GUIDELINES FOR IDENTIFYING THE FUNDING GAP FOR SDG 6 IN IRC SUPPORTED DISTRICTS

AUTHOR: JULIA BOULENOUAR

DATE: 20TH FEBRUARY 2019

TABLE OF CONTENTS

ACRONYMS

BoQ	Bill of Quantities
CoC	Cost of Capital
CapEx	Capital Expenditure
CapManEx	Capital Maintenance Expenditure
DSexp	Direct Support Expenditure
ExpIDS	Indirect Expenditure
JMP	Joint Monitoring Programme
MDG	Millennium Development Goal
OpEx	Operational Expenditure
SDG	Sustainable Development Goals
WASH	Water, Sanitation and Hygiene
WfP	Water For People

EXECUTIVE SUMMARY

The challenge at stake. Achieving SDG 6 will cost 116 billion USD per year up to 2030, excluding the cost of operation, maintenance and support required to maintain services over time. At global level, this will call for a significant increase in resources from all sources (domestic and private) and a better allocation across sectors, countries and types of expenditure.

At national level, countries have incorporated SDGs in their policies, strategies and plans, but the financial implications of achieving these have rarely been worked out. As a result, SDGs are treated as distant objectives, but do not always underpin a clear strategy to ensure services are adequately delivered over time from a technical, social and financial perspective.

Calculating the costs required to achieve SDG 6 in a given district and identifying the financial resources available to do so, is a critical first step towards strengthening the district's planning capacity and its efforts to ensure sufficient and adequate financial resources are available to deliver WASH services to all.

These guidelines are designed for IRC staff supporting districts in its six countries of operation. It provides key concepts, steps, guiding questions and examples of tools to implement directly or commission a district-wide costing and financing gap analysis, in view of supporting district-wide planning.

Steps required to identify the funding gap to achieve SDG 6 at district level

The process involved in determining the cost and funding available for achieving SDG 6 in a given district combines technical, strategic/political and social/consultative aspects:

- Technical: It is evidence based and linked to data collection, analysis and projections;

- Political/strategic: It involves key decisions related to the district's vision for long-term service delivery, the preferred approach to achieving it, the approach to resource prioritisation and to equitable service provision as well as the critical assumptions guiding the financial projection over time (e.g. level of tariff, transfers and taxes).

- Consultative: It calls for a degree of consultation to ensure the objectives are shared and owned by all critical stakeholders in the district.

The emphasis on each pillar will be context specific and dependent on the overall objective of the process (primarily driven by IRC or by the district).

Key steps involved in the process are presented in the guidelines,[1] along with key output data requirements, options for collecting data depending on the level of data and resource availability. Supporting tools available are listed in the guidelines as examples and a selection is described in Annex 1.

Step 1 (preparatory step): Define the scope, the output and the approach for data collection and analysis. The process starts with a clarification of: i) the district's interest, appetite, capacity for WASH planning, ii) data availability (on services, costs and financial resources), iii) availability of financial resources and interest to carry out additional data collection if applicable.

Step 2: Assess current status of services and capacity. The second step seeks to determine the current status in the district and provides an overview of where the district currently stands in terms of population and population growth, access to the various types of services as well as the condition of assets and capacity of service authority and providers.

Step 3: Articulate a vision, strategy and approach for achieving SDG 6. This step is largely political, as it seeks to determine what the district is aiming to achieve and by when, in line with SDG 6. It provides an articulation of the vision in terms of coverage rates, service levels, targets, milestones and the strategy for achieving it in terms of service delivery models. These assumptions are used as a basis for costing the achievement of SDG 6 in the district.

Step 4: Identify the cost of achieving the vision. This step seeks to determine the cost of achieving the vision set by the district and to sustain it over time. It considers all cost categories described in section 2.2 with a view to estimate the overall and yearly costs required to achieve the district's vision.

Step 5: Identify funding flows. This step aims at identifying the level of funding available and projecting it over time in an effort to determine the funding gap to achieve the district's vision. As a first step, it is recommended to understand the district budgeting processes/cycle and broad budget structure to determine the proportion of WASH budget that is on-budget and off-budget. On that basis, the proxy measure used for estimating current district funding allocation to WASH is through past (or recorded) WASH expenditure. Ideally, this is done using consecutive years of data to determine a "normal" funding pattern.

Step 6: Identify and address the funding gap. After identifying costs and sources of finance, this step seeks to determine the potential funding gap between vision and reality. It is used to inform the process of closing the funding gap through three channels: i) lobbying for additional resources, ii) revisiting assumptions related to the vision or to financial projections and iii) seeking ways of using available resources more efficiently (e.g. considering different management models, seeking alternative technologies, increasing service provider performance). These are thought through in parallel rather than in a consecutive manner and inform each other.

---

[1] Although the author acknowledges that the process is iterative in nature, steps are presented in a linear manner for clarity's sake.

INTRODUCTION

The magnitude of the problem: financing SDG 6. Over the past decades, significant investments have been made in the WASH sector to increase access levels. In spite of these efforts, Millennium Development Goals (MDG), including MDG 7 (*Ensure environmental sustainability*) have not been reached in many countries and a large proportion of the population continues to lack access to WASH services and experience poor quality of service.[2] This result is due to a combination of factors, including inadequate financing, poor targeting of resources, limited absorption capacity and more generally, weak institutional and financial systems.

In an effort to continue and deepen the drive towards eradicating poverty, the 2030 Agenda has defined 17 Sustainable Development Goal (SDGs). SDG 6 (*Ensure availability and sustainable management of water and sanitation for all*) reflects the increased attention on water and sanitation issues in the global political agenda. According to the World Bank, achieving SDG 6.1 and 6.2 will cost globally, 116 billion USD per year up to 2030, excluding the cost of operation, maintenance and support required to maintain services over time.

At global level, it is acknowledged that achieving these targets will require more and better resource allocation. Rethinking the allocation across sub-sectors, redirecting resources towards operation and maintenance as well as off-track countries, but also significantly increasing domestic public finance and mobilising user and private finance will be required to bridge the funding gap.

At national level, countries have largely incorporated SDGs in their policies, strategies and plans, but the financial implications of achieving them have rarely been assessed. As a result, SDGs are treated in many countries as a distant objective, de-linked from practical financial strategies to fulfil them. The principles of "cost recovery", "financial viability", "affordability" often feature in national strategic documents, but in the absence of a clear understanding of the cost of service provision, they do not always underpin a clear strategy to ensure services are adequately delivered over time from a technical, social and financial perspective.

The role of IRC and objectives of these guidelines
IRC is active in six countries and aims to strengthen WASH systems through a range of actions at district and national levels. IRC supports districts in all of their core functions related to the service authority role they play, including monitoring, planning and budgeting to achieve universal and sustainable access to WASH services by 2030, in line with SDG 6. IRC is also an active member of national technical working groups and supports stakeholders to ensure the enabling environment adequately supports service delivery, particularly through increased coordination and learning. IRC also actively lobbies Government to ensure the WASH sector is high on the

---

[2] UN. In 2015, 147 countries had met the drinking water target, 95 countries had met the sanitation target and 77 countries had met both water and sanitation targets.

political agenda and commitments for increased allocation of national budget to the sector are fulfilled.

Calculating the costs required to achieve SDG 6 in a given district and identifying the financial resources available to do so, is a first step towards achieving universal and sustainable access to WASH services. Indeed, it provides evidence to the district to inform district master planning and budgeting, it informs decision-making related service provision choices, management models and more generally supports the districts' efforts to ensure sufficient and adequate financial resources are available through tariffs, transfers and taxes to deliver WASH services to all.

These guidelines are designed for IRC staff supporting districts in Burkina Faso, Ethiopia, Ghana, Honduras, India and Uganda. It provides key concepts, steps and examples of tools, which can be used to develop a district master plan and inform discussions at district and national levels to mobilise additional financial resources. It is expected that these guidelines will provide sufficient information to IRC staff to determine where the country office stands and identify next steps to carry out this exercise.

1. SCOPE

1.1 The district as the unit of analysis

A district is broadly defined as an intermediary level of administrative division run by local government. In decentralised countries, districts generally fulfil service authority functions, with regards to the provision of water, sanitation and hygiene services. This means they are responsible for ensuring safe delivery of services in their area of jurisdiction.

Adopting a district-wide approach means working towards achieving universal and sustainable access to services at the scale of the district. This is done by supporting districts in their core functions (e.g. planning, budgeting, monitoring, supporting service providers) and developing management and delivery models that can be scaled up at national level. The costing and financing exercise is designed as part of this effort and should therefore consider the full district as the unit of analysis.

Setting the boundaries of what the "district-level" entails in a particular context, is an important step in the process. Although the administrative boundaries will be the preferred unit of analysis (all services provided under the district's jurisdiction regardless of the service provision model), in some cases, only services directly managed/financed by the district will be considered in the scope.

1.2 Types of services considered

Global targets 6.1 and 6.2 provide the starting point for costing and financing services to be provided by the district.[3] The definitions used are those provided by the General Assembly in 2017 (see table 1) and the service ladders developed by the Joint Monitoring Program (JMP) to monitor their progress (see section 2.1). These encompass household and extra household settings: drinking water services including on premises, sanitation services including shared facilities and hand washing with soap facilities.[4]

The principles and steps presented in the guideline are relevant for all types of services. However, sector efforts recorded so far to determine the cost of service provision and the available financial resources available have largely focused on water supply. Although this is evolving to encompass sanitation services, most tools and examples provided in these guidelines relate to water supply. This document should therefore be treated an evolving resource, which will need to be enriched with examples from other sub-sectors, as more experience is recorded.

Table 1: Sustainable Development Goal 6, Targets and Indicators

Goal 6: Ensure availability and sustainable management of water and sanitation for all	
Target 6.1 By 2030; achieve universal and equitable access to safe and affordable drinking water for all.	Indicator 6.1.1 Proportion of population using safely managed drinking water services.
Target 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	Indicator 6.2.1 a. Proportion of population using safely managed sanitation services. 6.2.1b. Proportion of population with hand washing facilities with soap and water at home

1.3 A data intensive and technically challenging process

Identifying the cost and funding for achieving targets 6.1 and 6.2 in a given district is reliant on accessing critical data on services, costs and funding. Data on services and costs are not always readily available, and financial data generally politically sensitive and difficult to access.

In order to overcome this challenge, different approaches can be used to determine the cost of providing services. These can be placed on a continuum, ranging from very resource intensive data collection activities to rapid estimations based on international benchmarks. The best approach will depend on a number of context-specific parameters, including: i) the district's appetite to collect additional data and carry out detailed planning, ii) the country planning culture,

---

[3] Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all. Target 6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
[4] https://washdata.org/monitoring/drinking-water
https://washdata.org/monitoring/sanitation
https://washdata.org/monitoring/hygiene

iii) the availability of resources to support additional data collection and iv) the nature of the end goal (i.e. initiate high-level discussions or inform a detailed plan).

Understanding the drivers for conducting this exercise and clarifying the funding context should therefore be considered as part of the preparatory phase.

Given the technical complexity of determining the cost of provision and level of financing for water and sanitation services - which require engineering skills to assess service levels or asset condition and an understanding of public finance to identify expenditure and funding over time - it is recommended that the water and sanitation assessments are carried out separately.

1.4 Outlining an approach rather than prescribing the use of specific tools

These guidelines are designed to support IRC monitoring staff operating in different countries to collect, analyse and use service, cost and financing data on WASH to support districts in their planning efforts.

Given the variety of countries and districts of IRC operation, the guidelines provide key concepts and guiding questions to support the process. Examples of existing tools that can support teams in collecting or analysing services/costs/financing sources are presented in these guidelines. However, these examples are non-exhaustive and the author does not make prescriptions on the use of specific tools, as their relevance will vary on a case-by-case basis. Other tools that are not listed in the document might be more relevant to a specific the context and unknown to the author.

2. KEY CONCEPTS

2.1 Service levels

Service levels for drinking water, sanitation and hygiene are defined by JMP to characterise the quality of service provided for drinking water, sanitation and hygiene (see table 2) and monitor progress of targets 6.1 and 6.2. These will be used as a starting point to characterise the services at baseline, to set a vision for the district and to use as a basis for costing SDG 6.

It is important to note that the SDGs and global targets set in 2015 were designed as both inspirational and aspirational, to be used by national Governments to define their own – relevant - targets. As such, it is not expected that all districts in all countries will seek to achieve "safely managed" water and sanitation services, by 2030, but instead that all governments will consider these as the end goal and work towards achieving them in a distant or close future.

This process will therefore require the identification of national and local targets, which can in some cases, differ from the JMP.

Table 2: drinking water, sanitation and hygiene service ladders, defined by JMP

Service ladder for drinking water

SERVICE LEVEL	DEFINITION
SAFELY MANAGED	Drinking water from an improved water source that is located on premises, available when needed and free from faecal and priority chemical contamination
BASIC	Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing
LIMITED	Drinking water from an improved source for which collection time exceeds 30 minutes for a round trip, including queuing
UNIMPROVED	Drinking water from an unprotected dug well or unprotected spring
SURFACE WATER	Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal

Note: Improved sources include: piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water.

Service ladder for sanitation

SERVICE LEVEL	DEFINITION
SAFELY MANAGED	Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or transported and treated offsite
BASIC	Use of improved facilities that are not shared with other households
LIMITED	Use of improved facilities shared between two or more households
UNIMPROVED	Use of pit latrines without a slab or platform, hanging latrines or bucket latrines
OPEN DEFECATION	Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches or other open spaces, or with solid waste

Note: improved facilities include flush/pour flush to piped sewer systems, septic tanks or pit latrines; ventilated improved pit latrines, composting toilets or pit latrines with slabs.

Service ladder for hygiene

SERVICE LEVEL	DEFINITION
BASIC	Availability of a handwashing facility on premises with soap and water
LIMITED	Availability of a handwashing facility on premises without soap and water
NO FACILITY	No handwashing facility on premises

Note: Handwashing facilities may be fixed or mobile and include a sink with tap water, buckets with taps, tippy-taps, and jugs or basins designated for handwashing. Soap includes bar soap, liquid soap, powder detergent, and soapy water but does not include ash, soil, sand or other handwashing agents.

Source: JMP, 2017

2.2 Costing sustainable services

Consider life-cycle costs for costing SDG 6, not just capital investment. Although WASH sector financing has historically been directed towards first time investment in construction and rehabilitation (capital investments), it is acknowledged that sustained universal access to safely managed services can only be achieved by considering

recurrent expenditures required to maintain services over time through operation and minor maintenance (OpEx), repairs, replacements and expansions (CapManEx), and monitoring and support to service providers (ExpDS). Cost components for water and sanitation services are fully defined in Fonseca et al. (2011) and are summarised in table 3 below. [5]

Table 3: Life-cycle costs and definitions

Capital expenditure (CapEx)	Initial investments in construction and one-off software activities. Expansion costs are also included.
Capital Maintenance (CapManEx)	Expenditure on major maintenance, repair or replacement.
Operation and minor maintenance expenditure (OpEx)	Recurrent cost of operating the system, such as fuel, staff, chemicals, and regular maintenance costs – normally borne by the service providers (or households, in the case of domestic facilities).
Expenditure on Direct Support (ExpDS)	The costs incurred by the service authority (e.g. district) in planning, coordinating, monitoring and providing mobilisation and technical support to service providers. Also known as District Capacity Assessment or Direct Support Cost.
Cost of Capital (CoC)	The cost of accessing finance for system construction – e.g. interest rates on loans, particularly looking at the public (rather than household) investments.
Indirect Support (ExpIDS)	Generally national-level costs of the sector, such as policy, sector planning and coordination and capacity building costs.

Source: IRC, 2018

For the purposes of the district-wide assessment, two cost categories are excluded from these guidelines: cost of capital (CoC) and indirect costs (ExpIDS). Indeed, in countries where IRC currently operates, districts cannot contract loans and therefore CoC is not relevant, whislt ExpIDS fall outside of the district's mandate.

2.3 Financing sustainable services

Funding for water and sanitation typically comes from three sources of finance: tariffs, taxes and transfers, known as the "3 Ts" which are defined as follows:

- **Tariffs** are financial resources coming from users of the services, generally paid to the service provider. The cash flow generated by the payment of the

---

[5] **Capital expenditure** is a one-time expenditure related to the cost of providing a new service or substantially improving or expanding the level of existing services and includes both hardware and software expenditure. **Recurrent expenditure** is the cost of sustaining an existing service at its intended level, through operations, maintenance, rehabilitation and replacement, management, planning and monitoring of service delivery.

tariffs is used to create self-financing capacity of the service providers and ensure the debt of the service of loans/repayable finance.

- **Taxes** are financial resources originating from domestic taxes (national, regional, local) that are channelled to the sector via transfers from all levels of government budgets. These funds are usually provided as subsidies for capital investment, but can also cover operating costs, if tariffs are insufficient.

- **Transfers** are financial resources provided by external sources (international donors, philanthropic resources from charitable foundations including NGOs, decentralised cooperation and local civil society organisations). They are mostly grants used mostly to subsidise capital investment and often spent on infrastructure serving the lower-income or unserved population but could also cover operational costs if tariffs are insufficient.

In an ideal situation, OpEx should be fully covered by the tariff to ensure financial autonomy of the provider, create incentive for demand/production/consumption by the provider and the customer and give the population the option and priority to contribute to the sector through payment of their consumption.

These three sources of finance, referred to as the "3 Ts" are used as a framework for categorising the available finance in a given district, and comparing the available financing to the life-cycle costs of providing WASH services.

When the above sources are deemed insufficient, repayable finance can be considered an additional source of finance, which eventually is repaid through the above sources. These include market loans, as well as concessional loans.[6] However, given that districts in countries where IRC operates cannot currently borrow, these sources of funding are not considered in these guidelines.

2.4 Identifying the funding gap to achieve SDG 6

Identifying the funding gap requires mapping funding available for WASH in a given district, both on-budget and off-budget: **On budget** refers to the budget which is usually decided and approved in Parliament/Congress, whilst **off-budget** refers, in most countries, to the external funding (aid) that is not captured in the national budget. Figure 1 below provides an overview of the funding flows to consider when analysing district-level funding available for WASH services.

---

[6] OECD. Concessional loans are extended on terms substantially more generous than market loans. The concessionality is achieved either through interest rates below those available on the market or by grace periods, or a combination of these. Concessional loans typically have long grace periods.

Figure 1: WASH budgets - where to look?
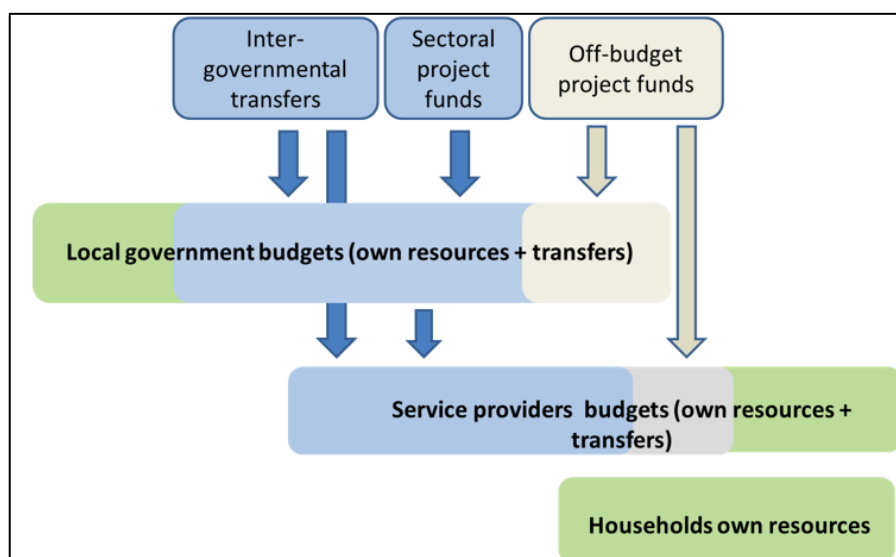
Source: Fonseca, 2018

Identifying the funding available for WASH in a district requires having an understanding of the district budgets, as well as WASH expenditures, ideally over 2-3 years, to determine a normal spending pattern.

The funding gap is then defined as the difference between the expenditure required to achieve the district's vision towards 2030, and the level of finance available (current and projected) to do so.

Identifying the funding gap is an important objective of this assessment. It serves primarily to develop strategies to bridge the gap to achieve the district's vision. This can be done through three main channels: i) lobbying for additional resources (through transfers and taxes), ii) adopting strategies to manage existing resources more efficiently (by strengthening service providers' performance) and iii) adjusting the assumptions behind the vision (e.g. service levels) or the revenue streams (e.g. tariff levels).

3. STEPS REQUIRED TO IDENTIFY AND ADDRESS THE FUNDING GAP

The process involved in determining the cost and funding available for achieving SDG 6 in a given district combines technical, strategic/political and social/consultative pillars:

- **Technical:** It is evidence-based and linked to data collection, analysis and projection;

- **Political/strategic**: It involves key decisions related to the district's vision for long-term service delivery, the preferred approach to achieving it, the approach to resource prioritisation and to equitable service provision as well as the critical

assumptions guiding the financial projection over time (e.g. level of tariff, transfers and taxes).

- **Consultative**: It calls for a degree of consultation to ensure the objectives are shared and owned by all critical stakeholders in the district.

The emphasis on each pillar will be context specific and depend on the overall objective of the process (for IRC and/or the district). Figure 2 below provides an overview of the key steps of the process and the expected results of each step. It is important to note that although the process is iterative, the steps are presented in a linear manner, for clarity's sake.

Figure 2: Overview of the key steps and results for identifying and addressing the funding gap to achieve SDG 6.
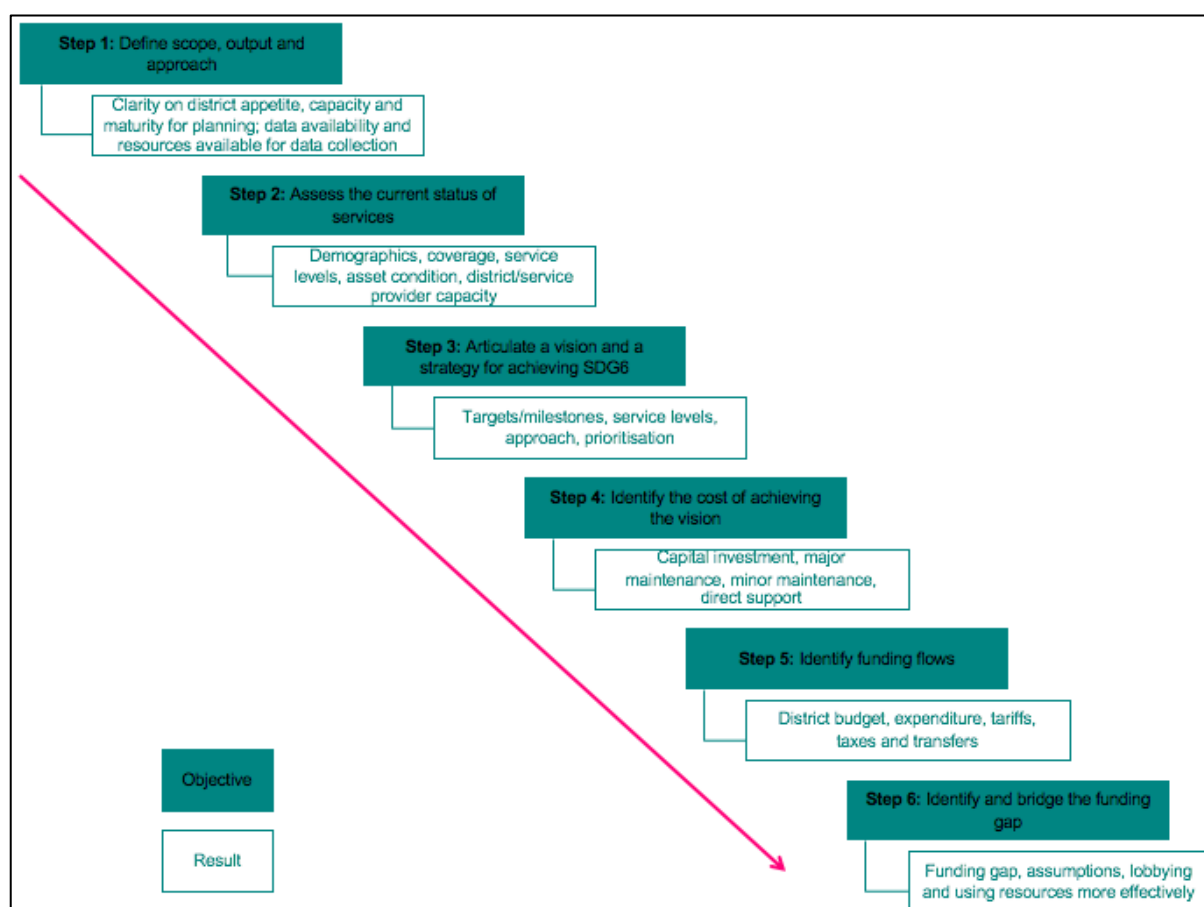
3.1 Step 1 (preparatory step): Define the scope, the output and the approach for data collection and analysis

In order to determine the appropriate level of detail and the choice of tools to be used for costing and financing, the process will start with a clarification of: i) the district's interest, appetite, capacity for WASH planning, ii) data availability (on services, costs and financial resources), iii) availability of financial resources and interest to carry out additional data collection if applicable.

In collaboration with the district, this will inform the decision related to the need to conduct additional data collection activities and the level of detail resulting from the assessment. Figure 3 below provides an example of the aspects to consider (left part) to inform the expected output and resulting approach (continuums on the right).

Figure 3: Example of a decision-making process to identify the best approach
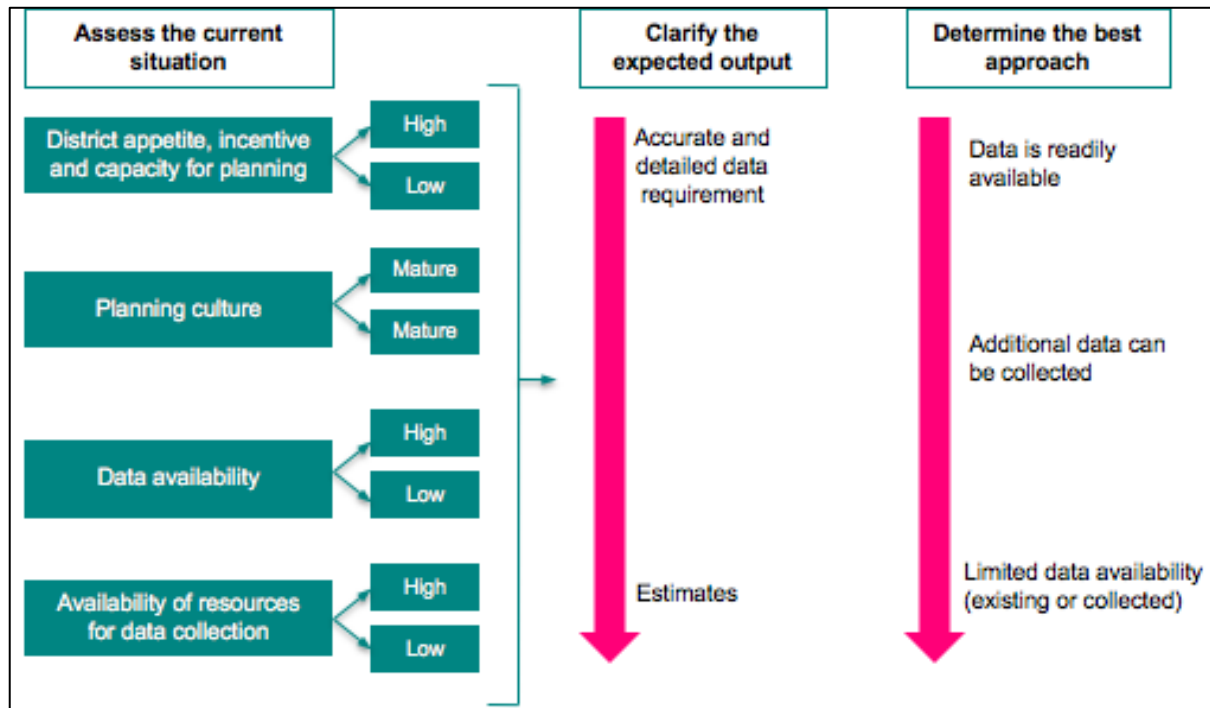
The assessment of the current situation might be done in different ways, depending on IRC's relationship with the districts and existing knowledge. Below are a few aspects that could be considered in this initial step:

1. Clarify with the district engineer/WASH officer/budget officer, the district's appetite for the exercise, expectations on the outcome and availability of key data. The latter would include recent data on services, census, district WASH plan, WASH expenditure and budgets.

2. In cases where existing data is deemed insufficient, determine in conjunction with other partners present in the district, whether additional resources are available and if there is willingness to carry out additional data collection. Consider also tagging onto existing data collection efforts, if possible, to limit the cost of data collection (e.g. if a baseline survey is planned already, the costing aspect can be added on without much effort).

3. If data and resources are not available, make sure you can spend time to sit with the district engineer and extract key information/ agree on key assumptions at key steps of the process.

3.2 Step 2: Assess current status of services and capacity

The second step seeks to determine the current status in the district. It provides an overview of where the district currently stands in terms of population and population growth, access to the various types of services as well as the condition of assets and capacity of service authority and providers.

Type of assessment	Technical
Data requirement	High

This "baseline" assessment will provide the foundation for defining a long-term vision and strategy to achieve it.

Key questions to be addressed during this step and resulting outputs are presented in table 4 below.

Table 4: Questions and outputs for assessing current service status

Area of questioning	Key questions	Key outputs
Demographics	What is the current population in urban and rural areas? What is the estimated population growth for the coming years and the trends for rural and urban areas?	• Population (total, rural and urban areas) • Population growth rate • Projections for urban and rural areas
Coverage	What is the current service coverage in the district, per area (urban/rural) and type of service (drinking water, sanitation and hand washing with soap)?	• Number/proportion of people served with water and sanitation services and with access to hand washing with soap facilities in urban and rural areas • Technology type and population served
Service levels	What is the current level of service provided across the district per type of service? [7]	• Number/proportion of people with access to safely managed, basic, limited, unimproved, no service) per type of service.
Asset condition	What is the condition of assets (water supply only)?	• Water systems: number of systems in poor condition (i.e. requiring major maintenance)
Capacity of district and providers	What is the current capacity of the district to fulfil its functions? What is the capacity of service providers to provide services? What are the key gaps	• District capacity: current human resources/gaps • Service providers' capacity: current human resources/gaps

---

[7] This will require prior clarification of the definitions used for categorising services against service ladders in the given country/district, using the JMP ladder as a reference.

3.3 Step 3: Articulate a vision and strategy for achieving SDG 6

The third step is largely political, as it seeks to determine what the district is aiming to achieve and by when and how, in line with SDG 6. Note that the district's vision and timing horizon might be more or less ambitious (as compared to SDG 6 horizon), but should always be in line with national

Type of assessment	Political
Data requirement	Low

policy/strategy. It provides an articulation of the vision in terms of coverage rates, service levels, targets, milestones as well as a strategy for achieving it in terms of service level, technology choices and service delivery models and the prioritisation process. These assumptions are used as a basis for costing the achievement of SDG 6 in the district.

Key questions to be addressed during this step and resulting outputs are presented in table 5 below.

Table 5: Questions and outputs for articulating a district vision

Area of questioning	Key questions	Key outputs
Target/milestones	What is the district's horizon for achieving SDG 6 (definition of target and timing horizon)?	• Definition of the target in line with SDG 6 • Planning horizon for universal access per type of service. • Key milestones to increase levels of access per type of service.
Service level	What level of service does the district intend to provide by 2030?	• Proportion of the population with access to different levels of service by the timing horizon and per type of service. • Proportion of the population with access to different types of technology (e.g. piped schemes and water points, individual and shared latrines, safely managed sanitation).
Capacity support	What specific activities/support are required to ensure the district provides adequate support to service providers?	• Additional/human resources required for the district to provide adequate support to service providers
Approach	How does the district intend to provide these services (service delivery models)?	• Service delivery management models for water service provision (e.g. private sector, community management, clustering of services) Approach to ensuring access to sanitation services (e.g. CLTS, CATs, targeted subsidies, combined approaches) • Approach to ensuring uptake of hand washing with soap

| Prioritisation | What are the district's priorities in terms of service provision?

What is the district's approach with regards to ensuring equitable access to services? | • Prioritisation across water, sanitation, hygiene, geographically, per area (population served/unserved) or according to other criteria
• Equity-focused prioritisation |

3.4 Step 4: Identify the cost of achieving the vision

The fourth step seeks to determine the cost of achieving the vision set by the district and to sustain it over time. It considers all cost categories described in section 2.2 with a view to estimate the overall and yearly costs required.

Type of assessment	Technical
Data requirement	High

Key questions to be addressed during this step and resulting outputs are presented in table 6 below.

Table 6: Questions and outputs for identifying the cost of achieving the vision

Area of questioning	Key questions	Key outputs
Investment cost	Based on the population currently served, population growth and types of services to be provided, how much would it cost to provide access to services to those who do not yet have access to water, sanitation and handwashing with soap facilities?	• Total CapEx requirement for water supply to achieve vision • Total CapEx requirement for sanitation to achieve vision • Total CapEx requirement for hygiene promotion to achieve vision
Major maintenance costs	How much would it cost to rehabilitate existing services?	• Total CapManEx requirement for existing and new water supply systems to achieve vision
Minor maintenance costs	How much would it cost to carry out regular O&M appropriately?	• OpEx requirement for drinking water supply/year to achieve vision • OpEx requirement for maintaining latrines/year to achieve vision
Cost of district support	How much would it cost every year, for the district to provide adequate support to service providers?	• ExpDS requirements for the district/year to achieve vision

Figure 4: Example of projected costs to achieve universal and sustainable access to drinking water by 2030 in Asutifi North district, Ghana
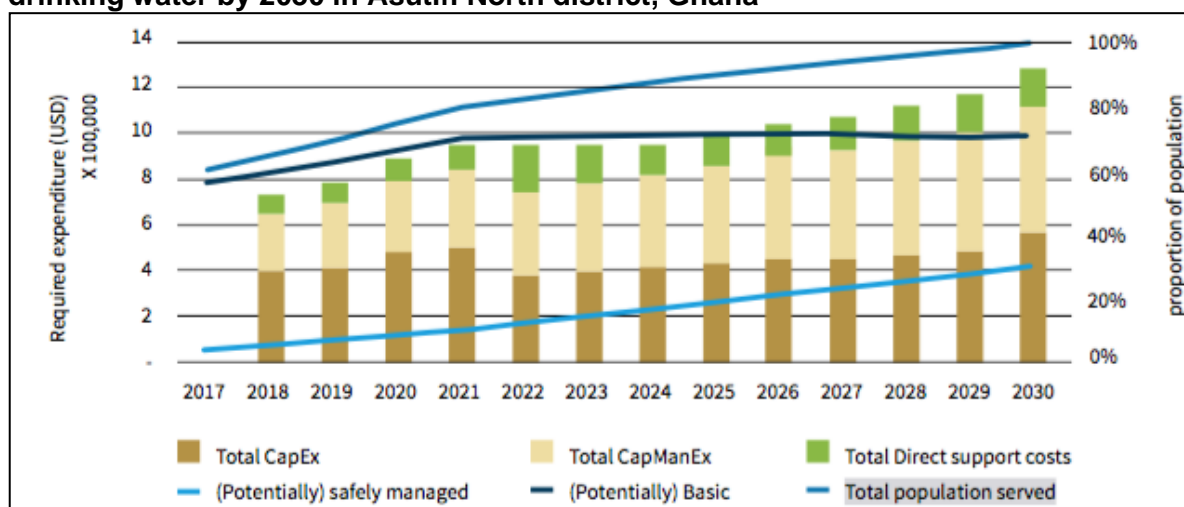
Source: Asutifi North District Assembly, 2018

3.5 Step 5: Identify funding flows

This step aims at identifying the level of funding available and projecting it over time in an effort to determine the funding gap to achieve the district's vision.

Type of assessment	Technical/political
Data requirement	High

As a first step, it is recommended to understand the district budgeting processes/cycle and broad budget structure to determine the proportion of WASH budget that is on-budget and off-budget.

On that basis, the proxy measure used for estimating current district funding allocation to WASH is through past (or recorded) WASH expenditure. Ideally, this is done using consecutive years of data to determine a « normal» funding pattern.

Key questions to be addressed during this step and resulting outputs are presented in table 7 below.

Table 7: Questions and outputs for identifying sources of funding

Area of questioning	Key questions	Key outputs
District WASH budgeting	How is the district budget structured (on-budget/off-budget) for covering WASH expenditure?	• Understanding district budget structure and processes. • Proportion of on-budget and off-budget allocation/expenditure for WASH
Tariffs	What is the level of revenue generated through the tariff in the district?	• Past/current revenue generated from the tariff (rate, users paying, level of tariff collection)

	What are the projections in terms of tariff rate/collection for the coming years?	• Projected revenue generated from the tariff (rate, number and types of users, level of tariff collection)
Taxes	What is the level of taxation (from central and local government) allocated to WASH in the district? What are the projections in terms of taxes allocated to WASH for the coming years?	• Past expenditure from taxes (local and central) allocated to WASH over the past 2-3 years • Projected revenue from taxes (local and central) allocated to WASH
Transfers	What is the level of external transfers allocated to WASH in the district? What are the projections in terms of external transfers allocated to WASH in the coming years?	• Past expenditure from external transfers allocated to WASH across the past 2-3 years? • Projected revenue from external transfers allocated to WASH?

3.6 Step 6: Identify and address the funding gap

After identifying costs and sources of finance, this step seeks to determine the potential funding gap between vision and reality. It is used to inform the process of closing the funding gap through three channels: i) lobbying for additional resources, ii)

Type of assessment	Political
Data requirement	Low

revisiting assumptions driving the formulation of the vision (e.g. lower service levels, different technology) or to financial projections (e.g. tariff levels or collection rates) and iii) seeking ways of using available resources more efficiently (e.g. considering different management models, increasing service provider performance through targeted capacity support). These are thought through in parallel rather than in a consecutive manner and inform each other.

Key questions to be addressed during this step and resulting outputs are presented in table 8 below.

Table 8: Questions and outputs for identifying the funding gap

Area of questioning	Key questions	Key outputs
Identification of the funding gap	What is the gap between the estimated cost of achieving the vision and the current and projected level of funding available?	• Funding gap (overall and per year)
Using the results to inform decision-making		
Revisiting assumptions	What assumptions can be revised to reduce this funding gap in terms of service levels, projected sources of	

	revenue (tariffs, transfers, taxes) and prioritisation processes?	• Revised vision (service levels, capacity support)
Lobbying for additional resources	What leverages can be used to generate or access additional revenue? What is the room for manoeuvre to revise the tariff structure?	• Revised funding projections (tariffs, transfers, taxes)
Using resources more effectively	What aspects WASH district funding can be revisited to use resources more effectively? Can alternative management models or implementation modalities be considered to reduce costs?	

4. ACTIVITIES REQUIRED AND TOOLS AVAILABLE

This section provides the detailed activities required to complete each step presented in section 3. Depending on the decision made during step 1 related to data collection and analysis, three options are presented to come up with the key data outputs:

- Option 1: Data is readily available (already collected by IRC or made available by the district);

- Option 2: Additional data is collected (there is willingness to do so and resources are available);

- Option 3: Data/resources are not readily available. Access to data is reliant on the district engineer/WASH officer and budget officer.

Tools and resources that are available and can support the process are listed at the end of each sub-section. Those in italic are described in greater detail in Annex I.[8]

4.1 Step 2: Assess the current status of services

Table 9: Areas of questioning and options for data collection for step 2

Area of questioning	Option 1: Data is readily available	Option 2: Additional data is collected	Option 3: Data/resources are not readily available
1.Demographics	*It is assumed that this information is readily available from the district or national sources (e.g. census) in all three scenarios*		
2. Coverage	2.a Coverage rates, types of technologies, number of users, are known by the district, for	2.b Community and household survey carried out to determine current	2.c For water: estimates of types/numbers of systems x design population in rural

---

[8] The description starts with step 2, as there is no specific tool supporting step 1 and no data output is expected from that step.

	water, sanitation and access to hand washing with soap facilities, in both rural and urban areas.	coverage levels, types of services	are urban areas of the district. For sanitation: estimates of latrine coverage, based on district officer's knowledge
	Key service providers		For hygiene: estimates based on district officer's knowledge
3. Service levels	3.a District monitoring system produces regular updates of service levels per type of service (water, sanitation, hygiene) and against the JMP ladder/national adjusted JMP service ladders. This information can be available through other sources (statistical services and housing census, IRC-supported monitoring activities).	3.b Community and household surveys are carried out to determine current service levels for water, sanitation, hygiene as per service ladders defined nationally.	3.c With the district officer, calculate: the rough proportion of population with access to basic, safely managed, limited/unimproved and no service for water, sanitation and hand washing with soap. Type of information to consider: type of water source, reliability and accessibility of source, quality of water. For sanitation type of latrine, shared/not shared, safe disposal. For hygiene, availability of facility and features (water and/or soap).
4. Asset condition	4.a District asset registry, comprehensive (all water points/piped schemes in the district) and regularly updated.	4.b Carry out an asset inventory to identify the existing water assets and the condition and age of their components	4.c Identify with the district officer, the number and proportion of water systems that are functional, non-functional and those that require major maintenance and/or full replacement.
5. Capacity of district and service providers	5.a Capacities are regularly assessed and documented against core functions of service authorities and providers	5.b. Carry out a capacity assessment of the district and service providers in the district (sample of or all)	5.c. Identify with the district officer the core functions requiring additional human resources or financing to ensure districts and service providers fulfil their role adequately.

Examples of supporting tools:

- 3.b/3.c: Service levels (National or JMP)
- 4.b: Asset inventory questionnaires (WfP), Collecting life-cycle cost data for WASH services. A guide for practitioners (IRC). *Asset registry assessment tool (IRC).*

- *5.b. District capacity assessment (WfP).*

Other useful resources:

- The Faecal Waste Flow Calculator (IRC). [9]

4.2 Step 3: Articulate a vision and strategy for achieving the SDG 6

Table 10: Areas of questioning and options for data collection for step 3

Area of questioning	**Option 1:** Data is readily available	**Option 2:** Additional data is collected	**Option 3:** Data/resources are not readily available
Vision setting and strategy formulation	A district WASH development plan is available and includes a vision, targets, milestones and details on level of service to be provided, with clear horizons and milestones. It also describes prioritisation processes used by the district to allocate resources and an approach to achieve equitable service provision.	Organise a meeting with the district decision makers and officer to support the articulation of a vision and approach to achieving it in terms of levels of service, types of technology to provide, approach to implementation, prioritisation and equitable service provision.	Agree with the district engineer on key assumptions related to: • Target and horizon (levels of service to be provided, by when) • Types of technology to be provided, number of systems and projected population served • Approach to sanitation and hygiene (e.g. CLTS, sanitation marketing, other) • Capacity strengthening for the district

---

[9] The tool is developed to determine faecal waste volumes along the entire sanitation service chain, allowing city planners, service authorities or any other users to determine where the biggest losses are and where interventions should be targeted. Less easily quantifiable issues such as the existence of policies and legislation, availability and transparency of plans and budgets, presence and adherence to environmental and safety standards are captured with the use of score cards.
For more information: https://www.ircwash.org/tools/faecal-waste-flow-calculator

		• Prioritisation process (population unserved, rehabilitation of schemes) • Approach to ensuring access to vulnerable groups.

Examples of supporting tools:

This process is primarily political and structured around discussions with district decision-makers. A simple excel table can be developed to support the recording of a conversation with the district engineer/WASH officer.

Other useful resources:

- The Empowers approach to water governance: guidelines, methods and tools.[10]
- The WASH master plan in Asutifi North District Assembly provides an example of what a district vision can look like.
- The Ethiopia strategic master-planning tool is an example of how the information can be recorded. However, the parameters will need adjusting to fit each country context.

4.3 Step 4: Identify the cost of achieving the vision

Different approaches can be used to identify the costs required to achieve district wide SDG 6. These can be placed on a spectrum from very detailed and rigorous (but quickly out of date and resource intensive) to estimates that provide a reasonable basis for planning but are less accurate in the medium to long term.

The choice of approach will depend on a number of factors including i) the practice in country to consider unit costs or not, ii) the geographical specificities in a country (i.e. hilly vs. flat) which render national benchmarks/unit costs inadequate, iii) technical specificities of water supply systems in place (i.e. complex piped systems with large

---

[10] This book contains guidelines, methods and tools for use in processes of planning and dialogue within and between local and intermediate levels. It describes a practical and logical framework of activities based on the involvement of those who use and manage water. The guidelines advocate a process of collaboration through dialogue, to bring about a change in the way water sector professionals and water users work with each other. For more information: https://www.ircwash.org/sites/default/files/empowers_guidelines_methods_and_tools.pdf (see pages 23-28 and 52-54 on the visioning process)

number of components). The different approaches to calculating or estimating costs are presented below per life-cycle cost category:

1.For CapEx, options include:
    a. Detailed engineering designs at the district level (for all systems needing to be built in the district);
    b. Unit costs/ per capita per types of systems derived from a sample of engineering designs carried out in the district;
    c. Unit costs/per capita using national benchmarks;
    d. Unit costs/per capita using international benchmarks.

2.For CapManEx, options include:
    a. Detailed calculation of cost of replacement based on asset condition and age derived from an up-to-date asset registry;
    b. Estimates of systems needing replacement using district knowledge and linked to unit costs/unit or capita;
    c. Rough costs applied to all existing systems based on national/international benchmarks.

3.For OpEx, options include:
    a. An accurate calculation of OpEx requirement for each system derived from an asset inventory.
    b. A per capita estimate based on national or international knowledge applied to existing and future systems.

4. For DSexp, options include:
    a. A calculation of support costs requirement, based on a district assessment;
    b. A per capita estimate based on international knowledge.

> **In Rwanda**, the complexity of piped water systems, combined with the hilly terrain and the relatively mature planning and performance culture, have led the team supporting the development of a district WASH plan to choose the most detailed option for calculating costs: i) CapEx are based on detailed engineering designs, ii) CapManEx are calculated based on asset components' condition and age and linked to a detailed cost reference sheet per asset component and feature, iii) OpEx will be calculated based on the analysis of a sample of systems and extrapolated to the whole district.

Examples of tools:

- CapEx: 1.a. example of Bills of Quantities (BoQ) in Rwanda (WfP), 1.c.d. national unit cost benchmarks (to be identified in each country
- CapManEx: 2.a. *CapManEx tool in Rwanda (WfP).*
- DSexp: 4.a. *Direct Support Tool (IRC/WfP) –*

- For all detailed cost data collection: Collecting life-cycle cost data for WASH services. A guide for practitioners (IRC).

4.4 Step 5: Identify funding flows

Table 11: Areas of questioning and options for data collection for step 5

Area of questioning	Option 1: Data is readily available	Option 2: Additional data is collected	Option 3: Data/resources are not readily available
5. Funding flows	5.a District-level WASH budgeting and funding flows are clearly articulated.	5.b.c. Clarify the district budgeting structure, budgeting process and identify the proportion of WASH expenditure in the district that is on-budget and off-budget.	
6. Tariff	6.a. The district has a consolidated view of the level of tariff currently applied in the district and rate of collection. Assumptions on tariff level and collection rates over time are known and revenue generated from tariffs is projected over time.	6.b KII with service providers and households to collect data on current and projected i) tariff level, ii) number of users, iii) collection rates	6.c. Identify estimates for the following: • Tariff level • Number of users (current and projected based on new systems projected to be built in coming years) • Tariff collection rate (current and projected)
7.Taxes	7.a. The district has a consolidated view of the taxes (from local or central government) that have been allocated to WASH in the past, at present projected for coming years.	7.b.c • Identify all sources of possible WASH funding for district governments (in the country in general) • Identify expenditure originating from taxes (from central or local government) allocated to WASH over the past 2-3 years • Estimate projections of taxes allocated to WASH for coming years, based on past expenditure to develop the "business as usual scenario" • Develop different scenarios with other funding assumptions (i.e. higher level of tariff, lower transfers, etc.) in collaboration with the district.	
8. Transfers	7.a. The district has a consolidated view of the transfers that are currently allocated to WASH and projected for the coming years.	8.b.c. NGO/donor transfers: KII with NGOs/donors working in the district to consolidate transfers	

Examples of tools:

- 5.b.c. *TrackFin*
- 6.b. *AtWhatCost*

Other useful resources:
- WASH Systems Academy financing specialisation module

4.5 Step 6: Identify and address the funding gap

It is assumed that in the districts where IRC operates, the funding gap has not been assessed and data is therefore not available and needs calculating.

Examples of tools:

- *The district financial balance sheet* (WfP)
- *The financial overview tool (IRC)*

Other useful resources:

- *The Ethiopia strategic master-planning tool* is an example of how the information can be recorded. However, the parameters of services, costs, finance will need adjusting to fit each country context.

ANNEX-I

Assessing current status of services and district/service provider capacity

Asset registry/inventory: various tools/data collection tools are available, including the Asset Registry Assessment Tool developed by IRC, the Asset registry and survey questionnaire developed by WfP, the guide for practitioners for collecting life-cycle cost data for WASH services developed by IRC. These provide different types of information related to the process and recording of asset data.

Name of tool: Asset Registry Assessment Tool
Degree of application: Rolled out
Purpose: The asset registry helps districts plan for rehabilitation and replacement of water infrastructure, based on data entered related to the type, age and condition of assets in a district.
Level of complexity: High
Description: The Excel spreadsheet is populated with results from a community survey, with data on assets (type, age, condition) to provide a district-wide overview of priorities for carrying out major repairs or replacements of water infrastructure, based on information on age and physical condition.
Output: this tool can be used to create an overview of i) the infrastructure in the district and its state, ii) the level of priority for repairing or replacing asset components.
Limitation: In order to provide up to date picture of the rehabilitation and replacement needs, the asset registry needs to be updated regularly and manually.
Useful links: https://www.ircwash.org/resources/suite-tools-support-systems-based-approach-sustainable-management-water-service-delivery

Capacity assessment

Name of tool: District capacity assessment
Degree of application: Rolled out
Purpose: The tool enables the user to assess existing district skills against core functions and identify the number of days/resources required currently spent against key activities.
Level of complexity: Medium
Description: The results of a district interview are inputted into an Excel tool to provide an overview of the current human resources capacity in a district to fulfil core functions. On that basis, ideal human resources and expenditure are calculated to provide the appropriate level of district support to service providers.
Output: Current capacity deficiencies and an indication of the difference between the ideal and current expenditure to provide appropriate support to service providers in a district.
Limitations: The tool is not linked to a benchmark for providing direct support
Useful links: Not available

Costing tools

Name of tool: **AtWhatCost**
Degree of application: Rolled out
Purpose: The tool supports service providers in better understanding the financial viability of water schemes and setting the appropriate tariff.
Level of complexity: Medium
Description: The tool is designed for service providers and uses the tariff set as the entry point to determine whether the scheme is "financially viable" over a 25-year period, in the sense of its ability to generate sufficient cash flow and cash reserves.
Output: This tool provides a visual display of revenue required to cover the expenditure of a water system over the next 25 years for a service provider and the proportion covered by the tariff.
Limitations: The level of analysis of the tool is the water system managed by a service provider. In order to have a district-wide assessment of the tariff and the generation of cash flow and reserves, this tool needs to be applied for all systems in the district.
Useful links: https://www.ircwash.org/resources/suite-tools-support-systems-based-approach-sustainable-management-water-service-delivery

Name of tool: CapManEx tool (associated to the asset registry)
Degree of application: Under testing (Rwanda)
Purpose: The tool is designed to provide an overview of the investment needed to cover current and future CapManEx for all water system for the next 10 years based on the information related to asset components' age and their physical condition contained in the asset registry.
Level of complexity: High
Description: This tool is derived from the asset registry to calculate the cost of carrying out major repairs and replacements of water asset components' condition and age. It is linked to a detailed cost reference sheet, which provides unit costs per asset component, distinguishing them per type, material, size/capacity.
Output: This tool provides a visual display of expenditure needed for CapManEx in the next 10 years for all water system in a district.
Limitations: The level of detail needed to use this tool is high and detailed engineering designs for all water systems are needed to obtain the CapManEx figures.
Useful links: Available upon request to WfP

Name of tool: Direct Support Tool
Degree of application: Rolled out
Purpose: It supports the district in identifying the gap between actual and required direct support expenditure in a district.
Level of complexity: Medium

Description: This tool is designed to calculate the current and required DSexp/person to identify a gap. It relies on the manual entry of key data related to direct expenditures, including salaries.

Output: This tool provides a visual display of the gap between actual and required DSexp, as well as the sources of support, the breakdown of actual DSexp and of required DSexp.

Limitations: NA

Useful links: https://www.ircwash.org/resources/suite-tools-support-systems-based-approach-sustainable-management-water-service-delivery

Financing tools

Cost/financing consolidated tool

Name of tool: The financial overview tool

Degree of application: Rolled out

Purpose: It creates an overview of revenue and expenditure at the service authority level (district) and calculates the gap between actual and required expenditure and analyse the various expenditure components and revenue streams.

Level of complexity: High

Description: This tool creates an overview of revenue and expenditure at the service authority level (i.e. district as a whole) and calculates the gap between actual and required revenue and expenditure. The tool also helps analyse the various expenditure components and revenue streams.

Output: Gap between actual expenditure and required revenue/expenditure

Limitations: The tool links expenditure requirements and revenue, but does not make the district vision (upon which the expenditure requirement is calculated) explicit.

Useful links: https://www.ircwash.org/resources/suite-tools-support-systems-based-approach-sustainable-management-water-service-delivery

Name of tool: The district financial balance sheet **(name TBC)**

Degree of application: Under development for application in Rwanda

Purpose: It provides an overview of the gap between expenditure and financial resources available/projected for water services in a district.

Level of complexity: Medium

Description: It gathers data on the district's vision, the costs and sources of finance for all stakeholders providing water services in a district and identifies the financing gap to achieve the districts' vision.

Output: An overview of costs/financing and financing gap to achieve the district's vision

Limitations: This tool relies on the manual entry of cost/financing/vision data generated in other tools that are not automatically linked.

Useful links: NA

Tracking WASH expenditure

Name of tool: TrackFin (Tracking Financing to WASH)
Degree of application: Rolled out
Purpose: track financing to the WASH sector in a consistent manner.
Level of complexity: High
Description: TrackFin is a methodology to identify and track financing to the water, sanitation and hygiene (WASH) sector at the national or sub-national level in a consistent and comparable manner. TrackFin produces WASH accounts which can be used for national benchmarking, cross-country comparisons and to provide an evidence base to better plan, finance, manage and monitor WASH services and systems. TrackFin tracks financing expenditures in the WASH sector to answer four main questions: i) What is the total expenditure in the WASH sector? ii) How are funds distributed between different WASH services and types of expenditure? iii) Who pays for WASH services and how much do they pay? iv) Which entities are the main funding channels for the WASH sector?
Limitations: Although the approach has been tested in four districts of Ghana, the methodology is designed to track financing at national level. In addition, it is focused on identifying/tracking expenditure rather than costs of achieving a vision**.**
Useful links: https://www.who.int/water_sanitation_health/monitoring/investments/trackfin-methodology/en/

Other

Name of tool: Master planning tool
Degree of application: Piloted (Ethiopia)
Purpose: Support woredas (districts) in developing master plans for WASH services
Level of complexity: Medium
Description: This tool supports the woredas in defining a vision for reaching universal and sustainable access to water supply and costing it in terms of the life-cycle costs.
Limitations: The tool focuses on service levels and cost of provision, but does not support the assessment of available/projected financing and determination of a funding gap for achieving the woreda's vision.
Useful links: Not available

BIBLIOGRAPHY

Asutifi North District Assembly. Water Sanitation and Hygiene (WASH) Masterplan, Kenyasi – Ghana, 2018

Frade, José. Finance assessment of the water sector in Rwanda, Uganda, Ethiopia, IRC, 2018

James, A.J. District Water Supply Services. Masterplanning tool: Ethiopia, 2018

Joint Monitoring Programme. Progress on Drinking Water, Sanitation and Hygiene 2017. Update and SDG Baselines, 2017

Moriarty, Patrick; Batchelor, Charles; Abd-Alhadi, Firas T.; Laban, Peter; Fahmy, Hazem. The *EMPOWERS* Approach to Water Governance: Guidelines, Methods and Tools, 2007

UNICEF. Liquid Waste Sanitation, Hygiene and Water Budget Monitoring at District Level in Ghana, 2018

UN-Water GLAAS, TrackFin Initiative. Tracking financing to sanitation, hygiene and drinking water at the national level. Guidance document, 2017

Veenkant, Mathijs; Fonseca, C. Collecting life-cycle cost data for WASH services. A guide for practitioners. Working Paper, January 2019

WASHCost. Life-cycle costs approach. Costing sustainable services. Briefing Note 1a, 2011

WASHCost. Providing a basic level of water and sanitation services that last: cost benchmarks. Infosheet 1, 2012

WSUP, IRC and Trémolet Consulting, Public finance for WASH, Domestic public finance for WASH: What, why and how?, 2015