WATER AND SANITATION SECTOR STRATEGIC PLAN 2024-2029

Abridged Version

Ministry of Infrastructure

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EXECUTIVE SUMMARY

The Water and Sanitation Sector Strategic Plan (WSS SSP) 2024–2029 provides a comprehensive framework for advancing Rwanda's water and sanitation sector, aligning with Vision 2050 and the 2nd National Strategy for Transformation (NST-2). Developed by the Ministry of Infrastructure (MININFRA), with input from various stakeholders, the plan seeks to address sectoral challenges and leverage opportunities to promote universal access to clean water and improved sanitation. Over the next five years, the WSS SSP will focus on expanding water and sanitation infrastructure, enhancing service delivery, and ensuring sustainable water and sanitation services for all Rwandans by 2029.

Aligned with Rwanda's commitments under the Sustainable Development Goals (SDGs), particularly Goal 6 for universal access to safe water and sanitation, the WSS SSP outlines key priorities for 2024–2029. These include scaling up water access to all villages, increasing water production capacity, improving sanitation services, reducing Non-Revenue Water (NRW), and mobilizing communities for sustainable hygiene practices. These priorities are central to achieving Rwanda's vision of fostering health, well-being, and socio-economic growth through enhanced water and sanitation services.

Despite significant achievements, such as increasing water production capacity and sanitation coverage, the WSS SSP recognizes ongoing challenges. These include rural water supply gaps, the impact of climate change on water resources, and a high rate of NRW due to outdated infrastructure. Moreover, limited centralized waste management systems and logistical constraints have hindered progress in sanitation. The COVID-19 pandemic also delayed project timelines and raised costs due to supply chain disruptions.

Looking ahead, the WSS SSP sets ambitious targets to be achieved by 2029. The plan aims for 100% access to clean water and sanitation services across all households, schools, and healthcare facilities. Water production capacity is projected to grow from 329,652 m^3/day to 684,652 m^3/day, with improvements in water distribution to underserved areas. Sanitation priorities include completing 3 centralized sewerage systems in Kigali including Kigali centralized sewarage system project, expanding faecal sludge treatment capacity, and increasing solid waste collection. These actions will contribute to healthier communities and sustainable urban growth.

Financing the WSS SSP's goals will require significant investment, with an estimated budget of $1.648 trillion over the next five years. The strategy emphasizes the importance of public-private partnerships, climate financing, and capacity building to support the expansion and sustainability of water and sanitation services. Through collaborative efforts, Rwanda is poised to achieve its ambitious WSS goals, supporting broader national objectives for public health, environmental sustainability, and long-term socio-economic development.

CHAPTER 1: INTRODUCTION

The Water and Sanitation Sector Strategic Plan (WSS SSP) for 2024–2029 serves as a vital roadmap for advancing Rwanda's water and sanitation sector to meet the nation's ambitious goals under Vision 2050. As Rwanda sets its sights on achieving middle-income status by 2035, access to safe, reliable, and inclusive water and sanitation services will be essential for fostering socio-economic development, public health, and environmental sustainability. With a population of over 13 million in 2022 and anticipated growth over the 2024–2029 period, Rwanda's water and sanitation sector will be pivotal in supporting this growth trajectory. Expanding water and sanitation access, especially to underserved rural and urban communities, will enhance health outcomes, promote gender equity, and elevate the quality of life across the country.

A key component of the WSS SSP is its alignment with Rwanda's global sustainability commitments. The plan is firmly grounded in Sustainable Development Goal 6, which calls for universal access to clean water and sanitation by 2030, and aligns with the Green Growth and Climate Resilient Strategy (GGCRS) to build a climate-resilient and water-secure future. This dual focus highlights Rwanda's commitment to addressing the dual challenges of sustainable development and climate resilience. The WSS SSP outlines core strategic priorities for the sector: scaling up water access to all villages, enhancing sanitation services, reducing Non-Revenue Water (NRW), and mobilizing communities for improved hygiene practices. These priorities emphasize Rwanda's dedication to fostering a water and sanitation system that promotes health, dignity, and resilience for all citizens.

The development of the WSS SSP was a collaborative process involving public sector entities, private sector stakeholders, non-governmental organizations, and key development partners. Spearheaded by the Ministry of Infrastructure (MININFRA), this inclusive approach ensured that the plan reflects a comprehensive understanding of Rwanda's water and sanitation challenges and opportunities. By incorporating diverse perspectives, the WSS SSP is well-positioned to address Rwanda's water and sanitation needs, adhere to national priorities, and align with international obligations, thereby promoting an inclusive, balanced, and forward-looking strategy for the sector.

Reflecting on recent achievements, the WSS SSP acknowledges Rwanda's progress in expanding access to clean water and improved sanitation facilities. Over the past decade, access to clean water has reached over 82%, with major improvements in urban areas. However, significant challenges persist, including a 39% NRW rate, infrastructure gaps, and the impacts of climate change. The WSS SSP seeks to address these issues through strategic actions such as enhancing resource mobilization, improving infrastructure resilience, and streamlining service delivery. Through these efforts, the plan aims to close remaining access gaps and ensure a sustainable water and sanitation infrastructure that supports Rwanda's long-term growth and resilience.

CHAPTER 2: SECTOR OVERVIEW

During the 2017–2024 period, Rwanda's water and sanitation sector made remarkable strides toward achieving universal access to clean water and improved sanitation facilities. The water production capacity increased substantially from 182,120 m³/day to 329,652 m³/day, while access to clean water reached 82.3% by 2022. Despite these achievements, challenges such as limited financing and the impacts of climate change hindered progress in some areas. The water distribution network also grew significantly, with 33,476 km of pipelines now serving both urban and rural areas, though access disparities remain, particularly in rural regions where 77% of households have water access compared to 96% in urban areas. Additionally, the sector made progress in sanitation with 92% of households having access to improved toilet facilities. However, issues like high Non-Revenue Water (NRW), which decreased only slightly from 42% to 39%, and the need for enhanced waste management systems persist. Other challenges have been the delays in project implementation due to limited insitutitonal capacity and negative impact of COVID-19. By expanding sanitation infrastructure, including seven semi-centralized sewage systems in Kigali and faecal sludge treatment plants across key districts, Rwanda is steadily advancing toward its goals for sustainable water and sanitation access.

2.1. Sector Milestones 2018/19 – 2023/24

2.1.1. Increase Water Production Capacity

During the 2017–2024 strategic plan, Rwanda's water sector made substantial progress by significantly increasing its water production capacity from 182,120 m³/day in 2017 to 329,652 m³/day in 2024, surpassing the targeted capacity of 303,120 m³/day. This growth was essential for meeting the needs of Rwanda’s growing population and supporting its socio-economic development. However, the sector faced challenges, including delays in project implementation due to budget constraints, the impact of the COVID-19 pandemic, and institutional capacity issues. Despite these obstacles, the expansion of water production capacity marks a critical milestone toward achieving universal access to clean water.

2.1.2. Number of km of water supply network constructed

During the Water and Sanitation Sector Strategic Plan (WSS SSP) 2017–2024 period, Rwanda’s water distribution network expanded from 29,342 km in 2017 to 33,476 km in 2024, surpassing the target of 31,193 km. This growth has enhanced access to clean water across the country, contributing to the increased access to improved water at from 72% to 82% and towards achieving the SDG6 goal.

2.1.3. Rehabilitation of Non-Functional Water Supply Stems

As part of the Water and Sanitation Sector Strategic Plan (WSS SSP) 2017–2024, Rwanda focused on rehabilitating non-functional rural water supply systems (NFRWSS) to bolster rural access to clean water. Out of 430 identified non-functional systems, 191 have been fully restored, and 74 are currently under rehabilitation, ensuring sustained improvements in rural water infrastructure.

2.1.4. Reduction of Non-Revenue Water

Rwanda has made progress in reducing Non-Revenue Water (NRW), although challenges remain. Initially, the goal was to reduce NRW to 38%, but levels rose to 42% in 2021 due to outdated infrastructure and leakage issues. By the end of the fiscal year 2023/2024, NRW had decreased to 39%, showing improvement as a result of targeted interventions. However, the reduction remains below the desired target, with ongoing challenges such as budget constraints and infrastructure limitations impacting further progress. Continued efforts and better coordination will be essential to achieving the sector's NRW reduction goals.

2.1.5. Water Access to productive use areas

During the WSS SSP 2017–2024 period, water access to productive use areas improved significantly, supporting both socio-economic development and essential service provision. By connecting 546 schools and 799 healthcare facilities (covering 97% of such facilities), these water access improvements have enabled critical services like healthcare and education to operate more effectively. This progress not only enhances public health and hygiene but also contributes to the overall quality of life for residents.

2.1.6. Households sanitation facilities improved

The 2022 Rwanda Population and Housing Census highlights substantial progress, with 92% of households having access to improved toilet facilities and 72.1% using unshared, improved latrines.

2.1.7. Sanitation Infrastructure constructed

Sanitation infrastructure have been constructed countrywide. Seven semi-centralized sewage systems were constructed in various estates across Kigali. Additionally, six faecal sludge treatment plants (FSTPs) and three landfills were established in Nyanza, Nyamagabe, Kayonza, Nyagatare, Rulindo, and Gicumbi districts.

2.2. WATSAN SSP 2018/19 - 2023/24 Challenges and Lesson Learnt

Despite significant achievements, Rwanda's water and sanitation sector faces numerous challenges. Firstly, climate change and erratic weather patterns have severely impacted water resources and infrastructure, with floods during the NST-1 period damaging 65 water supply systems and six treatment plants. Secondly, the sector struggles with a high rate of Non-Revenue Water (NRW) at 39%, driven by outdated water networks, leaks, and inaccurate meters—52,000 of which are over 15 years old. Additionally, rural water supply systems remain non-functional due to insufficient rehabilitation, impact of climate damage, and limited institutional capacity.

On sanitation particularly challenges remain in terms of infrastructure, technical expertise, and community engagement, which hinder the effectiveness and sustainability of sanitation services. While 45% of households dispose of sewage in their courtyards, 10% benefit from solid waste collection services, and decentralized sewerage systems serve real estates in Kigali. Furthermore, the country faces a shortage of centralized waste management systems, though efforts are underway with the construction of three Centralized Sewerage System in Kigali and five faecal sludge treatment plants and 5 landfills in key towns during the 2024-2029 SSP.

Water and Sanitation also faced significant challenges especially during the COVID-19 pandemic of which most fabrics of the sector got disrupted and this delayed project implementation and increasing costs due to supply chain disruptions.
The sector has drawn key lessons to address these challenges. The government's strong commitment to prioritizing water supply highlights its importance to national development and economic growth. Integrating climate change initiatives into water and sanitation projects has proven essential, as these issues directly affect infrastructure. Promoting public-private partnerships can enhance clean water production and sanitation services. Delays in project implementation due to complex processes underline the need for policy reforms of which the Government of Rwanda conducted both on policy and organisational reforms, lack of a preventive maintenance framework has exacerbated the NRW issue of which demands accelerating the implementation of NRW strategic actions. Ongoing reforms at the organisation responsible for Water Supply and Sanitation are expected to improve efficiency and accelerate future implementations.

2.3. WATSAN SSP 2018/19 - 2023/24 Implications on Climate Change

Rwanda's water and sanitation sector faces significant challenges due to climate change, which exacerbates vulnerabilities in water supply and sanitation infrastructure. Increasingly frequent extreme weather events, such as prolonged droughts and intense rainfall, threaten water availability and quality. Droughts lower groundwater levels and deplete aquifers, leading to dry springs and reduced river flows, which in turn jeopardize water supply. During heavy rains, soil erosion and runoff introduce contaminants into surface water sources, and reduced discharge rates during dry spells concentrate pollutants, raising treatment costs and occasionally affecting water quality.

In the sanitation sector, intensified rainfall leads to increased storm water, that could infiltrate aging infrastructure and overflowing uprotected pits and septic tanks. Flooding risks inundating treatment facilities, damaging weak sanitation systems and increase the cost of treatment of waste. Vulnerabilities are further compounded by the energy-intensive pumping required to handle high water demand, contributing to greenhouse gas emissions. While some climate resilience efforts are underway, such as reinforcing infrastructure and securing catchments, these have been on a limited scale, leaving the sector inadequately protected against climate-related impacts.

2.4. Water and Sanitation Sector Guiding Frameworks

Rwanda's water and sanitation sector is guided by a comprehensive policy framework that aligns with both national and international objectives, including the National Strategy for Transformation (NST2), Vision 2050, the Sustainable Development Goals (SDGs), and the African Union's Agenda 2063. Central to this framework is the 2023 Water and Sanitation Policy, which emphasize on sustainable management and equitable use of water resources, and equitable, accessible, reliable and cost-effective provision of safe drinking water and sanitation services to all. This endeavour makes a pivotal contribution towards enhancing the overall quality of life, fostering socioeconomic advancement and safeguarding environmental protection.

Water and Sanitation SSP builds on the goals of NST2, focusing on achieving universal access to water and sanitation by 2029, while Vision 2050 aspires to elevate living standards by ensuring access to sustainable water, sanitation and hygene infrastructure that enhance public health and economic development. The Water and Sanitation SSP also aligns with Rwanda's Green Growth and Climate Resilience Strategy (GGCRS), which prioritizes climate-resilient water infrastructure

and sustainable resource management to protect the environment. Furthermore, the plan supports SDG 6 by aiming to provide universal access to clean water and sanitation, contributing to Rwanda's transition towards a more sustainable, resilient, and inclusive future in the water and sanitation sector.

CHAPTER 3: STRATEGIC FRAMEWORK

3.1. Vision, Mission and Objectives

3.1.1. Vision

The vision of the Water and Sanitation SSP 2024/25-2028/29 to ensure universal and sustainable access to water and sanitation to all households, for socioeconomic development, health, and well-being. The sector envisions a future where all Rwandan households and public use areas have access to reliable, affordable, and basic drinking water, contributing to national prosperity and climate resilience.

3.1.2. Mission

To achieve inclusive and universal access to safe drinking water and sanitation services by 2029, prioritizing climate-resilient infrastructure and sustainable practices. The SSP will expand and enhance water infrastructure, increase production capacity, and improve service delivery while ensuring all communities, especially vulnerable ones, benefit equitably. By advancing sustainable sanitation projects and promoting resilient hygiene practices, we aim to foster community well-being and support adaptation to climate change impacts nationwide.

3.1.3. Core Goals

The Water and Sanitation Strategic plan, in line with NST2 identifies two core goals, priority actions and strategic outcomes, that will guide efforts over the next five years.

1	To achieve universal access to drinking water the sector will prioritize scaling up the drinking water access to all villages countrywide. the water production capacity will increase and distribution of water will ensure the access to all villages countrywide. The expansion and maintenance of water infrastructure will be done, along with improvements in the quality of water services. Planned settlements will be scaled up to reach more households in a cost-efficient manner. Water production will be increased by developing new water treatment plants and maintaining existing ones. Non-revenue water will be reduced and efficiency in providing water services will be enhanced. Universal access to basic water will be accelerated for productive use centers and	2	To increase access to Sanitation and Hygiene (WASH) services for improved wellbeing, the sector will ensure universal access to improved sanitation facilities. This will be done by implementing sanitation projects to support the sustainability of cities and urban areas. The centralized systems, including the Kigali Centralized Sewerage System Project, will be completed alongside the construction and operationalization of wastewater treatment plants and modern landfills in various districts. Public sanitation facilities will continue to be expanded in cities and urban areas. Communities and households will be mobilized to

	households, ensuring water is accessible in all villages, reducing the distance travelled to access water in rural and urban areas, and increasing the availability of piped water within dwelling units.		adopt safe and modern hygiene and sanitation practices for disease prevention

Table 1: WATSAN Strategic Goals

3.1.4. Objectives

Aligned with Rwanda's broader development agenda and climate commitments, the SSP sets forth the following objectives:

a) Achieve universal access to safe and reliable drinking water for all communities**, focusing on underserved and marginalized areas, by scaling up infrastructure, boosting production capacity, and rehabilitating water supply systems to enhance service coverage and quality.
b) Ensure universal access to improved sanitation and hygiene services**, incorporating climate-resilient infrastructure such as centralized sewerage systems and modern waste management facilities, while promoting sustainable hygiene practices in households, schools, and public areas to foster public health and environmental sustainability.
c) Integrate climate adaptation and resilience measures into water and sanitation programmes by building climate-resilient infrastructure and reducing water losses to enhance the sustainability of services and safeguard against climate-related risks.
d) Promote equity and inclusivity in access to water and sanitation services, ensuring that all villages, particularly the most vulnerable, benefit from the SSP's initiatives to improve living standards and support economic development.

3.2. Key Strategic Priorities of ESSP 2024/25-2028/29

3.2.1. Increase Daily Water Production

As of 2024, Rwanda's daily water production capacity stands at 368,736 m³, with a strategic goal to increase this to 688,686 m³ by the end of 2029 to meet growing demand and support sustainable development. Projections include reaching 472,036 m³ by 2025, 508,036 m³ by 2026, and 544,036 m³ by 2027. Despite challenges in water production, key opportunities lie in expanding infrastructure, improving system efficiency, implementing climate-resilient solutions, and integrating sustainable water management practices.
The figure below indicates the daily water production capacity targets.

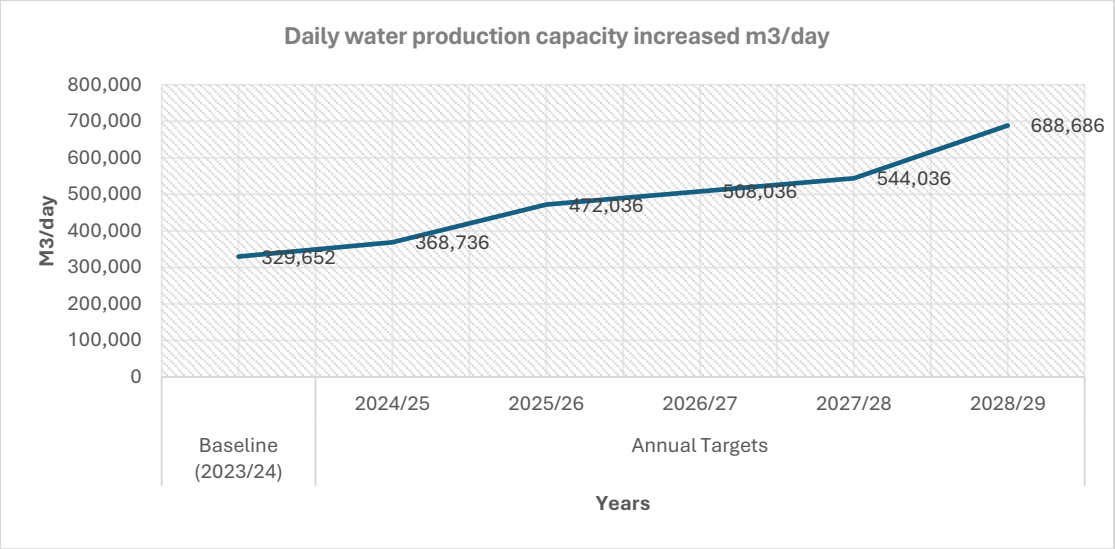


Figure 1: Water production capacity targets

3.2.2. Number of Km of Water Supply System to be constructed

As of 2023/24, Rwanda's water supply network spans approximately 33,000 km. The government aims to expand this network to meet growing demands, targeting an increase to 35,000 km by 2024/25 and 36,500 km by 2025/26. By 2026/27, the network is expected to reach 37,000 km, with further growth to 38,000 km by 2027/28 and ultimately 38,500 km by 2028/29. This expansion reflects Rwanda's commitment to achieve universal access to drinking water in all villages, particularly in underserved areas, by investing in new infrastructure and ensuring sustainable, reliable water access for all communities.

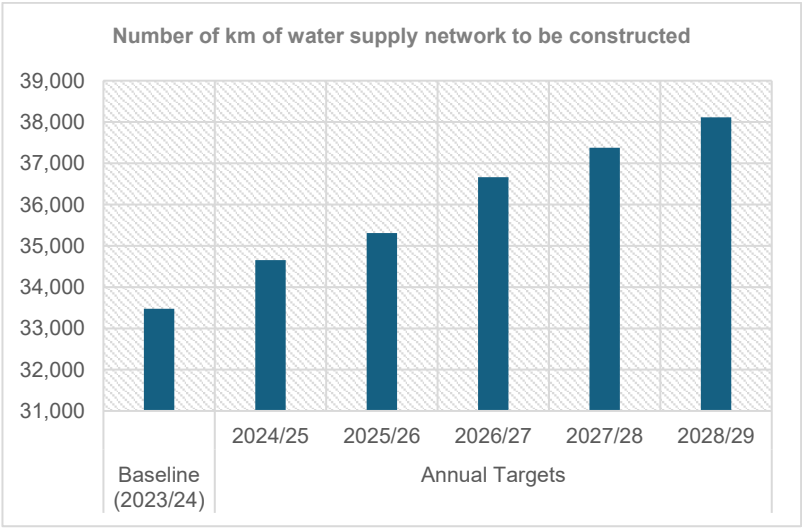


Figure 2: Scaling up nos of Km of WSS

3.2.3. Improved Water Access to Households in all villages

As of 2023/24, 80% of villages in Rwanda have access to improved drinking water, with a target of 100% by 2028/29 to bolster sustainable development and public health. Currently, 82.3% of households have access to improved water sources, which is set to reach 100% by 2028/29, ensuring universal access nationwide.

To achieve these goals, Rwanda will prioritize expanding water infrastructure and enhancing accessibility within households. By 2028/29, targets include increasing rural households' access to improved water sources within 500 meters to 68%, urban households' access within 200 meters to 85%, and access within the dwelling yard to 50%. Key priorities for 2024-2029 include scaling up water distribution networks, rehabilitating non-functional systems, and constructing additional kilometers of supply lines. These initiatives aim to ensure reliable water access, support socioeconomic growth, and improve resilience in communities across Rwanda.

Villages & HH with Access to drinking water	Baseline (2023/24)	Annual Targets				
		2024/25	2025/26	2026/27	2027/28	2028/29
% of Villages with access to improved drinking water	80% (2023)	82%	85%	90%	95%	100%
% of HHs with access to improved water source (SSP Indicator)	82.30%	85%	88%	90%	95%	100%
% of HHs with access with improved water sources within 500 m in rural	56.80%	59%	61.20%	63.50%	65.70%	68%
% of HHs with access with improved water sources within 200 m in urban	72.40%%	74.90%	77.40%	79.90%	82.40%	85%
% of HHs with access with improved water sources within the dwelling yard. (SSP Indicator)	18%	21%	27%	32%	40%	50%

Figure 3: scalling up % of Villages and HH with access to drinking water

3.2.4. Rehabilitation of Non Functional Water Supply System

As of 2023/24, Rwanda has identified 432 nonfunctional water supply systems (WSS) requiring rehabilitation to improve water access and service reliability. The rehabilitation targets are set to progress annually, with 73 systems scheduled for completion in 2025/26, followed by a significant increase to 223 systems in 2026/27. By 2027/28, the SSP aims to rehabilitate all 432 nonfunctional water supply systems, meeting the goal to fully rehabilitate these vital infrastructures and ensure consistent water supply throughout the country. This phased approach supports Sector commitment to enhancing water accessibility, promoting sustainable development, and strengthening service resilience.

	Baseline (2023/24)	Annual Targets				
		2024/25	2025/26	2026/27	2027/28	2028/29
Nonfunctional water supply systems rehabilitated	432 WSS to be rehabilitated	73	223	432	-	

Figure 4: Number of WSS to be rehabilitated

3.2.5. Reduce Non-Revenue Water

As of the baseline 2023/24, the non-revenue water stands at 39.50%, with a targeted reduction to 25.00% by 2028/29. This ambitious goal will be achieved through a comprehensive approach that includes replacing 52,000 old water meters, upgrading 1,785 km of water distribution networks, and implementing advanced leak detection technologies. The phased reduction plan

aims to lower NRW to 38.00% by 2024/25, with further targets set at 35.00% by 2025/26, 31.00% by 2026/27, and 28.00% by 2027/28.

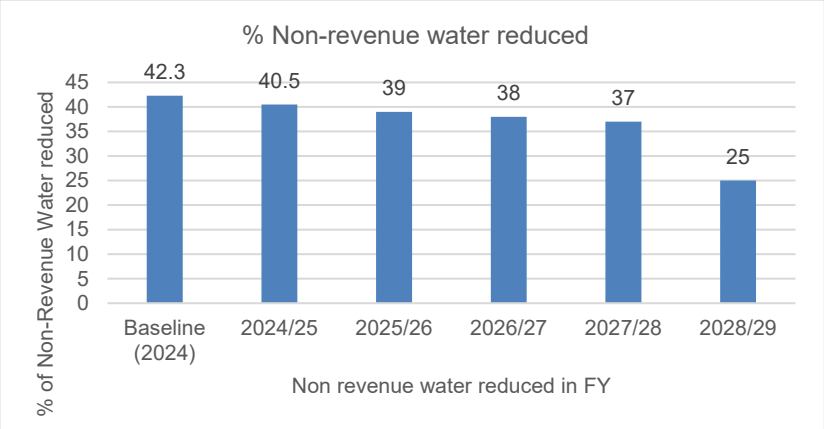
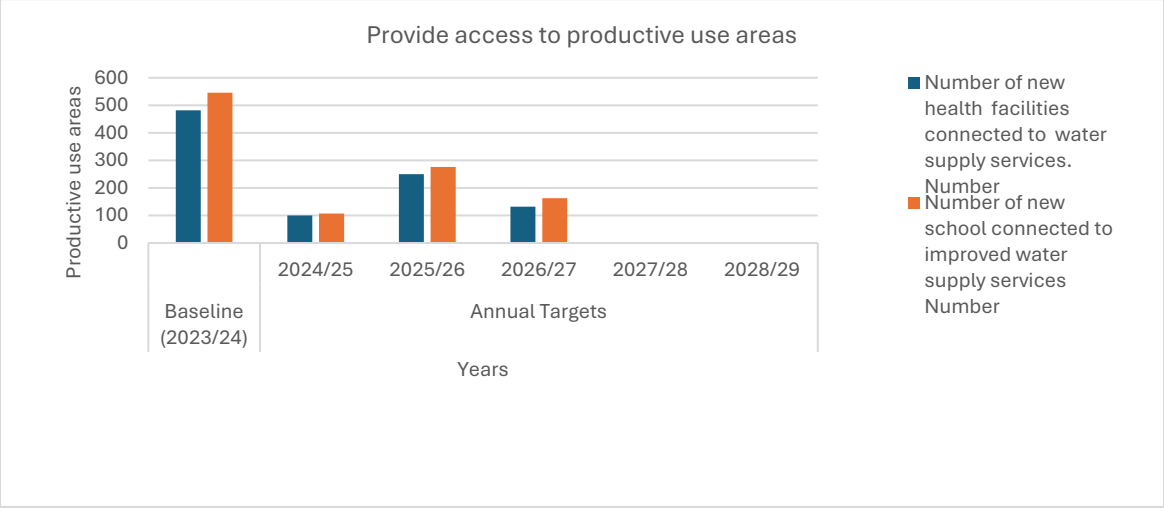


Figure 5: Non Revenue Water to be reduced

3.2.6. Water Access to Productive Use Areas



During the implementation of 2024-2029 Water and Sanitation SSP, the focus as well shall be on connecting productive use areas, particularly health facilities and schools, to improved water basic water. Starting from a baseline of 482 health facilities with access to water supply services in 2023/24, the plan targets connecting an additional 100 facilities by 2024/25, 250 by 2025/26, and 132 by 2026/27. Efforts will also be made to provide access to water to ECDs.

3.2.7. Achieving universal access to sanitation and hygiene

As of the 2023/24 baseline, 92% of households in Rwanda have access to improved sanitation facilities, with a target to reach universal access (100%) by 2028/29. The annual goals include incremental increases, reaching 94% by 2024/25, 95% by 2025/26, 97% by 2026/27, 98% by 2027/28 and 100% by 2028/2029.

Additionally, Rwanda aims to raise the percentage of the population with basic sanitation services from 72.1% in 2023/24 to 77% by 2028/29. The yearly targets are set to achieve 73% by 2024/25, 74% by 2025/26, 75% by 2026/27, 76% by 2027/28 and 100% by 2028/2029. These goals reflect

Rwanda's commitment to improving sanitation access, thereby supporting health, environmental sustainability, and the country's broader development objectives.

This will be achieved by sensitizing households to build their own sanitation and hygiene facilities. The sensitization will be done in between WASH sector members and development partners.

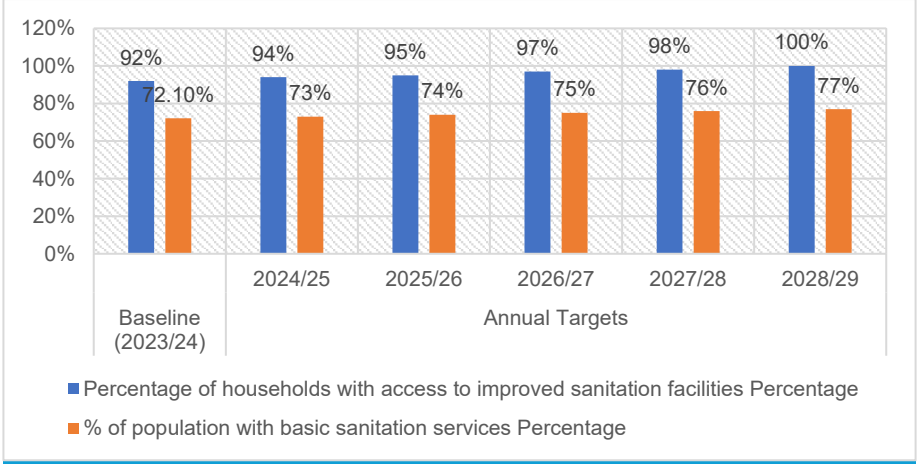


Figure 6: % of households with access to sanitation services

3.2.8. Construct three centralized sewerage systems and five Feacal sludge treatment plants

During the NST2 Period the focus for Water and Sanitation Sector Strategic Plan (WATSAN SSP will be to significantly expand its sewerage treatment capacity from 8,330 m³/day to 21,223 m³/day. Similarly the construction of the centralised sewerage systems and faecal sludge treatment plants will help increase Safe Wastewater collection coverage from 10% in 2024 to 33% in 2029.

This increase will be achieved through the construction of key facilities, including the Masaka faecal sludge treatment plant with a quick-fix capacity of 100 m³/day, Musanze's facility with a capacity of 62 m³/day, and Rubavu's facility with a capacity of 42 m³/day. Additionally, new plants in Rusizi and Karongi will provide a combined capacity of 189 m³/day. The major projects on these all is the Kigali Centralized Sewerage System, along with a faecal sludge treatment plant, which will together add 12,500 m³/day to the nation's treatment capacity. These projects are essential for enhancing Rwanda's sewerage infrastructure, improving urban sanitation, and in line with achieving the safely managed sanitation services as per SDG 6.

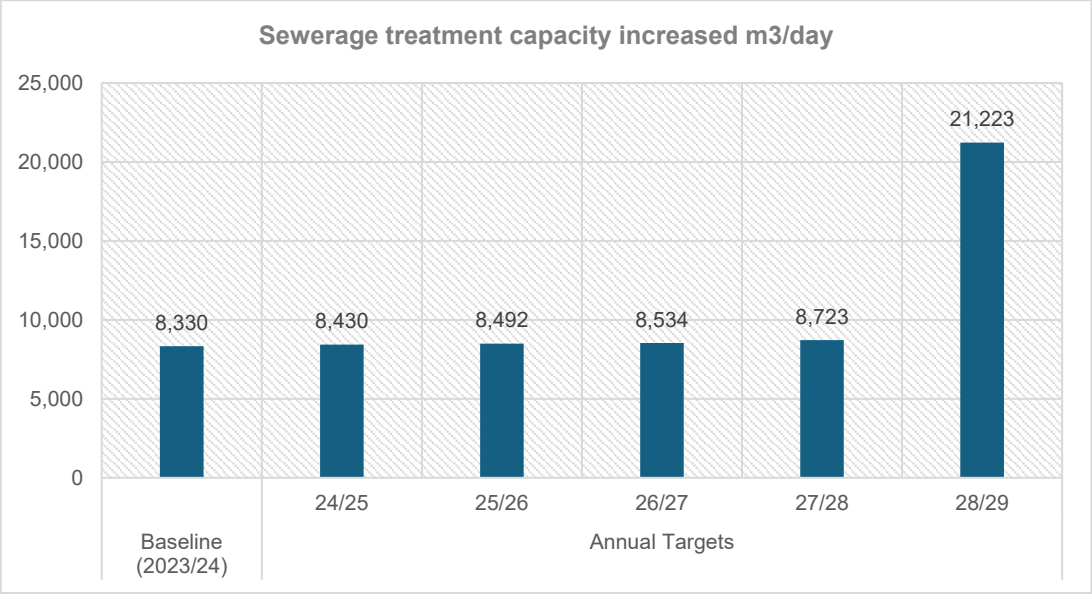


Figure 7: Sewerage treatment capacity to be increased

3.2.9. Solid waste management facilities constructed for proper collection and disposal

During the 2024-2029 the WATSAN Sector under its SSP by increasing the number of modern landfills from three to eight by 2028/29. In the first phase, scheduled for 2024/25, one new landfill will be constructed. This will be followed by the addition of two landfills in 2025/26. The expansion will continue with the construction of one landfill in both 2027/28 and 2028/29. These enhanced solid waste management facilities will support sustainable waste disposal practices, minimize environmental impact, and improve public health. The constructed facilities will increase the percentage of solid waste collected and properly disposed from 51% in 2024 to 60% by 2029.

4.1. Summary of the communication Plan

4.1.1. Key Communication Channels

- **Regular Meetings:** The sector working groups (SWG) will hold meetings, including Joint sector review meetings, to evaluate sector performance. Technical working groups (TWGs) will organize research and offer insights to the SWG.
- **MININFRA Website:** Updated quarterly, the website will feature significant information about the WATSAN SSP, including achievements, opportunities, and upcoming plans.
- **Local Media:** Newspapers, radio, and television will communicate project statuses and key developments, enhancing public awareness of initiatives such as campaign to sustainable solutions, sensitizing households to construct their sanitation and hygiene facilities etc.
- **UMUGANDA Events:** MININFRA, in collaboration with MINALOC, the Office of the President (OGS), and MINAFFET, will use UMUGANDA to engage citizens domestically and abroad, addressing strategy and policy issues through local and international channels.

4.2. Risks and Mitigation

Table II: Summary of Risks and Mitigation

RISKS	RATIONALE	EVIDENCE FROM THE PAST	LEVEL OF OCCURRENCE	MITIGATIONS
Technical Risks	These risks involve technical aspects of Water and Sanitation infrastructure, such as delays, failures, and inadequate maintenance.	Complexness of water supply and sanitation projects and lack of preventive maintenance have contributed to high rate of Non-Revenue Water and increased the costs and extending timelines.	High	♦ Conduct thorough feasibility studies and technical assessments. ♦ Implement robust project management, including monitoring and quality control. ♦ Invest in workforce training to address technical challenges.
Financial Risks	Financial risks affect project success through budget overruns due to inaccurate cost estimations, unforeseen expenses, and scope changes.	Water and Sanitation Infrastructure projects have delayed to be implemented due to delayed financial procedures that have made funds not fully utilized. Inadequate funding contribute to implementation delays.	Medium	♦ Seek alternative sources of funding such as grants, concessional and commercial loans and public-private partnerships ♦ Liaise with strategic partners to implement best-in-class project preparation that could attract funding ♦ Speed up procurement process ♦ Diversify funding sources and explore public-private partnerships. ♦ Establish contingency funds to mitigate unforeseen expenses.
Environmental and Climate Risks	Unreliable water sources and water quality due to climate change, water resource depletion and pollution	Natural disasters such as flooding, drought, and landslides have been disrupting water and sanitation services provision by damaging the infrastructure.	High	♦ Adhere to stringent environmental standards. ♦ Conduct robust environmental impact assessments (EIAs). ♦ Design climate-resilient infrastructure.

Capacity Risks	The Sector face Capacity Challenges which may pose the risks of ineffective implementation of projects	Capacity has been a challenge in the sector which has caused in delays of implementation of number of projects such as those of sanitation	Medium	♦ Implement strategic talent management practices such as human resource planning, recruitment, training, performance appraisal, motivation, and retention programs ♦ Build institutional and individual staff capacity ♦ Partner with sector stakeholders to improve private sector capacity

CHAPTER 5: MONITORING AND EVALUATION

Table IIIII: Monitoring and Evaluation Strategies

Indicators	Units	Targets by 2028/29	Proposed M&E Strategies
% of Villages with access to improved drinking water	%	100%	1. Regular Surveys: Use EICV AND DHS to assess water access. 2. Collaboration with Government Agencies: Work with MININFRA and WASAC. 3. Data Collection and Analysis: Analyze data for progress and policy adjustments. 4. Field Monitoring
Households with access to improved water	%	100%	1. Regular Surveys: Use EICV AND DHS to assess water access. 2. Collaboration with Government Agencies: Work with MININFRA and WASAC. 3. Data Collection and Analysis: Analyze data for progress and policy adjustments. 4. Field Monitoring
Productive user access to water	%	100%	1. Regular Progress Tracking: Track progress with updates and site inspections. 2. Data collection from WASH MIS 3. Data collection from MoH and MINEDUC
Number of Km of Water Supply System	Kms	38,113	1. Monitoring through WASAC Report and WASH Partners Annual reports 2. Date collected for Backward and Forward Looking JSRs
Water Production Capacity Increased	M3/day	688,686	1. Regular Progress Tracking: Monitor Water Production Capacity. 2. Performance Monitoring: Site visits and technical assessments. 3. Collaboration: Work with WASAC and MININFRA..
Nonfunctional water supply systems rehabilitated	Kms	432	1. Regular Progress Tracking: Non-functional WSS. 2. Performance Monitoring: Site visits and technical assessments. 3. Collaboration: Work with WASAC and MININFRA..
Non-Revenue Water Reduced	%	25	1. Regular Progress Tracking: Non-functional WSS. 2. Performance Monitoring: Site visits and technical assessments. 3. Collaboration: Work with WASAC and MININFRA..
Households with access to access improved sanitation	%	100%	4. Regular Surveys: Use EICV AND DHS to assess water access. 5. Collaboration with Government Agencies: Work with MININFRA and WASAC. 1. Data Collection and Analysis: Analyze data for progress and policy adjustments.
% of population with basic sanitation services	%	100%	1. Regular Surveys: Use EICV AND DHS to assess water access. 2. Collaboration with Government Agencies: Work with MININFRA and WASAC. 3. Data Collection and Analysis: Analyze data for progress and policy adjustments
% of population with basic sanitation services	%	77%	1. Regular Surveys: Use EICV AND DHS to assess water access. 2. Collaboration with Government Agencies: Work with MININFRA and WASAC. 3. Data Collection and Analysis: Analyze data for progress and policy adjustments 4. Engagement with NGOs: Support adoption through advocacy.
Sewerage treatment capacity increased	M3/day	21,223	1. Collaboration with Government Agencies: Work with MININFRA and WASAC. 2. Data Collection and Analysis: Analyze data for progress and policy adjustments
Feacal sludge treatment plants constructed	Number	8	1. Monitoring through field visits 2. Follow up With WASAC and MININFRA
Solid waste management facilities constructed	Numbers	8	1. Monitoring through field visits 2. Follow up With WASAC and MININFRA

LIST OF ANNEXES

1.THEORY OF CHANGE (LINKING SSP AND NST PRIORITIES)

4.5 Increased access to Water for socioeconomic development [Sector: Infrastructure (Water)]
Goal 1: Universal access to improved water services
PA-1: Scale up drinking water access to all villages countrywide
Outcome 1: Increased access to drinking water
Scale up access to drinking water in 2,966 remaining villages
Increase daily water production capacity from 329,652 m3/day to 688,686m3/day
Construct, upgrade and rehabilitate the Water Supply Systems (4,637Km)
Rehabilitate 432 Non-functional Water Supply systems
Scale up the access to basic water for productive use centers including 546 schools and 482 health facilities

5.3. Increased access to Sanitation & Hygiene (WASH) services for improved wellbeing [Sector: Infrastructure (Sanitation)]
Goal 1: Universal access to improved sanitation facilities
PA-1: Increase access to Sanitation, and Hygiene (WASH) services for improved wellbeing
Outcome 1: Increased access to sanitation services
Sensitize all households to build their own sanitation and hygiene facilities
Promote hygiene in households, schools, health facilities and public places

		Scale up public sanitation facilities in public and private facilities
		Construct 3 centralized sewerage systems including Kigali Centralized sewerage system
		Construct 5 fecal sludge treatment plants
		Construct the solid waste management facilities for proper collection and disposal (5 modern landfills including Nduba landfill)

2. M&E MATRIX

No	NST2 Outcome	Indicators	Units	Baseline (2023/24)	Annual Targets					Responsibility for reporting	Means of verification and Data Sources
					24/25	25/26	26/27	27/28	28/29		
1	**Increased access to drinking water**	Percentage of villages with access to improved drinking water	Percentage	80% (2023)	82%	85%	90%	95%	100%	MININFRA, MINALOC, WASAC, WASH PARTNERS	NISR, Sector reports
		Daily water production capacity increased	m^3/day	329,652	368,736	472,036	508,036	544,036	688,686	MININFRA, WASAC, WASH PARTNERS	Sector reports
		Percentage of HHs with access to improved water source (SSP Indicator)	Percentage	82.3%	85%	88%	90%	95%	100%	MININFRA, MINALOC, WASAC, WASH PARTNERS	NISR, Sector reports
		Percentage of HHs with access with improved water sources within 500 m in rural	Percentage	56.8%	59%	61.2%	63.5%	65.7%	68%	MININFRA, WASAC, WASH PARTNERS	NISR, Sector reports

No	NST2 Outcome	Indicators	Units	Baseline (2023/24)	Annual Targets					Responsibility for reporting	Means of verification and Data Sources
					24/25	25/26	26/27	27/28	28/29		
		Percentage of HHs with access with improved water sources within 200 m in urban	Percentage	72.40%%	74.9%	77.4%	79.9%	82.4%	85%	MININFRA, WASAC, WASH PARTNERS	NISR, Sector reports
		Percentage of HHs with access with improved water sources within the dwelling yard. (SSP Indicator)	Percentage	18%	21%	27%	32%	40%	50%	MININFRA, MINALOC, WASAC, WASH PARTNERS	NISR, Sector reports
		Nonfunctional water supply systems rehabilitated	Number	432 WSS to be rehabilitated	73	223	432	-	-	MININFRA, WASAC, WASH PARTNERS	Sector reports
		Non-revenue water reduced	Percentage	39.5%	38.0%	35.0%	31.0%	28.0%	25.0%	MININFRA, WASAC, WASH PARTNERS	Sector reports
		Number of km of water supply network constructed	Number	33,476	34,655	35,308	36,662	37,377	38,113	MININFRA, WASAC, WASH PARTNERS	Sector reports
		Number of km of water supply network upgraded and rehabilitated	Km	1785.8 km to be rehabilitated	406.3	825.4	1238.1	1568.7	1785.8	MININFRA, WASAC, WASH PARTNERS	Sector reports
2	**Increased access to sanitation services**	Percentage of households with access to	Percentage	92%	94%	95%	97%	98%	100%	MININFRA, MINISANTE, MINALOC	NISR, Sector reports

No	NST2 Outcome	Indicators	Units	Baseline (2023/24)	Annual Targets					Responsibility for reporting	Means of verification and Data Sources
					24/25	25/26	26/27	27/28	28/29		
		improved sanitation facilities									
		Percentage of population with basic sanitation services	Percentage	72.10%	73%	74%	75%	76%	77%	MININFRA, MINISANTE, MINALOC	NISR, Sector reports
		Sewerage treatment capacity increased	m3/day	8,330	8,430	8,492	8,534	8,723	21,223	MININFRA, MINALOC, WASAC, CoK	Sector reports
		Solid waste management facilities constructed	Number	3	3	4	6	7	8	MININFRA, MINALOC, WASAC, CoK	Sector reports
		Fecal sludge treatment plants constructed	Number	3	4	6	7	7	8	MININFRA, MINALOC, WASAC, CoK	Sector reports

3.Implementation plan (see in a separate attachment)