



RWB
Rwanda Water
Resources Board

ANNUAL REPORT
2024-25

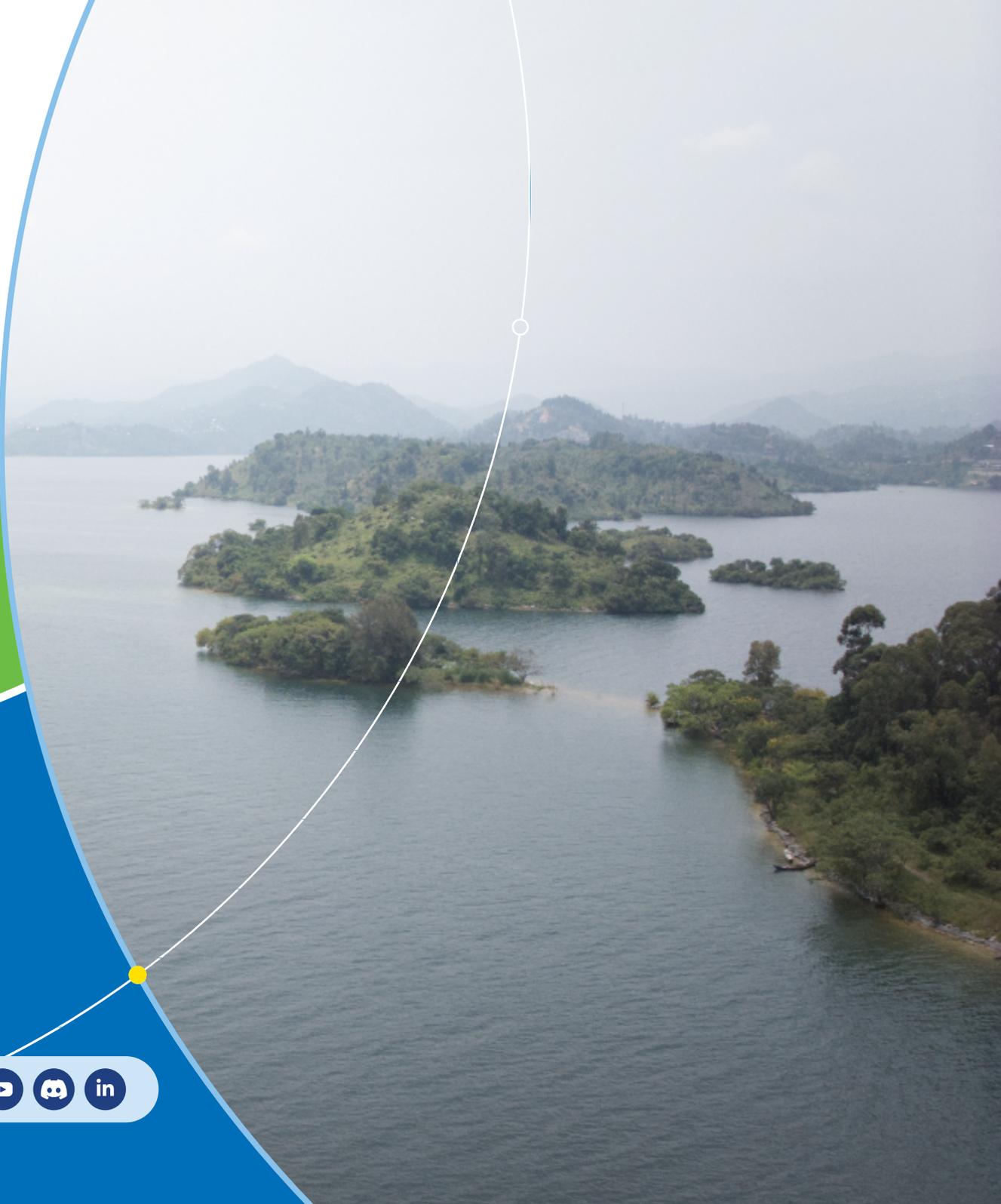




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Executive Chairperson's Message



As we reflect on the progress achieved by the Rwanda Water Resources Board (RWB) during the 2024/2025 fiscal year, I take great pride in the institution's unwavering commitment to ensuring the sustainable management of Rwanda's water resources. Water remains one of the country's most strategic assets fundamental to economic transformation, environmental integrity, and social well-being. In fulfilling its mandate, RWB has remained steadfast in implementing policies, strategies, and programs that protect this vital resource and ensure its sustainable use for generations to come.

This fiscal year was characterized by notable progress in strengthening water governance and advancing integrated water resources management. The operationalization of Catchment Management Committees across all nine level-1 catchments and the launch of the Rwanda Multi-Stakeholder Platform on Water Resources Management marked a significant milestone in promoting inclusivity, coordination, and accountability across the sector. These frameworks continue to enhance participatory decision-making and reinforce Rwanda's leadership in evidence-based water governance.

RWB also registered significant achievements in flood mitigation, erosion control, and catchment restoration areas critical to building climate resilience and protecting livelihoods. Through the construction of key infrastructure such as detention ponds, retaining walls, and

drainage channels, the institution has helped reduce disaster risks in vulnerable communities. In parallel, the restoration of more than 1,300 hectares of degraded land has contributed to improved soil fertility, increased agricultural productivity, and the recovery of vital ecosystems.

Equally important were advancements in water quality monitoring and regulatory compliance. The operationalization of modern water laboratory marked a major step forward in promoting science-driven water management and pollution control. Alongside this, RWB issued over 200 water use permits, conducted extensive inspections to ensure compliance, and launched the Lakes Water Use Master Plan strengthening the framework for equitable and sustainable utilization of Rwanda's key water bodies.

Looking ahead, the Rwanda Water Resources Board will continue to build on the achievements of this fiscal year. By strengthening institutional capacity, fostering innovation, and deepening collaboration with national, regional, and international partners, RWB remains fully committed to ensuring that Rwanda's water resources continue to support inclusive growth, climate resilience, and the country's long-term sustainable development.

Eng Richard NYIRISHEMA
Executive Chairperson
Rwanda Water Resources Board

Executive Summary

The fiscal year 2024–2025 marked a visible progress in Rwanda Water Resources Board's (RWB) ongoing mission to ensure the availability of sufficient, well-managed water resources for sustainable development. RWB strengthened its institutional capacity, deepened collaboration with partners, and implemented strategic interventions across governance, infrastructure, restoration, and research to enhance Rwanda's resilience to climate and water related challenges.

A major milestone of the year was the strengthening of water resources governance through the operationalization of Catchment Management Committees (CMCs) across all nine level-1 catchments. These committees have become vital platforms for participatory management, awareness creation, and enforcement of water related regulations at the local level. The official launch of the Rwanda Multi-Stakeholder Platform (MSP) on Water Resources Management further enhanced inclusive governance, bringing together public institutions, private sector actors, and civil society under the coordination of the National Water Consultative Committee.

In parallel, RWB advanced its work in flood and erosion control, a cornerstone of its contribution to national climate resilience. The year saw the completion of key structural interventions, including the construction of retaining walls and detention ponds in flood prone areas such as Sebeya, Cyuve, and Kazirankara. These works, together with routine maintenance of existing infrastructure, have substantially reduced flood risks and enhanced community safety. Complementary to these measures, large scale landscape restoration continued across priority catchments, with over 1,375 hectares rehabilitated through terracing, agroforestry, and buffer zone protection initiatives

implemented in collaboration with local governments and partners.

To further promote innovative financing and private sector participation in catchment management, RWB signed a Memorandum of Understanding (MoU) between Rwanda Mountain Tea Ltd, the ARCOS Network, and IUCN to pilot a Payment for Ecosystem Services (PES) initiative in the Giciye catchment. This landmark initiative introduces a sustainable financing mechanism that incentivizes upstream conservation actions while securing reliable water resources for downstream users. By linking ecosystem restoration with economic benefits for local communities, the PES pilot complements ongoing landscape restoration and governance efforts, reinforcing RWB's integrated approach to water resources management and climate resilience.

The institution also strengthened water use regulation and monitoring, ensuring that economic development proceeds in harmony with sustainable resource use. A total of 212 water use permits were issued, exceeding the annual target and reflecting improved compliance by water users across various sectors including irrigation, mining, recreation, and domestic supply. Inspections were intensified, with 119 field visits conducted to verify adherence to permit compliance requirements.

Complementing these regulatory achievements was the launch of the Lakes Water Use Master Plan, a strategic tool guiding equitable and sustainable development of Rwanda's key lakes.

Ensuring the quality and safety of water resources remained another key focus. The operationalization of a modern, fully equipped national water laboratory represented a major achievement in enhancing RWB's technical capacity for water quality monitoring and analysis. The laboratory is now capable of

conducting comprehensive assessments aligned with regional and international standards. Nationwide monitoring campaigns were conducted at 72 surface water and 25 groundwater sites, revealing notable improvements in key parameters such as dissolved oxygen, pH, and nutrient concentrations, underscoring the positive impact of ongoing catchment management efforts.

In the domain of institutional strengthening and project implementation, RWB, through its Single Project Implementation Unit (SPIU), successfully advanced several flagship programs, including the Muvumba Multipurpose Water Resource Development project, Volcanoes Community Resilience Project (VCRP), the Congo Nile Divide (CND) Project, and the Intego Facility-funded Muvumba Resilience Initiative. These projects not only restored degraded landscapes and improved water storage capacity but also created livelihood opportunities and strengthened community-based adaptation to climate variability.

Research, innovation, and awareness continued to underpin RWB's work. The institution expanded its groundwater mapping program, launched the second edition of the Water Resources Modelling and Erosion Hackathon to promote youth driven solutions, and piloted citizen science initiatives for flood hotspot monitoring. Through targeted awareness campaigns, media engagements, and community outreach during the World Water Day and Water Week celebrations, RWB successfully promoted a culture of responsible water use and catchment preservation.

Overall, the 2024–2025 reporting period reaffirmed RWB's leadership in advancing integrated water resources management in Rwanda. The institution's achievements demonstrate a continued commitment to evidence based planning, partnership driven implementation, and sustainable service delivery.

An aerial photograph of a resort complex nestled in a lush, green valley. The resort features several large, multi-story buildings with orange-tiled roofs and balconies. In the foreground, a large, modern building with a prominent wooden deck and a thatched roof sits on a grassy peninsula overlooking a large, calm lake. The background shows rolling hills and mountains under a clear sky. The text 'Introduction' is overlaid in white on the right side of the image.

Introduction



1.

1. Introduction

1.1. Background

Rwanda Water Resources Board (RWB) is established by the law N° 71/2019 of 29/01/2020. The Presidential Order N° 025/01 of 18/03/2022 governing Rwanda Water Resources Board (RWB) determines the mission, responsibilities, organization and functioning of RWB. RWB has legal personality and enjoys administrative and financial autonomy and is managed in accordance with relevant laws and falls within the category of non-commercial public institutions.

1.2. Mission & Mandate

The mission of RWB is to ensure the availability of enough and well-managed water resources for

sustainable development. RWB was established to meet

2 goals that are critical to Rwanda meeting Vision 2050:

- Ensuring sufficient water resources for long-term economic growth
- Reducing the impact caused by flooding and landslide risks so that Rwanda can reach Vision 2050.

The goals shall be met by a set of 3 key outputs:

- Protection for high-risk flood zones;
- Reduced soil erosion;

- Increased artificial water storage per capita.

1.3. Organizational Structure

RWB operates under the supervision of the Office of the Prime Minister. The Executive Chairperson, appointed in December 2024, provides strategic leadership, ensures good governance, and serves as the legal representative of RWB. Supporting him is the Director General, who oversees daily operations and serves as the Chief Budget Manager, seconded by the Deputy DG.

RWB management structure includes the following technical divisions and departments:



The institution comprises 82 staff members, plus 35 within the SPIU.

1.4. The Management Team



Eng. Richard Nyirishema
Executive Chairperson



Dr. Emmanuel RUKUNDO
Director General



NSABIMANA Evariste
Deputy Director
General



Bernard MUSANA
Head of Knowledge and
Forecasting Hub Department



Vital MUNYANDINDA
Water Permit Division
Manager



Pamela RUZIGANA
Catchment
Restoration & Erosion
Control Division
Manager



Davis BUGINGO
Flood Management & Water
Storage Development
Division Manager



DUHUZE Remy Norbert
Water Monitoring &
Quality Control Division
Manager



Mathilde MUSABYE
Corporate Services Division
Manager



Serugo KAMATARI Claude
SPIU Coordinator



2.

Strengthening Water Resources Governance



2. Strengthening Water Resources Governance

2.1. Operationalization of Catchment Management Committees



Figure 1: The CMC for Akanyaru catchment in assessment of transboundary issues

In recent years, as part of promoting effective governance of water resources, RWB has developed catchment management plans (CMPs) and has established catchment management committees (CMCs) for each of the 9 level 1 catchments. Subsequently, key activities have been identified to operationalize the established CMCs. The activities focused on capacity building of the committee members, awareness raising on Water Resources Management matters, monitoring and

enforcement of regulations governing water resources management.

The implementation of these activities was phased, where for the 2024-2025 fiscal year, the target was to achieve 9% of the total volume of planned activities for operationalization of the catchment management committees. The table below presents the key activities carried out during the 2024-2025 in the context of operationalizing CMCs:

Table 1: Activities carried out during the 2024-2025 in the context of operationalizing CMCs

No	Level 1 Catchment	Conducted Activities
1	Akagera (Lower)	Capacity building on Water Resources Management for catchment committee members (at level 2.5)
2	Akanyaru	Elaboration of the Catchment Management Committee's action plan Assessment of gullies and transboundary issues
3	Kivu	Evaluation of potential uses of Musaho lowland and Cyunyu marshlands
4	Muvumba	Identification of soil erosion hotspots (gullies) caused by road construction activities on the road Base-Rukomo-Nyagatare (124 km), and transboundary issues
5	Nyabarongo (Upper)	Inspection of Water Resources Management and sustainable mining practices
6	Rusizi	Inspection of big potential pollution sources

2.2. Launch of the Rwanda Multi stakeholder platform on water resources Management

In 2022, the Government of Rwanda approved the Prime Minister Order N°031/03 of 30/11/2022, governing the National Water Consultative Committee (NWCC) composed of a high-level Policy Consultative Committee and a technical Multi-Stakeholder Platform (MSP) for integrated water resources management.

On 13th December 2024, the Rwanda MSP was officially launched, marking a key milestone in operationalizing participatory and inclusive water governance. As an outcome from the launch, a Memorandum of Understanding (MoU) between Rwanda Mountain Tea Ltd, the ARCOS Network, and IUCN, to pilot a Payment for Ecosystem Services (PES) initiative in the Giciye catchment. This initiative aims to enhance water security while delivering economic and environmental benefits to local communities.



Figure 2: Launch of the Rwanda Multi stakeholder platform on water resources Management

2.3. Bilateral collaboration

The Rwanda Water Resources Board has successfully welcomed several delegations, fostering international collaboration through a focused study visit aimed at enhancing partnerships in water resources management.

2.3.1. Ethiopian Delegation

On November 18, 2024, RWB welcomed a delegation from Ethiopia, led by Dr. Abreha Adugna, the State Minister of the Ministry of Water & Energy. The visit aimed at sharing Rwanda's experience and best practices in basin planning and governance with a particular focus on the governance process from catchment planning to implementation.

2.3.2. Kingdom of Lesotho Delegation

November 21, 2024, RWB received a delegation from Lesotho's Integrated Catchment Management movement (ReNOKA) on a study visit in Rwanda. RWB shared its best approaches for managing water resources at the catchment level, including policies, plans, and their implementation.

2.3.3. Malaysian delegation

February 26, 2025, a Malaysian delegation led by Dr. Abdul Gapar bin Abu Bakar, the Deputy Director General of Operations at National Disaster Management Agency (NADMA), paid their visit to RWB. The visit's discussions focused on exploring innovative practices in disaster preparedness, climate resilience, and emergency response.

2.4. Steering Committee Meeting

The Rwanda Water Resources Board convened the 6th and 7th Program Steering Committee (PSC) meeting of the Muvumba Multipurpose Water Resources Development Program at the dam construction site in Nyagatare District. The meeting reviewed the progress on dam construction, provided strategic and technical direction, and approval of the program's 2025/2026 annual work plan and budget.

2.5. Technical Committee on Dams Meeting

In 2024/2025, Rwanda Water Resources Board held quarterly meetings on dams. The meetings highlighted the main challenges faced by dams like; excessive water overtopping crests and damaging embankments, unclear boundaries of some valley dams that hinder preservation efforts, damaged gates leading to spillway overflows, excessive sedimentation affecting reservoir capacity. To address these issues, the committee proposed enhanced monitoring systems, clearer boundary demarcations, and increased collaboration to implement preventive measures.



Figure 3: Ethiopian Delegation Visit to RWB



Figure 4: The Kingdom of Lesotho Delegation Visit to



Figure 5: Malaysia Delegation visit to RWB



Figure 6: Muvumba Project Steering Committee meeting



3

Preventing and Controlling Soil Erosion



3. Preventing and Controlling Soil Erosion

3.1. Restoration of degraded landscapes

Restoration of degraded areas through soil erosion control is one of the outputs prioritized by RWB to support Rwanda's Vision 2050 goals in terms of ensuring sufficient water resources for long-term economic growth and reducing the risks of floods and landslides.

During 2024-2025 FY, RWB has implemented landscape restoration activities including terracing, agroforestry and buffer zone protection on a total area of 1,375 ha. The activities were conducted through different initiatives including (i) transferred earmarked funds to five districts (Nyamagabe, Muhanga and Kamonyi Districts in the Southern Province; Karongi District in Western Province; and Rulindo District in Northern Province); (ii) the Volcano Community Resilience Project (VCRP); and (iii) the carbon-financed riparian buffer zone restoration projects under Memorandum of Understanding (MoU) between RWB and EcoPlanet Bamboo.

From the baseline of 226,786 ha restored at the beginning of the fiscal year, the additional restored area of 1,375 ha resulted in a cumulative total area of 228,161ha restored. The table above presents the distribution of quantities of restored areas by type of funding initiative:

Table 2: Distribution of quantities of restored areas by funding initiative

Initiative /Project	Protected area in ha
Earmarked Funds transferred in 5 Districts	479.1
Volcano Community Resilience Project (VCRP)	270.9
Ecoplanet Bamboo	625
Total	1375



Figure 7: Terraces constructed in Jenda Sector, Nyabihu District under VCRP Project

3.2. Village Land Use Action Planning (VLUAPs)

RWB has adopted a community participatory approach to ensure ownership and sustainability of its landscape restoration activities. In this regard, the Village Land Use and Action Planning (VLUAP) approach was prioritized in planning and implementation of all recent landscape restoration projects including VCRP, CND and Intego funded projects in 6 Districts.

VLUAP is a combined planning, implementation and learning process that generates agreed-upon activities at Village level. These activities are implemented in collaboration with respective Districts through community approach. Targeted Villages are selected considering Catchment Management Based Approach where most degraded micro-catchments are systematically covered from upstream to downstream.

During the 2024-2025 Fiscal Year, in total 120 VLUAPs were developed in different Districts (Rubavu, Nyabihu and Musanze Districts under VCRP and Rustiro and Karongo Districts under CND Project) and this activity is continuing.

Before the development of VLUAPs, RWB conducted training for VLUAP facilitators to provide them with the basic knowledge needed to actively participate in their development and implementation. The facilitators were selected among local leaders, local technicians, and community representatives from the target districts.



Figure 8: Consultation meeting during VLUAP development



Figure 9: Training of VLUAP Facilitators

The table below presents details of the training of VLUAP facilitators conducted during the 2024-2025 FY.

Table 3: Conducted Training of VLUAP facilitators

No:	Project	Target Districts	Number of Participants
1.	VCRP/RWB	Rubavu, Musanze, Nyabihu Musanze, Nyabihu and Rubavu	
2.	CND/RWB	Rutsiro and Karongi	142
3.	Intego Projects in 6 Districts	Nyagatare, Nyamagabe, Nyamasheke, Nyaruguru, Karongi, and Rulindo	

3.3. Community-led seedling giving to combat soil erosion in Rubyiro sub-catchment

During the 2024/2025 fiscal year, the Rwanda Water Resources Board (RWB), in collaboration with the International Water Management Institute (IWMI), advanced community-driven landscape restoration efforts under the West Central Africa Transforming Agri-Food Systems (WCA-TAFS/WP3) project. In the Rubyiro Sub-Catchment of Rusizi and Nyamasheke districts, farmers adopted sustainable land management practices, particularly coffee cultivation, as an effective measure to reduce soil erosion while enhancing household incomes.

Aligned with Rwanda's Inclusive Landscape Management Plan (ILMP), RWB and partners established nurseries, provided technical guidance, and distributed 2,000 coffee seedlings in Karengera Sector, with a target of 5,000 seedlings in the next phase. Farmers and local leaders highlighted coffee's dual role in generating revenue and stabilizing fragile slopes, underscoring strong community ownership

The project is set to scale across more than 56,000 hectares in the two districts, strengthening ecosystem restoration and supporting climate-resilient livelihoods. This initiative demonstrates the effectiveness of integrating science-based solutions with community engagement to achieve sustainable land restoration outcomes.



Figure 10: Strengthening Both Soil and Livelihoods through coffee plantation

3.4. Project Implementation

Three projects are ongoing, including the Volcano Community Resilience Project (VCRP); Building Resilience of Vulnerable Communities to Climate Variability in Rwanda's Congo Nile Divide through Forest and Landscape Restoration," commonly known as the Congo Nile Divide (CND) project, and Intego Facility funded project "Muvumba Catchment Community Resilience and Adaptation through Participatory and Ecosystem-based catchment restoration".

Key highlights

1. Volcanoes Community Resilience Project (VCRP)

Sub-Comp 2.1: Integrated catchment and landscape restoration

Under this component, the project supports landscape restoration and catchment management interventions aimed at improving livelihoods; reducing surface runoff and erosion; and enhancing efforts to restore and protect biodiversity in the three districts, such as Musanze, Nyabihu, and Rubavu districts.

Project achievements:

Village land use action plan development

60 Village Land Use Action Plans (VLUAPs) have been developed and completed for some villages in Rwanda, particularly within the Volcanoes Community Resilience Project (VCRP) in Musanze, Nyabihu, and Rubavu districts. These plans are designed to support catchment restoration and sustainable land management interventions.

Radical terraces and trenches development

57 ha of radical terraces were constructed in Nyabihu district, and 232.9 ha of trenches were developed in existing forestry in Nyakiliba sector in Rubavu district. Around 2001, casual workers, composed of 1142 women and 859 men, were employed in both districts.

Agroforestry seedling preparation

Preparation of 446,188 agroforestry seedlings to be planted on 1,361.5 ha is ongoing. In Musanze, 160,626 seedling preparation stands at 60% and production of 86,129 seedlings in Nyabihu and 199,433 in Rubavu are at the seed bed preparation.

Supporting measures

200 rainwater harvesting tanks have been installed in Musanze, and 180 tanks are under installation in Nyabihu and Rubavu.

Social protection

During the 2024/2025 fiscal year, the project targeted the distribution of 96 cows to poor households, and 10 cows were distributed to vulnerable households located in the Nyabihu district.

2. Building Resilience of Vulnerable Communities to Climate Variability in Rwanda's Congo Nile Divide Region through Forest and Landscape Restoration (CND) Project

Component 3: Enhancing climate adaptation through promotion of resilient livelihoods and climate-smart farming methods

“Building Resilience of Vulnerable Communities to Climate Variability in Rwanda's Congo Nile Divide Region through Forest and Landscape Restoration (CND)” Project is a Rwandan Government initiative supported by the Green Climate Fund (GCF) aiming at the conservation and restoration of the Congo-Nile Divide region, a high-elevation region, characterized by a mosaic of natural forest reserves, smallholder farms, commercial plantations and critical biodiversity hotspots within the Albertine Rift.

Project Achievements:

MoU between RFA and RWB signed on 28th June 2024. Tripartite MoU between Karongi and Rustiro Districts, RWB & RFA signed on 13th June 2025.

To ensure effective and consistent project coordination and implementation, District Project Coordination Committees (DPCCs) have been established for Karongi and Rustiro districts. These committees are responsible for coordinating and overseeing the implementation of the CND Project activities within the districts.

Development of Village Land Use Action Planning (VLUAPs)

The training was conducted from 27 to 29th January 2025, and attended by representatives from RWB, as well as the local authorities and staff from Rutiro and Karongi Districts. In total, 142 people were trained, including 22 women and 120 men, with 10 people with disabilities.

In total 60 VLUAPs were developed, validated, and adopted by the communities at both village and sector levels. 1st DPCC adopted and approved the Annual Work Plan and Budget targets for 2025-2026 for both districts.

3. Intego Facility funded project “Muvumba Resilience: Community-Led Adaptation Initiative”

Building community resilience and adaptation through participatory and ecosystem-based catchment restoration. This investment also contributed to the protection of the Muvumba Multi-Purpose dam. This project is jointly implemented by the Rwanda Water Resources Board and Nyagatare District.

Grant Agreement between Nyagatare, RWB and Rwanda Green Fund signed on 24th January 2025. Mou between RWB and Nyagatare district signed for the implementation of Intego Facility funded project.

Project achievements:

Development of Village Land Use Action Planning (VLUAPs).

The Training of Trainers (ToTs) on the development of Village Land Use Action Plans (VLUAPs) has been conducted for the six districts (Nyaruguru, Nyamagabe, Nyamasheke, Nyagatare, Rulindo and Karongi)

A ToT training for the first 90 villages which were selected in all 6 districts, and took place from Monday 26 to Friday 30th May 2025. The project is scheduled to begin physical work in the fiscal year 2025-2026. The initial planning and preparation of Annual Work Plan and Budget was complete.



4



Enhancing Water Availability, Quality, and Storage for Sustainable Development



4. Enhancing Water Availability, Quality, and Storage for Sustainable Development

4.1. Assessment and provision of water use permits

RWB's target was to issue 150 water use permits. However, the Rwanda Water Resources Board (RWB) exceeded this goal by issuing 212 permits to various water users, bringing the cumulative total to 1,214 permits. These permits were allocated across several sectors, including domestic water supply, coffee washing stations, irrigation, mining activities, recreation, fish farming, port construction, and dam construction. The distribution of the 212 permits issued by RWB is illustrated in the figure below.

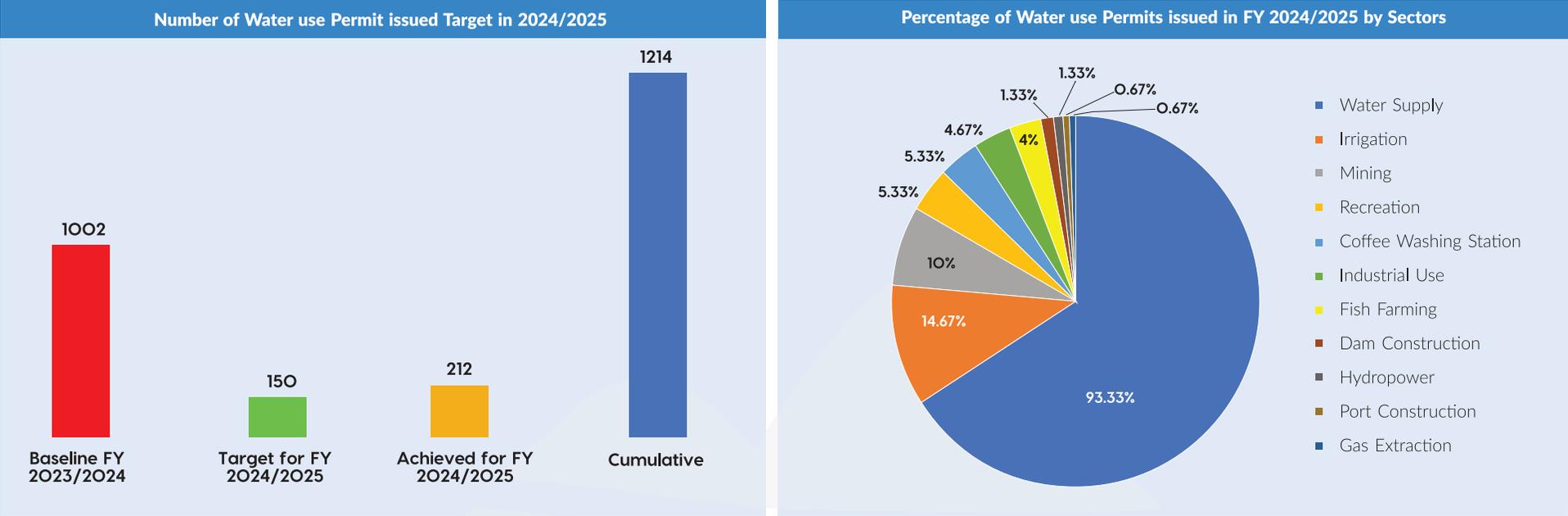


Figure 11: Water use permits issued vs target & Water use permits issued in by sectors in FY 2024/2025

Therefore, at the end of this fiscal year 2024/2025, it was expected to issue 150 water use permits, hence 212 water use permits were issued, the annual target was achieved at 141.33% with a cumulative number of issued water use permits of 1,214.

4.2. Inspections for water use compliance

During the fiscal year 2024-2025, it was expected to conduct a hundred and two (102) field inspections of water users, aiming to verify the water users' compliance with terms and conditions regarding water use. In these inspections, different methods were adopted; including a desk review that involved the consultation of the water permit register; and a field checklist to verify the water permit holder's compliance with the terms and conditions stipulated in the signed contract related to the water use permit.

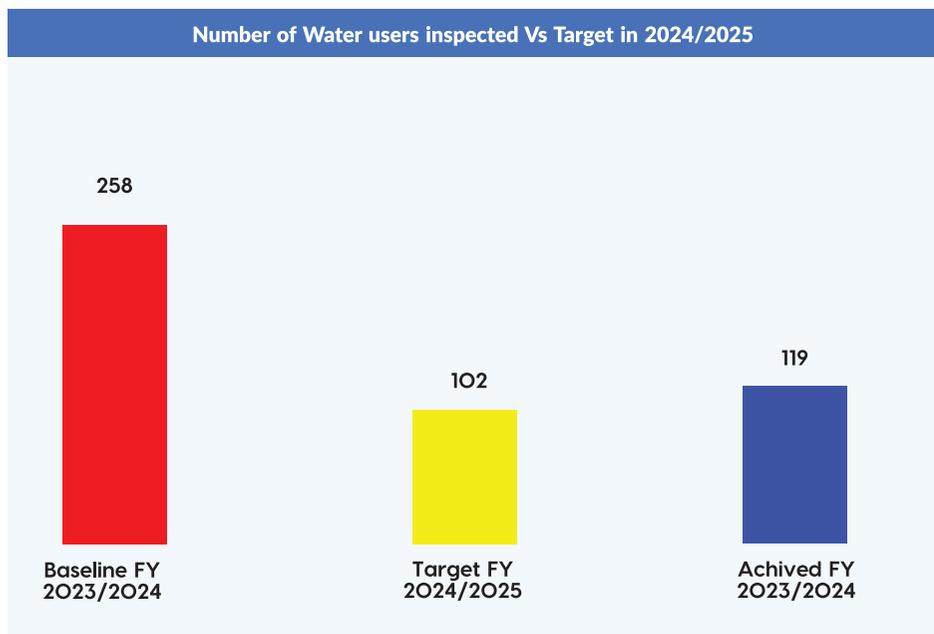


Figure 12: Inspections made related to water user compliance in FY 2024/2025

Therefore, at the end of this fiscal year 2024/2025 the findings show that out of 102 water users expected to visit, 119 water users were visited, the annual target was achieved at 116.67 % with a cumulative number of water users shared 377.

4.3. Achievements at the end of the financial year 2024-2025

From the observations recorded, the results indicated that some permits were found to be non-compliant due to temporary suspension of operations. Certain users were operating under outdated authorizations issued in 2000 and were instructed to reapply for new water use permits in line with current laws and regulations. Additionally, some users had not been operational for more than three (3) months due to ongoing upgrading works. Compliance with environmental flow requirements was assessed based on the method of water abstraction; therefore, users engaged in water-related activities within water bodies (such as lake concessions) were excluded from this assessment. Overall, the compliance

status regarding water use efficiency and environmental protection among monitored users was rated at 68.94%.

4.4. Launch of the Lakes Water use Masterplan

A master plan for water use in 5 identified key Lakes namely Kivu, Burera, Ruhondo, Muhazi and Mugesera has been launched. The Lakes Water Use Master Plan serves as a guiding tool not only for water users but also for decision makers about suitability of different categories of activities, Lakes zoning, and equitable allocation of water resources. This Master Plan provides an in-depth analysis of the water resources in Rwanda, with a particular focus on the management of lakes and their associated ecosystems.

4.5. Water Quality Monitoring and RWB-Water Laboratory equipment

4.5.1. RWB-Water Laboratory equipment

RWB has prioritized the full operationalization of a modern water laboratory, equipped with advanced equipment. This initiative is being supported by the World Bank through the Cooperation in International Waters in Africa (CIWA) Trust Fund.

In alignment with this support, the Nile Basin Initiative (NBI) is implementing the Nile Cooperation for Climate Resilience (NCCR) project to enhance regional collaboration and climate resilience across the Nile Basin. NCCR project supports Nile member states to cooperatively address the ever-increasing water quality and pollution control challenges in the basin through improvement of national water quality monitoring networks and regional water quality information systems to facilitate basin states to take joint actions to address and reverse the impacts of deteriorating water quality in different parts of the basin.

Equipment received by RWB with all patterns include handheld and general laboratory equipment (multi-parameters, balance, double door fridge, metalyser, bacteriological kits and physical chemistry equipment), field tool kits, sediment samplers, glasswares, beakers, Dry oven, ICT equipment etc, and four water quality sensors for real time measurement and transmission of data to the data management system.



Figure 13: The installation of laboratory equipment & official opening of the laboratory equipment of water quality

The following figures show various RWB laboratory equipment, grouped according to the parameters they are designed to measure. These categories include: Physical Parameters, Chemical Parameters, Microbiological Parameters and Isotopic Parameters.



Figure 14: Physical & Chemical measurement equipment and analysis

With state-of-the-art advanced analytical equipment, and a team of well-trained professionals, the laboratory is now fully capable of conducting comprehensive and accurate water quality assessments across Rwanda.

4.5.2. Water quality monitoring (wqm)

The Rwanda Water Resources Board (RWB) conducted water quality monitoring campaigns in alignment with its legal mandate and strategic objectives. To ensure a sustainable future for Rwanda, it is essential to focus on the management and quality of water resources, this approach aligns with global efforts to achieve the Sustainable Development Goals, particularly SDG 6.3.2, which focuses on ambient water quality by specifically measuring the proportion of bodies of water with good ambient water quality. With the aim to ensure water quality characteristics for surface water the monitoring was conducted for 72 sampling sites and RWB plans to expand its monitoring network to 256 sampling sites over the next three years.

The sites are selected by using a catchment-based approach, monitoring is based on seasonal variation across two main hydrological periods: dry and wet seasons.

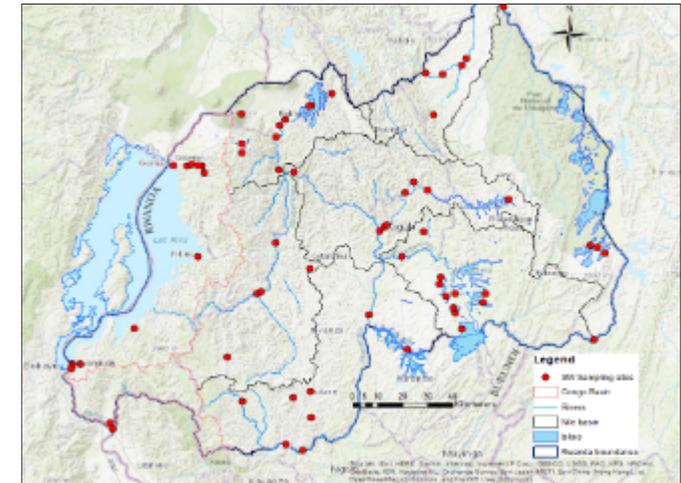


Figure 15: Surface water quality monitoring sites

Groundwater monitoring campaigns were conducted for 25 sites which were selected based on multiple criteria, including potential sources of contamination, historical water quality data, and overall land use patterns to ensure that the sampling locations provide a representative assessment of groundwater quality conditions across the catchment.

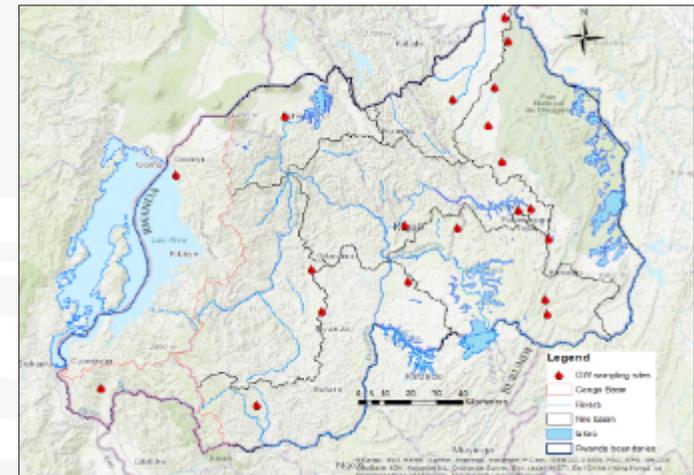


Figure 16: Ground water quality monitoring sites

4.6. Surface water quality (WQM)

The WQM campaigns assessed surface water quality for Dissolved Oxygen (DO), Electrical Conductivity (EC), pH, Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Salinity, Temperature, turbidity, Nitrate (NO₃⁻N), Nitrite (NO₂⁻), Sulfate (SO₄²⁻) and Phosphate (PO₄³⁻), the following parameters were compared with Ambient Water Quality Standard (RS 564:2023) for compliance. pH complying at 93.06%, EC(89.4%), NO₃⁻N(91.7%), PO₄³⁻(70.8%), SO₄²⁻(100%), DO (100%) and TSS complying at 84.72%.

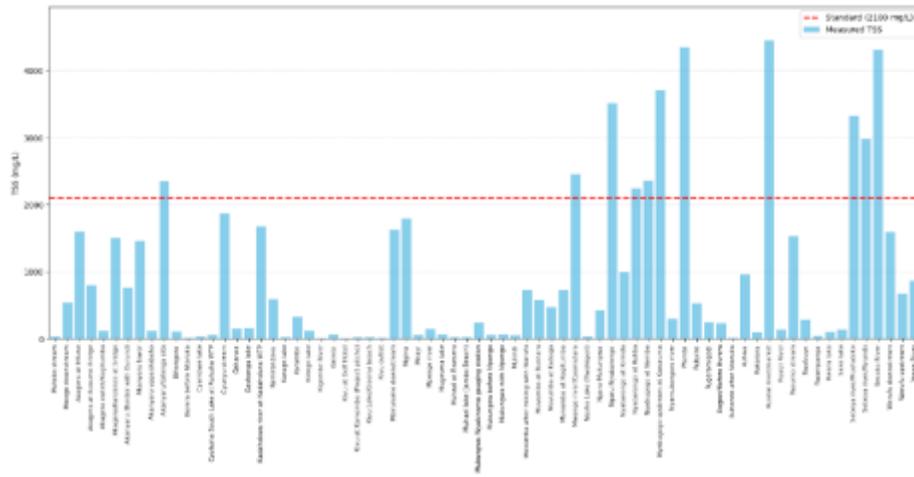


Figure 17: Variation of measured TSS with standard

4.7. Groundwater quality

The WQM campaigns assessed groundwater quality for Electrical Conductivity (EC), pH, Total Dissolved Solids (TDS), Salinity, turbidity, Nitrate (NO₃⁻N), Fluoride (F-) and Chloride (Cl-), the following parameters were compared with Ambient Water Quality Standard (RS 564:2023) for compliance. pH complying at 83.33%, EC(83.33%), NO₃⁻N(100%), F-(91.7%), Cl-(100%) and turbidity complying at 79.17%.

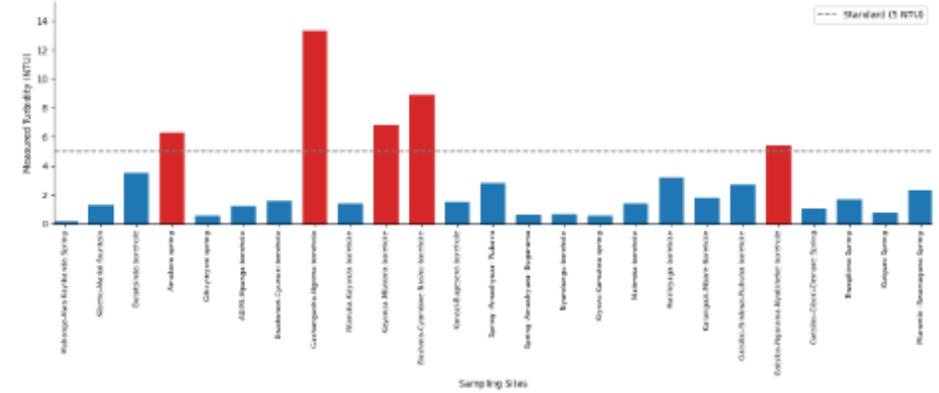


Figure 18: Variation of measured Turbidity with standard

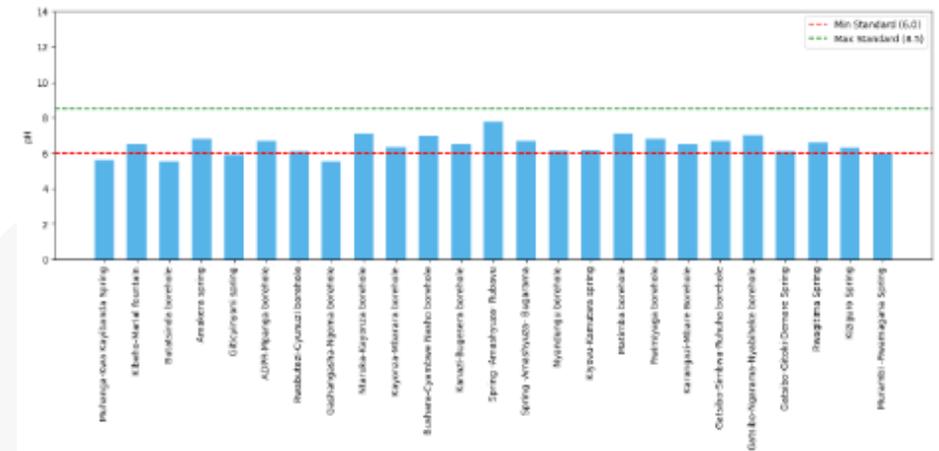


Figure 19: Variation of measured pH with standard

4.8. Water quality performance review: (year 2023/2024 VS 2024/2025)

Compared to previous years, notable improvements in water quality were observed in several parameters monitored by RWB including Dissolved Oxygen (DO), pH, EC, turbidity, Total Suspended Solids (TSS), and nutrients across multiple sites. These improvements reflect the positive impacts of ongoing catchment management efforts and nationwide government initiatives. The following graphs illustrate variations between the 2023/2024 and 2024/2025 monitoring periods.

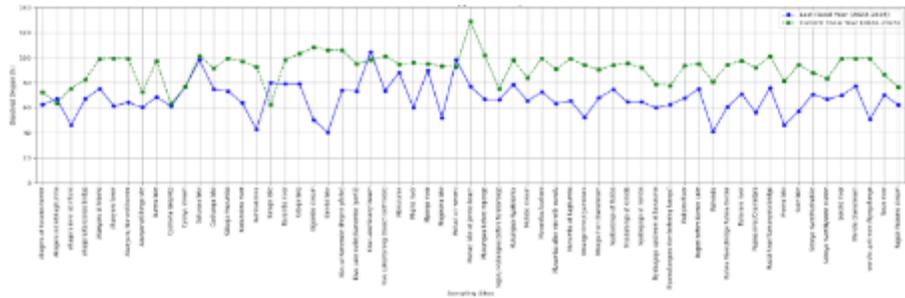


Figure 20: Variation of DO in the last two years at the monitoring sites

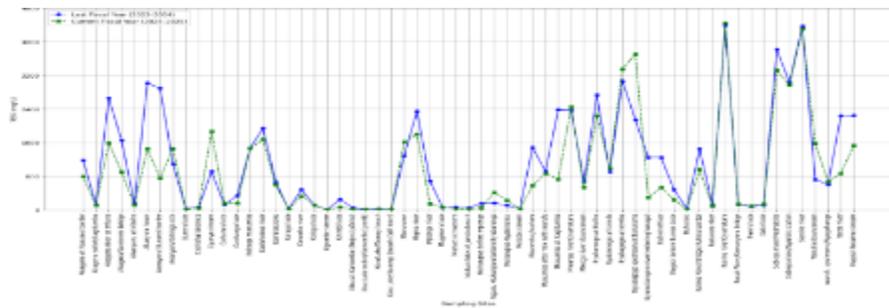


Figure 21: Variation of TSS in the last two years at the monitoring sites

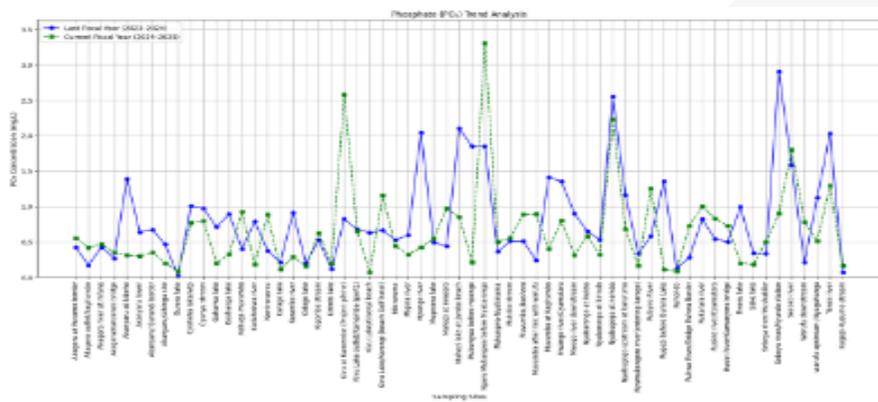


Figure 22: Variation of PO4 in the last two years at the monitoring sites



4.9. Water Pollution Investigation in Mining Sites

The Rwanda Water Resources Board (RWB) conducted an environmental investigation to assess water pollution levels and compliance with water management regulations in mining concessions across Gakenke District. The investigation targeted eight mining companies to evaluate their wastewater management systems, water reuse practices, and potential environmental impact on surrounding water bodies.

General Observations: Most companies have basic wastewater management systems in place, though not all are adequately maintained. Some mining Companies have integrated recycling and show sustainable practices. Companies posing an immediate environmental threat require close follow-up and corrective enforcement. Soil tail management is a recurring challenge across several sites. A wider investigation of mining concessions across the country is recommended to assess broader compliance and environmental risks



Figure 23: Wastewater ponds for recycling & unstable ponds with high risk of water pollution downstream

4.10. Water Pollution Investigation in Coffee Washing Stations.

The Rwanda Water Resources Board (RWB), through its Water Monitoring and Quality Control Division, conducted a water pollution investigation in Coffee Washing Stations (CWSs) across the country from May 19 to June 6, 2025. The objective was to assess the environmental compliance of CWSs and identify those posing pollution risks to nearby water bodies, particularly rivers and streams often used in coffee processing.

4.11. Surface water quantity monitoring

Rwanda Water Resources Board (RWB) conducted a nationwide surface water quantity monitoring campaign during the 2024–2025 fiscal year. The objective was to collect real-time hydrological data to inform the National planning agenda in various sectors.

For groundwater monitoring, the data collection campaign was successfully implemented, and maintenance addressed several previously identified issues. However, some groundwater and surface water stations continue to face significant technical challenges, particularly related to vandalism of data loggers.

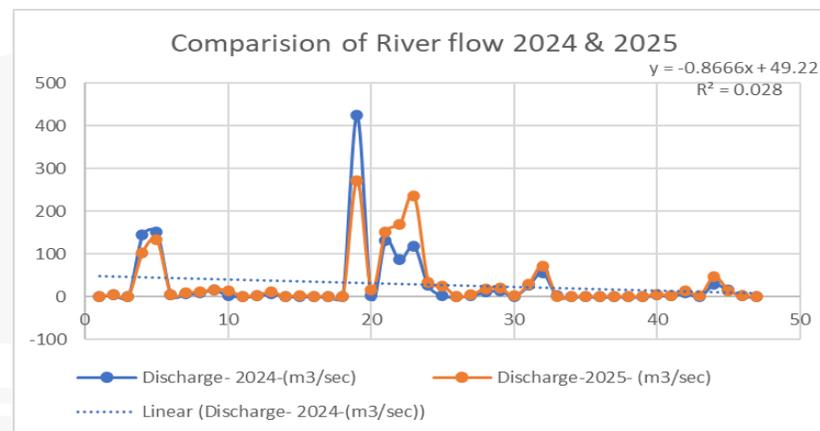


Figure 24: Similarity between the recent corrected hydrological data and the previous year's data

4.12. Groundwater monitoring

Groundwater monitoring in Rwanda is a critical component of sustainable water resource management, aimed at ensuring the long-term availability and quality of underground water. As the country faces increasing water demand from population growth, agriculture, and climate variability, monitoring helps assess groundwater levels, recharge rates, and water quality across various regions. It provides essential data for managing borehole drilling, preventing over-extraction, and safeguarding against pollution from human and industrial activities. By tracking changes in groundwater over time.

Groundwater levels monitoring stations:

The distribution of groundwater monitoring stations and their classification based on average groundwater table depth as shallow (0–20 m), moderate (20–50 m), and deep (>50 m). The figure below shows that the deep wells are located in the east of the country, while the shallow and moderate wells are spread throughout the country. Most wells are shallow (41), while there are 9 of moderate depth, and 4 deep wells.

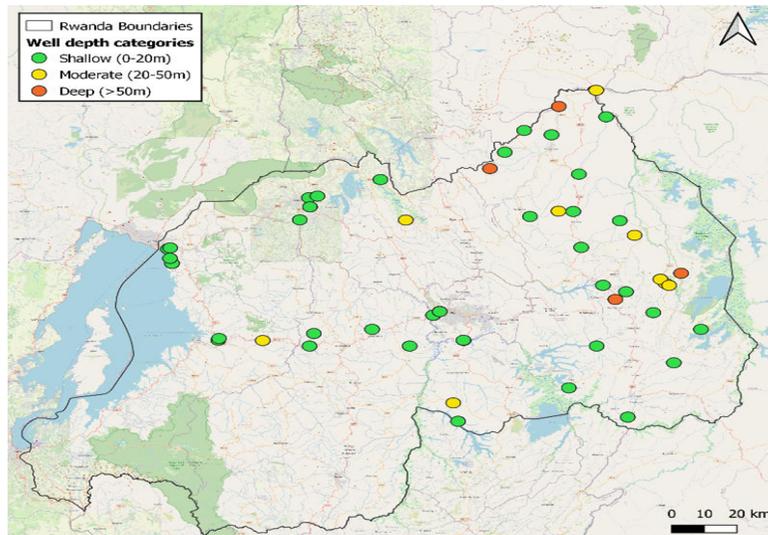


Figure 25: Spatial distribution of groundwater monitoring wells and the average groundwater table depth

Muhazi

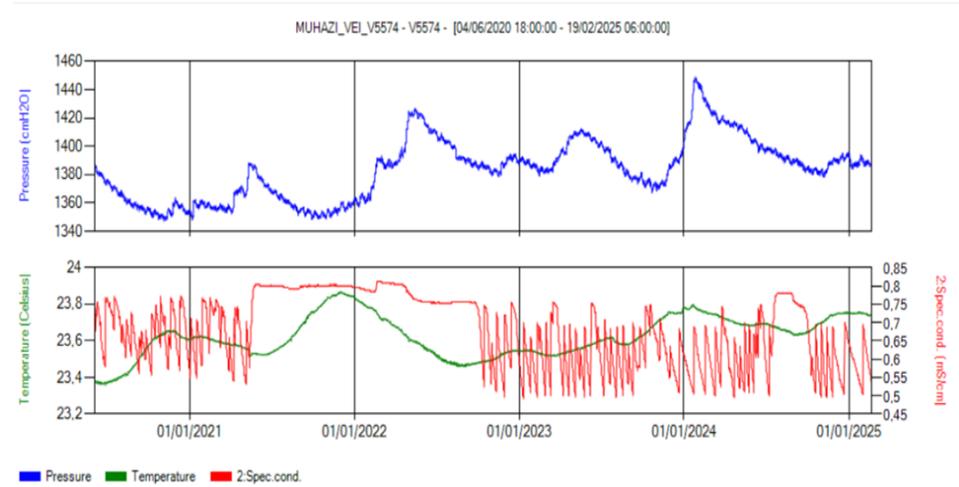


Figure 26: Groundwater level fluctuation at Muhazi station in Rwamagana district

The groundwater monitoring station near Muhazi lake is seasonally responsive, recharging in wet seasons and depleting in dry ones. Peak pressures suggest strong recharge events, while troughs may reflect dry periods or groundwater use. 2021 saw the lowest groundwater pressure, likely a dry period. 2022–2023 show a sharp recovery, possibly due to strong wet seasons or changes in land use or pumping rates. A gradual decline begins again in 2024 early - 2025.

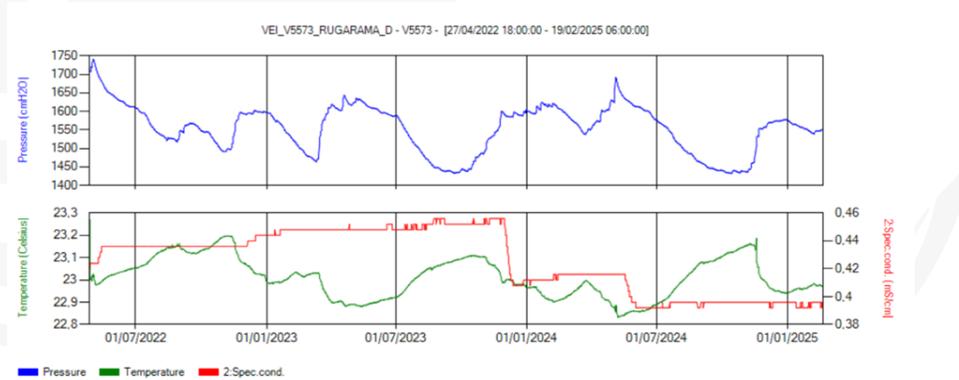


Figure 27: Rugarama groundwater monitoring station in Gatsibo district

Groundwater Level (Pressure) Analysis

Key patterns:

- April 2022 starts at a high pressure (~1725 cmH₂O)
- Afterward, there's a strong and rapid decline to around 1500 cmH₂O by mid-2022
- A rebound in early 2023, reaching around 1620 cmH₂O, followed by another sharp decline
- Another peak in early 2024 (~1670 cmH₂O), followed by a gradual decline throughout 2024
- By early 2025, levels are recovering slightly (~1590 cmH₂O)
- Combined groundwater level analysis for two stations (Muhazi and Rugarama-D)

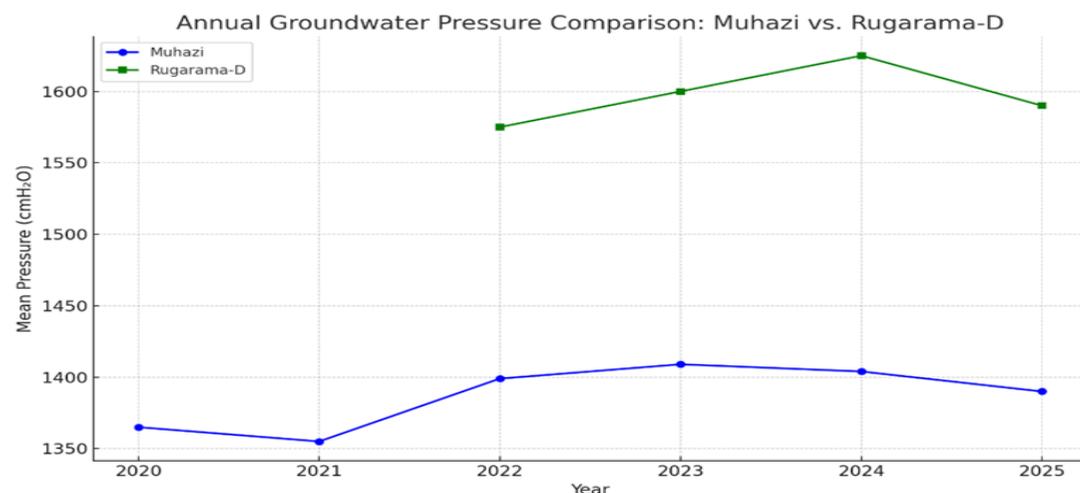


Figure 28: Annual Groundwater comparison

Key Observations:

- Rugarama-D consistently shows higher groundwater pressure than Muhazi.
- Both stations show Rising trends from 2021 to 2023 (likely wet or recovery years).
- Slight decline in 2024–2025.

Response of Groundwater monitoring station to Precipitation

The groundwater monitoring stations at Muhazi and Rugarama-D show moderate and delayed responses to precipitation events. Water levels at both sites gradually increase following likely wet

periods (e.g., 2022–2023) and decline during dry conditions (e.g., 2021 and early 2025). This behavior suggests that these aquifers have moderate storage capacity and slower recharge dynamics, possibly influenced by fine sediments or deeper groundwater flow paths.

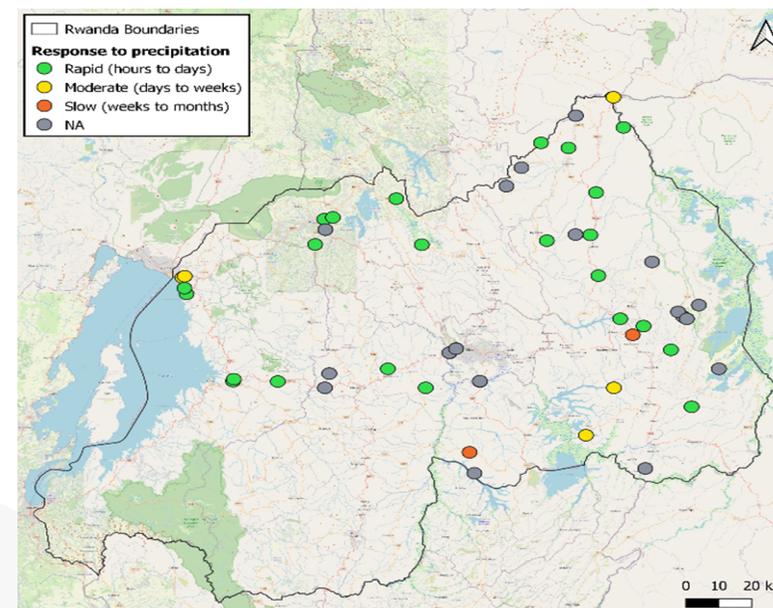


Figure 29: The groundwater table's response to precipitation

In contrast, some other stations exhibit a rapid response, with pressure rising almost immediately after rainfall. This typically indicates:

- Shallow water tables,
- High-permeability soils (e.g., sandy or fractured zones),
- Limited buffering/storage capacity
- Others show a slow or dampened response, suggesting:
 - Thick unsaturated zones,
 - Low-permeability layers (e.g., clayey or weathered profiles),
 - Strong aquifer confinement.

4.13. Water Storage Development

Under the Water Storage Program, Muvumba Multipurpose Water Resources Development Program (MMWRDP) is under implementation.

4. Muvumba Multipurpose Water Resources Development Program (MMWRDP)

The Government of Rwanda has received financing from the African Development Bank for the implementation of the Muvumba Multipurpose Water Resources Development Program (MMWRDP). The program is being implemented in Nyagatare District by the Rwanda Water Resources Board (RWB).

Its main objective is to improve water, food, energy, and nutrition security by harnessing water resources for irrigation, domestic, livestock, and hydropower use while ensuring the sustainability of the resources and building resilience against climate change and variability through catchment protection, forest management, and capacity development.

Project status:

Construction of the Dam and Installation of the Power Plant:

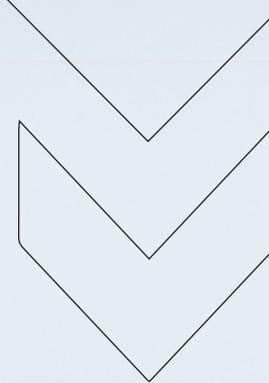
The implementation of the dam started in October 2023 by a Chinese Contractor – SINOHYDRO. At the end of June 2025, the overall project progress of works was 32%.

Safeguard Status:

There has been notable progress in the implementation of the agreed actions from the conducted Bank support mission on Environmental and Social Safeguards. Most of the commitments have now been fully addressed. The Client, Contractor, and Supervisor continue to work closely to ensure that all remaining Environmental and Social Safeguard actions are fully complied with in the shortest possible time.

Implementation of the irrigation and livestock water use sub-component:

The Government of Rwanda has sought the Bank's support to advance the implementation of the irrigation subproject under the ongoing Muvumba Multipurpose Water Resources Development Program. This initiative aims to enhance agricultural productivity and strengthen food and nutrition security through the development of a modern irrigation system downstream of the Muvumba Multipurpose Dam in Nyagatare District.



5

**Building Resilience to Floods
and Landslides through
Preparedness and Adaptation**



5. Building Resilience to Floods and Landslides through Preparedness and Adaptation

5.1. Construction works of flood control retaining walls on Sebeya river in Rubavu district

In response to the severe flooding caused by heavy rainfall on the night of 2nd – 3rd May 2023, which resulted in loss of life and significant damage to infrastructure and property along the Sebeya River, a rapid assessment conducted by the Rwanda Water Resources Board (RWB) identified several critical flood-prone areas. Based on this assessment, the construction of stone masonry retaining walls was proposed as a flood control measure. The implementation was carried out in two phases, both of which have been completed and formally handed over in 2024/2025.



Figure 30: Gasenyi Retaining Walls & Opposite Mahoko Bus-stand Retaining Wall

5.2. Construction of detention ponds for flood control in Cyuve gully, Musanze District

Heavy rainfall in the volcano area often results in floods. Whereas the observed floods may appear similar in nature, the dynamics of floods in the volcano area are quite different according to their locations: classic torrential rivers in the Musanze urban area (W4G, 2017). It is in this regard that the Rwanda Water Resources Board started to construct flood control works in the volcano area, where various structural and non-structural measures were constructed to mitigate flood risks and to optimize benefits from flood plains area.

It is in this context, the construction of flood control infrastructures (ponds, culverts, drainage channels and bridges) and gully buffer zone protection was implemented to in the targeted sub-catchments of Cyuve and Ruvumu some of the pictures highlighting the works on the critical sections of gullies to mitigate peak flows are given below. The project for the construction of the detention ponds along the Cyuve gully was completed and provisional handover was awarded.



Figure 31: Cyuve-Ruvumu detention pond (Left) & Cyuve detention pond (Right)

5.2. Construction of flood control work in Volcano area: new Nyabutoshwa water channel downstream flood hotspot

The construction work for the New Nyabutoshwa Water Channel Downstream Flood Hotspot consisted of the implementation of engineering solutions to mitigate flood risks and protect the surrounding area. The main tasks included the following;

- Excavation of open canal on Nyabutoshwa downstream gully
- Masonry work for open canal;
- Construction of bridges at Rugezi and Gakoro
- Construction of detention pond



Figure 32: Completed Masonry work for open canal (left) & constructed of detention pond (right)

5.4. Construction of stone masonry flood wall along Kazirankara River in Nyabihu District

The construction of a stone masonry flood wall along the Kazirankara River was completed to enhance flood protection. Kazirankara, located in the Shyira Sector of Nyabihu District, is where two streams, Gisoma and Nyagahondo, converge before flowing into the Mukungwa River. The river passes through Kanyamitana and Kintarure Cells and flows near GS Vunga and the IDP Model Village downstream, before joining the Mukungwa River. The catchment area of Kazirankara lies in a steep region, with hills featuring slopes

as steep as 72%, which accelerates the speed of runoff in the area. The works were provisionally handed over in 2023/2024 and finally handed over to the Client (RWB) in 2024/2025. The completed stone masonry flood wall is a crucial measure to protect the school and the IDP Model Village from future floods.



Figure 33: Constructed of Stone masonry retaining flood wall on the left side & Constructed of Stone masonry retaining flood wall on the right side

5.5. Maintenance and repair of flood control infrastructures

For the sustainability and proper operation of the implemented various flood control infrastructures (Retention dams, dykes, ponds, water channels, flood control retaining walls and related structures). The constructed infrastructures required maintenance because some ponds were no longer functioning as originally designed. Several were nearly filled with sediments, reducing their storage capacity. The scope of work included the removal of sediments from the Muhe 1 and Muhe 2 ponds, Bukeri diversion channel, and mowing of grass along the Muhazi and Sebeya Lateral dykes. The table below summarizes the quantities executed during the maintenance of flood control infrastructure.

Table 4: Quantities of executed during maintenance

Infrastructure	Activity	Quantity
Pond muhe 1	Sediment removal	6930m ³
Pond muhe 2	Sediment removal	6000m ³
Bukeri diversion channel ponds	Sediment removal	1120m ³
Muhazi dyke	Mowing grass	3,322.36m ²
Muhazi dyke	Mowing grass	683.6m ²

5.6. Feasibility Study for Flood Control Measures in Volcano and Vunga Corridor

The study is part of the Volcanoes Community Resilience Project (VCRP) and aims to develop feasibility studies, as well as preliminary and detailed designs for flood control measures in gullies, rivers, and streams. This will take into account land use changes and climate change across sub-catchments and rivers within the study area.

The study area encompasses 43 level 3 sub-catchments in the Volcano area and the Vunga Corridor. The major outputs of this study will include a feasibility study and detailed engineering designs for the proposed flood control measures. The study is ongoing and is currently in the Preliminary Engineering Design phase.

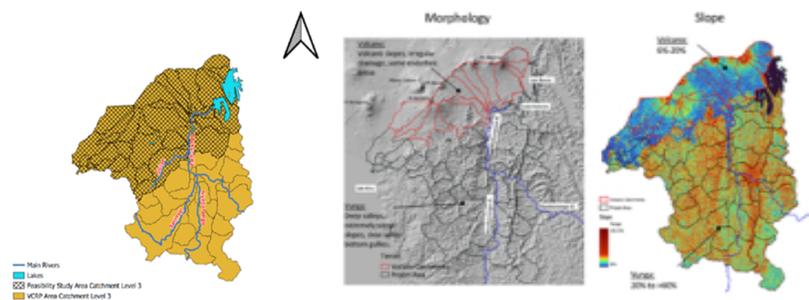


Figure 35 : Characteristics of the study area

5.7. Monitoring OF DAMS/Valley dams and other water storage systems

Dam inspection is the examination of a dam to determine its condition and need for improved operation, maintenance, study and analyses, repairs, rehabilitation, or removal. Dam inspections are vital to identifying deficiencies at dams that may pose unacceptable dam safety risks and reducing the chance of an incident or failure. RWB, which has the overall mission of ensuring the availability of enough and well managed water resources for sustainable development; is also responsible for monitoring water storage and flood mitigation infrastructures across the country.

For implementing the above, the inspection of all dams located in the country was made, and the monitored water storage countrywide is summarized in the figure below.



Figure 36: Water storages monitored during 2024/2025 FY

The dam monitoring fieldwork was conducted to assess the current status and management of dams, revealing several common issues, including sedimentation, excessive vegetation and insect infestation on embankment slopes and spillway channels, lack of designated buffer zones with ongoing farming activities even in reservoirs during the dry season, and soil erosion from unprotected catchments reducing reservoir capacity. Recommendations were made to include protecting dam catchment areas through terraces and tree planting, prioritizing buffer zones for erosion control, addressing minor maintenance issues via community works such as grass cutting, drainage cleaning, and riprap arrangement (with a checklist being developed for Umuganda activities), and urgently mobilizing funds to rehabilitate dams facing significant structural or operational problems.

5.8. Monitoring the compliance with the laws and regulations related to sand dredging activities in water bodies

In the 2024/2025, the activity of "Monitoring the compliance with the laws and regulations related to sand dredging activities in water bodies; and Mapping sand dredging activities" was conducted across different districts. This assessment involved several crucial steps: evaluation of the status of rivers in terms of morphological changes; verification of the

compliance of sand mining activities guidelines; collection of spatial data (geographic coordinates) from sand dredging sites; and production of a map showing the sites under sand dredging activities. The baseline is 213 sites monitored and mapped across the last two fiscal years.

Table 5: Districts covered and their respective number of sand dredging sites

Quarter	District Covered	Number of Sites
Q1	Nyabihu, Ngororero and Karongi	44
Q2	Rutsiro and Karongi	48
Q3	Kamonyi, Muhanga and Ruhango	40
Q4	Nyanza and Huye	35
TOTAL		167

5.9. Construction Work of the Framed Debris Screening Structure Upstream and Trash Rack (Sediment Trap) at Sebeya Retention Dam

The continued operation of the Sebeya Retention Dam is paramount for the safety and well-being of downstream communities. The 2024 Rainfall event served as a stark reminder of the critical need to address the debris accumulation issue proactively. Recognizing the urgent need to address this challenge and ensure the long-term sustainability of the Sebeya Retention Dam, RWB has initiated a feasibility study to design and implement a robust debris screening structure.

This crucial intervention aims to prevent large debris from entering the bottom outlets, thereby enhancing the dam's operational efficiency, mitigating the risk of future blockages, and safeguarding downstream communities from the devastating impacts of uncontrolled flooding. The proposed debris screening structure will utilize a combination of round concrete columns in the flow direction with round-shaped (circular) and square columns at the river banks.



Figure 37: Alignment of the proposed debris screening structure in front of the outlet structure & Layout plan of debris screening structure

The progress of the construction work of sediment trap on Sebeya Retention dam is at 14%.

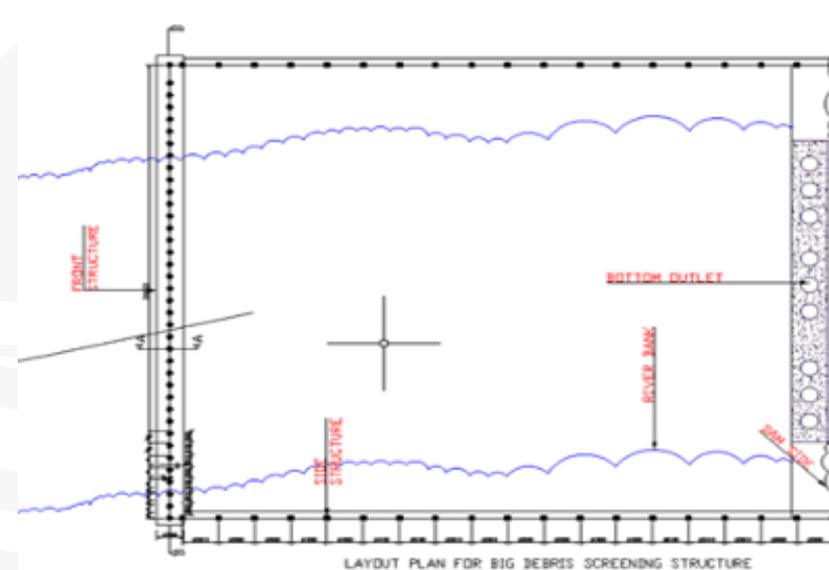


Figure 38: Excavation and rockfill

5.10. Monitoring stations installed/upgrade

Under the Volcanoes Community Resilience Project (VCRP), a network of 15 Water Level and Flow Monitoring Stations has been installed across flood-prone river points in the districts of Musanze, Burera, Rubavu, Ngororero, and Nyabihu. These stations serve as the backbone of a localized Flood Early Warning System (FEWS) and play a key role in strengthening community-level flood preparedness as part of broader efforts to address climate change and its impacts on vulnerable communities.

Each station is equipped with the RQ-30 ADMS, a next-generation, non-contact radar sensor designed to monitor river water levels and flow rates with high precision. These sensors, installed at sites including Sebeya_Nyundo, Karambo–Mahoko, Muhabura–Mbandana, Nyabutoshwa, Cyuve, Kinoni–Byangabo, Nyamukongoro, Mpenge, Nyamutera, Kagere, Mizingo, Ngaru–Mukungwa, Bugeshi, and Cyome Nyabarongo, provide real-time hydrological data critical for flood forecasting and risk mitigation.



Figure 39: RQ ADMS Radar sensor installed at Mizingo River

5.11 Flood risk reduction under VCRP

1. Volcanoes Community Resilience Project (VCRP)

Sub-comp 1.1: Flood risk reduction investments

The tender process for three consultancies has been completed for the Feasibility Study, Preliminary Design, and Detailed Design for flood control measures in the Vunga Corridor; the stormwater master plan study for Musanze and Rubavu cities, including the development of guidelines to integrate flood maps into district spatial plans; and the Environmental and Social Safeguard instruments for VCRP studies.

Sub-Comp 1.2

The construction of 15 site structures was completed in Musanze (3), Burera (3), Nyabihu (3), Gakenke (1), Rubavu (4) & Ngororero (1) for the automatic water level monitoring stations.

Eleven out of fifteen Automatic Water Level Monitoring Stations have been installed.

Spare parts for the 15 automatic water level monitoring stations delivered to RWB.

Project achievements:

Flood risk reduction investments

Flood risk reduction works have started demonstrating tangible progress through the execution of key project activities. Notable achievements include the awarding of two design study contracts, alongside the ongoing contract award of Environmental and Social Safeguard instruments for VCRP studies.

A significant milestone is the Stormwater master plan study for Musanze and Rubavu cities, where the Inception report, Data collection, and Stormwater master plan assessment report have been completed.

Flood early warning system (FEWS) and community-level flood preparedness

The project has acquired 11 Automatic Water Level Monitoring Stations in the volcano's region at the various sites located across the districts of Musanze, Burera, Rubavu, and Nyabihu.

An aerial photograph of a boat on dark water, viewed from above. The boat is white with a dark interior. The water is dark blue/black with some ripples. In the bottom right corner, there are many small, bright, shimmering lights. The text 'Enhancing RWB Institutional Capacity and Financial Sustainability' is overlaid in a light green color. There are also decorative elements: a large number '6' in light green, two downward-pointing chevrons in light green, and two rightward-pointing chevrons in light green.

**Enhancing RWB
Institutional Capacity and
Financial Sustainability**

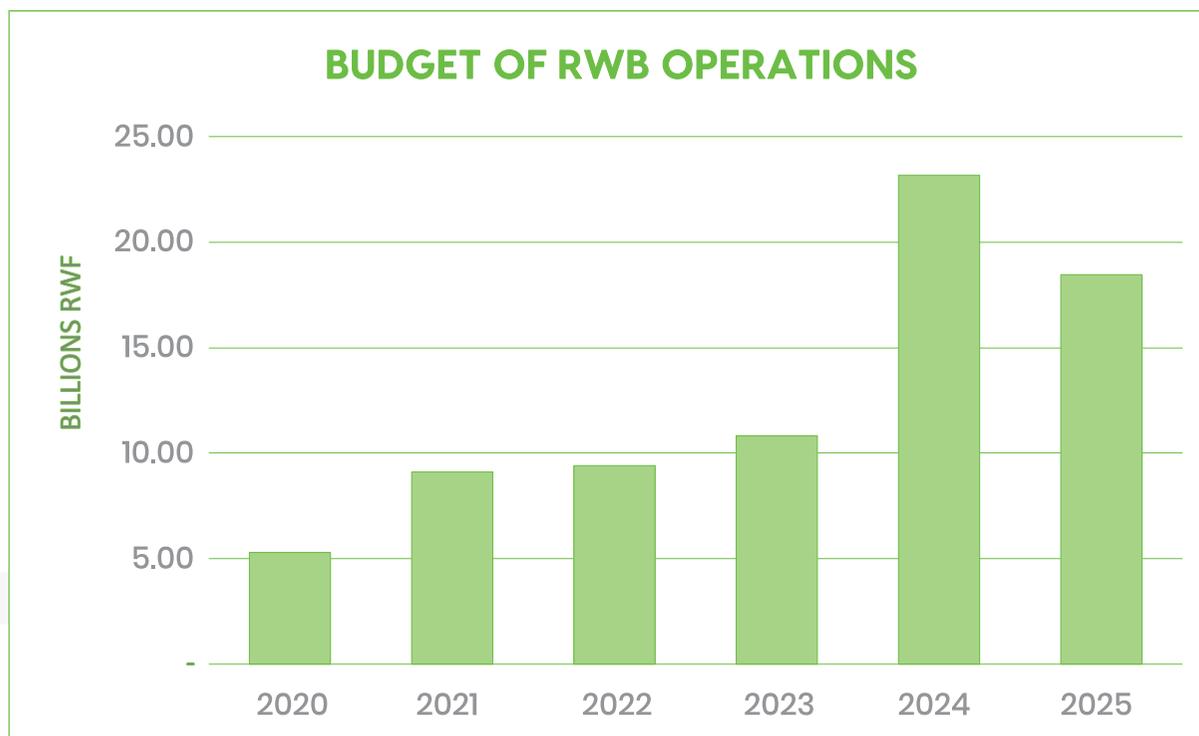
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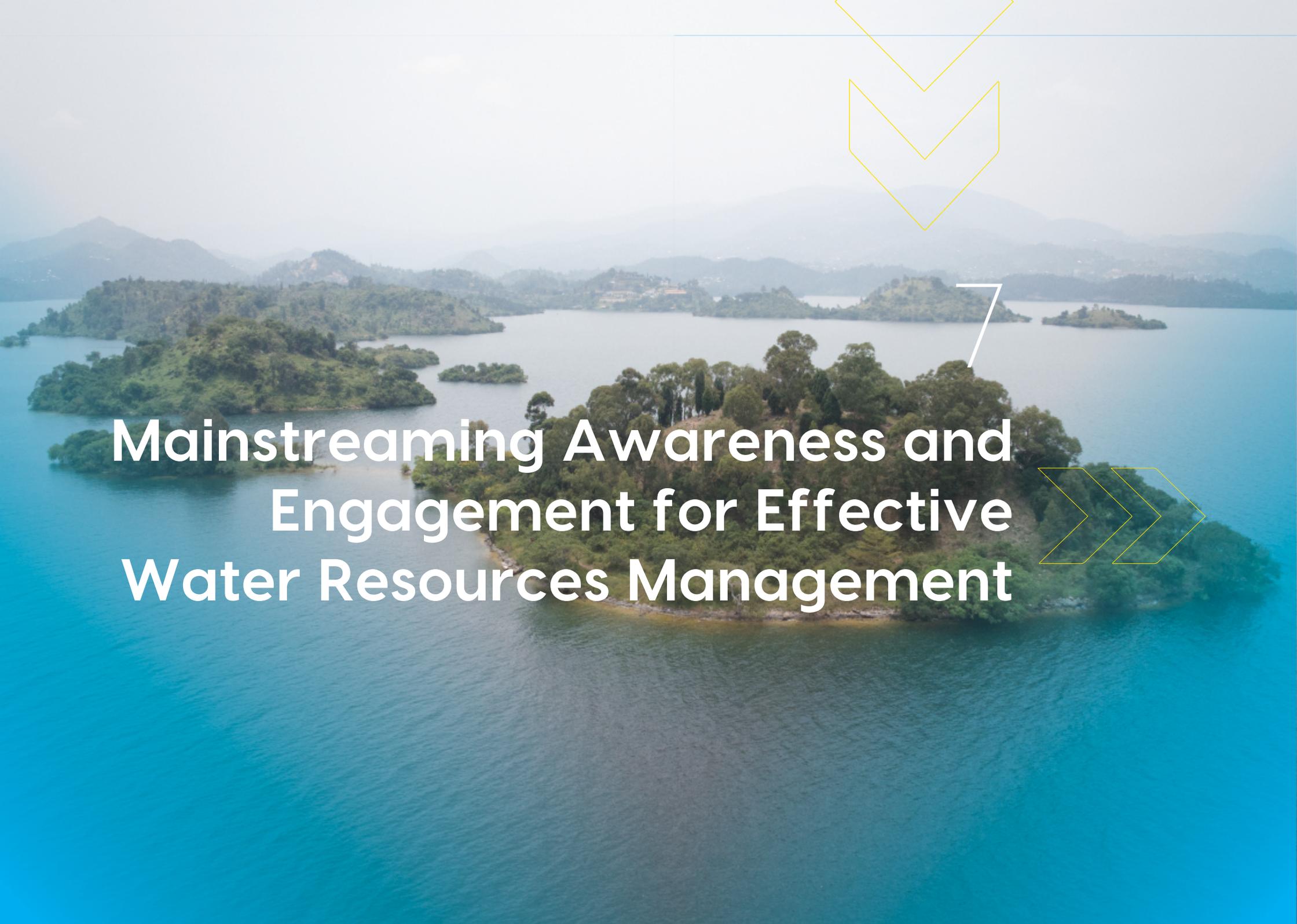
6. Enhancing RWB Institutional Capacity and Financial Sustainability

6.1. Fund Mobilization

Over the period under review, the Rwanda Water Resources Board's operations have been largely financed through resources mobilized outside the National Treasury. A substantial share of the institution's operational budget is supported by external funding, reflecting a model in which national priorities in water resources management are implemented with strong partner engagement. While Treasury allocations continue to play an important role,

they are complemented by off-budget resources that enable the Board to carry out its technical, regulatory, and investment-related functions. This diversified financing approach has allowed RWB to scale up its activities, sustain service delivery, and respond effectively to evolving water and climate challenges, while ensuring that public funds are leveraged to maximize impact and long-term value for the country.





**Mainstreaming Awareness and
Engagement for Effective
Water Resources Management**

7

7. Mainstreaming Awareness and Engagement for Effective Water Resources Management

7.1. Stakeholders Meeting on SLRPP

The Rwanda Water Resources Board held the meeting which convened key stakeholders to reflect on the impact of the five-year Sebeya Landscape Restoration Pilot Project (SLRPP). The meeting served as a platform to recognize the project's achievement and reinforce strategies for sustaining its outcomes which had already been handed over to the respective districts of Rubavu, Rutsiro, Nyabihu, and Ngororero, where the project was carried out under the broader framework of Integrated Water Resources Management (IWRM), with support from the Kingdom of the Netherlands.

7.2. Strengthening Community Based Flood risk monitoring through Citizen Science workshop

To improve flood data collection and support evidence-based decision-making, the Rwanda Water Resources Board (RWB) developed the Flood Hotspot Monitoring System, a digital tool designed to capture flood marks. These marks are critical for mapping historical flood events and validating hydraulic models used in designing flood prevention measures. However, consistently collecting accurate flood mark data remains a challenge due to limited technical capacity and a lack of localized information.

To address this, RWB in collaboration with International Center for Tropical Agriculture (CIAT) through the Enhancing Climate Change Resilience in East Africa (ECEA) Project introduced a citizen science approach, training local community members to use the system designed for flood mark collection, hence enhances data collection, raises community awareness and strengthens preparedness for future flood events.

The training was offered to 96 people composed of Villages leaders, farmer promoters, from Rubavu, Nyabihu, Burera, Musanze, Rusizi, Nyamasheke and Nyamagabe Districts including their District Agronomists selected based on known flood hotspots areas.

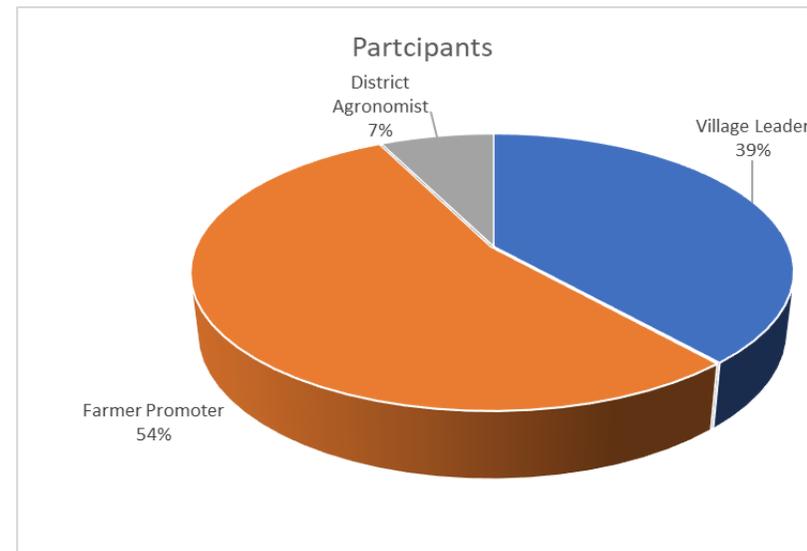


Figure 40: Participant distributions

7.3. Awareness Campaign on Water use and Lakes Master Plan.

The Rwanda Water Resources Board has made significant progress toward achieving “Regular Awareness on Water Use Permitting Guidelines through Media Platforms and Meetings.” By strategically utilizing X former Twitter, YouTube, and national TV talk shows, RWB has succeeded in increasing public understanding of water use regulations, promoting compliance with lake water use master plans, and encouraging responsible water resource management. These outreach initiatives not only enhanced visibility but also fostered a culture of regulatory compliance among water users, laying the foundation for more sustainable and equitable use of Rwanda's water resources.



Talk Shows on TV Broadcasters

The Rwanda Water Resources Board appeared in various talk shows:

Talk Shows on TV Broadcasters on Rwanda Broadcasting Agency (RBA):

accessible at: <https://youtu.be/5ZXoq3u9fu4> This episode focused on water use; the importance of the established Lake water uses master Plan. It highlights the governance, legal obligations of water users, and the enforcement mechanisms in place to curb illegal use.

TV10 Rwanda: accessible at: <https://youtu.be/ZxFj80B4XvE> This show addressed frequently asked questions from the public regarding permit procedures, how to comply with the lake water master plan, and penalties for non-compliance.

Awareness campaign on Catchment Preservation

The Rwanda Water Resources Board has carried out various awareness activities aired on both television and radio stations and the RWB' social media platforms with the aim of raising public concern about water resources management. During the preparation of the World Water Day,



RWB has successfully conducted a “WATER WEEK” dedicated to the celebration of World Water Day themed “Catchment Preservation”. During this week, RWB publicized a series of awareness activities focused on Catchment Preservation. During Water Week, RWB appeared in RBA’s Dusangire Ijambo, discussing the catchment preservation practices. On March 23rd, 2025, RWB participated in the Car Free Day, which the institution designated as a “Walk for Water” event to mark the World Water Day. Also, on March 29, 2025, RWB joined residents of Kigali Sector in Nyarugenge District for the monthly community work activity (Umuganda), held in Rwesero Cell Forest. Both Car Free Day and the community work contributed to the catchment preservation awareness as the platforms to pass the message to the wide audience.

Labor Day Celebration

RWB convened a general staff meeting which served as a platform to celebrate the International Labor Day and the recognition of the best professional and ethical employee of the FY 2024-2025. Mr. Christian Nkurunziza, the Catchment Management Specialist emerged as the best employee of the Year 2024-2025. On this special celebration day, Mr Mushinzimana Jean Marie Vianney, who served as the Catchment Management Specialist at the Rwanda Water Resources Board, was honored for his invaluable contribution as he entered his retirement.

7.4. E. Research & Innovation

Groundwater mapping

During the FY 2024–2025, groundwater mapping activities were carried out in the Northern and Western Provinces, specifically in Gicumbi, Burera, and Nyamasheke Districts, covering a total of 15 km (5 km in each district) as targeted (Fig. 1). This work builds on the achievements of FY 2023–2024, during which 26 km of groundwater mapping were completed in Musanze and Nyabihu Districts.

These activities were informed by two key studies named "Consultancy to Provide Technical Services for Groundwater Mapping in Rwanda (Hydro Nova & WE Consult, 2023)" and "Study on Groundwater Potential and Recharge Enhancement Possibilities (WE Consult, 2019)" both covering the Eastern part and Southern province (Amayaga region) of the Country.

Groundwater mapping results serve as a baseline for sustainable groundwater management, supporting improved decision-making on water availability and resource planning.

7.5. Water resources Modelling and erosion Hackathon

During Water Week, the Rwanda Water Resources Board, in collaboration with the Albertine Rift Conservation Society (ARCOS) Network, launched the second edition of the Hackathon aimed to foster innovative solutions for sustainable water management and biodiversity conservation. This initiative focused on two key themes: water resources modelling and erosion control, targeting Students unrolled in the University based in Rwanda for both undergraduate and graduate.

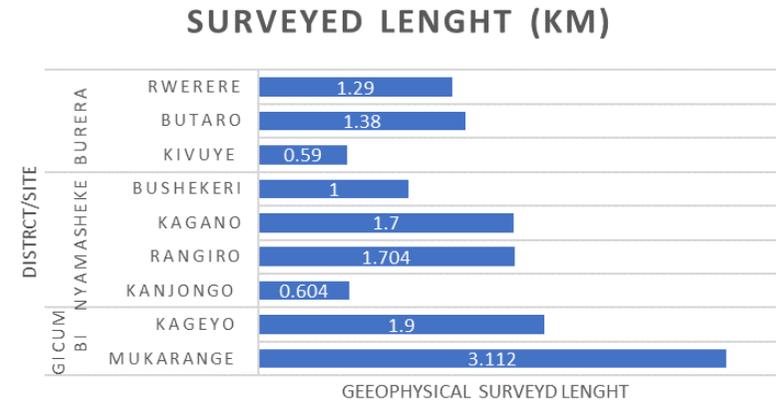


Figure 41: Geophysical surveyed length per district/sites

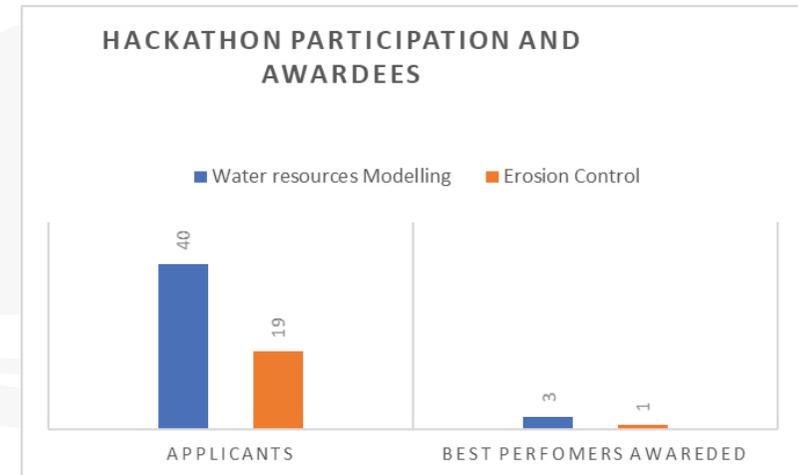




Figure 42: Hackathon competition award ceremony

7.6. Publication

RWB staff, along with colleagues from partner institutions, have also contributed to the publication of several research articles in the field of water resources management:

1. Uwanyirigira, Diane, B. Musana, Gerald Atampugre, Seifu Admassu Tilahun, Adebayo Oke, and Olufunke Cofe. "Situation analysis of Rubyiro Sub-catchment of the Rusizi River in Rwanda." (2024).
2. Atampugre, Gerald, Seifu Admassu Tilahun, D. Uwanyirigira, B. Musana, and Olufunke Cofe. "Inclusive landscape management for climate-smart agriculture and food systems transition in West and Central Africa." (2024).
3. Huber-lee, Annette T., Eric Kemp-Benedict, Brian Joyce, Bernard Musana, and Joy Busolo. "The Macroeconomic Implications of Water (and Energy and Food) Decisions in Rwanda." In AGU Fall Meeting Abstracts, vol. 2024, no. 2374, pp. SY33D-2374. 2024.
4. Uwanyirigira, D., B. Musana, Gerald Atampugre, Seifu Admassu Tilahun, Adebayo Oke, and Olufunke Cofe. "Inclusive landscape management plan for the transformation of the agrifood system in Rubyiro Sub Catchment, Rwanda." (2024).
5. Nigussie, Likimyelesh, Charity Osei-Amponsah, L. Muhorakeye, D. Uwanyirigira, Seifu Tilahun, Gerald Atampugre, and Olufunke Cofe. "Gender equality and social inclusion in landscape management: the case of Nyamasheke and Rusizi districts in Rwanda." (2024).

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