The District-Wide Approach: Progress review from its application in five districts in Rwanda

Stef Smits, Jeske Verhoeven and Eline Bakker; Perpetue Kamuyumbu, Bruce Uwonkunda and Nick Burn; Maurice Kwizera and Ellen Greggio

September 2020

IRC Supporting water sanitation and hygiene services for life
WaterAid
water for people EVERYONE • FOREVER
AGUA CONSULT

Photo credit: Stef Smits, 2018.

Please cite this publication as follows: Smits. S. et al. 2020. *The District-Wide Approach: Progress from its application in five districts in Rwanda*, IRC, The Hague, The Netherlands

For more information on the District-Wide Approach in Rwanda see:
https://www.ircwash.org/projects/supporting-district-wide-approach-rwanda

The District-Wide Approach: Progress review from its application in five districts in Rwanda

Stef Smits, Jeske Verhoeven and Eline Bakker; Perpetue Kamuyumbu, Bruce Uwonkunda and Nick Burn; Maurice Kwizera and Ellen Greggio

September 2020

Contents

Figures

Tables

Abbreviations

CapEx	Capital Expenditure
CapManEx	Capital maintenance Expenditure
CBOs	Community Based Organisation
DDS	District Development Strategy
DWA	District-Wide Approach
ExpDS	Expenditure on Direct Support
ExpDs	Indirect Support Costs
JMP	Joint Monitoring Programme
LODA	Local Development Agency
MINECOFIN	Ministry of Finance and Economic Planning
MININFRA	Ministry of Infrastructure
OECD-DAC	Organisation for Economic Co-operation and Development's Development Assistance Committee's
OpEx	Operational and minor maintenance Expenditure
PO	Private Operator
RURA	Rwanda Utilities Regulatory Authority
SDG	Sustainable Development Goals
UN	the United Nations
WASAC	Water and Sanitation Corporation
WASH	Water, sanitation and hygiene

Executive summary

This report presents the findings of an assessment of the process and results of piloting the District-Wide Approach (DWA) in Rwanda between 2017 and 2020. Rwanda adopted an approach to decentralised planning and delivery of WASH services by districts, called the District-Wide Approach. In this approach, district governments are responsible for planning for universal access to sustainable WASH services in their district, using the district as the unit of analysis and planning. This approach sought to overcome a number of limitations: 1) limited coordination between different actors working in the WASH sector at district level, 2) a bias towards planning for infrastructure development and less so for its maintenance, and 3) a limited vision on getting towards universal access.

The DWA has been articulated in a set of guidelines, which indicate that the DWA is both a process and an output. The process consists of a number of steps: from visioning and target setting, through assessments and planning and eventually matching the financial resources with the costs. During that process, a number of outputs are created, but ultimately culminating in a district WASH plan, that bring these elements together. This is also complemented by a stakeholder engagement and political decision-making process.

The DWA was piloted in five districts: Bugesera, Gicumbi, Karongi, Ngororero and Nyamagabe. A sixth district, Rulindo, was the district in which many of the bases of the DWA were defined previously, and hence the experiences of Rulindo are also included in this review. The pilot consisted of applying the steps of the DWA, as defined in the guidelines. This was done by a group of stakeholders, with different roles. The Ministry of Infrastructure lead and coordinated the effort, and also supported the mobilization of the political decision-makers in the district. The district itself, particularly through its WASH Board, led the process at district level. Finally there were a number of INGOs who facilitated the process and provided technical support. Also the national utility, WASAC, provided technical support.

The review of the pilot application shows that the DWA, as originally envisaged, has largely been applied. Not all steps have been completed in all pilot districts, and as such the content of the plans developed differs between the districts. Moreover, a number of modifications to the originally envisaged approach con. These include:

- The steps on visioning and target setting, and revisiting those happens in a different way than expected. The districts are well aware of the national targets and have therefore not discussed those in detail. Rather focus was on internalizing those.
- The consolidation of costs and sources of finance is still in progress. This is amongst others due to the fact that it is not always clear which source of funding can be used for what type of cost, nor whether it is useful to aggregate those costs at district level.
- Also the sanitation and hygiene part took off much later and is still in progress. One reason is that planning for sanitation and hygiene has some fundamental differences with planning for water supply, as sanitation is largely a household responsibility. It has taken more time to untangle the specific focus of sanitation planning.
- Moving to the improvement and use of sector tools to inform plans. Since the start of the DWA, improvements or development of national sector systems have been put in place and therefore could supersede use of other tools that were developed by INGOs.
- Districts are not waiting to have a fully-written up plan. The final step of writing up a full plan is skipped in some districts. They start using the projected investments needs to mobilize funds for some of the capital works projects.

Based on these findings, the review concludes that the concept and approach behind the DWA are largely relevant in the Rwandan context. Through facilitation, rural district local governments understand their role as WASH authority, supported by the national government. Furthermore, the DWA addresses the critical challenge of a systematic approach to planning.

The DWA has also been largely effective in achieving one of its goals, i.e. using the plans to mobilize funds for investments in WASH. The initial actions of the districts show that this is happening. Where the DWA is still less effective is in putting emphasis on sustainability of investments. The projections of needs for capital investments have gained most traction with the districts. But the elements that are crucial for sustainability – such as the assessment of district own capacity, the review of operation and maintenance by private operators, and the consolidation of strategies in the plan – have not obtained as much attention.

The costs of the DWA have been more than 100,000 US$ per district. This is a large amount of money, but appears to be reasonable compared to the total value of the districts plans which are multi-millions. Some of the specific steps in the DWA are particularly costly, such as the detailed engineering designs. Some stakeholders express doubts whether this step cannot be done more efficiently.

Finally, it is clear that the sustainably of the DWA itself depends on the technical support and facilitation provided by the partners. Those districts that had more support have progressed further and internalized the results.

All in all, the review concludes that the DWA is in a form in which it can be rolled out to the other districts. The report ends by providing a set of recommendations for the full roll-out. These are all minor in nature and are mostly about further fine-tuning the use of the tools. The only major observations is to provide more technical support and attention to the sustainability related aspects in the planning process.

1. Introduction

1.1 Background

Rwanda has set ambitious targets of achieving universal access to basic water supply and sanitation by 2024 and providing safely managed water, sanitation and hygiene (WASH) services by 2030. To achieve this ambition, new facilities and service provision mechanisms will need to be developed. At the same time, existing service levels need to be upgraded and sustained.

This requires a concerted effort between a range of actors: the Ministry of Infrastructure (MININFRA), district authorities, service providers including the national utility, WASAC (Water and Sanitation Corporation) and private operators, NGOs and others, who all have different roles to play. In the past, those actors did not always plan together or coordinate their efforts. Moreover, the scale in these efforts was often limited, for example focused on a small group of settlements only. In order to achieve the vision of universal and sustained WASH access and overcome some of the coordination challenges, Rwanda adopted the District-Wide Approach (DWA) to WASH services delivery in 2016. In this approach, district governments, which are responsible for realising universal access to WASH services, systematically plan for all the activities and investments that are needed in their district, and articulate the contributions from all stakeholders towards such a plan.

Between 2017 and 2019, MININFRA facilitated testing of the DWA in five pilot districts: Bugesera, Gicumbi, Karongi, Ngorero and Nyamagabe. The objective of the pilot was to establish a proof of concept for the DWA as a viable approach towards the planning for universal and sustainable WASH services within the Rwandan context. In this, MININFRA was supported by several partners, including INGOs and WASAC.

1.2 Purpose of the report

This report presents the progress review of the results of the pilot application of the DWA in five districts between 2017 and 2020. Specifically, this report aims to:

- Describe the steps that were taken in the DWA, as well as the methods and tools applied in each step
- Assess the relevance and usefulness of each the steps (and sub-steps) as well as of the DWA as a whole
- Provide recommendations for scaling up the DWA to other districts in the country

This document complements the existing guidelines for the DWA, by describing and analysing the process that was actually followed. It indicates the extent to which the guidelines were followed, and where modifications were made. It also captures the perspectives of the stakeholders involved on the relevance and effectiveness of the process that was originally envisaged. These are considered important in order to sustain the process in the five pilot districts and understand the implications for the scaling-up the DWA country-wide in Rwanda.

1.3 Scope of the review

The review focused on the implementation of the DWA for access to universal basic water supply in the five pilot districts between February 2017 and June 2019. The process in the districts is in some parts not complete. Therefore we expect that this document may need further updating in due time. But we believe that still there are useful lessons to learn so far. The sanitation component started later and at the time of writing this report was still in progress. The report therefore includes references to the sanitation component, but does not include a full review of that.

Methodology

The methodology used to prepare this report consisted of a desk review of documents that were provided during the pilot application of the DWA. The review included the five district WASH master plans, the tools and guidelines, as well as several papers written that described the process up till then (see reference list).

A stock-taking was conducted of the various elements, and the underlying method and tools, of the DWA in each of the five districts. In addition, a number of interviews have taken place with the stakeholders that were involved in the process to reflect on the relevance of the DWA, the stakeholder processes around it, and the use of the outputs. This included interviews with staff of districts, partner NGOs, WASAC and MININFRA.

The desk study and the interviews were guided by the following questions for each of the five steps (including the activities and outputs) in the DWA process:

- Has the step been completed in all districts?
- How was the step done, with which methods and tools?
- How have the outputs of each of the steps in the process been used?
- What are recommendations for scaling up per step?
- How was the management of the entire process? And what are recommendations for follow-up in five districts, and scaling-up to the other districts?

In order to structure the analysis, we used the Organisation for Economic Co-operation and Development's Development Assistance Committee's (OECD-DAC) criteria of relevance, effectiveness, efficiency, impact and sustainability.

1.4 Structure of the report

After this initial chapter, chapter 2 summarises the DWA and provides an overview of the process, the key steps in it, and the expected outputs from each step. Chapter 3 provides a description of how the DWA was actually implemented in Rwanda. For each defined step, a summary is provided of what was actually done, which tools were used, and a reflection on the usefulness of those. Chapter 4 presents the reflection on the results of the pilot application. Finally, the conclusions and recommendations are presented in Chapter 5.

2. Description of the District-Wide Approach

This chapter describes the DWA, as originally conceived and described in (ref). It does not reflect yet the adjustments and modifications made during the piloting. It first provides a summary of the steps, and activities and outputs under it. It then provides more detail of the main overall output: a district WASH plan. Finally, it emphasises that the DWA is both a process of stakeholder engagement and an output in itself.

2.1 Overview of the steps, activities and outputs under the DWA

The implementation of the DWA in the districts would consist of five generic steps, under which a number of activities are to be undertaken and related outputs are generated (see figure below). The final output of the process is a consolidated WASH plan.

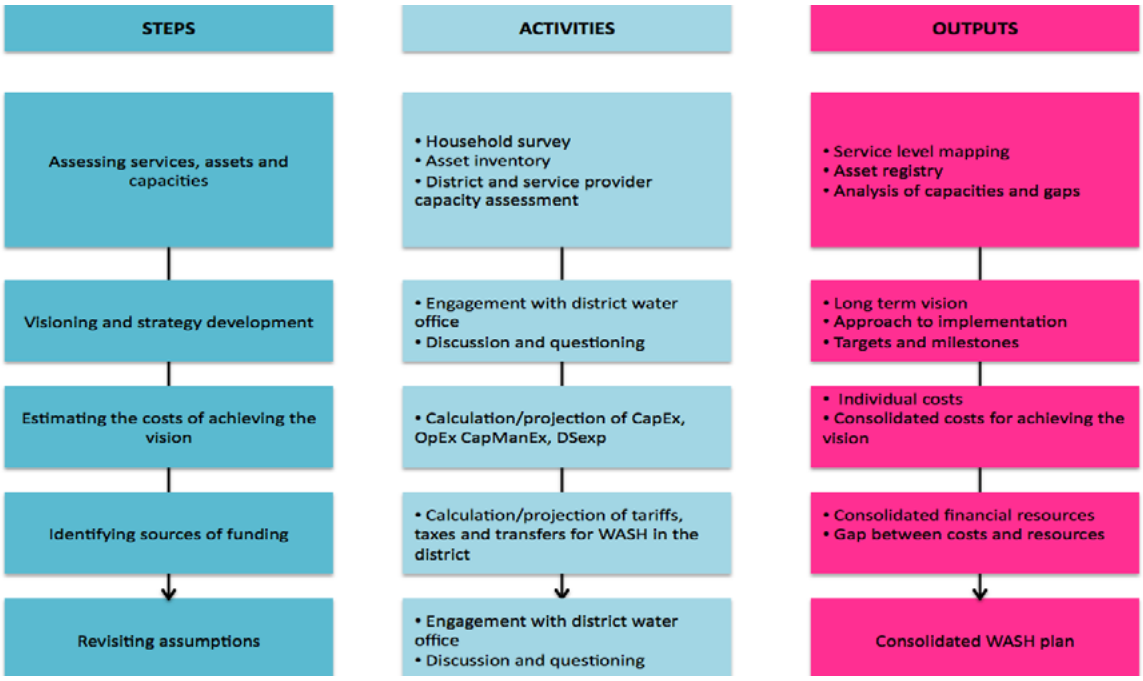

Figure 1: The District-Wide Approach (DWA) guidelines with steps, activities and outputs

The first step of the DWA assesses the current situation through a baseline of WASH service levels, asset analysis of water supply infrastructure and a capacity needs assessment of district officials and private operators (POs). Activities are therefore above all assessment activities. The outputs generated in this step are an overview of WASH service levels in the district, an asset registry and an analysis of capacities and gaps.

The second step entails visioning and strategy development where districts set priorities and develop a clear vision for the future (i.e. 10 years). This is done through activities led by the district water office. Based on the discussions and questioning a long-term vision, including milestones and targets, and an approach to the implementation of the vision is produced. This step is not just about filling gaps in access but about setting WASH service levels to be reached and maintained.

In the third step, districts analyse the costs and resources required to move from the current status to the vision and prioritise resources over time. A life-cycle cost analysis is conducted, with costs projected over a 10-year time frame. The outputs in this phase are a consolidation of costs for achieving the vision next to an overview of the individual life-cycle costs.

In the fourth step, sources of funding are identified through calculating or projecting tariffs, taxes and transfers for WASH in a district. This allows for a financial gap analysis of matching existing funding with the required funding to achieve the vision.

The final and fifth step consists of revisiting all assumptions and creating a consolidated WASH plan. This is done through discussions and questioning and engaging the district water office.

Although the five steps are presented in a linear manner, the nature of the process is iterative and involves revisiting the vision, targets and approaches based on the assessment of current service provision, costs and available financial resources. Where projections are unachievable with available and projected resources, the plans are revisited, discussed and negotiated.

2.2 District WASH plan

The main output of the DWA is a district WASH plan. This plan provides the framework for planning, coordinating investments and guiding the implementation of a vision, and policy objectives for WASH service delivery in a district. The plan articulates the long-term WASH priorities of the district, reflecting national targets and priorities.

The WASH plan provides a long-term horizon (i.e. 10 years) and from this derives medium-term targets and short-term activities (1-3 years). The level of detail provided is high for the first years of the plan and decreases over time. The plan includes funding scenarios in the short, medium and long-term required for delivering WASH services to the entire district population. Plans are fully costed and provide a roadmap of what is required to achieve vision. After its finalisation, the district WASH plan needs to be progressively adjusted as more information becomes available. This allows for more detail to be added.

The consolidated district WASH plans are guided by the national policy. How each district defines the path towards universal coverage dependants on a range of factors as geographical, density of population, water resources, existing infrastructure, demographics and income levels. The DWA caters to this variation by a plan defined by overarching characteristics and decision-making channels.

2.3 Process and output

The above implies that the DWA is both a process and an output, which combines a political/strategic process of decision making with a technical process of assessments and projections of costs with a consultative process with sector stakeholders.

Both the DWA process and the output would support district-decision making through three channels:

1. Technical: the plan is to be developed based on evidence generated through data collection activities and technical studies. It would provide a clear understanding of the current situation and an estimate of costs required to achieve and maintain goals via a defined strategy of approach. Districts use costed WASH plans to identify funding gaps and define funds for mobilising strategies, i.e. advocate with the Ministry of Finance and other institutions, such as the Local Development Agency (LODA) and build partnerships for financing.
2. Strategic: the plan articulates a vision supported by district-level decision makers, which includes a long-term horizon, as well as medium-term targets.
3. Engagement: engagement is sought at each step of the process, with communities, service providers and at district levels, to understand WASH needs and demands, and ensure understanding, ownership and usefulness of the output.

3. Description of the pilot application of the DWA

This chapter describes the pilot application of the DWA. It starts by providing the institutional set-up of the pilot. This is then followed by a description of how each of the five originally envisaged steps were undertaken, and the methods and tools used per step. It then provides an update on the progress for sanitation and hygiene and services in health care centres and schools.

3.1 Institutional set-up of the piloting

The DWA was applied in the five pilot districts: Bugesera, Gicumbi, Karongi, Ngororero and Nyamagabe between February 2017 and June 2019. A sixth district, Rulindo, was formally not part of the pilot. But many of the elements of the DWA were applied there, as Rulindo is the district where the INGO Water For People, had previously tested and developed many of the elements of the DWA, such as service level monitoring, asset registries, and District-Wide planning. For the remainder of the report, we also include relevant experience from Rulindo.

Figure 2: Map of Rwanda with the pilot districts highlighted

The process was led by the Water and Sanitation Department of MININFRA partners WASAC and the INGOs WaterAid and Water For People. Originally, also World Vision and ADRA would play a role, but they had to withdraw from the pilot for budgetary reasons.

Table 1: DWA pilot districts in Rwanda with implementing partner(s)

Pilot District	Supporting partners
Bugesera	MININFRA, WASAC and WaterAid
Gicumbi	MININFRA, WASAC and Water For People
Karongi	MININFR, WASAC and Water For People
Ngororero	MININFRA and WASAC
Nyamagabe	MININFRA, WASAC and Water For People
Rulindo	Water For People

The original division of responsibilities under the DWA was:

- MININFRA defined the approach, coordinated with partners and mobilised districts. It also had a supervisory role across all five pilot districts as it is expected to lead the subsequent further roll-out. It had a small coordination group, responsible for liaising with the district authorities and with the partners. In addition, it had a group of focal points to oversee progress and provide technical assistance.
- WASAC branch offices and its rural support unit provided technical support throughout the process, specifically for example with asset registries.
- WaterAid and Water for People committed technical assistance and financial support.
- World Vision and ADRA were also going to play a facilitating and technical assistance role, but had to withdraw because of budgetary reasons. World Vision, however, remains committed to implement some of the works that are part of the investments plans.
- At district level, WASH Boards were the main body to drive the process.

3.2 Step 1: Assessing the current situation

As indicated in chapter 2, this first step in the DWA would consist of assessing three elements: services, assets and institutional capacity. During the application, a fourth element of assessment, water resources, was added in some of the districts. For each of the assessments, one or more tools were used, as summarised in the table below. The application of each of those is discussed in the subsequent paragraphs.

Table 6: Overview of tools used in the assessment step

Assessment element	Tool used in the pilot districts	Output	Content	Guidance available
Services accessed	Initially based on AKVO FLOW survey and then the national Management Information System (MIS), based on household survey questionnaire	Database with calculated service levels per household	Database containing data on: population, access and service levels. Can be aggregated to village, district or national level	Guidance provided by MIS
Assets	Initially based on AKVO FLOW survey and then the WASAC Excel-based asset registry	Database with information on composition, condition and age of all water related infrastructure assets in a district	Asset registry with details on existing water supply asset components, in terms of age, condition and level of priority for maintenance activities	Guidance from WASAC on asset registry tools
Capacity	Excel-based district capacity assessment tool	Excel sheet with information on the institutional capacity of the district government	Sheet which captures existing district skills against core functions; municipal WASH budget and time dedication against key activities. It also captures training needs.	**Guidance document available**
	Service provider capacity assessment tool	Excel sheet with information on the capacity	Document which supported the assessment of service provider capacities in terms of skills, human resources.	Not yet available
Water resources	Water resources assessment	Status and sustainability of water resources	Assessment of the current status of water resources and their sustainability	No specific tool available, but hydro-geological studies follow a similar logic/ sequence

3.2.1 Service level assessment

The service level assessment was initially done through a survey built on a tool called AKVO FLOW, a tool that Water For People has been using. The districts also used a tool that they were already familiar with, the Rwandan Poverty Profile Report (that uses EICV5 tool), to conduct the service level assessment.

In parallel to the DWA, Rwanda started rolling out a new Management Information System (MIS) for monitoring service levels. That MIS requires household surveys to be carried out, during which households respond on questions around access to, and level of services. The results of these surveys are uploaded into the MIS, the results of which are used to calculate coverage and service level data at different geographical scale level.

Moving forward, the MIS will be the main service level assessment tool, this being the formal national government tool. It will thus replace the use of AKVO FLOW.

The main use of the services level assessment is in defining an overall strategy based on long and short term targets. However, the results have limited use in planning for specific interventions in particular locations. The asset inventory is more relevant for that.

3.2.2 Asset inventory

The asset inventory was initially done by using a specific survey built on AKVO FLOW tool in 4 districts. That captured for each community the type and components of the water infrastructure present in the community, as well as its age and condition.

Since then, WASAC started carrying out a country-wide asset inventory using an Excel database. This initiative was undertaken with the aim to identify new investments. Though there are some minor discrepancies between the WASAC tool and the originally used survey on AKVO FLOW, the essence of what is captured is the same: the main water infrastructure components, their location, condition and age. Through the WASAC effort, there now exists a nation-wide asset registry, though there are still uncertainties about the process of regularly updating the inventory.

The results of the asset inventory have formed the central part of the WASH plan of each district, as it allows:

- Identifying communities where currently no water infrastructure exists, and hence new investments need to be done
- Identifying communities where some water infrastructure exists, but which is unimproved, and hence also new investments need to be done.
- Undertaking asset management on the existing water infrastructure by identifying infrastructure component that currently require, or likely will, capital maintenance works.

3.2.3 Capacity assessments

The capacity assessment covers two aspects: 1) the skills currently available among district staff against core functions, and the training needs, and 2) the staff time dedication of district staff against key activities. This step assesses the capacity of the district as well as the service provider (private operator) in delivering services.

The district capacity assessments originally consisted of an Excel-based checklist of the skills available against core functions. This, however, didn't go into the details of time requirements for activities. For that, an additional Excel-based tool was added, called the direct support costs tool. This captures, the time district staff currently dedicate for their functions and what would be ideally required.

Even though this second part of the assessments has now been done, the time dedication is not (yet) used explicitly in the WASH plans. District staff also have too little knowledge on the results of the capacity assessment and the use of these assessments.

The service provider assessment has been done in five districts through some six guiding questions, but not having a prominent place in the assessment protocol. At district level, results of this not yet used to plan activities to strengthen service providers. The reason for that is that so far, the districts have focused mainly on the infrastructure component which falls under their direct responsibility.

3.2.4 Water resources assessment

A water resources assessment was originally not planned for but has been done in the districts of Rulindo and Gicumbi by Water For People. It has been used to plan local protection works and larger catchment management activities. WaterAid also supported a water resources assessment report for Bugesera. So far, they have not been included however into the district WASH plans. But they can be included in the broader District Development Strategy (DDS).

3.3 Step 2: Visioning, target setting and strategy development

This step was originally envisaged to be the moment in which the district articulates a detailed vision of what intends to achieve and through what channels is established. In practice, this step happened in a different way.

The national government has a very clear vision and national targets for universal access and the time frame for achieving that. Districts are aware of this vision and from that they have been assigned the derived targets. That made that it was not necessary to define a vision and set targets. Rather the step consisted of having discussions to confirm the awareness of these targets, and understanding the targets in relation to the baseline. It was thus more a question of internalising the targets and their implications, rather than of setting the targets.

This discussion didn't happen as a second step in the DWA, but occurred prior to the assessments, or in parallel to some of the assessments. That discussion then also helped in creating an overview of the whole process and the steps in it. Some interviewees considered that it helped in creating the ownership over the rest of the process.

The second part of this step, the strategy development, through discussions on for example which technologies, which service providers to work with, how to focus on capacity strengthening, has only been partially completed in three districts: Rulindo, Gicumbi and Bugesera. This happened mainly through ongoing discussions and in a largely implicit manner. Moreover, it only happened after steps 3 and 4, on costing and finance, were completed. Also districts felt some strategic issues can only be addressed at national level, as they are beyond mandate of district.

3.4 Step 3: Estimating the costs

The third step in the DWA consists of estimating the life-cycle cost of achieving the vision and projecting this over a certain period of time (see figure below). The life-cycle costs that are estimated are: capital expenditure (CapEx), operational and minor maintenance expenditure (OpEx), capital maintenance expenditure (CapManEx) and expenditure on direct support (ExpDS). This analysis excludes indirect support costs as these costs are incurred at regional or national level, and not at district level. All calculations are first done separately before being brought together. Some of these activities (i.e. calculating OpEx) were carried out as part of step 1 but are grouped here for logic.

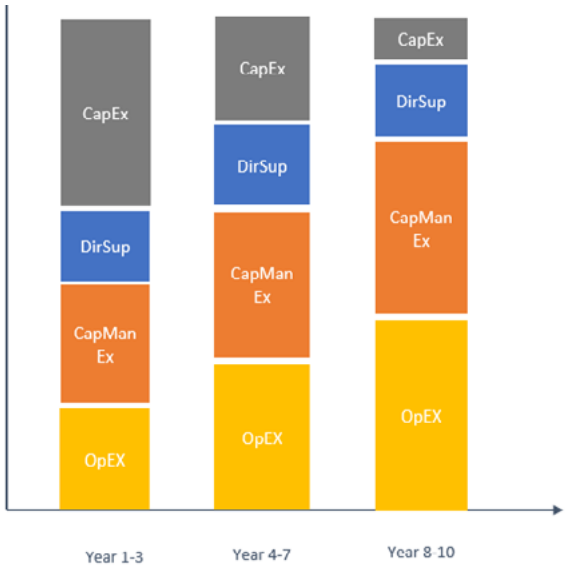

Figure 2: Projection of required life-cycle costs over time to achieve the vision

Each of the cost categories requires different methods and tools for making the estimates. The table below presents an overview of the tools utilised.

Table 7: Approaches and tools used for estimating each of the cost categories

Cost category	Approach used	Supporting tool	Guidance
Capital investment costs	Estimated based on detailed engineering designs for all new infrastructure to be developed	No specific tool used. Based on expertise and insight in unit costs from WASAC.	
Operation and minor maintenance costs	Costs on existing services are calculated from data of existing service providers. Unit costs are extrapolated for new services to be provided in the districts to obtain total OpEx required In Bugesera district, where large water treatment plants are in place, also historical records of costs were reviewed.	AtWhatCost tool	Guidance manual for AtWhatCost
Capital maintenance expenditure needs	From the asset inventory, systems requiring major repairs because of their age and/or condition are identified. These repairs are matched with costs, calculated using pre-identified unit costs per asset component and condition. The costs are then spread costs over a 10-year time span.	CapManEx calculator included in the asset registry)	Manual under development
Direct support costs	Using the results of the district capacity assessment, the gap between required time and resource dedication and the actual dedication is converted into monetary terms.	The district capacity assessment tool to project costs Direct support cost calculator	Guidance document available
Consolidation of all costs	Consolidation of all costs (OpEx, CapManEx, CapEx, expDs) required to achieve universal and sustainable services in the districts.	Consolidated costing tool – still under development	To be finalised when the tool is ready

3.4.1 Capital expenditure

Capital expenditure needs was calculated through detailed engineering designs. These were develop by freelance engineers or WASAC engineers. The choice to develop detailed engineering designs, and derive capital expenditure costs from that was made because the sector stakeholders realised that it would be impossible to provide a comprehensive investment plans without considering the costs of developing new infrastructures. Given the complexity of many water systems in rural areas, these being large systems often combining gravity and pumping, meant that just using unit costs would probably give insufficient detailed information. Moreover, it was felt that by having detailed engineering designs ready, it would help districts with getting subsequent access to funds. Districts contracted an engineering firm to complete detailed engineering designs, which drew out the planning phase.

This step could only draw to a limited extent on the asset registry. That registry does not provide capital expenditure needs; it only identifies communities without access to services. So the asset registry allows to identify the communities, but the actual cost calculations would need to be added separately.

The use of the detailed engineering designs has given some benefits. Districts would be, and have in fact, been using these designs for fund mobilisation. Still some actors question whether it was useful to do all designs for all new systems in a district in one go, or whether that could have better been done per batch.

3.4.2 Operational and minor maintenance expenditure

Operation and minor maintenance cost projections were calculated with the 'AtWhatCost' tool in Gicumbi and Rulindo. In Bugesera, these costs were calculated from a historical review of production costs at the large water treatment plants in that district.

The 'AtWhatCost' provides both the current costs of maintaining services and projects the profitability of a given service provider and system. The user can establish the tariff needed to cover it at the system level. One limitation of the 'AtWhatCost' tool is that at present it can only give operating cost of the existing water supply system. As such, any system that is not constructed at the time of analysis is not included, which means that the OpEx costs for planned systems are not taking into this cycle. Pilot districts reflect that for this information to be taken into the consolidated tool, there is a need to 1) aggregate OpEx at district level and 2) project OpEx to ensure sustainable O&M of services.

These calculations were based on data from private operators, supplemented with data from WASAC, where WASAC is the service provider. The data from WASAC was used to double check whether operation and minor maintenance is covered through tariffs and whether PO's are breaking even.

3.4.3 Capital maintenance expenditure

Calculating capital maintenance expenditure needs was done through an Excel tool using data from the asset inventory. This tool identifies from the asset inventory which infrastructure components are in current need for replacement (because of poor condition or old age) or are likely to need replacement in the coming years (because of age). The costs of replacing these tools is then calculated, using the unit costs for those components. This then is all aggregated to get the required capital maintenance costs for all infrastructure in the district, and how it spreads over the year, using certain prioritisation criteria.

This thus came in essence down to importing the asset inventory data into the Excel tool, and then letting the tool do the calculations. But manual reviews of the outcomes of the calculation were needed.

Only in Bugesera a different approach was taken, as in Bugesera WASAC is the service provider. There, the engineers of WASAC did these more detailed calculations using their own tools – even those are also based on a review of existing infrastructure assets, their age and predicted replacement costs. The situation in Bugesera was more complicated, as there is uncertainty on the contribution of the district to capital maintenance. Though the district must contribute to capital maintenance, this is done on an ad hoc basis (outside of district planning). As such, it was agreed that even though the district might have to fund capital maintenance, this cannot be included in the district- planning process, and these costs should be included in WASAC's asset management plans.

3.4.4 Expenditure on direct support

The costs required to support service delivery were estimated using the following these steps:

i. The initial capacity assessments
ii. Identify the current cost of supporting service delivery through a set of activities (e.g. monitoring visits to communities, training of service providers)
iii. Estimate ideal costs for achieving the vision and milestones.

Direct support costs were estimated through an Excel tool to calculate difference between actual and required direct support. This starts by estimating the current time dedication to the functions of the district, and then estimating what is actually necessary. For that, also the scheduled staffing from the government was used. The tool eventually also converts these time dedications to monetary values, using the salaries of staff. However, the use of the monetary data was felt less relevant. Districts plan on the basis of the number of staff and their time dedication, rather than on the costs of those staff. This included capturing both the existing time dedication, and the required time dedication.

The assessment can be completed in a couple of hours, if information is available at the District Office. If data needs to be collected from NGOs and on the ground, it takes more time. The way it is completed is for District Offices to work together to fill the information, reflect on roles and priorities, and ensure that it is well-communicated and advocated so it does not backlash.

3.4.5 Consolidation of the costs

In order to bring the results from the four cost categories together, a consolidation tool was developed. The idea was that the tool would present the consolidated costs of achieving the vision, source of finance and the financial gap. It would then have as main purpose to stimulate a discussion on revenue mobilisation.

In practice, rather than a dedicated tool, this has become a simple Excel sheet in which manually the results of the four cost categories, and their spread over time, are added up.

3.5 Step 4: Identifying and projecting funding sources and identifying the financial gap

The fourth step entails identifying the projecting the currently available financial resources for WASH in a district over time, and then comparing those to the costs identified in step 3, in order to assess the financial gap.

3.5.1 Identifying and projecting funding sources

Conceptually, the identification and projection of funding sources, follows the framework of the 3Ts: tariffs, taxes and transfers. Those are the only sources of funds that a district would have access to.

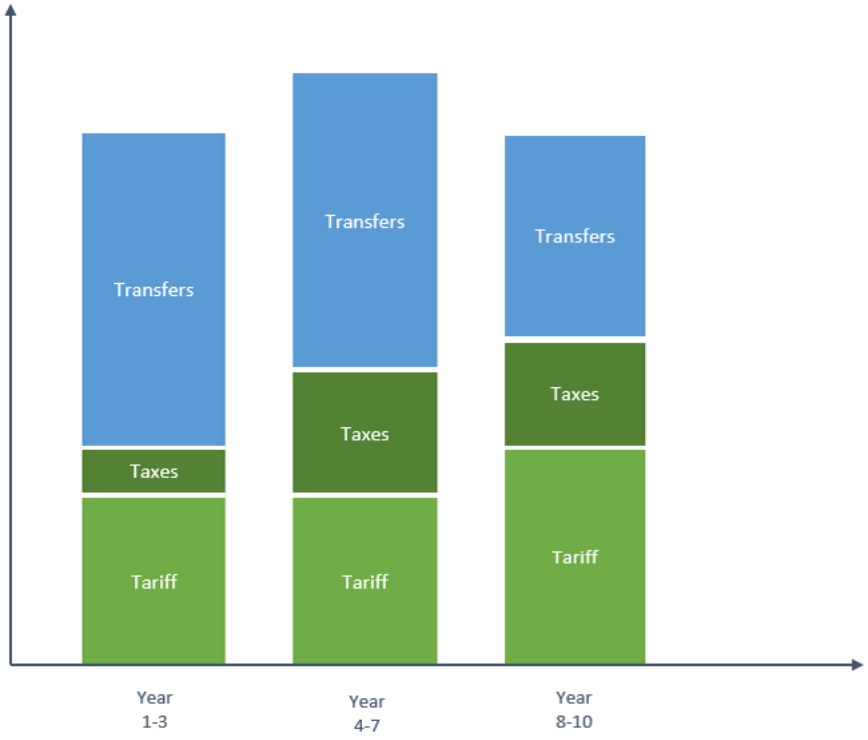

Figure 3: Tariffs, taxes and transfers calculated or projected over time

In order to come to this projection, the following was done:

- For tariffs, a consolidation is made of all the current users of all water systems in the district, the tariff level they pay and collection efficiency. That gives the total tariffs. For future projections, this is expanded by the users on new systems to be built and the tariffs they pay.
- For taxes, the main source of information is derived from district budgets. Taxes are calculated/ projected for current level, and then forecasts for the subsequent three year period. This also then includes the amounts the districts receive from national government
- For transfers, only existing and likely commitments of development partners (particularly INGOs) are made.

The information on tariffs, taxes and transfers is then entered in the Excel-based 'Cost/Revenue' summary tool. So far, this projection has only been partly done. Particularly the projection of tariffs, and from that royalties to the district, proved to be more complex than expected. Also the term transfers caused confusion. Whereas in the 3T framework, it refers to funding from development partners, the term transfer is also used for the financial flows from national to district government.

3.5.2 Financial gap analysis

The next (sub) step is to present the identified financial resources against the overall life-cycle cost, identified during step 3. This allows for a financial gap analysis and results in an overview of financial resources over time and an understanding of the funding gap (see figure below).

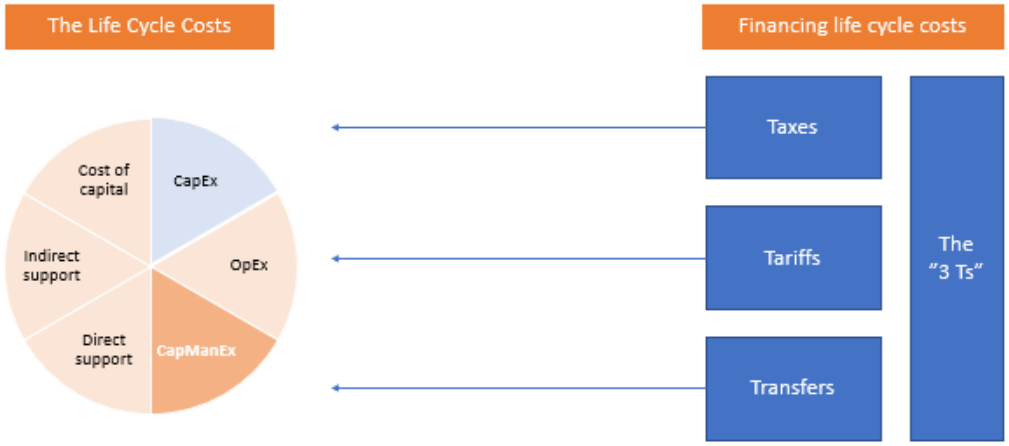

Figure 4: Overview step 4: Life-cycle costs and matched with financial resources; taxes, tariffs and transfers

As shown in the figure below, recurrent costs (i.e. all costs except for CapEx) rises over time together with increases in WASH coverage levels. As the number of infrastructure assets increases, the amount of money needed to continuously operate, maintain, repair and eventually rehabilitate the infrastructure will also rise. If funds continue to be mostly spent on capital expenditure rather than on recurrent costs, WASH coverage levels risk to stagnate. With as a result, not reaching full coverage and poorly performing services.

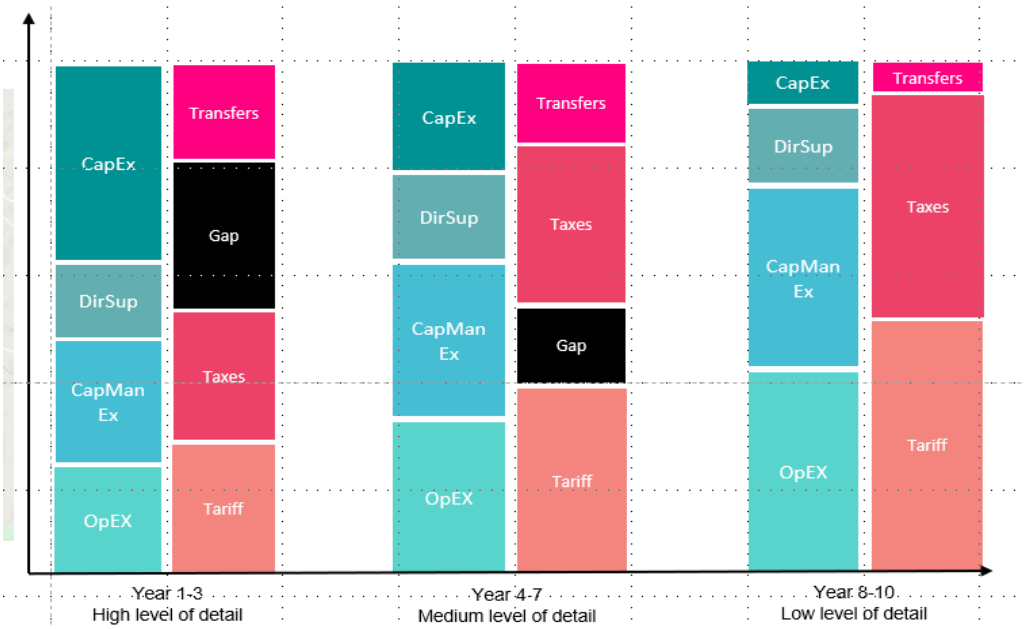

Figure 5: Projection of life-cycle costs and financial resources over time

In practice, this gap analysis is still work in progress. The main reason is that the consolidation of the projected funding sources is still not clear.

3.6 Step 5: Revisiting assumptions and writing the narrative

During this final step all results are packaged into a WASH plan which articulates the results of each step in a synthetic manner. As part of writing the document all assumptions are revisited. The paper-based document of approximately 35 pages spans over a 10-year period and is expected to be revisited on a regular basis. There has however not yet been made a firm agreement on the frequency of revision. For now, we assume this to be on a 3-year basis.

The document first outlines the vision and targets and then provides an overview of the life-cycle costs projected over a 10-year period for achieving the vision, including the financial resources available (see figure below). This enables districts to 1) identify the funding gap, 2) use this analysis as a basis to lobby government and donors for additional resources and 3) potentially revisit the vision and milestones if deemed inadequate/ unrealistic from a financial perspective.

So far, only the districts of Bugesera and Gicumbi have completed a full write-up of the WASH plan, using a standard template. The other districts have a partial write-up, with the section on capital investments completed or the document is available in the form of (PowerPoint) presentations. No real check-based on all assumptions and a reality check was done.

In spite of the limited progress in writing up the district WASH plans, districts have started using the estimates and elements of the plan for fund mobilisation. Some of the districts have started working on specific projects identified under the plan, or obtained commitments of INGOs in their district towards the implementation of the plan.

3.7 Sanitation and hygiene and WASH in institutions as part of the DWA

The focus of piloting the DWA in Rwanda between 2017 and 2019 has initially been on water supply services. The inclusion of sanitation and hygiene and sanitation in institutions[1] (i.e. health care centers and schools) into the DWA started only in July 2019 and were still ongoing in 2020. This lag was due to main reasons:

- The methods and tools for planning for water supply were more developed, so it was easier to apply and expand on those.
- Here are fundamental differences between planning for water and for sanitation and hygiene. Public authorities are responsible for both planning and financing water supply. Their role vis-à-vis sanitation is more limited. They are responsible for hygiene promotion and sanitation marketing activities, as well as some limited subsidies for construction, but in the end, sanitation is largely a household investment decision. So, it was felt that important adjustments would be needed.

The development of an approach, with a supporting set of methods and tools for planning and costing sanitation at household level started in 2019. The process of adapting methods and tools has almost been finalised at the time of writing this report. Partners are in the process of testing the methods. District and partners will have to develop a sanitation and hygiene chapter (detailing all five steps) and add this to the WASH plans at a later stage.

1 Water supply at institutions should have been considered of the water supply plans, though it has not received very specific attention there.

4. Analysis of the District-Wide Approach

The previous chapter has described how the District-Wide Approach was applied in practice and where and how it deviated from the original concept. In order to analyse the results of the pilot application, we – loosely – use the criteria for evaluation as defined by OECD-DAC (ref).

4.1 Relevance of the DWA

The relevance of the DWA is defined by the extent to which it overcomes some of the initial problems with planning for WASH services. The findings from the pilot application indicate that it is relevant in that sense for a number of reasons:

- It has brought together a number of key stakeholders around a common plan to reach universal and sustained WASH at district level, and allowed those stakeholders to buy into it. This is witnessed by the fact some districts started to mobilise funding for WASH, using the plan, from the Local Development Agency (LODA), MINECOFIN, WASAC and development partners. This is an early sign that the planning may overcome the originally identified piecemeal actions of each.
- The DWA has also allowed putting much more emphasis on sustainability of services in planning. Originally, the focus in WASH has been largely on capital investments. By making the district go through all the steps in the DWA, it was made aware of the need to also plan for asset management, replacement and sustainability of services more broadly. Having said that, this is still an area that needs more attention, given that some districts are in their fund mobilisation focusing on capital investments only.

Whereas the DWA in itself can thus be considered largely relevant, there are steps in it, that have more or lesser relevance. For example, the asset registry and its subsequent use for planning new investments and capital maintenance appears to be the most relevant method within the whole process. The monetary part of the capacity assessment has a lower relevance as the results are currently not used. The parts that have to do with staffing and skills development in that sense are more relevant.

4.2 Effectiveness

For some of those same reasons, the processes and outcomes of the DWA shows to have the potential to be largely effective. The WASH plans have already been used to get buy-in from partners for specific investments. This is obviously the main use of the plan.

There are also a number of concerns around its effectiveness. The financial gaps may appear overwhelming and lead to piecemeal planning to get there. Also, there still is a strong bias in the plans and the understanding of districts towards the capital investment.

District staff have too little knowledge on the results of the capacity assessment and the use of the assessments. The capacity assessment also lacks an analysis of current time dedication. The time dedication is not (yet) used explicitly in the WASH plans.

4.3 Efficiency

It cost pilot districts about US$ 110,000 each to define a WASH investment plan, which included detailed engineering designs of water infrastructure performed by consultants. In future, districts may be responsible for funding the process of district WASH planning, and while a WASH plan may cost US$ 110,000 to define, it can be valued at a much larger the investment figure, for example for the district of Karongi the plan is valued at US $ 46 million. That would make investing in the DWA a cost-efficient exercise.

Nevertheless, there are also questions around the efficiency of each step. The DWA process that was piloted was a resource intensive process, particularly the engineering designs and service level assessments.

The timeline for the process of DWA took much longer than anticipated. The number of activities conducted as part of the DWA differed from one district to another. Districts with the strongest process of facilitation and technical support have gone further in the district WASH plans. Others have limited the WASH plans to capital investment assessment only.

4.4 Impact

The DWA was based on a strong multi-stakeholder process. The formal process of review, validation and adoption of the plans was led by the district WASH boards, executive committee and the district council. It also linked to DDS. The district technical staff and WASAC participated in data collection and analysis.

Despite the strong process, understanding of the full process and all elements of the district WASH plan remains limited among district technical staff and executive committee members. There was only partial involvement of other stakeholders (i.e. CBOs and POs). Due to lack of budget some partners withdrew and others stepped in for specific pieces.

Nevertheless, districts have moved forward with planning specific projects and mobilising funds for that, showing strong ownership of the results. Despite limited financial resources to implement DWA, all districts have increased budgets allocations on water and sanitation for their first time ever in this fiscal year 2019/20. The increase in budget allocations is evidence that changes are taking place in prioritisation of WASH services.

4.5 Sustainability

The pinnacle to success of the DWA has been having a dedicated national team that provided leadership, support, guidance and commitment by WASH stakeholders to supporting the process. Such technical support, alongside commitment from the stakeholders, seems key for the results of the DWA to be sustained.

5. Conclusions and recommendations

5.1 Conclusions

The District-Wide Approach has been piloted in five districts of Rwanda. This document sought to describe the way in which this piloting was done, and draw lessons for the further replication of the DWA.

The review of that pilot application shows that the DWA, as originally envisaged, has largely been applied. Not all steps have been completed in all pilot districts, and as such the content of the plans developed differs between the districts.

Moreover, a number of modifications to the originally envisaged approach con. These include:

- The steps on visioning and target setting, and revisiting those happens in a different way than expected. The districts are well aware of the national targets and have therefore not discussed those in detail. Also in the final step, those targets are not revisited. Rather, districts immediately have jumped to using the plans developed for fund raising towards the plan.
- The consolidation of costs and sources of finance is still in progress. This is amongst others due to the fact that it is not always clear which source of funding can be used for what type of cost, nor whether it is useful to aggregate those costs at district level. For example, the tariffs and costs of operation and maintenance don't go through the district accounts. So there is doubt on whether to include them in the consolidation.
- Also the sanitation and hygiene part took of much later and is still in progress. One reason is that planning for sanitation and hygiene has some fundamental differences with planning for water supply, as sanitation is largely a household responsibility. There are some aspects, though, for which the district is responsible, and needs to plan for. It has taken more time to untangle the specific focus of sanitation planning.
- Moving to the improvement and use of sector tools to inform plans. For some of the steps, tools that were originally applied by INGOs have been used. But since then, improvements or development of national sector systems have been put in place and therefore could supersede use of other tools The best example of that is with the current use of the MIS for service level monitoring, instead of surveys built on AKVO FLOW.
- Districts are not waiting to have a fully-written up plan. The part of the final step of writing up a full plan is skipped in some districts. They start using the projected investments needs to mobilise funds for some of the capital works projects.

Based on these findings, the review concludes that the concept and approach behind the DWA are largely relevant in the Rwandan context. Through facilitation, rural district local governments understand their role as WASH authority, supported by the national government. Furthermore, the DWA addresses the critical challenge of a systematic approach to planning. Prior to the DWA, districts also carried out planning, but the DWA has provided a more systematic approach, covering the entire area of jurisdiction of a district, and not at a particular community or scheme.

The DWA has also been largely effective in achieving one of its goals, i.e. using the plans to mobilise funds for investments in WASH. The initial actions of the districts show that this is happening. It is too early notice to assess whether the total investments are going up. But at least the behaviour of districts and sector stakeholders indicate actions towards that.

Where the DWA is still less effective is in putting emphasis on sustainability of investments. The projection for capital investments have gained most traction with the districts. But the elements that are crucial for sustainability – such as the assessment of district own capacity, the review of operation and maintenance by private operators, and the consolidation of strategies in the plan – have not obtained as much attention.

The costs of the DWA have been more than 100,000 US$ per district. This is a large amount of money, but appears to be reasonable compared to the total value of the districts plans which are multi-millions. Some of the specific steps in the DWA are particularly costly, such as the detailed engineering designs. Some stakeholders express doubts whether this step cannot be done more efficiently.

Finally, it is clear that the sustainably of the DWA itself depends on the technical support and facilitation provided by the partners. Those districts that had more support have progressed further and internalised the results.

All in all, the review concludes that the DWA is in a form in which it can be rolled out to the other districts, with some – relatively minor – modifications, which are elaborated below

5.2 Recommendations

This section presents the recommendations for the modification of the DWA. Some are specifically directed to a particular stakeholder. Others will need to be further discussed between all partners involved.

On the institutional set-up of the DWA process

- Differentiate between 'facilitating partners' and 'contributing partners'. The facilitating partner can be government focal points or an NGO, who is in charge of supporting the districts from the beginning to the end. A contributing partner can support one or more parts of the process, but is not in a position to support a district for the whole process.
- Strengthen the involvement of district level staff (including WASAC) in the analysis and interpretation of the various elements to ensure continuous contribution and ownership of the outcomes .
- Involve the Private Operators more strongly in the DWA, with dedicated sections in the district WASH plan on their performance improvement.
- As part of any introduction to the DWA, also include a broader orientation to the WASH sector for the leadership at district level
- MININFRA needs to develop a technical assistance plan to accompany the roll out that includes the role of WASAC support engineers (review their ToRs), and staff from MININFRA and partners.
- The potential role of Provinces, or staff placed at provincial level needs to be defined.

On timeline and resource deployment

- MININFRA and partners to ensure availability of (almost) all resources (financial and human) for the planning process for a district prior to the start of it.
- The expected duration of DWA process needs to be redefined now that all tools are completed, and the more intensive assessments have been done. The process takes probably about one year per district.
- Trade-offs between carrying out detailed engineering designs (more accurate, but also more time consuming and costly) versus estimates (less accurate but quicker and cheaper to develop) are considered throughout the process.

On the assessment step:

- MININFRA to consider frequency of the assessments included in step 1, and whether based on sampling or census, in relation to its costs.
- Districts can use the WASAC inventory as basis for CapEx and CapManEx plans in the other districts
- Districts (with WASAC) need to regularly update the data in the WASAC inventory, whenever new systems are built, or existing ones upgraded
- There is a need to do a more detailed assessment of the capacity of the coordination unit within MININFRA and the time, resources and skills required for that.
- Partners need to analyse the data on staffing for the five districts, in order to see whether sector-wide recommendations on staffing can be made and the tool does not need to be repeated in each district in Rwanda.
- MININFRA needs to discuss the results of the capacity assessment with districts so they can include their own capacity development in their plans.
- Districts should use the MIS data for future service level assessments, to update plans and validate progress in levels of access.
- Districts need to add a water resources assessment (both on quantity and quality) in future rounds of planning in order to plan for conservation and protection works around the WASH infrastructure.
- External partners need to check the questions on service providers in the MIS, as well as the KPIs of POs in their reports to RURA and districts, to see whether those can be used to get a better service provider assessment.
- MININFRA and partners should discuss the results of the current service provider assessments with districts and include activities to strengthen them in the district plans.

On the visioning step

- The originally envisaged visioning need to be split in two: 1) awareness raising on the vision and target confirmation, which needs to take place prior to the assessments as well as on the overall strategy, and 2) a fund raising and prioritisation strategy discussion after completion of costs and finance exercise. Within the latter, dedicate specific attention to prioritisation and potential scenarios and make this explicit in the narrative.

On the costing steps

- MININFRA and partners to discuss feasibility to do detailed engineering designs per batch to avoid risk of designs getting outdated
- Partners need to analyse results from the OpEx calculation from a sample of different types of systems in the five districts to draw average parameters. This avoids repeating this exercise in every district.
- Districts should use the data from the reports to RURA to identify other financial indicators of POs (i.e. non-revenue water, billing efficiency and collection efficiency) and identify performance strengthening in cost recovery in district plans.
- Districts to get branch-specific revenue & expenditure balances from WASAC Head Office for the WASAC-managed schemes.
- Districts to apply the CapManEx tool for the PO-managed schemes and include CapManEx estimates in their WASH plans.
- Partners to identify generic recommendations on the required number of staff and time dedication of staff, based on results from the five districts. This avoids repeating this exercise in every district.
- Partners and districts need to do the consolidation of costs for all remaining districts, before further recommendations can be given.

On the identifying funding sources step

- Partners and districts need to carry out the consolidation of the costs versus existing levels of funding, using the consolidation tool. MININFRA to encourage districts to continue to fund mobilisation efforts but monitoring this progress systematically
- There is a need to differentiate more clearly between macro-level planning and pipeline management. The overall district WASH plan should include the main elements:
- An ongoing pipeline of specific projects, with designs, feasibility studies etc. for specific fund mobilisation.
- Engage the likely financiers (i.e. LODA and MINECOFIN) so they can anticipate the funding requirements.
- Develop a sector finance strategy to anticipate the funding needs coming from districts (i.e. public finance, tariffs and the use of royalties).
- Partners to facilitate a dialogue with the district to ensure that they don't focus their fund identification efforts solely on the investment parts, but also on the other life-cycle cost categories.

On the consolidation and writing the narrative step

- Partners and MININFRA to support districts in a final and complete write-up, so that the plans go beyond investment planning.

6. References

Bakker, E., and Smits, S., 2020. Application of the District-Wide Approach in 5 pilot districts of Rwanda: Lessons Learned. Available at: **https://www.ircwash.org/sites/default/files/learning_note_lessons_learned_from_district_wide_approach_rwanda_pilot_0.pdf** [accessed 17 July 2020]

Boulenouar, J. and Sanchez Trancon, D., 2018. Guidance for developing a district WASH plan. Available at: **https://www.washagendaforchange.org/wp-content/uploads/2020/04/20181201_guidance_for_developing_a_wash_plan_in_rwanda_-_aguaconsult_guide.pdf** [accessed 17 July 2020]

Boulenouar, J., 2019. Guidance for implementing the District-Wide Approach in Rwanda. **https://www.ircwash.org/resources/guidance-implementing-district-wide-approach-rwanda** [accessed 17 July 2020]

Boulenouar, J., 2020. Guidance for implementing the full life cycle WASH plan in Rwanda through the District-Wide Approach. **https://www.ircwash.org/resources/guidance-implementing-full-life-cycle-wash-plan-rwanda-through-district-wide-approach** [accessed 17 July 2020]

Frade J., 2019. Finance assessment of the WASH sector in Rwanda. Final report. Available at: **https://www.ircwash.org/sites/default/files/084-201920report_irc_finance_assessment_of_rwanda_water_sector.pdf** [accessed 17 July 2020]

Kamuyumbu, P. and Kwizera, M., 2019. Developing district WASH investment plans, a cornerstone of the District-Wide approach. Available at: **https://www.ircwash.org/resources/developing-district-wash-investment-plans-cornerstone-district-wide-approach** [accessed 17 July 2020]

Tillet, W. et al., 2017. A district level roadmap for universal access to sustainable WASH services. Available at : **https://www.washagendaforchange.net/sites/default/files/20171106_agenda_for_change_roadmap_revised.pdf** [accessed 17 July 2020]

Annex 1: Status of the application of the District-Wide Approach

This is the status of the application of the District-Wide Approach at the moment of writing (Sept 2020).

Table 8: Overview status application of the DWA per district

District	Service levels	Asset inventory	Capacity assessment	Visioning, target setting and strategy development	CapEx projection	OpEx projection	CapManEx projection	Direct Support costs projection	Consolidation of costs	Financial flow forecast	Writing consolidated WASH plan
Bugesera	Completed	Completed	Completed	Partially completed	Completed	Completed	Completed	Completed	Completed	In progress	Completed
Gicumbi	Completed	Completed	Completed	Partially completed	Completed	Completed	Completed	Completed	Completed	In progress	Completed
Karongi	Completed	Completed	Completed	Not completed	Completed	No progress	No progress	On going	No progress	No progress	Ongoing
Ngororero	Completed	Completed	Completed	Not completed	Completed	No progress	No progress	On going	No progress	No progress	Ongoing
Nyamagabe	Completed	Completed	Completed	Not completed	Completed	No progress	On going	On going	No progress	No progress	No progress
Rulindo	Completed	Completed	Completed	Partially completed	Completed	Completed	On going	On going	No progress	No progress	Ongoing