanda Water Resources Board told *The New Times' Doing Business* that more than 200 sites with enough groundwater that can help to establish boreholes were identified in the Eastern and Southern provinces which are hit by dry spells.

“We carried out studies in the Eastern province and identified sources of groundwater in almost every sector that can help establish boreholes,” he said.

He said that only a few parts of Gatsibo and Kirehe districts were found not to have enough sources of groundwater that can enable boreholes creation.

“We found sites where eight boreholes can be constructed to supply 1,000 cubic meters per day. This is a potential source of water that can be used for small-scale irrigation on 100 hectares and domestic use. This is enough water, especially in rural areas,” he said.

Boreholes are timely solutions, Musana said, as rainwater harvesting is impossible during dry spells.

Rwanda targets to irrigate 102,284 hectares by 2024.



**There is still a need for low-cost drilling technologies in Rwanda so as to make borehole construction affordable | Photo: Living Water International**

**The joint field work by water partners to map groundwater sources. This was organized by RWB in collaboration with UNICEF Rwanda | Photo: Remy Niyingize**



Currently, only 4 percent of arable land is irrigated.

But Musana also warned against damaging and polluting groundwater.

“Identifying these sites with groundwater is necessary so as to take measures as regards avoiding their pollution. For instance, you can’t establish a landfill on a site with groundwater. That could be like dumping waste into a lake,” he explained.

Among all the assessed existing boreholes, the survey found that 27.2 percent (75 boreholes) are destroyed and can’t be repaired. At least 30.1 percent (83 boreholes) among them are not working but they can be repaired and are accessible by communities.

Only 42.7 percent (118 boreholes) of assessed boreholes are still operational.

In general, it was found that the non-operational boreholes didn’t have maintenance committees while very old ones that are still operational have maintenance committees.

“We have 32 stations that are helping to locate sites with enough groundwater,” he said.

Research has shown that people who have access to groundwater from boreholes are much less affected by drought.

### **NEED FOR AFFORDABLE TECHNOLOGIES TO EXTRACT GROUNDWATER**

Low-cost drilling technologies are not yet available in Rwanda so as to make borehole construction affordable.

“We are in discussions with partners such as universities to introduce low cost technologies in Rwanda’s universities to increase drilling skills about drilling,” Musana said, noting that such skills are needed considering that a better borehole should have 100 metres of depth.

According to Musana, the mapping exercise to identify sources of groundwater will be done in other provinces as well. The Chinese government sponsored a 200-borehole project countrywide meant to increase access to clean water for people in rural areas by drilling boreholes.

Boreholes were constructed in seven districts in the Eastern province, and two districts in the Southern province. The project aims to set up 200 boreholes, at the cost of Rwf8 billion.

East Africa is facing its worst drought in years, with climate change largely to blame.

According to the International Fund for Agricultural Development (IFAD), an international financial institution and a specialised UN agency working to address poverty and hunger in rural areas of developing countries, the current drought is a result of the recurring La Niña weather phenomenon, which is exacerbated by climate change, while the impacts of drought are aggravated by deforestation, land degradation and growing water demand—all influenced by climate change.

## RWB RECEIVES AFDB TEAM OVER MUVUMBA PROJECT



**RWB and AfDB's delegation posing for a group photo |  
Photo: Remy Niyingize**

**2nd November 2022** - The African Development Bank (AfDB) management and technical team yesterday wrapped up their supervision mission, which ran from October 24 to November 1, 2022, with a visit to the Rwanda Water Resources Board (RWB).

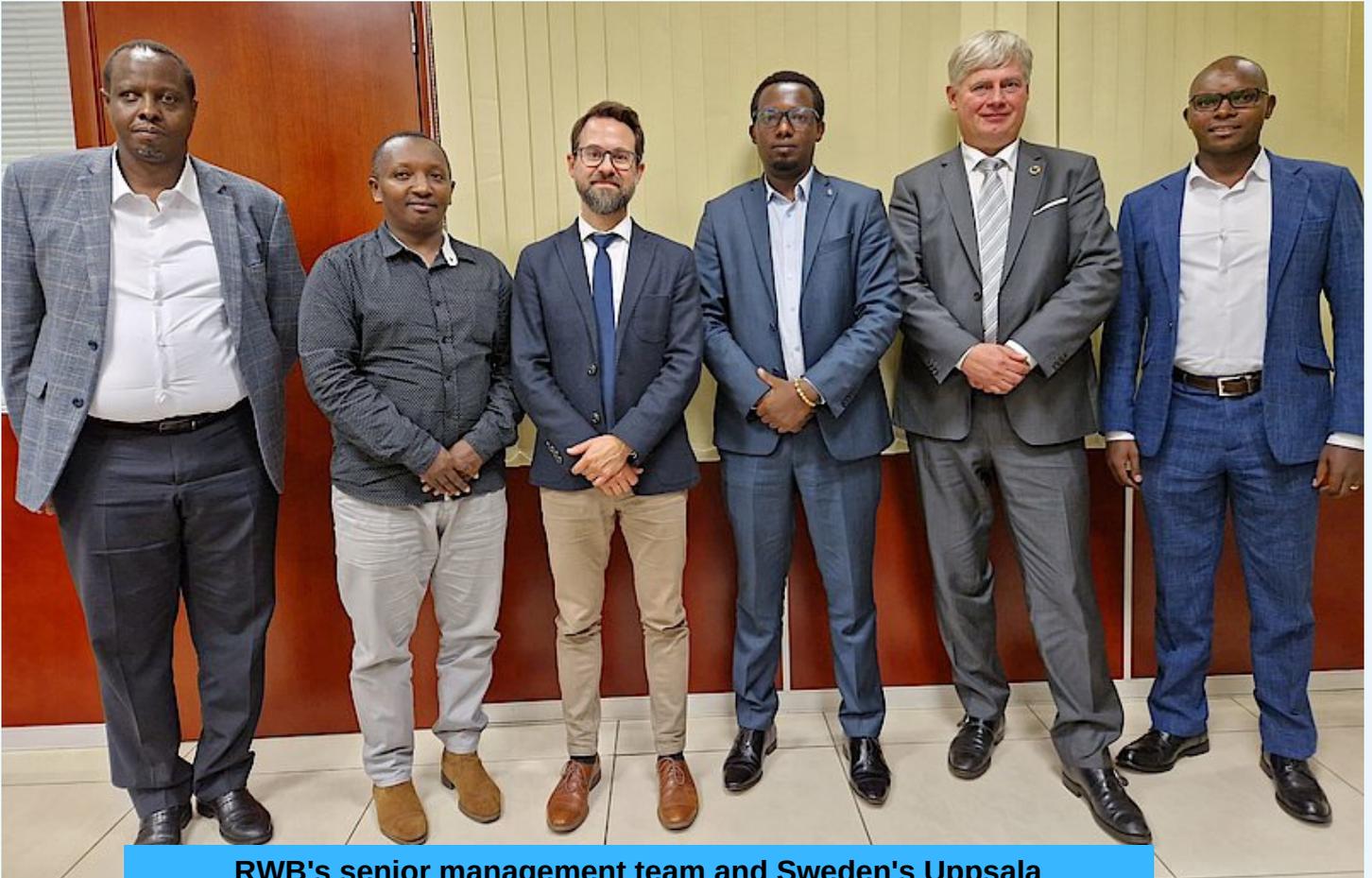
Its objective was to assess the Muvumba Multipurpose Water Resources Development Program, which is being implemented in Nyagatare District, Eastern Province, as discussions focused on reviewing of the program implementation progress, addressing any outstanding issues, and agreeing on the way forward.

The mission was attended both virtually and physically allowing the bank staff to visit the sites to witness the progress of physical activities and provide recommendations as well as guidance on the critical challenges reported.

The team also met with officials in the Ministry of Finance, Ministry of Infrastructure and WASAC as a water-related projects' implementing agency.

Meanwhile, the Muvumba Multipurpose Water Resources Development Program, financed by AfDB and implemented by RWB, is aligned to the Government of Rwanda's development agenda and envisaged economic transformation as outlined in Vision 2050 and the National Strategic Transformation (NST1).

It will improve water, energy, food and nutrition security by harnessing water resources for irrigation, domestic, livestock use and hydropower generation; while ensuring sustainability of the resources and building resilience against climate change and variability.

**UPPSALA UNIVERSITY REPRESENTATIVES PAY A COURTESY VISIT TO RWB**

**RWB's senior management team and Sweden's Uppsala University representatives | Photo: Remy Niyingize**

**1st November 2022** - The Uppsala University representatives have made a courtesy visit to the Rwanda Water Resources Board (RWB).

The Swedish delegation has met with Dr. Emmanuel Rukundo, Director General of RWB, Evariste Nsabimana, Deputy Director General, and Bernard Musana Segatagara, Head of Knowledge and Forecasting Hub.

Their visit's goal was to discuss the implementation of the 'EFFORT Project,' which is expected to accelerate the Sustainable Development Goals (SDGs) fulfillment by closing gaps between academic research and public stakeholders' challenges.

RWB will be part of this impactful project, which will strengthen its research capacity in groundwater modeling, water quality control, climate change resilience and adaptation, as well as flood mitigation.

The 'EFFORT Project' will mainly act as a joint platform to exchange knowledge, practical experience, and technical solutions.

Ends,

Thank you to all our partners



MoE



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