

FINANCE ASSESSMENT OF THE WASH SECTOR IN RWANDA

FINAL REPORT

20 March 2019, José Frade for IRC,
Water for People and WaterAid



ACRONYMS

AfDB	African Development Bank
BOT	Build, Operate and Transfer
CapEx	Capital Expenditure
CapManEx	Capital Maintenance Expenditure
CFD	Community Development Fund
Ctp	Capacity to pay
CBEHPP	Community Based Environmental Health Promotion Program
CoK	City of Kigali
CSO	Civil Society Organisation
DP	Development Partners
DWA	District Wide Approach
EDPRS 2	Economic Development and Poverty Reduction Strategy (2013 – 2018)
FSM	Faecal Sludge Management
GIS	Geographic Information System
GoR	Government of Rwanda
JICA	Japanese International Cooperation Agency
l.c.d	Litres per capita and per day
LODA	Local Administrative Entities Development Agency
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MINALOC	Ministry of Local Government
MINECOFIN	Ministry of Finance and Economic Planning
MINEDUC	Ministry of Education
MININFRA	Ministry of Infrastructure
MINIRENA	Ministry of Natural Resources
MIS	Management Information System
MoH	Ministry of Health
MoU	Memorandum of Understanding
NGO	Non-Governmental Organization
NRW	Non-revenue water
NSPS	National Sanitation Policy and Strategy
OBA	Output-Based Aid
ODA	Official Development Assistance
OpEx	Operation Expenditure
O&M	Operation and Maintenance
PHAST	Participatory Hygiene and Sanitation Transformation
PO	Private Operators
PPP	Public Private Partnership
RDB	Rwanda Development Board
RDHS	Rwanda Demographic Health Survey Rwanda Environment Management Authority
REMA	Rwanda Environmental Management Authority
RNRA	Rwanda Natural Resources Authority
RSB	Rwanda Bureau of Standards
RURA	Rwanda Utilities Regulatory Authority
RWSS	Rural Water and Sanitation Services
SDGs	Sustainable Development Goals
SWA	Sanitation and Water for All

SWAp	Sector-Wide Approach
TA	Technical Assistance
ToR	Terms of Reference
UNICEF	United Nations Children's Fund
WASAC Ltd	Water and Sanitation Corporation Limited
WASH	Water and Sanitation
Wtp	Willingness to pay

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EXECUTIVE SUMMARY

The WASH sector in Rwanda is progressing in a sustainable direction based on sound principles and supported by national policies and strategies that aim at universal services as laid down in the SDG6. However, despite having achieved the MDGs in 2015 and a continuous implementation of new infrastructure, the sector requires substantial investment to achieve basic universal services and much higher investment to reach the safely managed services defined in the SDG6 targets.

WASH sector goals set in national strategies defined in 2016 aiming at universal improved services for water supply and sanitation by 2020 were recognised as unachievable. They have been reviewed in more recent strategies to be achieved by 2024, while universal safely managed services are to be achieved in 2030 in line with SDG6.

There are several constraints to achieving the global WASH sector goals, but the main one is the lack of financial resources for multiple purposes. Capital expenditure (CapEx) is needed to implement new infrastructure and rehabilitate and renew existing assets (CapManEx), and investment is needed for soft CapEx – capacity building, improving efficiency and the enabling environment as well as to cover the operation and maintenance costs (OpEx) of the service providers.

If universal basic coverage is to be achieved, financial resources will have to be increased by about 2.5 times between 2019 and 2030. If safely managed services are to be achieved, the resources need to be increased by more than 8 times.

The financial resources allocated to the WASH sector for the FY 2018/19 are about FRW 50 billion, equivalent to USD 57 million. However, if the SDG6 target is to be achieved by 2030, an estimated USD 134 million will be needed by the sector to build and maintain universal basic coverage. An additional USD 286 million will be needed to build and maintain safely managed services each year up to 2030.

The institutional framework has been changed over the last few years and has been adapted to cope with the challenges facing the sector in improving its performance nationwide and in strengthening WASH governance to make it accountable. The last changes were made recently and include setting up WASAC (Water and Sanitation Corporation Limited) in 2014 and RURA (Rwanda Utilities Regulatory Authority) in 2013.

The decentralisation of decision making from central to local government has enabled greater representation of the population and its representatives. There is now a bottom-up approach from villages to cells, sectors and district levels where rural WASH services are managed using the transfers of financial resources from the central government to districts.

WASAC has a dual role, one, as a national public utility and, two, as a department in charge of supporting rural WASH services, primarily on technical aspects. Another positive aspect favouring the sector and in particular the potential development of PPPs for the provision of services was the creation of a multisector utilities' regulator, RURA, which provides licences for private companies to operate. This gives RURA an element of control over the quality of the services. RURA also regulates WASAC, the urban water utility created in 2014 after the water and electricity services were unbundled.

Decentralising the decision-making and management of the WASH sector led, as elsewhere, to a highly fragmented organisational framework, particularly in the rural areas where there are now 1,000 water service providers who do not have the capacity to deliver adequate services. However, the sector in Rwanda differs significantly from other countries in the region in that its national approach is to mobilise private operators to encourage the involvement of the private sector.

This policy is almost unique in the region, where PPPs have concentrated on large concessions and lease contracts which have failed in most of the countries.

The participation of the local private sector in the operation of existing facilities under management contracts in rural or small urban areas, and the Government's willingness to strengthen it can benefit the sector in the medium and long term. It could enhance the conditions for job creation and develop a potential hub of WASH services in the private service provision sector. However, despite the strong political support, the PPP context is still very fragile with private companies lacking many needed skills and their public counterparts, the Districts, suffering from the same problem. Wide institutional capacity strengthening is thus required.

The Government has the intention of turning WASAC into a financially autonomous utility by ensuring OpEx cost recovery. RURA recently raised the urban water tariffs with a first subsidised block for domestic use, a second block above the break-even/average OpEx cost tariff, and two higher tariff blocks for households and non-residential customers to ensure cross-subsidisation for the first block. A tariff study for the rural areas will be launched soon. The results of the study will be informative given the importance of mobilising additional financial resources to the sector from the tariffs.

Another challenge faced by WASAC is a future transfer of the assets under its operation but owned by MININFRA. It implies the need to depreciate the assets to ensure the continuous CapManEx coverage that is supported by the cashflow from customers' revenues. This will require a further tariff increase. Ownership of assets would have a positive impact on WASAC creditworthiness by creating a borrowing capacity and the freeing up or shifting of current Government subsidies for other high value-added purposes such as subsidising infrastructure, connections and tariffs for the poorer and excluded population contributing to leaving no one behind and eliminating inequalities.

After obtaining an accurate data baseline of the current level of services, the investment needs (the demand of financial resources), the allocation of resources to the sector from taxes, transfers and tariffs (the 3Ts, the supply of resources), the financial gap and the required additional resources could be eliminated or mitigated. Managing this information and setting the right priority criteria for allocating resources to the investment needs should be done in a Financial Strategy Plan.

The analysis of the main sources of finance – the 3Ts – shows the strong limitation on increasing taxes and transfers that currently fully support CapEx in the sector and part of the OpEx. Despite the strong political commitment of the GoR in developing the sector, the share of the national budget allocation to WASH is about 2% lower than other regional countries, and has decreased since 2014/15.

External aid is also declining, from 32% of the total budget allocated to the sector in 2016/17 to 20% in 2018/19. It will decrease further when Rwanda will become a middle-income country. Fiscal constraints imposed by restrictions on internal tax raising and in the donor countries, and competition with other public sectors for national and local government budget allocation are strong factors that limit an increase of taxes and transfers.

The tariff revenues has a completely different limiting factor – the affordability of the tariffs and less willingness to pay when the quality of the services is poor. Potentially, tariff revenues can generate a constant cashflow that could be used to cover the OpEx and service the debt of repayable (concessional and private) finance, freeing grants from taxes and some transfers for the social high value-added projects mentioned above.

Based on the assessment and discussion with the different stakeholders involved in the study, the following proposals address and could remove constraints on mobilising additional finance:

- Revise the tariff and cost recovery policies nationwide with the purpose of using them to mobilise additional financial resources. Pay special attention to the affordability ceiling/limit of tariff increases. An analysis is included in the rural tariff study.
- Support the preparation of a Financial Strategy Plan to complement the national Investment Plan. This will be based on the Master Plan that is currently under preparation.
- Create a revolving fund at national level and a public autonomous entity to manage it.

An Action Plan could be defined that included the following elements:

A. Mobilisation of additional financial resources.

- i. Propose the creation of a thematic 'WASH Finance' sub-group under the Sector Working Group to promote national dialogue on financial matters. Closely follow the proposals coming from the tariff study, MIS, Master Plan and TA to advise Rwanda's approach in mobilising new sources of development finance;
- ii. Establish a Financial Strategy Plan;
- iii. Conceive and design a national Revolving Fund that includes a new public autonomous entity to manage it.

B. Improvement of the institutional and organisational framework.

- i) Introduce the following topics for discussion in the WASH Finance WG: the issue of WASAC's double role as both a utility and the developer of rural WASH services, and options to strengthen the latter; and asset ownership at district level, asset management and depreciation needs.
- ii) Support the strengthening of the capacity and role of the private sector in service provision.

C. Remove bottlenecks to financial flows and increase absorption capacity by using the best methodology to identify the bottlenecks, its causes and measures to remove them.

D. Identify and choose an area where a demonstration effect would have potential for replication and scale-up, for example in a district wide approach (DWA), and contribute with additional funding.

1. INTRODUCTION

IRC commissioned the consultant to identify the main constraints to attracting finance to the WASH sector in three countries: Rwanda, Uganda and Ethiopia. Each country has its own set of macro financing opportunities and challenges and the assessments make explicit how to overcome the institutional, organisational and legal constraints to attracting more public and private finance to the rural water sector.

This report is the assessment of the WASH sector in Rwanda. It follows a mission to Kigali by the consultant, José Frade from 26 to 30 December 2018 which was supported by the Water for People team. Interviews were carried out with representatives of main stakeholders indicated in Appendix 1. The findings were preceded by a validation meeting with sector stakeholders. A list of the documents consulted is presented in Appendix 2.

The findings are expected to provide the basis for a decision on whether there is scope to undertake actions and develop facilities to attract and mobilise additional financial resources to the sector.

2. ASSESSMENT METHODOLOGY

The assessment methodology consists of three stages described below.

STAGE 1: THE SECTOR

1.1: Country sector policy, strategy and planning

Before focusing on the main objective of the assessment – identifying ways to attract and mobilise more financial resources to the sector, it is important to understand the key broad ‘instruments’ that drive the sector: the policy, followed by the strategy and the planning. No proper planning can be done if not supported by a sector strategy that is established to give shape to a policy that is often based on a sector vision and broader country objectives which could include economic development, poverty reduction or climate change action. These instruments have the advantage of creating the conditions for consensus among the sector stakeholders promoting their involvement and minimising the risk of potential divergence of approaches and wrong practices in implementing programmes.

Another important aspect is to compare the sector’s driving instruments with the reality on the ground to understand if a major issue is the result of the absence of a policy, strategy and plan or a wrong interpretation or non-respect of them. One key example in the finance assessment is the tariff and cost recovery policy.

1.2: Institutional and organisational/service provision framework

The instruments mentioned above could be sound and able to move the sector into sustainability, but the results and outcome depend entirely on those that apply it – the sector governance. Its capacity, procedures and practice dictate the sector performance. The decentralisation process is relevant as a starting point but without skilled and competent decentralised entities, the sector could be led to a low performance and absorption capacity of the financial resources made available to the sector. Within the institutional framework, the existence or absence of a key public entity to act as a regulator could influence the outcome. How the regulatory role is carried out is also a determinant and could sometimes lead to a negative impact by constraining the expectations associated with the economic regulation of the sector.

The organisational framework of the WASH service provision requires attention as the bottlenecks in financial flows and the consequent low absorption capacity are often associated with the low performance of the service providers. Low efficiency of the service providers also negatively impacts cost recovery as higher tariffs than necessary are required to cover the OpEx costs. Furthermore, poor efficiency, scale and insufficient cash flow generated by tariff revenues limit the creditworthiness of the utility who is then not able to attract additional finance.

The decentralisation of national administration and sector institutions worldwide has led to a highly fragmented framework of service provision that facilitates low performance. It is a major cause of the current lack of financial resources to sustain the sector and achieve SDG6. The lack of creditworthiness of the utilities, given their small scale and/or insufficient cash flow generated from tariff revenues, is a major constraint in attracting additional resources.

The assessment of the current status of the sector, namely service coverage, gaps and trends, discusses the baseline, factors or variables that could influence the capacity to attract and mobilise more financial resources.

STAGE 2: THE INVESTMENT NEEDS AND FINANCIAL RESOURCES

2.1: Demand and supply of financial resources, management of the resources flow, absorption capacity and funding gap

Finding ways to attract and mobilise additional financial resources could not be achieved by only looking at the current resources allocated to sector and identifying other available sources and financial mechanisms. This is often the approach taken in similar assessments. The demand side – the investment needs – also matters at least to know what the financing gap is and the accuracy of the WASH service coverage baseline and the accuracy of the investment estimate. Targets set in line with international commitments such as the SDGs or national indicators based on political factors rarely take relevant constraints into consideration, such as the fact that the water sector is capital intensive.

The absorption capacity of the financial resources is another important aspect to be assessed. If the capacity is low, action to remove the bottlenecks in the flow of resources from supply to demand should be prioritised to improve the absorption capacity before substantially increasing any financial resources.

The proper management of resources is a major aspect influencing the absorption. The financial instruments used to channel financial resources are also important. The WASH sector tends to be conservative and does not easily adopt successful instruments from other public infrastructure sectors. The very low sector creditworthiness due to the low performance of the service providers and inadequate tariff and cost recovery policies and practices does not favour innovative mechanisms. There are successful cases worldwide on innovative financial mechanisms but the capacity to scale up is still very limited.

2.2: Main issues and constraints/bottlenecks

As mentioned above, it is important to identify the issues and constraints/bottlenecks and their relevance/severity to define the priorities for the use of additional resources. This is more important for the follow up of the current assessment and support the definition of the scope of the Action Plan.

STAGE 3: THE WAY FORWARD

The assessment undertaken in Stages 1 and 2 should make it possible to define the best solutions to help address the main issues and remove the financial constraints. However, the scale of the actions will vary from national to more local levels such as the District Wide Approach (DWA). The latter could have the advantage of having a bottom-up approach that requires less time and/or a lower cost. Some of the solutions go beyond the scope of the Action Plan proposed in the report for reasons indicated in the strategy (chapter 8.2). These include actions to be taken by the Government, public entities and other stakeholders. However, it is worth promoting national dialogue around the identified issues and proposed solutions.

The Action Plan at the end of this document is based on a clear strategy and the expected output.

3. SECTOR POLICY AND FRAMEWORK

Much of the text included in this chapter is extracted from the documents listed in Appendix 2 with the purpose of understanding the sector policy and framework set for the WASH sector in Rwanda. Some proposals expressed in this chapter might thus not coincide fully with the consultant's opinions.

3.1 POLITICAL COMMITMENT, SECTOR LEADERSHIP AND CONDITIONS FOR A NEW APPROACH

The Government of Rwanda (GoR) shows a strong commitment to achieving the Sustainable Development Goals (SDGs) and made them central to the national political framework and action under Vision 2020, the more recent Vision 2050, and the medium-term Economic Development and Poverty Reduction Strategies, EDPRS 1 and EDPRS 2. The WASH sector is expected to contribute to poverty alleviation and to the national development objective to transform Rwanda into an upper middle-income country by 2035.

The GoR plays an active role in the leadership and coordination of the sector through the Ministry of Infrastructure (MININFRA) under whose mandate the WASH sector falls. The Ministry of Finance and Economic Development (MINECOFIN) also plays an important role, namely in relation to the finance assessment. It reviews the policies that MININFRA publishes and verifies whether they align with overall strategies such as the Vision and the EDPRS.

During the mission it was mentioned that the WASH sector is among the Government's top priorities in terms of budget planning as water supply, sanitation and hygiene are basic needs essential for social and economic development. But the national budget allocation to the sector of about 2% is low compared with other countries in the region. The contacts made during the mission to Rwanda show a strong commitment from all the stakeholders to help the sector move in the right direction. One common opinion is that despite the political commitment, there is a large gap in available funds compared to what Rwanda needs to achieve its WASH targets. The contacts have shown open minds and genuine interest in listening and understanding the proposals suggested by the consultant, in particular during the feedback meeting.

In view of the above, the consultant is convinced that Rwanda is a 'fertile ground' for an open dialogue and shows acceptance of a new approach that will attract and mobilise more funds to the WASH sector. The Action Plan proposed at the end of the report could help promote dialogue on relevant matters related to the objectives of the assessment and start implementing action in the short term that would support the new approach. If successful, the Action Plan could have a demonstration, replication and scale-up effect for other countries with a similar level of good governance.

3.2 SECTOR POLICY, STRATEGY AND PLANNING

NATIONAL WATER SUPPLY AND SANITATION POLICIES AND IMPLEMENTATION STRATEGIES (2016)

The national sector policies classified SDG6, defined in the 2030 Agenda for Sustainable Development adopted in September 2015, as a core objective. They also acknowledge that reaching the ambitious objectives of the 2030 Agenda demands addressing universal and equitable access to drinking water and sanitation along with issues of quality and supply, in parallel with improved water management to protect ecosystems and build their resilience.

Each sub-sector has a dedicated policy that strongly emphasises sanitation (including urban drainage and solid waste management) in order to meet the ambitious national objectives. The sub-sector was lagging behind and sanitation must not again be neglected or just seen as an add on to water supply. The policy implementation strategies were intended to provide guidance for the achievement of the key development goals set out in EDPRS 2, Vision 2020 and SDG6.

The main objectives of the policy implementation strategies that are relevant to the finance assessment are below.

- a) **Investment priority.** Each person and community has equal rights to access to basic sanitation services. Until universal coverage for all is reached, priority will be given to 'some for all' rather than 'all for some'. Water supply, sanitation and hygiene (WASH) basic services should be prioritised and delivered as an integrated package to ensure maximum health outcomes. This priority is also in line with the goal promoted by Sanitation and Water for All (SWA) of leaving no-one behind.
- b) **Service coverage.** Extend urban water supply services to 100% of the urban population. About 90% of the urban population are using an improved water source but only 60% have access to it within 200 metres, which is considered the maximum acceptable distance for urban habitats in Rwanda. Only 39% of urban households have piped water within their dwelling or yard. WASAC will develop and implement a strategic plan to achieve 100% coverage in each of its urban service areas. The strategic plan will clearly map the unserved areas and identify the options to extend water supply services to these areas in the most efficient manner. The GoR will continue its efforts to mobilise resources for investments in water production and distribution systems. Strategies to mobilise private investment for bulk water production will be continued.
- c) **Decentralisation.** The responsibility for service delivery is vested in the decentralised level. The GoR is committed to building and strengthening decentralised planning, implementation and management capacities.
- d) **Improve the performance of service provision.** Cluster service areas to create economies of scale, professionalise service delivery and trigger private investment. The current PPP model, which is based on management contracts with private operators, will be maintained but modified in order to allow for economies of scale and create commercially viable units that are attractive for professional service providers. The remaining schemes under community-based management will also be included in the new, larger service areas. Interested operators will have to demonstrate their technical and managerial capacities to acquire a licence to participate in competition, and contracts between districts and operators in rural areas will include agreed performance indicators and targets to be monitored. For some very large and inter-district schemes, WASAC – as a public commercial utility – may directly act as an operator instead of contracting a private operator.
- e) **Access to the services.** Promote household connections to improve service levels, increase water consumption and improve the financial viability of water supply schemes. New investments should aim at improving service levels in addition to universal coverage. Existing rural water supply schemes have few household connections other than those of public institutions. This leads to very low consumption, in the order of 5 litres per person per day which is not desirable from a hygiene point of view and keeps the revenue base for scheme operation at a very low level. The construction of connections shall therefore be actively encouraged at the planning stage, and one-off subsidies to make the connection costs affordable shall be considered.
- f) **On-site individual sanitation.** Individual on-site systems will remain the sanitary solution for the large majority of Rwandan households in reaching the overall coverage objective. Modern individual sanitation systems shall be designed, made available and affordable to households and operated by them in order to provide affordable and high level of services. The policy considers the role of the GoR to: i) motivate and support households, industries and trade so they improve their own individual sanitation facility; ii) improve the business enabling environment for service providers so they are able to provide affordable services. The final responsibility for household sanitation shall remain with the individuals.
- g) **Financing on-site individual sanitation.** Today, households are the country's largest financiers of sanitation. They devote substantial resources to developing their own on-site facilities. Thus, ownership and behaviour change are critical to sustainably increase sanitation coverage and improving hygiene practices including the proper use and maintenance of latrines; hand washing at critical times; safe water storage and handling; and improved access to local materials and services. Government institutions will therefore focus on promotion

and facilitation, while households will remain the main investor. Well-designed sanitation programmes have shown leverage ratios of up to 1:10 between public and private investments.

- h) Collective sanitation.** The role of the GoR, through WASAC and other utilities, is to plan, invest, operate or delegate the operation of collective sanitation services and facilities, including institutional sanitation, sewerage and treatment plants. Based on the user-pays principle, WASAC and other commercial operators will recover operational costs for urban wastewater services by user fees. The principle shall be applied progressively, starting with recovering the full operating costs for wastewater collection networks and treatment plants. The recovery of investment costs of the fixed assets shall commence at a later stage and will take the financial capacity of the customers into account. Communities shall be involved in the decision and the implementing process with regard to project planning, construction and maintenance of simplified sewerage systems, and will have the option of contributing in kind to reduce costs and lower the tariffs.
- i) Private sector participation.** The sector will continue to promote delegated management through private operators. This strategy is key to enhance the sustainability of rural water infrastructure. The private sector will also be encouraged and supported in developing capacities for investment, construction and service delivery in water supply.
- j) Private sector funding.** Encourage and mobilise private sector investments in new infrastructure and the GoR shall consider options to leverage private capital investments by providing low-interest loans, through output-based aid (OBA) or co-financing. The importance of this type of model is expected to grow in the future, once the sector develops beyond basic service delivery. The available options shall be studied and piloted as soon as possible, in cooperation with the Rwanda Development Board (RDB) and other stakeholders. The types of non-government investments to be encouraged and co-financed are:
- i. investments by private operators in system extensions, rehabilitations and service level upgrades;
 - ii. investments by religious communities in the public interest;
 - iii. community self-help initiatives such as installing rainwater harvesting facilities, self-supply and scheme expansions financed through the 'Ubudehe' programme; and,
 - iv. Participatory approach involving in kind contributions through 'Umuganda' community activities where water material expertise is financed by a third party.
- Global evidence suggests that blended finance (a combination of grants with loans and equity from public and private sources) and pooled financing mechanisms based on PPPs shows potential for application in Rwanda. However, the feasibility of such arrangements to be applied at scale still needs to be established in the WASH sector in Rwanda.
- k) Regulation.** Provide resources for and strengthen RURA's capacity to regulate private water service providers to ensure adequate field monitoring and follow up. This means strengthening capacities for the day-to-day regulation and supervision of private operator licensing, adherence to minimum service standards, monitoring of agreed performance targets/benchmarks and agreed tariffs.
- l) Empower and support to Districts.** Develop district capacities as asset holders and contract managers with support from WASAC/Rural Water and Sanitation Services (RWSS). The Districts will have to play an important role as asset and contract managers. Districts will handle scheme extensions and major repairs/rehabilitations and will handle the funds set aside for this purpose. Districts will act as the contracting party for management contracts with private operators and will ensure day-to-day supervision of contract compliance.
- m) Tariff and cost recovery policy.** The complexity of tariff, cost recovery, financial viability, affordability and pro-poor policies needs to be addressed in the policy and strategy update process. To do this, further analysis is needed to come up with guiding suggestions. O&M costs of water supply infrastructure shall be borne by the users, in order to ensure sustainable service delivery. Affordability shall be addressed by appropriate technologies and enhancing efficiency, rather than by granting subsidies.

- n) Urban water tariffs.** Set urban water tariffs that take into account cost recovery, financial viability and affordability, and ensure improved operational efficiency in order to deliver high-quality services at cost reflective tariffs. A strategy will be developed to reduce non-revenue water (NRW) by lowering both technical and commercial water losses.
- o) Affordability.** Develop and implement a pro-poor strategy for urban water supply. Targeted policy measures will be taken to ensure affordable access to safe water services for low-income and vulnerable households, including those living in informal settlements. In general, the operational costs of urban water services shall be fully covered by user fees and WASAC will operate on a commercial basis. However, the following measures will ensure affordable access to safe water supply services for the urban poor.
- i. An adequate number of public stand-posts (water kiosks) will make water available for those who cannot afford household connections.
 - ii. Water vending at these public kiosks and at other sources will be regulated to avoid excessive prices per jerry-cans.
 - iii. Application of a pro-poor tariff.
 - iv. Prepaid water will be piloted as a means to eliminate the extra cost of water vending.
 - v. Cross-subsidies between types of connections will allow low tariffs for public kiosks and for the first block (0 to 5 m³ per month) of the block tariff scheme.
 - vi. Consider subsidising the installation of private connections to raise service levels for the urban poor.
- p) Rural water tariffs.** Develop rural water tariffs that take into account financial viability and affordability. The regulator, in cooperation with main stakeholders, will prepare tariff guidelines that reflect the O&M arrangements and take into account both O&M costs and affordability. As is the general rule for rural water supply schemes, tariff guidelines will recommend the recovery of the running costs (O&M including repair and replacement of electro-mechanical equipment) and exclude the depreciation of the initial capital investment. Within a service area, cross-subsidies will make pumping schemes financially viable with affordable tariffs possible. The guidelines will also provide guidance on the amount and use of the earmarked reserve to be set aside by the districts for major repairs, refurbishments and extensions. Water sales at water kiosks and public stand-posts will be regulated to avoid excessive prices charged to the poor who buy water by the jerry-can. Specific exemptions will be offered for extremely poor or vulnerable households, based on guidance from relevant institutions. The cost for this free service will be compensated by other consumer categories.
- q) Funding CapManEx.** Provide funds and financing mechanisms for capital maintenance, rehabilitation and renewal investments for existing schemes. The sector will establish a budget line and funding mechanism for scheme rehabilitation, major repairs, upgrades and extensions. Many of the older piped water schemes are coming close to the end of their design life and need substantial refurbishment and/or expansion. In many cases, this is even a precondition to make them viable for commercial operations by a private operator. Funding may also be needed to adapt existing water supply schemes to the new concentrated settlement structures. In addition to these funds, the Districts will also keep separate, ring-fenced escrow accounts holding the monthly royalty ('redevance') paid by the scheme operators. This will be essential to finance major repairs, such as replacing electro-mechanical equipment, but will not be sufficient to cover other capital maintenance and rehabilitation costs.
- r) O&M monitoring information system.** Set up an O&M performance monitoring framework that includes a web-based information system consisting of indicators, reporting and benchmarking procedures. Also set up a web-based information system to monitor the delegated management of water supply infrastructure by private operators. As a first step, a baseline inventory of the status of all existing piped water schemes can be done to capture key information on operational performance, quality of service delivery, contract status, and achievement of performance targets, cost recovery and the condition of key assets.

- s) **SWAp.** Promote sector harmonisation and aid effectiveness by developing a Sector Wide Approach (SWAp) agreed between MININFRA and its key development partners (multilateral agencies and bilateral donors). This will be an inclusive process involving all relevant stakeholders including government institutions, civil society organisations (CSOs) and non-governmental organisations (NGOs), the private sector, and user communities. The SWAp should aim at greater efficiency, reduced transaction costs, coherent monitoring etc.
- t) **Legal framework.** Create a Water Supply Law that establishes legally binding services and management requirements. Define clear formal roles and responsibilities for policy implementation and the legal requirements for a mandatory water safety plan and water quality monitoring programmes. Strictly apply water tariffs, especially in rural areas by service providers, and strengthen the enabling legal framework for private sector participation in the WASH sector.

Sound policies and strategies, namely on financial matters, are unfortunately not yet fully in place. While this creates constraints, it does have the advantage of having the potential to change current practice that is not yet in line with policies and strategies.

SECTOR PLANNING PROPOSED BY POLICIES AND STRATEGIES

The list above does not include all the sector policy and strategy objectives. Instead, it shows a broad and sound framework necessary for sustainable planning and further implementation of investment fully in line with the objectives. In both the water and sanitation policies mentioned above, there is a need for a clear strategy and regional master plan on achieving WASH universal service coverage. The strategy and regional master plan consists of the following key elements:

- i. A complete set of master plans that identify the investment needs and the individual projects needed to fill the gaps. They should include a clear categorisation and prioritisation of projects.
- ii. A financing plan that can be submitted to both Government and development partners. It will make the cost of reaching the EDPRS2 target transparent and will mobilise additional funding.
- iii. An implementation concept consisting of a mix of WASAC-led large-scale, high-impact projects combined with strengthened support to the districts to implement smaller projects.
- iv. A sanitation and hygiene programme that is linked to water supply implementation and that makes use of the implementation dynamics (synergies).
- v. Review and reorganise the management structure of rural water supply schemes. This could be done by creating economies of scale by clustering service areas, in order to attract professional private operators and improve the technical and managerial capacities. The option of establishing regional public utilities could also be considered as an alternative model.
- vi. Build an effective O&M support structure for the management of piped water schemes. Direct support and close monitoring are needed to compensate for the weaknesses of decentralised capacities. These cannot be provided by the districts nor by WASAC/RWSS with their current capacities. An effective support structure should have regional (e.g. provincial) offices and should provide services such as technical advice, spare part supply, credits for major repairs or scheme extensions, capacity building (training), and water quality monitoring.

The total public funding requirements estimated in the Water Supply Policy Implementation Strategy for water supply were about RWF 337 billion (USD 450 million using an exchange rate of USD 1 = RWF 749) for the five-year period 2015/16 to 2019/20. For sanitation, the investment cost was estimated at about RWF 130.7 billion (USD 174 million using the same exchange rate) for the five-year period 2015/16 to 2019/20. All cost estimates were indicative, pending more detailed cost evaluations through a sector investment plan/financial model.

POLICY MAIN SECTOR ISSUES

The following list of issues related to the overall sector development can be considered as a summary of issues and concerns that the sector policy is expected to address, and as successes to build on:

- a) **Financing.** The lack of an overall investment plan does not really allow a proper base to be established for estimating the funding gap for sector targets. It is therefore imperative to develop a sector investment plan to guide the balance of investment to each of the subsectors.
- b) **M&E.** The sector's monitoring & evaluation and disaggregated data collection tool is under development. The performance measurement framework needs to be strengthened with a view to create the basis for results-oriented management, planning and budgeting.
- c) **Capacity building.** Capacity building needs to be addressed systematically at all levels. District capacities and ownership are generally growing as the decentralisation process progresses. However, the nature of WASH projects involves activities and levels of technology to meet high quality standards and these call for specific expertise. To this end, sector-specific backup and training arrangements will support decentralised implementation which will eventually replace the current project implementation units.

One of Rwanda's strengths is that Technical and Vocational Education and Training (TVET) receives considerable attention from the Government. Two new bodies have been created under the Ministry of Education – the Workforce Development Authority and the Integrated Polytechnic Regional Centres. Plans are on the table for a sector capacity needs assessment of the district level. Capacity development strategies will be coordinated with these institutions as well as with the Kigali College of Science and Technology and will be used for academic education and research & development.

FINANCING STRATEGY

i) Water supply

The ambitious goal of achieving 100% coverage in a short time requires a significant, coordinated effort to mobilise the required funds by both the GoR and its development partners. The bulk of the necessary investments, namely in rural areas, will still have to be funded from public sources but innovative finance and new ways to mobilise more financial resources are required.

It is important to make the costs and the funding gap for achieving universal access to safe water known. Resources will be allocated to WASAC (for large projects) and the Districts (for smaller projects) according to the types of projects identified in the master plans.

Funding for the District projects will be partly provided either through earmarked budget allocations or through the Local Administrative Entities Development Agency (LODA). It is furthermore desirable to establish a pooled funding mechanism for donor funds. If this is not viable, donor funds will be channelled through parallel, coordinated projects with harmonised implementation procedures. Financial management, implementation and reporting will follow the same government procedures, irrespective of the source of funding. Decentralised funding shall be linked to appropriate arrangements for technical support and monitoring.

ii) Sanitation

Individual sanitation. Private households, institutions, industries and trade shall continue to finance their sanitation facilities as in the past. As the State holds the overall promoting responsibility, it shall optimise fund allocation and direct its financial means to leverage private investments. It will do this through adequate sanitation marketing, regulation and standards, technical assistance, and training for small enterprises and the informal construction sector. In addition, the State shall promote access to sanitation credit facilities and, under certain circumstances, provide targeted incentives to boost sanitation coverage.

Institutional sanitation. Building and maintenance of these sanitary facilities fall under the responsibilities of the respective institutions (MoH, MINEDUC, MINALOC/Districts). These institutions shall provide the necessary financing for improvements, hygiene promotion and proper maintenance. However, it is proposed to make these investments eligible for funding through the sector's harmonised financing mechanism. Construction and O&M of certain public toilets, for example in stadiums, markets and bus stations, can be outsourced to the private sector that can provide partial or full financing and operate the facility.

Collective sanitation. Public infrastructure such as sewerage systems and sludge disposals require substantial upfront investments as well as operating funds that can, in the best case, only be recovered slowly over extended periods of time. The Government has to provide financing and channel it through WASAC, the state-owned corporation in charge of urban collective sanitation. Alternatively, the Government can establish attractive conditions for a PPP scheme in order to tap into the national financial market and attract private investors/operators. Part of collective sanitation works and services will be financed, built and operated by households and industries themselves. This includes private connections from the premises to the public sewer, new upper/middle class condominiums or industrial pre-treatment plants. Sludge emptying services can be carried out by the private sector as well, provided that pre-set tariff conditions allow for business commitment.

Traditional pit latrines certainly have an economic value, but they have often been built without cash outlay by the household using family labour and locally available material for the construction. On the other hand, improved sanitation facilities require cash for some industrially produced materials and sometimes for qualified craftsmen. In order to support market and business development, and not jeopardise it, subsidies shall be targeted. Subsidies can then boost sanitation demand and should be considered for the following reasons: i) expenditures in sanitation generate an impressive economic return on investment and subsequent health benefits are a foundation for economic development and poverty reduction; ii) even willing to improve, rural and peri-urban lower income households sometimes do not have sufficient cash or savings to invest upfront. Credit mechanisms, subsidised or not, allow spreading credit reimbursements over time in line with the household's income conditions. Credit mechanisms can target individual households, communities and associations. They can act as a guarantee fund for microfinance organisations or reduce the cost of materials provided by local shops.

Only in very specific and well defined cases should subsidies be used to support households in difficult environmental conditions and for which the construction costs of latrines, due to geological conditions, flooding risks etc., are higher than average. Pro-poor subsidies shall be designed for limited periods, and incorporate full impact accountability and effectiveness that is evaluated annually.

As a rule of thumb, subsidies are most efficient if they create incentives for latent demand, mobilise household efforts, promote a specific type of sanitation system, and conform to improved sanitation standards. Output-based aid schemes (OBA) may strengthen demand, but they should above all target the development of the professional construction sector at district level for individual and collective sanitation works.

IMPLEMENTATION FRAMEWORK

The Districts take the lead in planning and implementing the smaller projects of the rural water supply programme, applying their regular procurement, contract management, financial and reporting procedures. The overall coordination is ensured by the District Water Boards (DWB). Water supply performance indicators are incorporated in the Districts' performance contracts. In addition, plans entail a support framework consisting of earmarked funding, technical support, capacity building and monitoring. These will enable the Districts to efficiently implement a programme of the required scope.

Capacity building will target the District Water Engineers as well as other District and Sector officers to strengthen their implementation, supervision and monitoring capacities. Monitoring includes both the implementation progress of the projects and progress towards achieving the universal access goal. For this purpose, a Management Information System (MIS) needs to be improved. It should include indicators that measure the level of sustainability and functionality and make it an operational tool for monitoring implementation progress.

3.3 INSTITUTIONAL FRAMEWORK

The WASH sector falls under the mandate of the Rwandan Ministry of Infrastructure (MININFRA), which publishes the sector's policies and strategic plans. All budget allocations and investments go through the Ministry of Finance (MINECOFIN). The sector is regulated and monitored by the RURA. Other governmental authorities involved with the WASH sector are the Ministry of Health (MoH), Ministry of Local Government (MINALOC) and Ministry of Natural Resources (MINIRENA).

There is a sectoral implementation committee consisting of key stakeholders (ministries, regulator, NGOs, WASAC, private operators) that meets twice a year. There is also a sector working group that consists of all stakeholders that meets quarterly to monitor progress.

MININFRA is the technical arm of the Government under whose mandate the WASH sector falls. MININFRA is mandated to formulate policy, monitor the sector and publish the WASH policies. As WASH services also interact with the policies on health and natural resources, the MoH and MINIRENA are involved in the WASH sector. MINECOFIN is in charge of planning all financing and budget allocations. The Local Administrative Entities Development Agency (LODA) is in charge of distributing funds among the local governments (districts) while the Rwanda Development Board (RDB) is in charge of attracting foreign investments.

RURA is the independent governmental institution with financial and administrative autonomy. It is financed through licence fees from private operators (POs) and bulk water suppliers, as well as regulation fees that consumers cover in their tariffs (0.3%). It regulates the IT, transport, electricity, gas and petroleum, post services and WASH sectors. RURA looks specifically at service provision, which means that it only looks at infrastructure when it affects the service. One of the main functions of RURA is tariff setting. The monitoring capacity to inspect the service provision throughout the whole process of a large number of utilities from source to tap might not be sufficient. It would have to look at water quality (to the customer), network quality, O&M, water access, tariffs and so on.

In 2000, the government began the process of decentralisation, giving the country's 30 districts more revenues and decision-making authority. The Ministry of Local Government (MINALOC) ensures the coordination of good governance and territorial administration programmes that promote economic, social and political development. The Local Administrative Entities Development Agency (LODA) is in charge of distributing funds among the district governments. LODA is connected to MINALOC, as financial decisions made at district level have to go past MINALOC for approval. Districts themselves are the service authorities and can decide on the service provider arrangements.

With LODA being an agency of MINALOC, key administrative procedures for planning and implementation of local government projects are located within this Ministry. LODA also monitors the execution of public investments undertaken through Districts and works with the National Budget Department in MINECOFIN to support Districts in preparing investment related spending plans.

The political, administrative and management decentralisation process also includes the decentralisation of service provision. This creates a highly fragmented framework with about 1,000 small service providers who are unable to gain scale, increase business, recruit skilled staff at local level and are thus not able to perform professionally. The service provision was progressively taken over by private companies that faced the same constraints and that focused mainly on generating profits at the cost of efficiency. This had a negative impact on the quality of the service and customer satisfaction. This issue was acknowledged at national level and led to the following recommendations:

- Promote the creation of economies of scale by clustering service areas in order to attract professional private operators. Improve technical and managerial capacities.
- Directly support O&M and closely monitor it to compensate for the weaknesses of decentralised capacities. These cannot be provided by the districts or by WASAC Directorate of Rural Water and Sanitation Services (DWWS). See chapter 3.5 for more details about WASAC.

The WASAC DWWS is mandated to do the following:

- a) Provide technical support to Districts for the planning, design and implementation of projects and quality assurance (adherence to guidelines, standards and procedures).
- b) Monitor progress and ensure coherence with investment plans and strategic targets.
- c) Do assessments and monitoring related to earmarked grant funding for water supply projects.
- d) Support districts to put WASH facilities management in place.
- e) Build capacity and train local government staff and WASH services providers.
- f) Follow up the District Water Boards and other local stakeholders.
- g) Monitor WASH services management to ensure effective O&M support for rural water supply and service level.
- h) Create an enabling framework for improved WASH supply services.
- i) Ensure reporting of WASH activities.

RDB is in charge of attracting private investments from both domestic and foreign sources. RDB also serves as the Secretariat of the PPP Steering Committee in accordance with Article 2 of the Prime Minister's Order that determines the functioning of the PPP Steering Committee. In line with article 10 of law N° 14/2016 of 02/05/2016 'governing public private partnerships', RDB's role also comprises the function of a specialised advisor for the preparation and implementation of PPPs. This role includes coordinating the negotiation of strategic investments and Joint Ventures with potential investors as well as following up on the use of investments attracted.

Rwanda Environment Management Authority (REMA) is a national regulator that falls under the Ministry of Natural Resources and looks only at environmental monitoring.

3.4 ORGANISATION FRAMEWORK OF SERVICE PROVISION

The Rwandan water sector is divided into an urban and a rural sector. Water is provided through 15 urban water systems (Kigali and some secondary towns), and over 850 rural piped systems. Many of these piped systems are multi-village schemes, some covering more than one district. The biggest one covers 120,000 users. In addition, there are 19,000 protected community managed springs.

Urban water supply is managed by WASAC, a large private company whose only stakeholder is the Government of Rwanda. WASAC supplies water to Kigali and 14 other urban areas. Water in rural areas falls under the responsibility of the local governments (districts) and is supplied through around 1,000 small scale systems, of which about 50% is managed by POs. The GoR promotes the PPP arrangements between Districts and POs to increase the professionalism and efficiency of rural water supply and thereby increases access.

URBAN

The Water and Sanitation Corporation (WASAC) is the mandated entity to provide reliable water and sanitation services in urban Rwanda and is the key implementer of the policy and strategic plan. It operates under the oversight of MININFRA and is regulated by RURA. WASAC supplies water to 20 so-called branches, of which six are in Kigali City and the other 14 comprise six satellite cities and eight smaller towns. WASAC was set up in 2014 after the Government's decision to unbundle the water and energy service provider, EWSA, turning WASAC and Rwanda Energy Group (REG) into two independent separate companies.

An important institutional challenge identified during the policy and strategy formulation process is the distinction between the two major roles and mandates of WASAC: i) WASAC's role as a water utility, and ii) WASAC Rural Water Services Directorate's role as a development and sector support agency. Indeed, these two mandates of WASAC are quite different.

WASAC AS A WATER UTILITY

WASAC as a water supply utility, established as a public corporation, is supposed to operate according to commercial principles. Specific pro-poor measures may require subsidies, but in general the focus is on efficient, operational service delivery and financial viability.

WASAC AS A DEVELOPMENT AND SECTOR SUPPORT AGENCY

District local governments are the service authorities in rural areas and can decide on service provider arrangements. They are the owners of the rural water infrastructure and have the freedom to plan and execute small infrastructure projects that fit in their budget. Funding for development projects that need higher investments should be requested through MININFRA to MINECOFIN. Although districts have the responsibility to decide on the exact service provision arrangements, for rural areas, the government has been promoting PPPs. Under these PPP arrangements, districts contract POs after competitive bidding for the operation and maintenance of the water systems. The district retains ownership of the assets, and the private service provider takes care of their operation, maintenance and administration.

Each District has a District Water Board in charge of the tasks decentralised to the local level. District Water Boards are also the contact point for water user committees and act as the consumers' voice, as well as the contact point for reports and complaints received at lower decentralised levels (village to sector level).

WASAC Directorate of Rural Water Services is an entity with development objectives aimed at strengthening decentralised capacities, implementing projects and reaching strategic targets in rural areas. It is not a water supply operator, does not have revenue, and channels government subsidies for water and sanitation in rural areas and monitors their use. It supports the implementation and management of rural water supply infrastructure, in particular by providing technical support and capacity building to districts and scheme operators. It enables these entities to develop and implement projects and do the O&M. It also monitors performance and sector achievements. In the future, given that sanitation has recently been included, it should increasingly focus on developing an enabling framework for sanitation.

It should be noted that the distinction between the two roles of WASAC is not about urban versus rural service delivery. The difference is about acting as a commercial operator versus a development agency in using public grant funding to support districts and other sector stakeholders. Districts have the main responsibility (project ownership) for the implementation and operation of rural water supply projects.

PRIVATE OPERATORS

Rural Rwanda is supplied through more than 1,000 water systems and approximately 20,000 improved water point sources which include protected springs or boreholes and wells equipped with hand-pumps. The systems are small-scale, with only 27 of them exceeding more than 40 km. The target was for 50% of the schemes to be managed by private operators by 2012 and 100% by 2017. However, progress stalled at about 50% managed by private operators. There are 32 POs that operate in rural Rwanda. Their numbers are going down and several of them cover more than one district, while others operate only a few systems in a part of a district. To reach professional management of all systems, RURA is promoting clustering service providers and restricting the number of licences being issued per district so that there will ultimately be between one and three POs per district.

Initially, the introduction in 2004 of delegated management for rural water supply schemes promoted by the government with the purpose of addressing the issue of service provision by inefficient community-based entities made good progress. More recently, however, progress has stalled and it became obvious that the current management model in which each scheme is managed individually, has failed to attract professional operators. Most of the operators are small local companies, individuals, cooperatives, associations and religious communities. Typically, contracts stipulate that the operator is in charge of day-to-day operations and maintenance, including fee collection, while the district is in charge of system extensions and major repairs. The delimitation between these sets of responsibilities and the conditions for tariff adjustments are usually not well defined. Payment is based on consumption (water meters, jerrycans) and the private operator's remuneration depends on the revenue collected, of which 10% is transferred to the District. Contract duration is typically between two and five years.

An assessment undertaken in 2015, 'Assessment & Improvement of Performance', highlighted key shortcomings as follows:

- not all private operators fully understand their contractual and professional obligations and responsibilities;
- the reports of private operators are sometimes not submitted on time, lack details or contain questionable data;
- districts are often not effective in overseeing the implementation of the private operator management contracts or in analysing the reports received;
- private operators do not receive feedback on reports or requests submitted to the districts;
- in general, districts do not undertake contractual mandates such as routine 'spot check inspections', audits or follow-ups on the implementation of private operator contracts;
- where there are Water Users Committees in service areas, these committees are rarely involved or engaged by districts;
- many water facilities have high NRW levels, while others are not even aware of their levels (no measurements being taken);
- some pumping schemes are reported to not be commercially viable with current tariff levels and revenue collection rates;
- many handpump sources are abandoned for a variety of reasons;
- shortcomings regarding revenue collection include: i) manual billing and revenue collection; ii) some private operators cannot account for a part of the collected revenue; iii) low collection efficiency;
- many private operators are not undertaking water-quality testing or reporting; and
- inadequate skills and experience of private operator staff.

The same assessment made the following recommendations:

- create a strong and effective regulatory framework; provide guidance and support to the private operator;
- adopt an economies of scale approach, life cycle costing approach, cost-reflective tariffs that offer incentives for operational efficiencies;
- cross subsidies within systems and customer categories to minimise recourse for subsidy from the districts;
- allow for depreciation and capital maintenance fund reserves; funds in the reserve account may be invested with due authorisation;
- review private operator contract framework to explicitly clarify suggested changes and recommendations and once discussed and agreed, they should be adopted/modified.

The Government continued to promote PPPs for the management of water supply systems and a new policy was initiated in 2016 when POs started to be licenced by RURA under stricter rules. According to the National Investment Policy definitions prepared by MINECOFIN in April 2017, a PPP is 'a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance'. In Law N° 14/2016 of 02/05/2016 governing PPPs, PPPs are similarly understood as a broad modality to procure public investments with the involvement of the private sector, potentially leveraging private financing and technical know-how to deliver the project. The basic principle for PPPs is that risks are allocated to the party best able to mitigate the respective risk, thereby arriving at an optimal risk allocation.

In order to overcome the lack of capacity, in May 2011 the private operators created a forum called the FEPEAR which acts as a non-profit organisation that promotes the common interests of its members. However, FEPEAR members are losing interest and membership numbers have dropped from 56 to 17. The two largest POs are:

- i) Ayateke Star Company created in 2008 as a cooperative with 200 staff with eight licences and seven contracts in seven districts serving about one million people – an impressive number that shows the potential of the sector; and,
- ii) Aquavirunga whose shareholders are a local company, AquaRwanda, and the PWN public water company from the Netherlands who also provides TA.

The main purpose for creating FEPEAR was to: provide training to PO staff; serve as a platform for sharing good practice; uphold professional standards; and, act as a shared lobby and advocacy group for private operators. However, weak leadership rendered the POs unable to feel the added benefit of membership. Since the financial support stopped in 2014 and FEPEAR is not earning enough through membership fees, the Forum is not operational.

The Rwanda Utilities Regulatory Authority (RURA) developed the 'Regulations on Minimum Required Service Level for Water Service Provision' in 2013 which regulates licencing, monitoring and benchmarking water service providers.

4. CURRENT STATUS OF THE SECTOR

4.1 POPULATION GROWTH AND IMPLICATIONS FOR SDG6

Rwanda is a small country in East Central Africa with a high population of almost 12 million. The population density is among the highest in Africa. The population growth rate between 2010 and 2015 was 2.4% with an average of 4.3 members per household. The urban growth rate over that period was 6.4%. With almost 30% of the population living in cities in 2016, this will bring the urban population to almost 4.4 million by 2020 (data.UN.org). The population is now projected to double by 2050 and 70% of the population will be in urban areas.

To relieve the pressure of urban growth on Kigali, the Government has identified six major satellite cities – Musanze, Rubavu, Muhanga, Nyagatare, Huye, Rusizi and Karongi – as urban growth centres. Beside the capital, Kigali City, and the six satellite cities, Rwanda has another eight medium sized towns.

Rwanda is divided into five provinces subdivided into 30 districts, which are again divided into sectors, cells and then villages for efficient public administration. Kigali City falls under the administration of Kigali City Council and the towns are administered by local government (Districts) and the relevant town council authorities.

A particular challenge for the provision of water supply services arises from the fact that Rwanda's settlement structure is quite dispersed. One way the Government of Rwanda is addressing this challenge is through promoting grouped settlements. In 1994, the Rwandan Government launched a programme to rehouse/cluster rural and low-income urban populations and for them to share public services. Part of the rationale of the concept is that a typical grouped settlement, Imidugudu, of between 100 and 200 families can be more easily provided with access to adequate services, including safe water supply.

4.2 WATER SUPPLY AND SANITATION SERVICES

Based on the 2017 JMP ladder, the levels of basic drinking water access stands at 49% in rural areas, compared to 77% in urban areas, of which 36% is safely managed. Rwandan national statistics present more optimistic data regarding current coverage for water supply: 86.4% for urban households and 72.4% for rural households in 2012 (the baseline used for the definition of the sector policy is outlined in chapter 3.2). However, distance to and reliability of the water sources was not taken into account in these data. The lack of reliable baseline data is recognised and is mentioned in the policy documents. It is known that service coverage is much lower than is often reported.

Rwanda has met MDGs 2015 targets for water and sanitation with coverage of improved water supply and sanitation is estimated at 85% and 83% respectively in 2014. The more ambitious WASH targets and standards under the SDGs, however, significantly raise the bar for what is required. Rwanda is aiming for 100% access to basic water supply and sanitation and 100% access to safely managed water and sanitation services by 2020 and 2030 respectively. The main challenge is funding gaps for increasing access to WASH services, particularly in scattered settlements and hilly areas with difficult access.

The figures below extracted from the reports made available give a broad view of the level of access to basic/improved or safely managed services:

Fig. 1 Access to basic water supply services

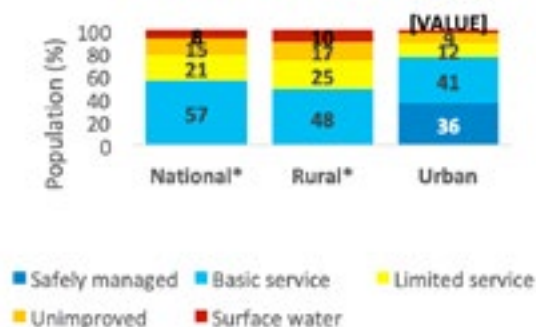
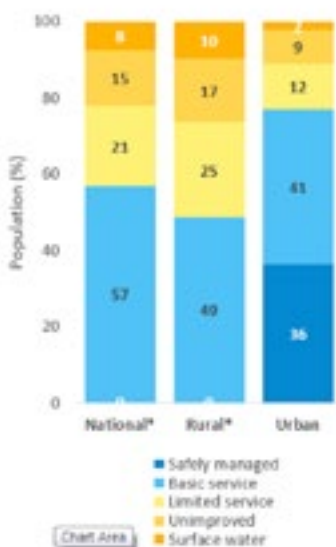


Fig. 2: Access to basic sanitation services



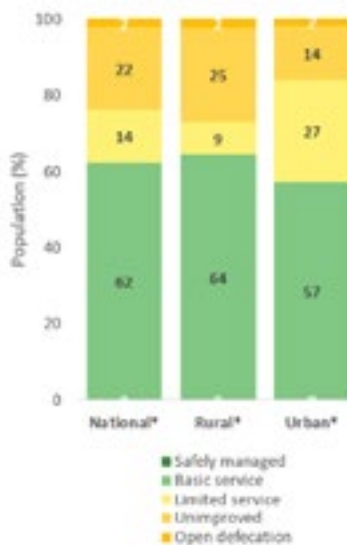
Similar data including hygiene:

Drinking water



*No safely managed estimate available

Sanitation



*No safely managed estimate available

Hygiene



Rwanda	Drinking water			Sanitation			Hygiene		
	National* 2015	Rural* 2015	Urban 2015	National* 2015	Rural* 2015	Urban* 2015	National 2015	Rural 2015	Urban 2015
Safely managed	-	-	30	-	-	-	-	-	-
Basic service	57	49	41	62	64	57	5	2	13
Limited service	21	25	12	14	9	27	9	9	7
Unimproved	15	17	9	22	25	14	-	-	-
No service	8	10	2	2	2	2	86	88	80

In the urban areas served by WASAC, the number of customers over 2017 rose from an average of 187,137 in the first quarter to 223,191 in December, of which about 50% live in the City of Kigali as indicated below.

Total water subscribers, per province and the City of Kigali as of December 2017		
Province	No. Customers	%
City of Kigali	102,835	46.1
Southern Province	27,195	12.2
Northern Province	23,783	10.7
Western Province	32,570	14.6
Eastern Province	36,808	16.5
Total	223,191	100.0

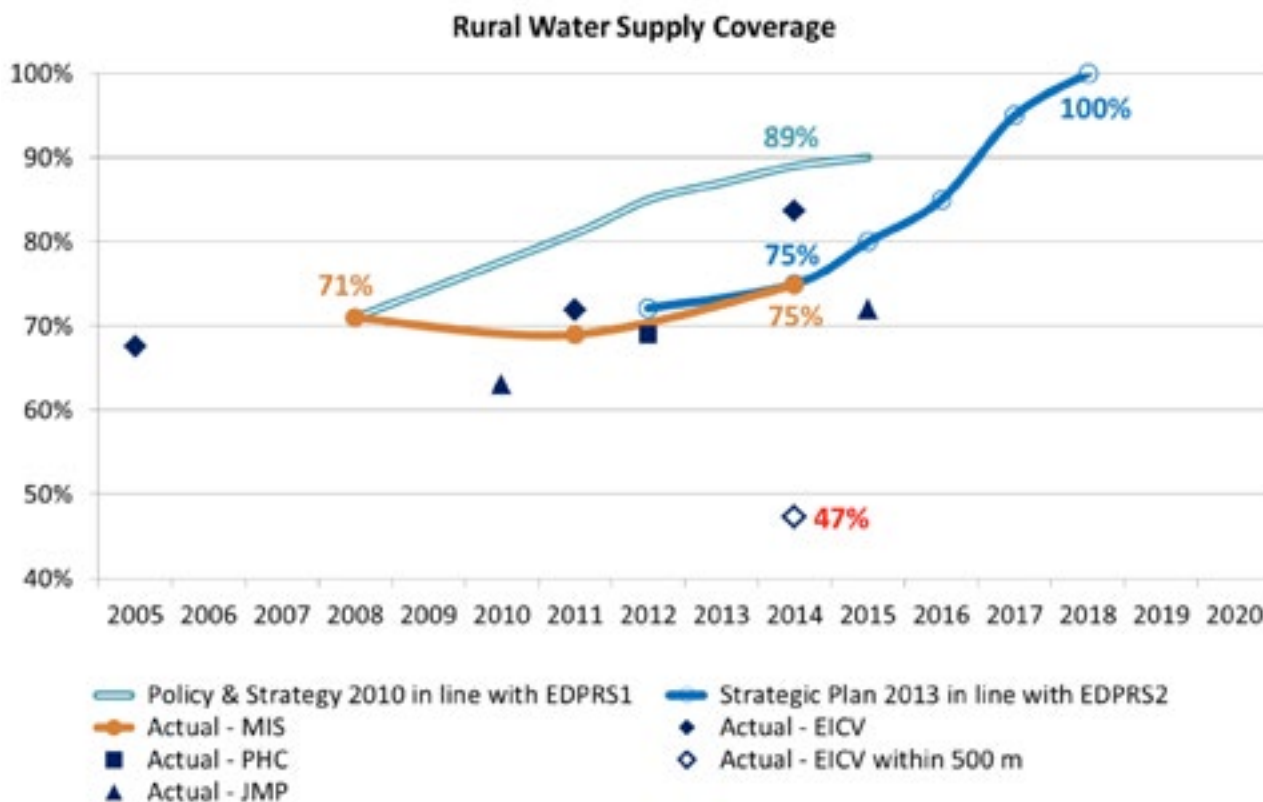
Current WASAC data reveals that Kigali counts on average 11 users per connection and in the six satellite towns the average is 36 users per connection, while in the remaining eight towns one connection serves over 50 people. This is a low service coverage and indicates the likelihood that those without a household connection use water vending services.

The number of rural water customers in these areas is significantly lower, about 10% of urban customers, which is likely due to a lower population density, but they should also be prioritised for investment for access to service.

Rural water subscribers, per province and the City of Kigali as of December 2017		
Province	No. Customers	%
Kigali City	245	1
Southern province	2,662	11
Northern province	7,471	31
Western province	9,935	41
Eastern province	3,972	16
Total	24,285	100

Actual water consumption in rural areas is low and per capita consumption in some areas is in the order of six to eight litres per capita per day, well below the international standard of at least 20 litres per capita per day for basic access. Such low water sales impact negatively on the financial viability of rural water supply schemes, making the cost recovery of OpEx more difficult, especially as public standpipes have relatively high personnel costs from operator fees. The sector should therefore consider ways to increase the number of household connections through subsidised connection fees and promoting private connections, and especially the promotion of yard taps (several families sharing a connection), in project planning.

According to the data available for the MDGs, the rural water supply coverage over the 10 years preceding 2015 was the following:



The trend was positive but there is a significant gap between planned and actual coverage. Moreover, efforts to achieve universal coverage should be higher than the past investment on new infrastructure, which means the availability of more financial resources.

5. INVESTMENT NEEDS & PLAN (DEMAND)

5.1 INVESTMENT NEEDS

The funding requirements estimated in the National Water Supply Policy in 2016 are summarised in the table below. The total public funding requirements for the implementation strategy were about RFW 337 billion (USD 450 million) for the five year period 2015/16 to 2019/20. The costs refer to CapEx funding requirements, and do not include OpEx and CapManEx.

Public funding requirements in the water supply sector 2016-2020			
	RWF billion	USD million	Proportion
Rural water supply – increasing coverage	133	177	40%
Rural water supply – ensuring functionality	42	56	13%
Urban water supply	158	211	46%
Institutional sector framework & capacity building	4	5	1%
	337	450	100%

In terms of sanitation, the estimated investment costs to achieve the national and strategy policy's target were as follows:

- On-site individual sanitation costs = RWF 62.55 billion.
- Institutional sanitation costs = RWF 6.20 billion.
- Collective sanitation costs = RWF 43.96 billion.

The total public funding requirement for the Sanitation Policy strategy was RFW 130.70 billion (USD 174 million using an exchange rate of USD 1 = RWF 749) for the five-year period 2015/16 to 2019/20. All cost estimates are indicative, pending detailed cost evaluations through a Sector Investment Plan/financial model.

In total, the estimate for the five year period was USD 624 million equivalent, corresponding to an annual CapEx investment cost of USD 125 million and a per capita investment of USD 10 per person per year.

A more recent report prepared by the MININFRA, MoH, WASAC and DPs – the data used is not indicated – says that Rwanda will require USD 134 million annually to build and maintain universal basic coverage and an additional USD 286 million to build and maintain safely managed services each year up to 2030. This amounts to USD 420 million every year.

It is expected that updated figures will be provided by the investment master plan currently in progress.

5.2 MANAGEMENT INFORMATION SYSTEM

An M&E system is currently being established to develop a comprehensive, effective and efficient Management Information System (MIS) that will contribute to inform decision making for the WASH sector on meeting the national WASH targets and related SDGs. The system will include separate lists of parameters and indicators for water and for sanitation that need to be measured to assess the level of access.

A high number of indicators will allow better decision making on targeting of resources. Thus, data is needed on availability, levels and functionality of services; where resources are being used (budgets/allocations/expenditures); and the system (service providers' data can also be added if they agree to publish this information). The data should have an option to filter on a number of parameters such as district, sector, cluster etc. Comprehensive knowledge of this type of information will improve the ability to make decisions to target resources to where they are needed. This is the core of achieving goals and making sustainable progress. Decision makers have to know what infrastructure

exists, whether it is providing services, what type of services and who the beneficiaries are. With the data provided by the MIS, decision makers will know where money is being spent and will be able to prioritise investments.

The new MIS will be directly linked to the sector performance monitoring framework, in particular service coverage (sustainable access to safe water and sanitation) and service quality. Its output will be used for strategic decision making and to plan actions or corrections needed to achieve the targets and address problems. The system will be immediately accessible from anywhere and at any time. Given the key role of the Districts in water and sanitation development, this is a key feature to support decentralised planning and monitoring. The new MIS will be hosted at the MININFRA and will serve the information needs of various stakeholders, including local governments and development partners, and will capture data from a wide range of stakeholders, including private operators and NGOs.

In addition to the national level, the system will be designed to support decentralised planning, implementation and monitoring at the district level. The MIS will support data collection, validation, analysis/interpretation and the generation of performance reports. It is physically hosted by the National Data Centre (NDC) and will be administrated and maintained by MININFRA.

The MIS will give the sector a monitoring framework consisting of indicators, reporting and benchmarking procedures as well as a web-based information system to monitor the delegated management of water supply infrastructure by private operators. As a first step, a baseline inventory of the status of all existing piped water schemes will be re-established.

SDG6 has eight targets. Six of them are to be achieved by the year 2030, one by the year 2020 and one has no target year. Each of the targets also has one or two indicators which will be used to measure progress. In total, SDG6 has 11 indicators.

5.3 MASTER PLAN AND FINANCIAL ASSESSMENT

The national sector policy recommends the preparation of a master plan for the sector based on an accurate baseline that will support the preparation of a national financial strategy plan. A master plan was launched in 2018 with the financial support of the African Water Facility. The objective of the master plan for water supply at the national level is to guide, harmonise and standardise the existing water supply master plans and those that will be developed and established on a basis of sub-watersheds in the future.

The purpose of the sector master plan is to provide the Government of the Republic of Rwanda with a long-term 25 year Master Plan and 10 year investment plans for water supply and sanitation for the entire country that will allow the identification and implementation of effective water supply and sanitation projects.

The project's immediate outcomes will be twofold: i) a tool (Master Plan) which will optimise the effectiveness and efficiency of future investments in water supply and sanitation, and that can attract additional funds for these investments; and, ii) improved the capacities of WASAC and 30 districts to plan, design, finance, implement and manage water and sanitation projects and infrastructure.

It is expected that the consultancy will lead to the following results:

- The development of an integrated National Comprehensive Water Supply Plan and Sanitation Master Plan for the sustainable management of water and sanitation that includes action and investment plans with an approved list of prioritised integrated and financially viable WASH projects. The infrastructure (intake, transmission pipes and distribution network) to be created, rehabilitated and extended will be presented in cartographic form and digitized.
- The improved capacity of relevant stakeholders to implement and manage WASH projects and systems, including a management plan for the sustainability of infrastructure.
- Technical design of a few selected small prioritised integrated projects.
- Capacity of the various stakeholders built.

The Consultant will prepare a detailed Integrated Water Supply Master Plan and Sanitation Master Plan for a planning period of 10 years that will include preliminary designs, accompanying measures, economic and financial analysis, a strategic environmental and social impact assessment and a financing strategy and sequencing of investments. The current tariff structure will be critically reviewed vis-à-vis cost recovery – cost reflective pricing, inclusivity, steering effects (demand management), cross-subsidisation and user's capacity to pay.

Scenario Development

Up to three scenarios showing desired ultimate states of water supply and sanitation infrastructure will be defined. They will include services for the entire country ranging from traditional approaches to highly innovative approaches, and technology options, different degrees of decentralisation, utilisation of alternative sources etc. The consultant will develop a multi-criteria assessment of the scenarios that will include:

- a) a financial assessment of: the costs (actual cash value method; parameters such as interest rate, lifespan of investment, O&M cost, reuse profit, period of consideration etc.); the energy/electricity demand; and the minimum tariffs needed to cover O&M and the full system; and
- b) an economic assessment of the secondary benefits linked to environmental protection, improved health and living conditions, improved agricultural and industrial development potential.

The financial analysis will consider tariff assumptions based on a comprehensive tariff analysis supported by the results of the socio-economic survey. It will propose alternative structured tariff options for O&M/full cost recovery including incentives for demand side management. Each scenario should assess the external financing needs for WASAC for a 10 year implementation plan of the investments.

Under the capacity building component of the Master Plan, the consultant will deliver training to various stakeholders on various topics.

- i) WASAC staff: master plan development, water and sanitation MIS and GIS.
- ii) District staff: procurement and contracting, construction supervision, construction coordination, general contractor management, monitoring and evaluation, project identification and design.
- iii) Private operators: O&M of water and sanitation systems, basic accounting, financial management.

The main objectives and scope of the Master Plan described above as part of the ToR are sound and are expected to provide the output required to determine the financial resources requirement, the funding gap and the supply of financial resources to cover the gap to achieve the sector SDGs.

No specific mention is made in the ToR on climate resilience requirements of the WASH infrastructure to be proposed. In the literature made available, no climate resilient WASH investment programme was found either. Climate resilience criteria would facilitate access to Climate Action funds from international donors and attract more funding to the WASH sector, in that it could support the rehabilitation of underperforming facilities while simultaneously rendering the WASH sector more resilient.

6. FINANCIAL RESOURCES (SUPPLY)

6.1 MAIN SOURCES

THE 3TS

The analysis and identification of ways to mobilise and attract additional financial resources to the sector requires assessing the sources that are usually available to the WASH sector and those that are used in the country. It is thus important to start by first looking at the 3Ts concept and clarify the confusion between these three sources and funding mobilised for CapEx and OpEx.

The definition of each of the 3Ts is as follows:

Taxes are financial resources originating from domestic taxes – national, regional and local that are channelled and allocated to the sector via transfers from all levels of government budgets. These resources are usually provided as subsidies for CapEx but can cover OpEx if the third T, tariffs that are paid by the users of the WASH services are too low to fully cover the OpEx.

Transfers are financial resources provided by external sources such as international donors; philanthropic resources from charitable foundations such as NGOs; decentralised cooperation and local civil society organisations; and remittances such as those from the diaspora. These external sources are grants used mostly to subsidise the CapEx, namely for infrastructure serving the lower-income or unserved population but could also cover OpEx as referred above. Concessionary loans (loans that include a grant element in the form of a subsidised interest rate or a grace period) and guarantees provided mainly by development banks are also considered external resources. However, these loans constitute repayable finance, implying a debt service by the other sources. These sources could be taxes if the loan is undertaken by the government (sovereign) and/or tariffs if the government on-lends the loan to third parties such as service utilities who may also borrow directly from the financial market (sub-sovereign). Loans or repayable finance often create confusion and double counting if summed up with the other sources – taxes and tariffs used to service the debt.

Tariffs are financial resources coming from users of WASH services who generally pay the utilities. The cash flow generated by the payment of the tariffs is used to cover the OpEx and the debt service of loans/repayable finance as mentioned above. It could also be used to create the self-financing capacity of the utilities, thus reducing their leverage ratio and debt level. In developing countries, direct household contributions to CapEx could also be relevant if the utilities are unable to provide the service such as when households are located far from the existing network or on-site sanitation facilities. Households often use microfinance for this purpose. If the service is self-supplied – when the household builds and operates a private well and latrine or contributes to a community WASH facility, for example – the equity invested by the household in the form of cash, materials, or time would fall under the category of tariffs.

One of the most important aspects in analysing the availability of financial resources to the sector is the cost recovery and related tariff policy in the country. It is important to ensure that the OpEx is fully covered by the source Tariff for several reasons:

- i) ensure financial autonomy of the utility's annual budget to operate the system;
- ii) create incentives for demand/production/consumption management by the utilities and the customers; and,
- iii) give the population the option to contribute to the sector through paying for their consumption.

Universal access to adequate services is only limited by consumers' affordability. In terms of the affordability constraint, there is also a trend to cross-subsidise tariffs at regional level to ensure cost recovery and reduce the

wide range of unit service costs in urban areas that vary widely according to population density or availability of water resources (abundant or scarce).

FINANCING STRATEGY

The 2016 sector policy and implementation strategy proposes the following financing strategy (quote):

Urban water supply. The operational costs of urban water supply shall be entirely covered by user fees, with the long-term objective to achieve full cost recovery. In the short and medium term, extensions of the production and distribution capacities will be funded by the Government, but the utility will be encouraged and supported to identify other sources of funding, such as loans. The opportunities to mobilise private investment (e.g. in bulk water supply) will be explored.

Rural water supply – new infrastructure. The bulk of new infrastructure and major rehabilitation works will continue to be funded by the GoR and its development partners. Community contributions are important to foster commitment and ownership but will not exceed a percentage of the total upfront investment. NGOs will continue to contribute to infrastructure development. The potential for private investment in new rural water supply schemes is limited: it requires high upfront investments while the revenue base is small. However, the private sector will be involved through PPP arrangements and is expected to invest in extensions or rehabilitations of existing schemes and service-level upgrades. The type and duration of delegated management contracts shall be reviewed to mobilise this type of investments by private scheme operators.

Rural water supply – O&M. As a matter of policy, O&M costs of rural water supply infrastructure will be covered by user fees. Tariffs will be set to ensure the financial viability and sustainability of scheme operations, at a level of cost recovery that includes major repairs and replacement of electro-mechanical equipment but not asset depreciation. Targeted subsidy schemes or cross-subsidy arrangements (by grouping schemes) will be considered in exceptional cases where the local conditions do not allow for cost recovery with affordable tariffs. WASAC will develop guidelines for tariffs and for the use of fees set aside by the districts, while RURA will be in charge of regulation. The Government will support the transformation of existing schemes for delegated management by providing subsidised water meters.

Rural water supply tariffs have to be balanced to reconcile the interests of (1) cost recovery, (2) affordability for the rural poor, and (3) attractiveness for private operators. Updated tariff guidelines will address the following issues:

- a) the level of cost recovery, financial model to be used;
- b) cost components and minimum accounting standards;
- c) grouping of schemes with different cost structures;
- d) subsidies and cross-subsidies;
- e) mechanisms for tariff adjustments; and
- f) amount, earmarking, accumulation and use of the reserve ('redevance') to be set aside by the districts for major repairs, refurbishments and extensions.

Three levels of cost recovery shall be distinguished:

- Level 1: Running costs for operating the water system (staff, energy, consumables)
- Level 2: Running costs + all repairs (including replacement of electro-mechanical equipment)
- Level 3: Running costs + all repairs + depreciation of assets

Progress towards cost recovery will be measured as collected revenue as percentage of Level 1 running costs. Experience shows that even cost recovery at Level 2 may be difficult to achieve for systems involving diesel pumps. These types of systems will be discouraged by promoting instead electrical or solar pumps. In certain cases, subsidies or cross-subsidies may be needed to keep local tariffs affordable.

ALLOCATION OF FUNDS TO THE WASH SECTOR IN RWANDA

The 'Joint Sector Review forward-looking report' for the FY 2018/19 and referring to the Mid Term Expenditure Framework 2018-21, indicates a budget allocation to WASAC Ltd of RFW 39.4 billion (equivalent roughly to USD 45 million) of which 93.4% is allocated to water supply and the remaining 6.6% to sanitation. The budget allocation for LODA is RFW 3.5 billion (USD 4 million) making a total of about RFW 43 billion (USD 49 million). UNICEF information based on public data provided to the consultant refers to a budget allocation to WASH of RFW 49.9 billion in 2018/19.

In the last FY 2017/18 the allocation was RFW 26.5 billion (about USD 30 million), which represents a significant increase in the budget for this year of about 50%.

No information was made available regarding contributions from NGOs, but this type of off-budget allocation to the sector is small in comparison with the on-budget allocation. No data was found about household contributions through tariffs and CapEx.

THE USE OF THE 3TS IN THE RWANDA WATER SECTOR

According to the information provided by UNICEF, the allocation of funds to the sector in 2018/19 will be about 80% from GoR and 20% from donors. According to the same source, the external financing for WASH has slightly increased from RFW 8.9 billion in 2014/15 to RFW 9.9 billion in 2018/19. However, external finance as a share of the WASH sector budget declined from 32% in 2016/17 to 20% percent in 2018/19.

Taxes:

The on-budget allocation confirms that the funding of CapEx in the sector is mainly secured by taxpayers through the national budget to WASAC. As the current tariffs charged by the national utility have been kept below the average/break-even O&M cost, the taxpayers are supporting the OpEx of WASAC and subsidising their customers.

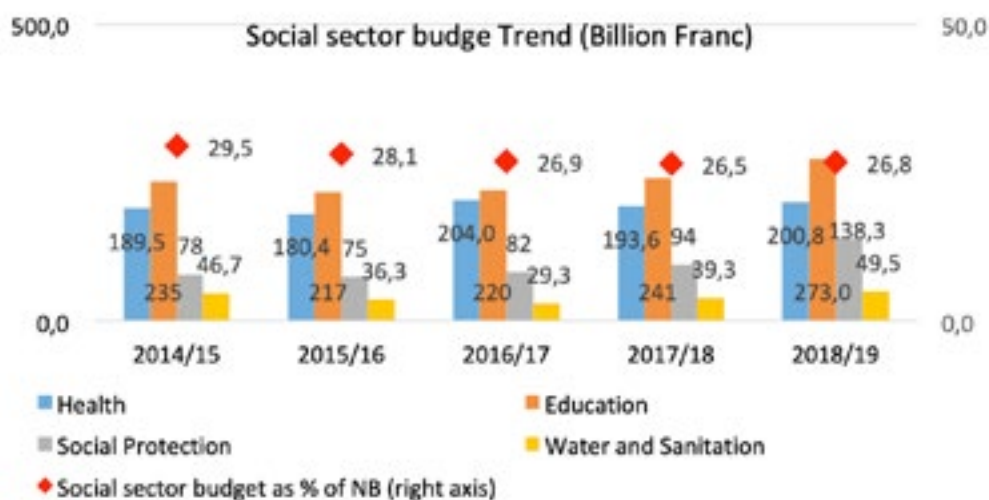
According to some opinions expressed by the contacts made during the mission, the Government currently has an efficient taxation and collection system, and there is still some fiscal space to increase tax revenues. This implies that an increase of budget allocated to the sector might be possible although it will still be limited by competition with other sectors.

According to data provided by UNICEF, the WASH budget as a share of the total government budget has decreased from 2.7% to 2.0% from 2014/15 to 2018/19. This downward trend and the low share of 2% compared with other countries in the region indicates that a substantial increase in contributions from the T-taxes to the sector is unlikely. However, the allocation grew after 2014/15 and might enable an increase to the 2015/16 level. See the UNICEF figures below.

WASH Budget trends - Sources: Calculated using State finance laws



The graphic below shows a comparison with other social sectors.



Another issue is sub-sector allocation – about 92% goes to WASAC for investment on water supply infrastructure in urban areas with very little left for rural areas through LODA and for sanitation. Moreover, as the WASAC investment is dedicated to improving water supply systems of customers already served and new systems for the unserved population in urban areas, the amount of GoR contribution to achieve SDG6 is likely to be smaller than it seems.

One example of a better, or well targeted, use of on-budget allocation is the promotion of household water connections through subsidies. This has been applied successfully in other countries.

Transfers, international aid

Foreign donor money (concessional loans and grants) is very important for Rwanda, and in the recent past constituted about one third of the total national budget. However, the number of donors supporting the WASH sector is decreasing and is currently low compared with other countries in the region.

As mentioned before, external finance as a share of the WASH sector budget declined from 32% in 2016/17 to 20% percent in 2018/19. Apart from the political context mentioned in one report, there were no other reasons mentioned by the contacts made, but it seems that no major increase on the number and amounts of transfers are expected in the short term.

Currently, JICA is the biggest donor in the Rwandan water supply sector. JICA works on urban and rural water supply and funds both hard and soft investments, including the asset survey at national scale. AfDB has not been involved in Rwanda's water sector for a few years, as water was then off the Rwandan Government's priority list. In December 2017, the AfDB board approved a USD 171 million loan for a WASH programme that is expected to be implemented in 48 months from the beginning of 2018 at a total cost of USD 262 million. The contributions will come from a USD 121,137 million AfDB loan, a USD 50 million Africa Growing Together Fund (AGTF) loan, and a EUR 45 million European Investment Bank loan. The Government of Rwanda will contribute USD 40,687 million (15.5%).

Other donors in the WASH sector in Rwanda are UNICEF, the Dutch Government and NGOs of which World Vision, Water for People and WaterAid are the most important and cooperate in joint programmes to support the WASH sector in rural areas (see reference in chapter 8.3).

International aid includes grant contributions such as from JICA and the NGOs mentioned above, or loans. About 85% of the USD 262 million investment programme mentioned above will be concessional loans. These loans are borrowed by the GoR but transferred as grants to WASAC who up to now has not contributed to the debt service.

WASAC is thus fully supported by the taxes collected by the government that feeds the national budget.

The level of WASAC tariffs does not allow for any debt service until it is raised above the utility's break-even average OpEx. It should also be mentioned that:

- i) the infrastructure used by WASAC to provide the services are not owned by the utility. Once transferred as intended by the government, the tariff should cover the asset depreciation, that is, the CapManEx that is currently not considered;
- ii) the price of the bulk water to be supplied under a BOT arrangement signed on 31 March 2015 awarded to the private company called Metito is higher than the average WASAC tariff and the gap covered by the GoR.

The structure adopted for the project is a 27 year concession on a Build, Operate and Transfer (BOT) arrangement. The concessionaire will commit USD 75 million to: finance the design and construction over a two year period; and operate and maintain water production and treatment facilities to deliver up to 40,000 m³/day. The sole off-taker for the project is WASAC, while MININFRA will be the grantor of the project on behalf of the Government.

This agreement is considered as a landmark transaction, as it is the first competitively tendered Water BOT Concession in Sub-Saharan Africa (outside of South Africa) and will result in an investment of USD 75 million from the private sector. This is the largest amount in many years invested by the private sector in WASH in Sub-Saharan Africa.

Tariffs

The table below shows the urban water tariffs applied by WASAC up to recently.

Tariff by consumption block (excl. turnover tax) Category	RWF/m ³	Eq. EUR/m ³
0-5 m ³	323	0.41
6-20 m ³	331	0.42
21-50 m ³	413	0.53
51-100 m ³	736	0.94
> 100 m ³	847	0.97
Industries	736	0.94

In principle, a tariff structure by consumption block should have about three levels: a social tariff below the break-even cost; a tariff at the break-even level; and tariff above break-even level to cover the subsidy amount for the first tariff and allow cross-subsidisation within the utility customer universe. Industrial, commercial and public consumers should pay the second and/or the third tariff depending on the subsidy policy.

The WASAC tariff structure makes little sense with the first three blocks set below the break-even cost of WASAC estimated at about RWF 650/m³. If the average household served by WASAC has five persons, an average daily consumption of 300 litres is subsidised under the current tariffs – a level of consumption of a very high-income consumer.

This situation was recently significantly improved with the increase of the second block from RWF 331 to 720/m³ above the WASAC break-even cost, the third block from RWF 413 to 845/m³ and one fourth block above a consumption of 50 m³ with a tariff of RWF 877/m³ which replace the previous two highest blocks of RWF 736 and 847/m³. Non-residential tariff was also slightly increased and split into blocks below and above 50 m³ of RWF 877 and 895/m³.

The rural water tariff structure is different and tries to reflect the cost of water supply for the different types of technology required as shown below.

Rural Water Tariffs per water system (excl. sales tax)	Tariff RWF/m ³		Tariff/Jerrycan*	
	RWF/m ³	Eq. EUR/m ³	RWF	Eq. m ³
Gravity	287	0.33	7	350
Electricity pumping	731	0.93	17	850
Diesel Pumping	921	1.17	21	1005
Turbo	689	0.88	16	800
Complex System	597	0.68	14	700

• estimated for a jerrycan of 20 litres

In the rural areas there is no cross-subsidisation through different tariff blocks for domestic use, which could be acceptable if the majority of the population has similar incomes, which is most likely in the lower-income levels. There is also no cross-subsidisation between populations served by different types of technology (see the table above) with a wide range of 1:3 between gravity and diesel pumping supply systems. As the rural water tariffs are charged by private sector companies who by nature are profit-making, some systems may allow them to make profits and cover other loss-making systems. It can be assumed that on average the rural water tariffs cover the average actual OpEx. It is evident by comparing urban with rural tariffs that, until the recent change, most of the rural population was paying more per m³ than the urban population served by WASAC, and the former is not subsidised whereas the latter is subsidised.

Options to address this issue could include the following:

- Apply a tariff structure to the urban areas (served by WASAC) as mentioned above with one single subsidised block. The recent change made this system effective. Further, use the categorisation system of the social welfare database to give access to the lowest tariff only to the customers falling in a category below the poverty line.
- In the rural tariff structure include a first block with a subsidised social tariff for all customers on the assumption that the majority of the rural population is low-income or, if justified, for customers in the lower-income category mentioned above. The second block could be set at the level of the break-even cost of supplying water, which means different tariffs to the current ones. There is also the option of providing some geographic or regional cross-subsidisation from outside the system's boundaries by applying the same tariffs to the population served by the infrastructure owned by each District which would apply the same tariffs within its area. This type of cross-subsidisation is often useful to reduce affordability constraints for populations living in areas with high OpEx.

Option (a) has the following advantages for WASAC and the sector.

- It reduces the amount of subsidies for low-income customers and enables a low social tariff – the first block.
- It minimises the cross-subsidisation between the higher tariff blocks and the first block, thus keeping everything affordable.
- It minimises the increase of the average tariff required in the future to cover the CapManEx + OpEx, and gives WASAC the opportunity to start covering part of the CapEx with tariffs, for example by partially serving the GoR debt of concessional loans from donors.

During the feedback meeting, some participants said that this practice has already been adopted by the energy and waste sectors, which confirms the availability of the social database. This option is one among several practical measures that could increase the availability of financial resources based on the T-tariffs.

A study funded by UNICEF on rural water tariffs will be launched soon. Its objective is to provide RURA with the information, advice and methodologies it needs to set rural tariffs. According to the study's ToR, this will include determining:

- accurate reporting on commercial information, financial expenditure and revenue by rural water private operators by: conducting a rapid assessment, providing tools and templates, and providing brief training to enable private operators to improve financial and commercial reporting to RURA;
- affordability for water services by the population in rural areas by conducting a nationally representative willingness and ability to pay survey;
- the tariff structure which defines and addresses customer groups;
- the methodology to set rural water tariffs.

The study will involve four key tasks:

- **Improve availability of adequate financial and commercial information.**
Strengthen rural private water supply operators' capacity to provide adequate, accurate and regular commercial and financial data. This will allow RURA to assess the financial viability of operators and regularly review rural water tariffs thereby enabling private operators to become financially sustainable.
- **Determine Rural User Affordability for Safe Water.**
Design and conduct a willingness/ability to pay survey to determine affordability of rural water supply.
- **Determine the Cost of Regulated Rural Water Service Provision.**
Review the financial and commercial operations of rural water providers to determine the private operator cost of providing water at the level of service required by RURA to the population projected for 2024.
- **Determine Tariff Structure and Tariff-setting Methodology.**
Advise RURA on the best approach to set and regulate rural water tariffs including a proposed tariff structure based on an assessment of rural water demand, customer groups and affordability. Include the categories to be used in tariff structure determination and an end-user rural water tariff setting methodology that aims to ensure cost-recovery of O&M for private operators at affordable rates for all identified sub-groups of customers.

The Action Plan proposed in chapter 9 recommends closely following the results and proposals to be made under the Master Plan concerning the review of the tariffs and the output of the rural tariff study before final approval.

REPAYABLE AND PRIVATE FINANCE

The only repayable and private finance used to cover the CapEx in the sector comes from the repayment of donors' concessional loans by the GoR and the use of BOT to supply bulk water to Kigali.

At country level, Rwanda issued its first bond of USD 400 million in 2013 and it was oversubscribed. It provided a 6.7% yield for 10 year denominations. There is reference to the issuing of shorter term (3-5 year) bonds to invest in infrastructure projects such as the airport and a hydropower scheme and for debt repayment with yields of 11%. No sub-sovereign bonds have been issued. A 2013 PWC report states that countries that have only recently started issuing sovereign bonds, like Rwanda, first need to further deepen those bonds, alongside financial sector governance as a precursor to sub-sovereign or project bonds.

Contact with a commercial bank revealed its interest in funding the sector but hesitancy given that the minimum conditions required to go ahead are not yet in place. The risk is high and the creditworthiness of sector borrowers is almost non-existent, as shown in the case of WASAC – the first utility that may go to the market in the future once it has achieved an adequate level of cost recovery. The example of WASAC parallels the pension funds.

After the mission, contact was made with a UNDP advisor on development finance who is based in MINECOFIN. The advisor mentioned that work is underway on using blended finance. It is based on a study whose ToR are summarised below. The intention is to use several innovative finance instruments including a green bond. The WASH sector is a priority for both blended finance and the green bond. The advisor also mentioned that a Social Finance UK scoping exercise in the sanitation sector of several countries is underway with a view to extending an impact bond. Furthermore, the EU has funded a consultant who is reviewing the overall project pipeline linked to the so called External Investment Plan.

ToR for TA to advise on Rwanda's approach to mobilise new sources of development finance

The TOR set out the scope of work for analysing and guiding Rwanda to catalyse and mobilise substantive levels of development finance from new sources. The emphasis of the country's approach will be on how to crowd-in private and commercial investment and management making use of available de-risking instruments. GoR and Rwanda's development partners are commissioning the work to better understand the constraints and opportunities for enhanced mobilisation and utilisation of commercial and development finance for critical development projects. In line with the ToR, development partners and the GoR will develop, leverage, and formalise relationships with existing de-risking facilities and instruments more strategically and will consider blending public resources with commercial funding, where feasible, in line with the principles of effective development cooperation.

The work was (or will be) contracted by DFID. MINECOFIN, RDB, the WB, USAID, UNDP and DFID will form the contract steering committee which provides quality assurance in collaboration with the Global Partnership for Effective Development Co-operation joint UNDP/OECD Secretariat during contracting and service delivery.

The main objective of the ToR is to inform the approach of GoR, development partners and the local private sector in attracting substantive levels of additional private and development finance. Attracting such capital will require building domestic project design and financial transaction expertise while utilising appropriate incentives and de-risking vehicles, such as different forms of blended finance. This consultancy will also provide a concrete set of recommendations on changes to the mechanisms, technical capabilities and enabling environment necessary to generate robust project structures on a strong economic foundation that will mobilise new forms of capital to foster sustainable development in Rwanda.

The assignment's deliverables are:

- (1) a diagnosis of Rwanda's existing ecosystem for utilising innovative ways to catalyse and mobilise commercial finance and other new sources of financing;
- (2) a gap analysis that articulates the current deficit between the demand and supply of the de-risking instruments, facilities and commercial finance available to Rwanda, including a stocktake of existing de-risking instruments available globally which will point to a sectoral focus or specific limitations; and,
- (3) an actionable strategy outlining how to maximise Rwanda's ability to attract private development finance through appropriate de-risking vehicles, including various models of blending public and private resources.

Deliverable 1 will include the following.

- i) An outline of good practice in de-risking principles and approaches that have been successfully implemented in emerging middle-income countries. Where possible it will highlight examples from East Africa.
- ii) A set of criteria governing the choice of the most appropriate approach.
- iii) An analysis of Rwanda's existing ecosystem of de-risking mechanisms and instruments including non-financial mechanisms such as transaction advisory services to de-risk deal facilitation. It will also outline approaches for de-risking value chains and assess key enabling environment features such as laws, regulations, policies, incentives, systems, processes, coordination mechanisms of key stakeholders, staffing levels and capabilities for project development and the financial structuring of investment deals that are attractive to the private sector, leading institutions and line ministries.

Deliverable 2 will cover a Gap analysis between demand and supply of suitable de-risking instruments, identifying current key barriers for commercial investors to be crowded-in. The demand side analysis will synthesise existing sectoral analysis and investment opportunities to form a list of emerging priority projects that are suitable for innovative finance. The supply side will highlight some types of domestic, regional and international investors, including impact investors that could be mobilised to fund priority projects and initiatives in the short and medium term. Consideration will also be given to domestic and regional institutional investors.

Deliverable 3 builds on findings of Deliverable 1 and 2. It will define a roadmap to maximise Rwanda's ability to unlock additional private finance. It covers the following actions.

- i. Stocktake, appraise and recommend project appraisal standards; guide the selection process of funding structures and/or blending options; and advice on standard terms and clauses for deals.
- ii. Propose a set of criteria to analyse investment opportunities that have the potential for private financing and public-private collaboration using a scorecard approach.
- iii. Propose methods to measure the development impact and to capture and promote learning and adaptation.
- iv. Draft ToR for long term TA to support GoR with pipeline development, transaction advice and deal structuring.
- v. Draft ToR for a platform that convenes joint teams from GoR, DPs, bilateral and multilateral development banks and the private sector to discuss how to best support project ideas or priority reforms with a range of tools that include blended finance.

The ToR is not time-bound and the information provided did not specify if the study was underway or under procurement. Deliverable 3, and in particular the drafting of the ToRs, implies that it will take much time before any blended finance and new mechanisms are available. The BOT process for the supply of water to Kigali took five years to contract signing.

In a workshop on 'Development Credit Authority, putting local wealth to work' that took place in Kigali in October 2018, the following comments were made on the potential for issuing bonds in Rwanda:

Initial Findings: Rwandan Bond Markets

- There are a number of issues precluding bond market development in Rwanda, including:
 - There are ***very few potential local investors***; specifically one public pension fund, a few insurance companies, and new private pension schemes that are not yet fully operational
 - The ***transaction costs for issuing a bond are very high*** due to a lack of investment banks/transaction advisors for the requisite legal and structuring work; this removes the incentive to issue
 - There is a ***lack of investor knowledge regarding the additional benefits*** of purchasing corporate bonds, specifically tax and liquidity benefits
 - There is a ***poor legal framework for municipal/government infrastructure bonds***, and specific issues will need to be resolved; i.e. ownership of assets in both the water and energy sectors
- However, there are also a number of opportunities that can mitigate these issues:
 - The ***banking sector's biggest funding challenge is maturity risk***; most banks are primarily funded by deposits and cannot offer loans of maturity longer than 3 years
 - ***A number of regional investors***, specifically Kenyan pension fund managers, have been active on the Treasury Bond market, and ***would likely add additional competition for high quality corporate bonds***
 - CMA and other government entities are highly motivated to expand the bond market, and ***are willing to take action on a number of fronts to develop the bond market***, including investor education, lower listing fees, and policy reform

6.2 THE FLOW OF FINANCIAL RESOURCES AND ABSORPTION CAPACITY

Financial resources are allocated by the GoR to WASAC and LODA, but no information was made available on the mechanisms and channels. There is no information on lengthy procedures, significant constraints and bottlenecks in the flow of the financial resources from supply to demand. However, the data made available by UNICEF shows declining budget execution rates in recent years from 89.1% in 2014/15 to 65.6% in 2017/18. The causes are not stated but it is a matter of concern that was not referred to by any stakeholder during the mission.

There was also no information available about any Sector-Wide Approach (SWAp) and basket funding by donors. There is a report that refers to the adoption of harmonised procedures for project implementation (technical and financial) in 2008 by the major funding agencies. One element of the harmonised procedures is the Community Development Fund (CDF) that sets targets for WASH investments by district. The CDF also acts as a pooled funding mechanism through which both taxes and transfers were channelled to district government. Later, the goal of the 2010 WASH policy was to create a dedicated Water and Sanitation Pooled Fund that would no longer be part of the general CDF. No further references were found about whether this Fund was established and is being used.

The National Investment Policy Prepared by MINECOFIN in April 2017 states the following about funding public investments (quote):

'In general, there are three sources for funding and financing public investments: i) internal funding sources, ii) external funding support and iii) borrowing as financing source with the requirement to be paid back at least partly.'

Internal funding sources entail domestic tax and non-tax revenues, which are used to fund the recurrent as well as the development budget.

External funding support refers to Budget and Project Support from Development Partners. According to the Rwanda Aid Policy from 2006, Budget Support is the transfer of resources from a Development Partner to the Rwandan budget. The same lines of authority and procedures that govern the normal Rwandan budget are applicable.

There are three main types of Budget Support in Rwanda: 'General Budget Support' is defined as a method of financing the GoR's national budget through a transfer of resources from a donor to the government national treasury account with no earmarking to a sector or programme dealing with budget allocation. 'Sector Support' is budget support provided by a donor with the aim of financing the development objectives in an identified sector. 'Budget Support to Decentralisation' is sector budget support for decentralised entities, channelled through LODA. The third option is 'Project Support', which directly targets defined sets of activities under the development budget.

Borrowing is used for the recurrent as well as for the development budget. It can be differentiated into domestic borrowing, external concessional and non-concessional loans (including financing via capital markets issuing bonds) and public guarantees. Whether a loan is considered concessional depends on the share of a potential grant element and the terms with regard to maturity and interest rates.

WaterAid commissioned Development Finance International (DFI) at the beginning of the decade – no date is indicated in the study – to analyse financial absorption capacity in the water, sanitation and hygiene sector in five countries (Ethiopia, Mozambique, Rwanda, South Africa and Uganda). The analysis was to identify the prevalence of low financial absorption and help identify key steps and conditions for achieving higher levels of absorption and effective spending in the future. Addressing financial absorption constraints is considered an important part of the process of strengthening the water, sanitation and hygiene sector and providing a platform for achieving universal access by 2030.

The findings of the study for Rwanda show a relatively high budget absorption rate for domestic financing, at an absorption rate above 90% for the financial years 2011/12 and 2012/13. There was a lower level of absorption in 2013/14 of 84%, a drop of 10% from the previous year. Interviews and the JSR Backward Looking Report of 2013-2014 show that the reduction in budget absorption performance was principally due to the high level of institutional reform and change, in particular the reforming of the water and energy service provider EWSA that led to the

creation of WASAC. In addition, a large amount of non-absorbed funds appeared to come from the central budget, including for recurrent spending (which is not normally a major issue for budget absorption).

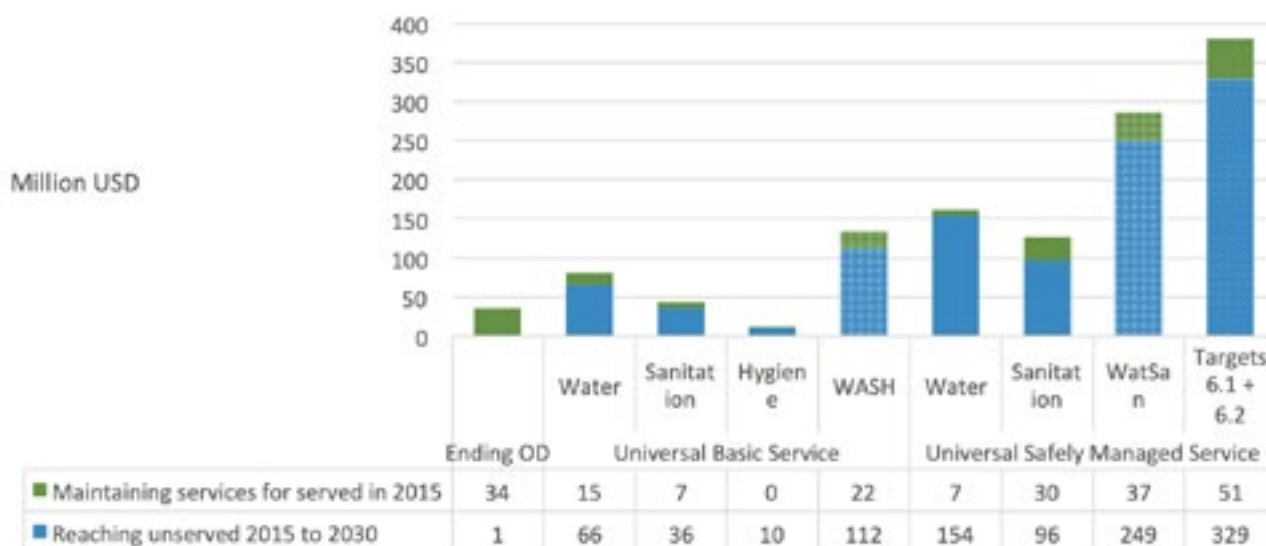
Apart from the development budget allocated to water and sanitation projects or programmes, central government had also allocated substantial funds for WASH sector coordination, water and sanitation policy, strategy monitoring and evaluation. It appears thus that lower budget execution is due to committed donor funds not being translated into actual spending – of a planned externally funded budget of RWF 14.9 billion, the disbursed budget was RWF 8.9 billion, giving an absorption rate of 60%.

6.3 THE FINANCING GAP

A report prepared by MININFRA, MoH, WASAC and the DPs after the establishment of the national sector policy states the following: “The largest share of the investments will be targeted at capital expenditures in the medium-term and will mostly be dominated by investment in rural water supply. These costs are driven mostly by population growth due to migration in urban areas, rehabilitation to maintain services, new construction to expand services. Currently, the financing gap to provide universal basic services is USD 82 million annually”.

To achieve the SDG6 targets by 2030, Rwanda will require USD 134 million to build and maintain universal basic coverage and an additional USD 286 million to build and maintain safely managed services each year up to 2030.

UNICEF indicated that the financial resources allocated to the WASH sector this FY was RWF 49.9 billion, representing a slight increase from RWF 46.7 billion in 2014/15. Therefore, the allocation of financial resources would have to be increased by an average of 2.6 times over the period 2019-2030 to build and maintain universal basic coverage and by more than 8 times to achieve the safely managed services stipulated in SDG6 by 2030.



7. ASSESSMENT OF THE MAIN SECTOR ISSUES AND CONSTRAINTS

7.1 SECTOR ISSUES, BOTTLENECKS AND CHALLENGES

The JSR Backward Looking Report of 2013-2014 does not assess the main sector issues, bottlenecks and challenges extensively or comprehensively. The report provides information on a study called 'Establishing a roadmap to improve the enabling environment for local water and sanitation service providers: Country study for Rwanda' that was presented on 27 October 2017. The study concludes that policy and planning are quite strong in Rwanda, but that plans are often too ambitious and the country lacks the legal framework and capacity at central and decentralised level. Furthermore, there is no sustainable data collection and one of the country's main challenges is the inability to secure enough financing. Rwanda's water supply sector would greatly benefit from the development of a thorough financing plan, capacity (central as well as operational) development and relevant legislation (a central water supply law as well as support on contract management between districts and POs).

The study proposes the following actions to strengthen the enabling environment for water companies in Rwanda.

- Develop a sector financing plan for submission to government and development partners. This would make the cost of reaching national targets transparent and mobilise additional funding for water supply in rural areas.
- Create standard contracts to be used by Districts. These would show the proper process of contracting and monitoring of private operators.
- Design and run capacity building programme at different levels – WASAC urban, WASAC-Development Support Unit, POs, Local level (districts).
- Further support the reviewing and adjusting of the rural tariff structure. The current level of rural tariffs is still insufficient for the POs to break even.

The study considers that a thorough sector financing plan could have a very high impact but also recognises that developing this plan is a complex activity. Regarding the standard contracts between Districts and private operators, the study notes that a contract was created in collaboration with the stakeholders (WASAC, RURA, FEPEAR, POs) in the SusWas project (a Water Operator's Partnership) between WASAC and the Dutch water operator Vitens Evides International that ran between 2012 and 2017). The contract has been ready since December 2015 but is not used as a standard contract. The need for capacity building is also recognised by the Government and is stated in national policy and strategies, but a change in mind-set is necessary to move from an project/asset focus to an operations and sustainability focus.

One unstated but common issue, particularly at decentralised level, is the capacity of project preparation for submission for available resources, for example from the LODA budget. In discussion with the LODA representative, it emerged that Districts do not take the initiative to submit investment programmes, which might be caused by a lack of project preparation. This issue could be addressed support from the new Rural Water and Sanitation Services Agency (see comment below) and from NGOs, for example through the DWA programme.

A country brief entitled 'Achieving the SDGs targets for water, sanitation and hygiene: Rwanda Overview: Water, Sanitation and Hygiene' prepared by MININFRA in collaboration with MoH, MINECOFIN, MINIRENA, WASAC Ltd, with the participation of partners including UNICEF, JICA, Water For People, Water Aid and World Vision, proposes five major actions to achieve the SDGs by 2030:

1. Bridge the funding gaps by increasing public sector allocation, advocacy for increased support from development partners, and promotion and facilitation of private sector and household investments.
2. Roll-out the National Water and Sanitation Fund as a harmonised financing mechanism for the WASH sector.
3. Strengthen sector regulation in urban and rural areas to improve service delivery and sustainability, and achieve the new standards for safely managed services.
4. Strengthen the monitoring mechanism for WASH service delivery through the establishment of a comprehensive WASH sector Management Information System.
5. Strengthen the capacity of, and coordination among, the line ministries, WASH sector institutions and partners at the national and sub-national level.

One of the subjects referred to in the document that requires particular attention and is mentioned in the proposed Action Plan is the institutional rearrangement of the roles and responsibilities of key institutions for all subsectors, especially the role of WASAC as a water utility in urban areas versus WASAC Rural Water and Sanitation Services Directorate's role as a development and sector support agency.

Another key subject is the financing of the sector as the funding gap remains huge. And the levels of disbursement and expenditure need to be improved to make the most of increased sector allocations. Capacity building is another major issue requiring particular attention with the need to: strengthen decentralised capacities; provide complementary support and monitoring at national level institutions that manage and regulate the WASH sector; and provide support to districts as well as the private sector.

The priority actions proposed to ensure the readiness of the sector for the SDGs were to:

- undertake specific studies to generate baseline estimates of safely managed water, safely managed sanitation and institutional WASH;
- put in place effective mechanisms for the coordinated monitoring of the implementation of the national water and sanitation policies and strategies;
- develop district-level plans and capacities for achieving universal access to WASH services;
- develop national-level capacity for strengthening the decentralised institutions responsible for WASH service management;
- increase the share of public resources allocated for improving access to WASH services in rural areas and advocate with development partners for increasing the amount of development financing for WASH in the national budget.

The plans and strategies proposed to reduce the financing gap were as follows.

a. Use existing resources more effectively:

- i. resource allocation strategies will be improved to better target 100% of the vulnerable groups by 30 June 2020;
- ii. WASAC Ltd, Private Water Operators and Districts will gradually improve cost saving measures, particularly in energy use and reduce water losses;
- iii. to ensure transparent management, water and sanitation operators will be assessed annually and the assessment reports will be made public.

b. Access more financing:

- i. public sector allocation for the WASH sector will be increased by at least 20% per year;
- ii. additional resources will be mobilised through advocating for increased support from development partners, promoting and facilitating private sector and household investments, and commercial financing.

7.2 FINANCE RELATED CONSTRAINTS

One key aspect that is usually not mentioned in assessing ways to mobilise more financial resources is the limiting factor of each main source – the 3Ts.

Taxes are limited by fiscal constraints, that is, the capacity of the government to raise more taxes. There is also much competition among national sectors for grants from the national budget.

Transfers are limited by similar fiscal and sector competing constraints in the countries of the development partners as well as by priorities set by the country for external aid. Moreover, when the recipient country moves from low to middle-income status, the ODA will follow a downward trend.

Tariffs are mainly limited by affordability constraints or willingness to pay (Wtp). They are also conditioned by political concerns on price increases of basic and sensitive goods.

In view of the current fiscal constraints in many countries and in particular in developing regions with lower income populations, of the 3T financial sources, only the tariffs have the potential to be increased. However, tariff and cost recovery policies are rarely seen as a tool to mobilise financial resources. Instead, they are outweighed by political/social concerns about WASH prices paid by households.

Affordability is the major limiting factor in mobilising additional financial resources from tariffs. However, affordability is not monitored as the global indicators and studies can be complex and unavailable. This limits the estimate of the amount of funds that could be raised through tariffs. The other key limiting factor is the users' Wtp, which could be lower than the capacity to pay given that users often either consider that poor service quality does not justify the price or they have alternative cheaper options such as private wells, boreholes or open defecation.

A major tool in minimising the affordability limiting factor on the mobilisation of additional financial resources is cross-subsidisation between low and high-income households or domestic and non-domestic (industry, commerce) users. The block tariff structures and social tariffs below the utilities' break-even/cost recovery level are provided for lower-income, vulnerable or disadvantaged populations. Cross-subsidisation could also be scaled-up regionally, for example by expanding the areas served by the same utility.

RURA is tasked with the economic regulation of the sector and could have a key role on tariff and cost recovery practices. However, the role of a regulator is to keep the balance between the financial sustainability of the service providers and the interests of the customers. RURA therefore does not have a role in the financial resources policy and strategy to mobilise more funds. It does therefore not see tariffs as a major source and a tool to achieve that purpose.

In Rwanda, there is now an awareness across the sector that tariffs in both urban and rural areas should be revised. The recent increase of WASAC tariffs approved by RURA is a positive sign confirming this awareness.

Another aspect that needs to be included in the design of the best tariff structure is often hidden and unseen – the 'lack of solidarity' in the WASH sector. The lack of solidarity is visible in the areas below:

- 1) Between the served and unserved population. The former tend not to accept the increase in tariffs necessary to service the debt of loans required to attract more financial resources for the construction of new WASH systems giving access of services to the unserved.

- 2) Between the population living in smaller towns and larger urban areas/towns. The latter have lower investment and O&M unit costs and thus lower tariffs for full cost recovery.
- 3) Between the current generation and future generations. The current generation pays tariffs that do not cover the renewal of the existing assets. Future generations will have the burden of paying for postponed asset renewal costs which will require much higher tariffs to ensure cost recovery.
- 4) Between populations living in regions with excessive and insufficient water resources.

Another relevant subject that impacts on the mobilisation of additional financial resources is the best use of subsidies fed by taxes (domestic source) and transfers (external sources). When a country moves from low-income to middle-income status, as is the intention of the GoR in its Vision 2050 which states that it will be an upper middle-income country by 2035, the international aid will be reduced significantly. This, coupled with the national budget progressively allocating more resources to other sectors, will turn subsidies to the WASH sector into a scarce resource.

Subsidies should therefore be dedicated to specific objectives with high added value such as to:

- i) pay the CapEx of infrastructure serving the lower-income and unserved population thereby contributing to the achievement of the SDGs;
- ii) strengthen the enabling environment by continuing to provide capacity building where necessary and create the conditions for an increase in the efficiency and creditworthiness of utilities who do not have access to repayable finance;
- iii) create the conditions needed to attract and leverage additional funding from repayable finance, namely from private sources (concessional and commercial loans, bonds, equity) and progressively using local currency to mitigate the hard currency risk involved in sub-sovereign borrowing by the utilities with a cashflow generated by tariffs in local currency. This is the concept of blended finance between public and private finance.

The major role of the subsidies in creating the conditions to attract additional funding is to lower the risk and cost of repayable private finance. Several mechanisms could be used for this purpose such as the provision of guarantees. One of the most relevant mechanisms is a revolving fund. This is already practised in several countries at national level in more developed sectors (USA) and at regional level in the region (Ethiopia, Cape Verde, Uganda). Kenya and Tanzania also have revolving funds dedicated to specific objectives.

A national revolving fund has the merit of blending sources and funding in a transparent way. It has higher efficacy and efficiency rates in mobilising funds, and creates a constant flow of funds instead of a discrete deal by deal amount for each project that implies higher transaction costs and dependency on the goodwill of each financier. However, a national fund requires a well-managed structure that is not compatible with public administration procedures and practice. Instead, it should be a dedicated public autonomous entity staffed with a good mix of experts experienced in development banking and the WASH sector.

A revolving fund could take the form of a sovereign risk entity supported by the Government that will contribute grants from the national budget, initially with no obligation to service the debt but assuming debt servicing progressively as the revolving capacity increases. Sovereign risk funds will become cheaper for WASAC to invest in new infrastructure and rehabilitate/renew its facilities, for private operators purchasing their own assets, and for households building their individual sanitation facilities. The blending of the grants would provide more favourable conditions in maturity, interest rates and grace periods as compared to borrowing from the market. In the last scenario, WASAC would have to issue a sub-sovereign bond on the local market and private operators and households would have to borrow commercial loans from local banks.

The risk of lending to a national sovereign revolving fund instead of lending directly to local private companies and households would be much lower for the local banking sector. This implies more favourable/lower cost loan conditions. The revolving nature of the fund entails the repayment by the borrowers, in this case WASAC, Districts, POs and households. They would use the revenue cashflow generated by the users' tariffs or household budget

disbursed over longer periods, which would attract more private resources to the revolving fund and the flow of additional resources to the sector.

The capacity of the public entities to perform well is important in achieving the above objectives. At the central level, WASAC Ltd should have the conditions to become a financially autonomous utility, like NWSC in Uganda. It should own the assets it uses to provide WASH services and be guided by performance indicators and incentives achievable through financial autonomy. This means it should have the capacity for self-funding from the cashflow generated by tariff revenues. This would improve efficiency, such as NRW reduction, and improve the quality of the service through upgraded treatment processes and sampling/quality control of drinking water.

At local level, Districts should have the capacity to:

- i) manage their assets, which means making proper use of the on-going asset survey programme and have the right management tools such as GIS software and hardware;
- ii) apply tariffs and collect the revenues to depreciate and renew the assets;
- iii) establish and regulate the management or lease contracts with private companies with the support of RURA.

Until the Districts have an acceptable level of capability, the WASAC/RWSS should have the conditions to provide support. However, under the current conditions, the WASAC umbrella might not be the right framework. The core goals of a WASAC utility and a WASAC/RWSS are substantially different. The former focuses on service provision while the latter focuses on sub-sector development with no direct implementation and operation intervention.

A subject worth considering in the Action Plan is the support of private sector involvement in the operation of WASH systems in line with GoR goals. One of the major benefits is to professionalise the service provision and enable private interest in making acceptable profits through efficiency gains regulated by RURA. As mentioned above, this approach would help push tariffs to adequate levels by requiring and enforcing the knowledge of accurate data on costs. The MIS can help with this and in so doing, improve the quality of the service and the performance of the service providers through greater competency.

If the process of strengthening the private sector capacity is properly managed, it could support the creation of a hub of private operators in Rwanda. This would stimulate job creation outside the public sector and promote the export of services to regional countries where this level of private sector capacity does not exist.

Last but not least, any future increase in tariffs would be accepted by the population if the quality of the services is improved prior to the tariff increase. Special attention should be paid to the availability and support of investment programmes that endorse this goal.

8. WAYS TO ADDRESS THE FINANCE RELATED ISSUES AND REMOVE CONSTRAINTS

8.1 RECOMMENDATIONS

The ways to address the WASH sector's finance issues and remove constraints are described in detail in chapter 7.2 jointly with a description of the issues. They are summarised below.

- The revision of the tariff and cost recovery policies nationwide with the purpose of using them to increase the mobilisation of additional financial resources in the form of taxes and transfers, faces fiscal constraints and competition with other public sectors in the allocation of financial resources from the national and local budget. There is a need to pay special attention to the affordability ceiling/limit to tariff increase. There is growing awareness across the sector of the need to change the current tariffs applied in urban and rural areas in favour of this recommendation.
- Support the preparation of a Financial Strategy Plan to complement the national Investment Plan based on the Master Plan that is under preparation.
- Create a revolving fund at national level and a public autonomous entity to manage it.

8.2 STRATEGY PROPOSED

The strategy proposed by the consultant for the design of the Action Plan is based on important assumptions outlined below. These were also adopted for similar assessment carried out in other countries under the same assignment. However, there are objectives that are less relevant for Rwanda because of the country's stronger need to promote dialogue and awareness at national level by bringing key subjects into the dialogue with the Government and sector stakeholders. This may be easier to achieve in Rwanda as some key processes such as the tariff and cost recovery policy and practice are starting now. There is also a strong commitment, leadership and openness to new ideas from both the GoR and the stakeholders to changes that will lead to improvements in the WASH sector in the short term.

- It is assumed that the amount of funds available to implement the Action Plan is limited.
- The scope of the Action Plan will consist mainly of soft measures and will minimise hard components such as water supply and/or sanitation infrastructure and equipment.
- A high 'value for money' Plan, that is, a high value added/cost ratio.
- Aim for short term results, quick wins.
- A high leverage ratio of the Plan thus avoiding dilution into other on-going programmes.
- Create conditions for innovation and a leap frog approach.
- Mitigate the lack of solidarity in the sector in view of its strong social purpose.
- Remove the constraints to additional finance to the sector with a particular focus on the unserved and/or the lower-revenue/poor population.
- Create conditions for: one, the demonstration effect where possible and replication of the experiences and lessons learned when implementing of the Action Plan; and, two scale up the Plan and smoothly increase the flow of financial resources.

8.3 PILOT AREA

The actions proposed mainly target a short term change at national level. However, the approach of demonstration, replication and scaling up could be adopted by some specific actions yet to be defined. In this case, criteria to select the pilot area would be a geographic area/region/district where programmes, namely in rural areas, are run with the support of development partners. WaterAid, Water For People and WASAC are piloting the district-wide approach (DWA) in five districts which will result in a costed WASH Investment Plan for these districts and eventual scale-up country-wide. The investment plan could be complemented by a Financial Strategy Plan for the five

districts. Another option is to allocate additional financial resources to roll out the tools developed under the Agenda For Change programme. The tools would:

- i) develop costed WASH Investment Plans for these five districts and document the entire DWA process to serve as a guiding document for other WASH stakeholders who will be involved in the scale-up of this approach country-wide;
- ii) set baseline assessments of service levels and asset assessments in line with the MIS to estimate the costs of establishing new services, and the on-going costs of service delivery; and,
- iii) assess and develop District implementing and operational capacity including service provision by the private sector.

8.4 PROPOSED ACTION PLAN

A. Mobilisation of additional financial resources

- A.1: Propose the creation of a thematic sub-group, 'WASH Finance', under the Sector Working Group to promote the national dialogue on financial matters. It could define the role of tariff and cost recovery policies and practices in attracting and mobilising additional financial resource flows as per suggestions made in this report.
- A.2: Follow the process of WASAC urban tariff setting by RURA and the tariff study for rural areas with the opportunity to review or provide opinions on the output of the study within the context of the WASH Finance working sub-group.
- A.3: Follow the output of the:
 - i) MIS, namely related to cost indicators;
 - ii) Master Plan, in particular Phase 3 that includes a financial strategy and the review of the current tariff structure with respect to cost recovery – cost reflective pricing, inclusivity, steering effects (demand management), cross-subsidisation and user's capacity to pay; and,
 - iii) 'TA to advise Rwanda's approach for mobilising new sources of development finance'.
- A.4: Propose support, through the funding of consultancies to help MINIFRA and MINECOFIN establish a Financial Strategy Plan and adequate methodologies based on sound goals set by the GoR.
- A.5: Propose support, through the funding of consultancies to conceive and design a national Revolving Fund, including a new public autonomous entity to manage it.

B. Improvement of the institutional and organisational framework

- B.1: Bring the topic of WASAC's current dual role of utility and developer of rural WASH services for discussion in the WASH Finance WG. In the discussion include options to strengthen the latter role through transforming WASAC into a public agency. Also look at the topic of asset ownership at district level, asset management and depreciation needs. Identifying the reasons for the recent significant lower absorption capacity after several years of high rates of absorption would also be worthwhile.
- B.2: Support the strengthening of the capacity and role of the private sector in service provision by: i) attracting the interest of international organisations in providing advice and promoting PPPs with local companies; ii) identifying opportunities for TA from international utilities to the local companies and the potential of joint ventures such as the case of Aquavirunga.
- B.3: support a study, for submission to the RDB of the potential and the conditions required to develop a hub of private companies to export WASH services to the region.

C. Remove bottlenecks to the financial flows and increase absorption capacity

Promote the use of the best methodology to identify the bottlenecks, causes and measures to remove it.

D. Identify and choose an area where a demonstration effect could be based and contribute with additional funding

See proposal made in the chapter 8.3.

9. APPENDICES

APPENDIX 1: ENTITIES AND REPRESENTATIVES MET DURING THE VISIT TO RWANDA

N.	Name and title	Organisation
1	Perpetue Kamuyumbu, Country Director	Water For People, Rwanda
2	Bruce Uwonkunda, Senior Programme Officer	Water For People, Rwanda
3	Nick Burns, Chief of Scale and Strategy	Water For People, Headquarters, UK
4	John Ndungutse, Business Development Officer	Water For People, Rwanda
5	Pius Nishimwe, Sanitation Officer	Water For People/SNV Isuku Iwacu Program
6	Joseph Usabimana, Managing Director	Aquavirunga, Ltd
7	Godfrey Kabera, Director General, National Development Planning and Research	MINECOFIN
8	Patrick Ntalindwa, Planning and Research	MINECOFIN
9	Cesar Nkusi Nkwesi, Chief Financial Officer	WASAC Ltd
10	Vincent de Paul Mugwaneza, Director of Rural Water and Sanitation Services	WASAC/RWSS
11	Vuningoma Faustin, Head of Investment Unit	WASAC Ltd
12	Benjamin Rutimirwa, Director of the Economic Regulation	RURA
13	Sibomana Saidi, Deputy Director General	LODA
14	Marcelline Kayitesi, Water and Sanitation Division Manager	MININFRA
15	Fidèle Nteziyaremye, MININFRA/SWAp Secretariat Coordinator	MININFRA
16	Jackson Mugisha, WASH Advisor	WASHFIN
17	Kogi Nakashima, Program Manager	JICA
18	Ananias Sentozi, Integrated Programmes Director	World Vision
19	Alice Muhimpundu, WASH BCC Specialist	World Vision
20	Maurice Kwisera, Country Director	WaterAid
21	Winifred Ngangura Kabega, Head of Investment Promotion and Facilitation Department	Rwanda Development Board
22	Dr Benjamin Rutimirwa, Director of Economic Regulation Unit	Rwanda Utilities Regulatory Authority (RURA)
23	Timmo Gaasbeek, WASH Specialist (not available)	Dutch Embassy
24	Cyprien Sebikwekwe, Chairperson FEPEAR & MD Ayateke Star Company Ntarindwa Emmanuel, Deputy Director	FEPEAR (Umbrella of Private Operators) + Ayateke Star Company
25	Cindy Kushner, Chief of Water, Sanitation and Hygiene	UNICEF
26	Dr Zuberi Muvunwi, DG of Clinical and Public Health Services	Ministry of Health
27	Egizu Nhamaka Emmanuel, Managing Director	GT Bank
28	Marie Claudine Uzamukunda, SME Banking Group	GR Bank
29	Magdalena Kouneva, Advisor Aid Effectiveness & Resource Mobilisation (contact by email)	UNDP/MINECOFIN

APPENDIX 2: LIST OF DOCUMENTS SUPPORTING THE ASSESSMENT AND REFERENCES

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