

# Professionalising rural and small-town water supply management: the need to enhance support arrangements

## Zambia country brief

December 2024

Zambia has made important progress in defining desired professionalised models for rural and small-town water supply services that give a key role to commercial utilities directly managing facilities and overseeing other service providers, such as private operators. There is now a pressing need to scale up these more professionalised management models, increase the support that commercial utilities and private operators receive in areas such as technical and water quality management, and implement interventions that improve financial viability. At the same time, it is important to ensure that village water, sanitation, hygiene and education (WASHE) committees, which will remain essential in at least the short- to medium-term, are properly supported to manage facilities not transferred to commercial utilities or private operators.

### Study overview

Rural areas and small towns represent diverse demographic, socio-economic and water resource contexts. A plurality of water supply management models are required to serve these different contexts and any model, be it a form of community-based management or public or private service provision, requires a variety of support to deliver reliable and professionally managed services. This country brief is part of a broader study that was conducted across ten countries. It builds on existing global- and country-level studies about management models for rural and small-town water supply services, but focuses explicitly on determining the level of support that different management models receive across four dimensions (technical, financial, organisational development, monitoring and regulation) and identifying priority areas for improvement. This country brief distils top-level findings about the status of the sector and the level of support that management models for rural and small-town water supply services receive in Zambia. It also provides recommendations.

## Sector status

Zambia has made important progress in expanding access to water supply services in rural and small-town contexts, but is not on track to achieve national and international targets. The proportion of the rural population accessing an 'at least basic' water supply service increased from 28% in 2000 to 51% in 2022 (JMP, 2022). This increase was primarily due to an expansion in the number of point water sources, with 54% of the rural population accessing water from a non-piped water supply facility and 5% from a piped facility (JMP, 2022). Despite this increase, a significant acceleration in the rate of progress is required to achieve Sustainable Development Goal target 6.1. of universal access to safe drinking water.

Zambia is progressing towards more professionalised models for managing rural and small-town water supply services, but scaling up desired models remains slow. The 2018 Framework for the Provision and Regulation of Rural Water Supply and Sanitation in Zambia sets out desired professionalised models for managing rural and small-town water supply services. These preferred models place considerable responsibility on commercial utilities for the direct delivery of services, as well as providing backstopping support to, and oversight of, other service providers, such as local authorities and private operators. The current primary arrangements are as follows (see Figure 1):

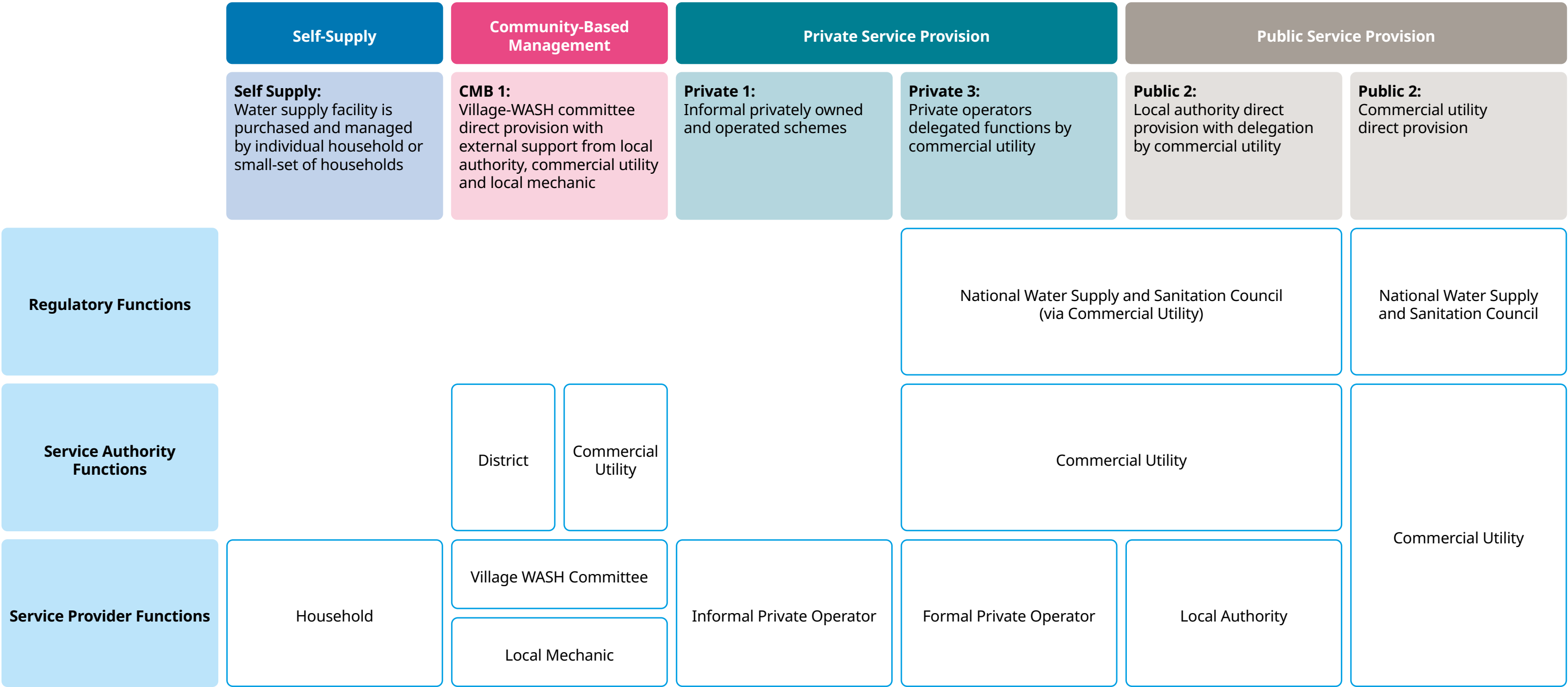
- Household self-supply, whereby the water supply facility is purchased and managed by an individual household or small set of households.
- Village-WASHE committees carry out direct service provision, with external support from the local authority and local mechanics.
- Informal privately owned and operated facilities operate outside of the regulatory framework.
- Formalised private operators carry out direct service provision, delegating management responsibilities to the respective commercial utility and indirect regulation to the National Water Supply and Sanitation Council (NWASCO).
- Local authorities carry out direct service provision, delegating management responsibilities to the respective commercial utility and indirect regulation to NWASCO.
- Commercial utilities carry out direct service provision, with regulation by NWASCO.

More professionalised arrangements based on direct delivery of services by commercial utilities and private operators have been shown to deliver higher quality services. For example, Access Water reports a 100% functionality rate and 99% of their facilities passed their internal water quality testing requirements<sup>1</sup>. However, these models are only applied at a modest scale, with commercial utilities struggling to expand their operations into rural and small-town contexts. Moreover, Access Water is the private operator managing the greatest number of rural and small-town water supply services but, despite recent increases in the scale of its operations, it serves a modest 89,000 people through 37 solar-piped water schemes in four districts. Consequently, direct service provision by village-WASHE committees remains the primary management model for rural and small-town water supply despite a long-standing record of delivering low-quality services. For example, non-functionality rates of 25-30% is commonly reported (Skat Foundation, 2020).

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<sup>1</sup> Detailed data on the quality of services managed by commercial utilities in rural and small-town contexts is not available. However, the 2023 NWASCO sector performance report shows that across urban and rural areas, commercial utilities provided the following average performance: (i) 87.1% water service coverage, (ii) 17.4 hours of supply, (iii) 89.6% revenue collection efficiency, and 75% operations and maintenance cost coverage by collection. Additionally, eight of the 11 commercial utilities achieved a Grade A for water quality compliance, with the remaining three scoring a Grade B (NWASCO, 2023).

Figure 1: Management models for rural and small-town water supply services



Management model support

The level of support that Zambia’s management models for rural and small-town water supply services receive from internal (i.e. a higher body within the service provider) and external actors (e.g. NWASCO, commercial utilities, local authorities, private operators) was assessed across 13 indicators, grouped into four headline dimensions. The assessment tool uses a four-point scale and focuses on whether support is being provided in-line with requirements. Table 1 provides an overview of the different average scores per indicator per management model<sup>2</sup>.

<sup>2</sup> The models based on household self-supply and informal private operators were not scored because support responsibilities have not been defined and only very limited and ad-hoc, if any, support is provided to these models.

● **Non-existent (0-0.5)**  
Support is not provided for this dimension.

● **Limited (0.6-1.5)**  
Some support is provided, however, substantial limitations exist.

● **Good (1.6-2.4)**  
Meaningful support is provided but important limitations remain, and support is not provided in line with guidelines.

● **Desired (2.5-3)**  
Support is provided in line with guidelines, but some very small limitations may remain.

Table 1: Scoring of the support provided per indicator per management model					
Dimension	Indicator	Village-WASHE committee	Private operator with commercial utility delegation	Local authority with commercial utility delegation	Commercial utility
Technical	Preventative maintenance	1.5	2.0	1.0	2.0
	Corrective repairs	1.0	2.0	1.0	2.0
	Spare parts procurement	0.5	2.0	1.0	1.0
	Water quality management	0.0	3.0	1.0	2.0
Financial	Operational expenditure	1.0	3.0	1.0	1.0
	Capital maintenance expenditure	1.0	2.0	1.0	3.0
Organisational development	Technical management	1.0	2.5	1.0	3.0
	Financial management	1.0	2.5	1.0	3.0
	Customer relations and conflict resolution	2.0	2.7	1.0	3.0
Monitoring and regulation	Service provider monitoring	1.0	3.0	3.0	3.0
	Incentives and sanctions	0.0	2.7	3.0	2.0
	Performance reporting	0.0	3.0	3.0	3.0
	Economic regulation (tariff setting)	0.0	2.7	3.0	3.0

**More professionalised models based on commercial utilities and private operators managing facilities receive the greatest levels of support.** Across the four assessed dimensions and 13 reviewed indicators, commercial utility direct provision and private operator provision with delegation by commercial utilities received the most support, with average scores of 2.4 and 2.6, respectively. This highlights how more professionalised management models are associated with higher service levels – greater levels of support play an essential role in the success of these models and provide a vital foundation for ensuring sustainable rural and small-town water supply service provision.

**Only limited support is provided to village-WASHE committees, which directly impacts the model's ability to ensure safe and reliable water supply services.** Despite the shift towards more professionalised management models, village-WASHE committees will continue to play an important role in managing rural and small-town water supply facilities in at least the short- to medium-term, especially for point water sources. However, this model is currently associated with poor service levels and only received a 'good' level of support for one indicator (customer relations and conflict resolution). A wide-ranging set of weaknesses were identified around the support that village-WASHE committees receive, including limited monitoring and reporting, insufficient mechanisms to help cover required life-cycle costs, and weak arrangements for providing critical technical and water quality management functions.

**Monitoring and regulation represent areas of generally strong performance, but there are big challenges around support for key technical functions.** Aside from village-WASHE committee direct service provision, the monitoring and regulation dimension generally performed best. This reflects the good progress that has been made over the last five years to bring alternative management models under NWASCO's regulatory sphere by expanding commercial utilities' mandate and enabling them to delegate service provision responsibilities to private operators and local authorities. Conversely, across all management models, the technical factor generally performed worst, highlighting weaknesses in arrangements for preventative maintenance, repairs, spare parts procurement and water quality management.

**While some forms of financial support are provided, financial viability remains a concern across the assessed models.** Identified forms of financial support include cross-subsidisation between better- and worse-performing facilities, accessing loans from third-party financiers, and direct financial support from the Government of Zambia to cover capital maintenance expenditure exceeding 400 Zambian Kwacha for village-WASHE committee-managed facilities. However, these measures were deemed insufficient, particularly considering the extent of the financial challenge that service providers face in effectively managing rural and small-town water supply facilities.

## Conclusions and recommendations

Zambia has made important progress in defining desired professionalised models for rural and small-town water supply services that give a key role to commercial utilities directly managing facilities and overseeing other service providers, such as private operators. There is now a pressing need to scale up these more professionalised management models, increase the support that commercial utilities and private operators receive in areas such as technical and water quality management, and implement interventions to improve financial viability. At the same time, it is vital to ensure that village-WASHE committees, which will remain essential in at least the short- to medium-term, are properly supported to manage facilities not transferred to commercial utilities or private operators. This represents a considerable undertaking and the following steps should be taken to enhance the support that management models receive:

- Accelerate the expansion of water supply services management by commercial utilities and private operators (delegated by commercial utilities) in rural and small-town contexts. This should include:
  - NWASCO developing a series of incentives and financial mechanisms to encourage and support commercial utilities and private operators in this process.
  - NWASCO establishing standards and criteria for when a water supply scheme should be managed by a commercial utility, private operator or village-WASHE committee.
  - The Ministry of Water Development and Sanitation updating the 1997 Water and Sanitation Act, 2020 Water Supply and Sanitation Policy, and 2010 National Water Policy to account for commercial utilities' expanded role and the desire for private operators to play a greater role in managing water supply facilities. The two policies will be merged into one National Water Policy that should account for associated elements, such as tariff setting, that will heavily influence commercial utilities' capacity to expand their operations.
- The Ministry of Water Development and Sanitation accounting for this study's findings in guidelines for the management of rural and small-town water schemes that are under development.
- Ensure village-WASHE committees receive the support they require by distilling learnings from initiatives such as the Sustainable Operation and Maintenance Project (SOMAP I, II and III) and developing programmes to expand the support that village-WASHE committees receive on key technical aspects. This should include reviewing the skills of area pump mechanics, and updating their training curriculum and the Water Supply Sanitation Capacity Development Strategy 2015 to include additional areas (i.e. basic plumbing, metal fabrication, electrical maintenance of solar systems, submersible pump systems).
- NWASCO should expand its reporting activities to place greater emphasis on rural and small-town water supply services and disaggregate data and information presented by different demographic contexts more clearly.

- The Ministry of Water Development and Sanitation and NWASCO should prioritise securing additional funding for the rural and small-town water supply sub-sector from the Government of Zambia for the express purpose of fully operationalising the 2018 Framework for the Provision and Regulation of Rural Water Supply and Sanitation in Zambia.
- The Ministry of Finance and the Ministry of Water Development and Sanitation should acknowledge that ongoing subsidies will be needed to cover some of the costs of professionalised rural water supply service provision and account for this in their future budgets and policies. Subsidies will be especially important for mitigating new costs that commercial utilities are expected to cover, for example, maintenance visit costs or spare parts for point water sources managed by water committees.
- Expand and formalise private sector involvement in maintenance to reduce the burden on local authorities and commercial utilities.
- Ensure that a percentage of the Constituency Development Fund is allocated to enabling professionalised operations and maintenance activities.



## Annex 1: Indicator overview

Dimension	Indicator
Technical	<b>1.A. Preventative maintenance.</b> Service providers are supported to perform regular preventative maintenance on the water supply facilities they manage.
	<b>1.B. Corrective repairs.</b> Service providers receive direct support to perform repairs when breakdowns occur and assistance is required.
	<b>1.C. Spare parts procurement.</b> Service providers receive support in accessing spare parts when required.
	<b>1.D. Water quality management.</b> Service providers receive support to perform key water quality management functions and take corrective measures when water quality challenges are identified.
Financial	<b>2.A. Operational expenditure.</b> Service providers receive financial support to cover their operational expenditure.
	<b>2.B. Capital maintenance expenditure.</b> Service providers receive financial support to cover their capital maintenance expenditure.
Organisational development	<b>3.A. Technical management.</b> Service providers receive refresher training in how to plan and perform key technical functions (i.e. preventative maintenance, conducting repairs, water quality testing, infrastructure improvements).
	<b>3.B. Financial management.</b> Service providers receive refresher training in how to perform key financial functions or address challenges that may emerge (i.e. unwillingness to pay, personnel mismanagement of funds, mobilising resources in the event of a sudden climatic event, financial planning).
	<b>3.C. Customer relations and conflict resolution.</b> Service providers receive support to ensure good relations with customers and resolve any conflicts or grievances that may emerge.
Monitoring and regulation	<b>4.A. Service provider monitoring.</b> The quality of service and performance of service providers is monitored on a regular basis and covers key elements.
	<b>4.B. Incentives and sanctions.</b> Regulatory actors consistently apply regulation by incentives (financial and/or reputational) and sanctions where instances of non-compliance are identified.
	<b>4.C. Performance reporting.</b> Regulatory actors produce regular performance reports that specify service providers' performance for key quality of service and financial performance indicators.
	<b>4.D. Economic regulation – tariff setting.</b> A clear process and guidelines for tariff setting exists and support is provided to ensure tariff setting is conducted in accordance with this process.

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