Water, Sanitation and Hygiene (WASH) in Rwanda
A situation analysis

Key achievements

- **Rwanda has taken strong measures to strengthen the enabling environment for water**, sanitation and hygiene (WASH) – especially with regard to policy making, institutional arrangements, coordination, planning, monitoring and regulation of services.

- The country has made good progress in improving access to water and sanitation services with 56 per cent of households having access to basic water supply (2019/20 Demographic and Health Survey, DHS), and 72 per cent of households having access to basic sanitation services (2022 Census).

- **Government allocations for WASH have significantly increased over the years**: a 28.6 per cent increase between 2022/23 and 2023/24 demonstrates strong commitment to expand access to quality WASH services.

Key challenges

- **Considerable gaps remain in coverage of WASH services**, with 44 per cent of households lacking access to basic water supplies (2019/20 DHS), 28 per cent of households lacking access to basic sanitation (2022 Census), and 75 per cent of households lacking basic hygiene services (2019/20 DHS).

- **The WASH sector remains hugely underfunded**, with RWF 95.7 billion allocated for 2023/24, against a requirement of RWF 400 billion per year to achieve the Sustainable Development Goals (SDGs).

- **WASH infrastructure and services in Rwanda are not climate resilient**, with many systems damaged or destroyed every year due to flooding and landslides, undermining progress made so far.

- **The sector suffers from significant capacity challenges**, including human resources and institutional capacity gaps.

- **Significant gaps exist in data on coverage of WASH services**, especially for sub-district level, and safely managed water and sanitation services.
1. Introduction
Access to water and sanitation are fundamental human rights for everyone's health, dignity and prosperity. The right to clean water and sanitation is enshrined in the Convention on the Rights of the Child and in international targets, such as the Sustainable Development Goals (SDGs). In particular, SDG 6 is intended to ensure the availability and sustainable management of water and sanitation for all, while SDG target 4.a.1 is intended to ensure that schools have access to basic drinking water; single-sex basic sanitation facilities; and basic handwashing facilities.

Lack of adequate access to WASH services can lead to outbreaks of waterborne diseases (such as cholera) and contribute to child mortality and morbidity, undernutrition and stunting. Poor WASH services affect girls and women, who are primarily responsible for fetching water from the source to the house. Lack of appropriate WASH facilities is also a barrier to education for girls (as they are important for menstrual hygiene) and to economic opportunities for the poor. Improper disposal of human waste and wastewater can contaminate local water sources, soil, and ecosystems, leading to environmental degradation and the spread of disease vectors such as mosquitoes. The COVID-19 pandemic has made even more evident the importance of access to safe water and improved hygiene and to curtail rapid transmission of infectious diseases to the general population.

2. Policy and strategic framework for WASH
In the National Strategy for Transformation (NST-1), the Government of Rwanda recognizes water as a driver for achieving economic and social transformation. The social transformation pillar of the NST-1 is intended to “develop Rwandans into a capable and skilled people with quality standards of living and a stable and secure society.” In the NST-1, the Government of Rwanda has committed to achieving universal access to WASH services by 2024.

Adequate water supply and sanitation services are drivers for social and economic development, poverty reduction and public health. This is fully acknowledged in Rwanda’s flagship policy documents and national goals including Vision 2050, Green Growth and Climate Resilience Strategy (2023) and several other policies and strategies. The government has also developed sector-level policies and plans to guide the achievement of national WASH targets and the SDGs. These include, among others, the National Water Supply and Sanitation Policy, which was approved by the cabinet in October 2023, as well the Integrated Water and Sanitation Master Plans, the National Water Resources Management Plan, and the Integrated Solid Waste Management Strategy. The government has also established a WASH sector management information system to measure progress and inform decision making.

The recently approved National Water and Sanitation Policy harmonizes the National Policy for Water Resources Management (2011) and the National Water Supply and Sanitation Policies (2016) into one policy with due consideration to the updated national development goals and SDGs and the emerging issues, including water security, sustainability and climate resilience.

Nevertheless, significant systemic challenges persist. Several policy instruments and regulations are yet to be developed. Data on coverage of WASH services, especially for basic and safely managed services at the district and sub-district levels, are inadequate. The roles and responsibilities of key institutions in the subsectors – especially rural and urban sanitation - including governance, regulation, ownership and operations need to be further clarified.

The availability and capacity of WASH sector human resources, particularly at decentralized level, is another critical constraint. There is a lack of adequately skilled professionals in the design, operation and maintenance of water and sanitation systems, especially for wastewater and faecal sludge management. This is compounded by insufficient harmonized training tools for capacity building at household level, and among public institutions, practitioners and latrines builders. Sector planning and implementation capacity to manage complex projects and monitor the performance of contractors (especially at local level) are other gaps.1 Furthermore, no national human resource development strategy and action plan are in place for the water and sanitation sector.

1 Ministry of Infrastructure, Water, Sanitation and Hygiene sector analysis, 2019.
3. Financing of WASH

The Government of Rwanda continues to increase allocations for the WASH sector - the total budgetary allocation for the sector increased by a total of 66 per cent in two years, from RWF 57.7 billion in 2021/22 to RWF 74.4 billion in 2022/23 and RWF 95.7 billion in 2023/24. However, funding gaps continue to be a key sector challenge, as financial resources are not adequate to meet the current demand and sustain access to WASH services. In addition, most funds are allocated for water and urban areas, with less funds for rural areas and very little for household sanitation and hygiene. Current water and sanitation tariff structures are not adequate to ensure sustainability of services or affordability for vulnerable groups. It has been estimated that Rwanda needs an annual investment of at least RWF 249 billion to achieve the national WASH targets of 100 per cent basic coverage by 2024, and RWF 400 billion a year to achieve the WASH SDG (safely managed) targets by 2030. This equates to gaps of around RWF 154 billion and RWF 304.3 billion per year to achieving the National Strategy for Transformation and SDG targets, respectively.

4. Access to water supply

According to the 2022 Population and Housing Census (PHC), 82 per cent of households in Rwanda (96 per cent in urban and 77 per cent in rural areas) used water from improved drinking water sources, which include piped water, boreholes or tube wells, protected dug wells, protected springs, rainwater, and packaged or delivered water. About 18 per cent of the households used water from unimproved sources.

The PHC 2022 report does not include data on access to basic water supply, which is a higher service level than improved and refers to use of water from an improved source, provided collection time is not more than 30 minutes for a roundtrip including queuing. According to the Demographic and Health Survey (DHS) 2019/20, 56 per cent of Rwanda’s households had access to basic drinking water services.

There are considerable disparities in access to basic water supply in Rwanda. In 2019/20, access to basic water supply was 87 per cent in urban areas and 49 per cent in rural areas. The City of Kigali registered the highest access to basic water supply (82 per cent), while the Eastern province registered the lowest access to basic water supply (43 per cent). There was also wide divergence by wealth, with 85 per cent of the richest quintile and 38 per cent of the poorest having access to basic water supply.

According to PHC 2022, 12 per cent of households had access to water within their premises. Data on access to safely managed water supply services – the highest level of service on WHO/UNICEF Joint Monitoring Programme (JMP) WASH service ladder, defined as use of drinking water from an improved water source that is accessible on premises, available when needed and free from faecal and priority chemical contamination – are not currently available for Rwanda.

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2 UNICEF Rwanda, Budget Brief for WASH Sector, 2023.
5 DHS 2019/20
Old and inadequately maintained infrastructure in Rwanda contribute to high water losses (non-revenue water, which averaged 41 per cent in 2022); this in turn causes substantial loss of resources. The functionality of existing water supply systems is emerging as a concern, with over 45 per cent of the rural piped water supply systems fully or partially non-functional in 2021.\(^7\) The quality of the drinking water supply is also a matter of concern, especially where there is a risk of cross-contamination between water and sewerage networks due to high levels of pipe leakage, which poses a serious problem for the health and well-being of the population.

The Rwanda Integrated Water and Sanitation Master Plans 2022 have set a target of reaching 60 per cent access to safely managed water supply with the remaining 40 per cent of the population accessing basic water by 2030. The Master Plans are also intended to progressively improve access to reach 100 per cent access to safely managed water by the year 2050.\(^8\) The Plans also include the targets of decreasing the percentage of non-revenue water to 34 per cent in 2030 and 20 per cent in 2050.

5. Access to sanitation

Improved sanitation facilities are those designed to hygienically separate excreta from human contact and include flush and pour flush toilets connected to piped sewer systems, septic tanks or pit latrines; pit latrines with slabs (including ventilated pit latrines), and composting toilets.\(^9\) According to PHC 2022, 92 per cent of households in Rwanda used improved sanitation facilities. Seven per cent of households used unimproved sanitation facilities, while 1 per cent practised open defecation.

Basic sanitation, a higher service level than improved, is defined as use of improved facilities that are not shared with other households. In 2022,\(^10\) 72 per cent of households in Rwanda had access to a basic sanitation facility. This was a significant improvement from the 61 per cent access to basic sanitation in 2019/20 and 54 per cent in 2014/15.\(^11\) Access to basic sanitation was 56 per cent in urban areas and 79 per cent in rural areas in 2022. The City of Kigali has the lowest proportion of households using basic sanitation (50 per cent) due to the high number of households sharing latrines, with other provinces ranging from 75 per cent (Western province) to 80 per cent (Northern province). In the richest quintile, 71 per cent had access to basic sanitation, compared to 34 per cent in the poorest quintile.\(^12\) Data on access to safely managed sanitation services – the highest level of service on WHO/UNICEF JMP WASH service ladder and defined as use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or removed and treated offsite – are currently not available for Rwanda.

\(^7\) Ministry of Infrastructure, WASH MIS Report, 2021.
\(^10\) PHC 2022
\(^11\) DHS 2019/20 and 2014/15
\(^12\) DHS 2019/20
In 2022, 45 per cent of private households in Rwanda disposed of their sewage water in their courtyards. Other common modes of sewage disposal include bush (20 per cent), cesspool (18 per cent), sump (8 per cent), and main sewer (6 per cent). In the City of Kigali, the most common mode of sewage disposal used by private households is cesspool (52 per cent).

Practices related to solid waste management remain inadequate with 32 per cent of households throwing waste into fields and bushes. Moreover, few households in Rwanda properly empty faecal sludge from their pit latrines and cesspools.

The Rwanda Integrated Water and Sanitation Master Plans (2022) have the goal of reaching 60 per cent access to safely managed sanitation services with the remaining 40 per cent of the population accessing basic sanitation by 2030. The Master Plans are also intended to progressively improve access to reach 100 per cent access to safely managed sanitation by the year 2050.

6. Access to hygiene

Some 25 per cent of Rwanda’s population had access to a basic hygiene facility – a handwashing facility with soap and water – in 2020. The figure was 37 per cent in urban areas and 23 per cent in rural areas. From 2014/15 to 2019/20, overall access to basic hygiene facilities increased by 21 percentage points, with handwashing momentum gained during the COVID-19 pandemic as one of the key contributors.

In 2020/2021, 84 per cent of the household population was found to have places for handwashing, with 12 per cent and 84 per cent of the population having fixed and mobile places respectively for handwashing. However, only 41 per cent of the population for whom a place for handwashing was observed had water available at the time of observation, and only 32 per cent had soap or another cleansing agent available, thus indicating that soap and water remain major barriers to handwashing.

7. Menstrual hygiene management

Like in many countries, stigma, poverty, and lack of access to basic services like toilets and water can cause menstrual health and hygiene needs go unmet in Rwanda, and increase girls’ risks of infection. Lack of adequate supplies and facilities for menstrual hygiene management can mean that girls miss school during their periods. A 2019 study found that 18 per cent of women and girls in Rwanda miss school or work due to lack of safe pads or sanitary napkins. These absences represent a potential loss of gross domestic product of US$ 215 per woman each year – a total of US$ 115 million per year in Rwanda.

13 PHC 2022
14 PHC 2022.
15 DHS 2019/20
16 DHS 2014/15
8. WASH in schools
WASH facilities in schools also contribute to increased school enrolment and retention, especially for girls and children with special needs, as well as enhanced learning capacities among schoolchildren. Moreover, these facilities play an important role in the promotion of healthy behaviours among children, and enable them become agents of change for improving WASH in their communities. In 2021, 64 per cent, 68 per cent and 52 per cent of schools in Rwanda had access to basic water supply, sanitation and hygiene services respectively.19

9. WASH in health-care facilities
Provision of adequate WASH, and infection prevention and control services in health-care facilities, is critical for ensuring delivery of quality health services; protection of patients, health workers, and staff; and prevention of further transmission of diseases such as COVID-19 and Ebola virus disease. In 2021, 73 per cent of health-care facilities in Rwanda had basic water services available on the premises and 6 per cent of health facilities reported having basic sanitation,20 while 93 per cent had limited sanitation services.21 In addition, 65 per cent of health facilities had basic hygiene services (hand hygiene facilities at points of care and water and soap at toilets respectively).

10. Climate change
Climate change is causing multiple challenges to the WASH sector. More recurrent and intense periods of droughts, heavy rains, flooding and landslides all disrupt WASH services through damage to infrastructure, deterioration of water quality and reduction in surface flows and reduced yield of springs and boreholes. This is threatening the progress made thus far.22 Rwanda’s hilly terrain also leads to high dependence of water pumps, resulting in high use of electricity to supply clean piped water to beneficiaries. Most existing WASH systems are not climate resilient.

11. Opportunities and recommendations
The following areas of action are crucial enablers and should be prioritized to accelerate progress towards achieving universal access to WASH services in Rwanda:

• Develop new – and update existing – policy instruments, regulations, standards and action plans to support implementation of the new harmonized Water and Sanitation Policy, with strong focus on resilience to effects of climate change, gender, equity and inclusion;

• Increase budgetary allocations for WASH sector from the national budget, especially for rural areas and sanitation and hygiene;

• Maximize the efficiency and the effective use of existing funding for the WASH sector by reducing non-revenue water, improving billing, reducing unit costs, improving asset management, strengthening climate resilience, reducing operational costs, and use of innovative technologies.

• Mobilize additional financing for the sector through increased engagement with bilateral and multilateral donors, innovative financing, and public-private partnerships;

• Strengthen data collection for WASH, especially data on coverage at sub-district level and for safely managed services;

• Strengthen climate resilience and disaster risk reduction for the WASH sector;

• Develop and implement WASH sector capacity building plan to strengthen sector capacity in coordination, planning, implementation, monitoring and delivery of WASH services;

• Reform water tariffs with strong focus on ensuring affordability and financial sustainability; and

• Launch special projects focusing on scaling up WASH services in communities, schools, health centres and public places, with a strong focus on the most vulnerable and marginalized areas, climate resilience, gender and disability. Also launch a dedicated national initiative to mobilize communities to build latrines and adopt safe hygiene practices.

20 Defined as improved latrines or toilets which are usable, separated for patients and staff, separated for women with menstrual hygiene facilities, and meet the needs of people with limited mobility are classified as having a basic service.