Strengthening management models for piped water supply services in rural and small town contexts





Decision making resource for selecting and strengthening management models



Introduction

Many governments have set ambitious targets for reaching people with piped water services. Piped water at household level provides one means of achieving safely managed water access in line with SDG 6. Proliferation of piped water must come with stronger endeavours to professionalise service management, ensure adequate levels of external support and ensure services are inclusive. Without attention to management, financing, support, regulation, available water resources and inclusive access there is the risk that piped water services will under perform in low-income areas resulting in poor service levels and lost investment. There are alternatives to piped supply service options and these should be considered where piped supplies are not viable.

This publication

This publication is the second in a series focused on management models for piped water services in rural and small-town settings. It is a decision-making resource designed to help practitioners select or strengthen piped water supply management arrangements in different contexts. The first publication in this series entitled: Management Models for <u>Piped Water Services</u> set out the factors that impact on the sustainability of piped water, presenting a typology consisting of ten different management models. This publication compares the likely viability of these ten management models against the following four variables:

- A. Commercial viability and economies of scale
- **B.** Technical complexity, connectedness and **local capacity**
- C. Sector policy, legislation and financing arrangements
- D. Regulation and accountability mechanisms, local preferences, and ensuring inclusive services for all



Keys

Variables key



Commercial viability and economies of scale



Technical complexity, connectedness and local capacity



Sector policy, legislation and financing arrangements



Regulation and accountability mechanisms, local preferences, and ensuring inclusive services for all



Feasibility key

The stronger the colour assigned to a management model the better it is likely to perform in a given context.







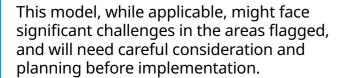


This model will most likely be applicable in the given context















This model will most likely face significant challenges. It is not recommended to adopt it, unless issues can be fully addressed either at operational or sector level. In the far right-hand column some possible actions are given to address the weaknesses or gaps identified.



Not relevant to the model

Management model key

Basic community management



Community management with minimal or no external support

Community management plus

CBM2

Community management with external support and some level of professionalised functions

СВМ3

Community management with delegation of some or all functions to private operator through a management contract

CBM4

Aggregate of community-based management organisations into associations or federations, to support management of rural water supply schemes

Local government

LG1

Direct management of schemes by local government

LG2

Local government delegation to community operators through management or lease contracts

LG3

Local government delegation to private operators or maintenance companies, through management or lease contracts

Public utility

PB1

Public water utility at town, district, state or national level manages the rural water supply scheme

Private



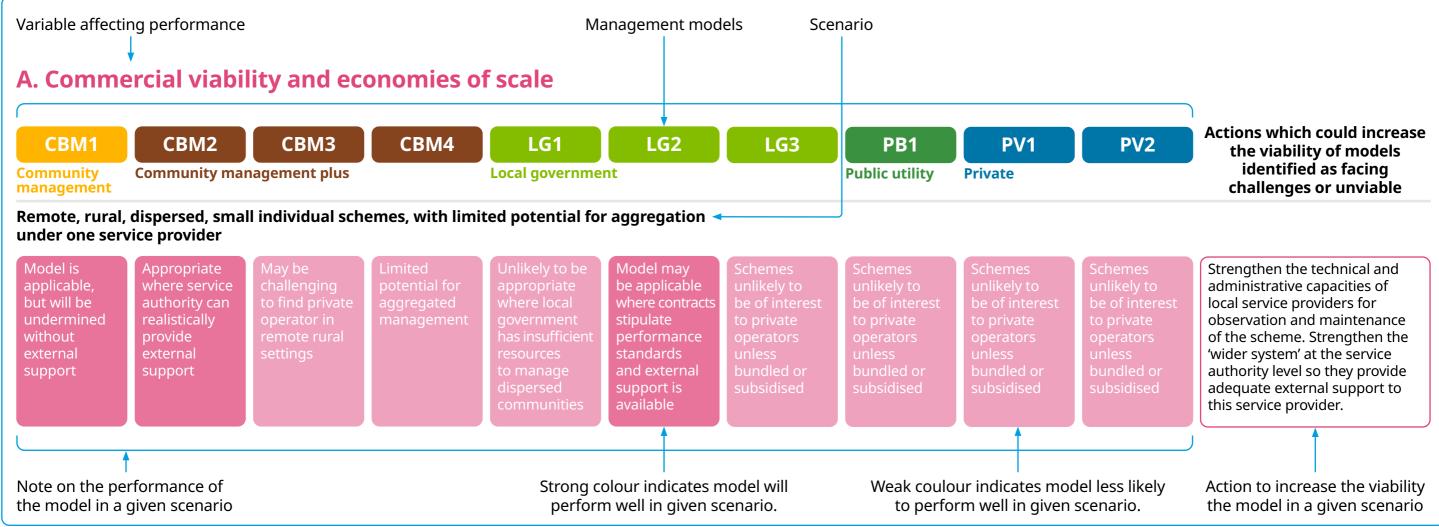
Ministry or asset-holding entity delegates operation and/or maintenance responsibilities to a private company through management or lease contracts

Privately owned and operated schemes (invest, build and operate)



How to use this guide

Each page in this guide is set out in the format shown in the image below. Please refer to this image to understand how to read the guide.



This guide is divided into four sections each representing a variable that impacts on the performance of different management models:

- A. Commercial viability and economies of scale
- B. Technical complexity, connectedness and local capacity
- C. Sector policy, legislation and financing arrangements
- D. Regulation and accountability mechanisms, local preferences, and ensuring inclusive services for all

Under each variable are a set of different scenarios that may be at play where piped water supply services are being considered for implementation or where they are operational. You can see which scenarios apply to the context you are working in and see how well any particular management model is likely to perform in that scenario using a colour-based classification system.

The stronger the colour assigned to a management model the better it is likely to perform in a given scenario. The weaker the colour assigned to a management model the less likely it is to perform well in a given scenario. If a scenario is not relevant to a

management model, the model will not be assigned a colour. You can see what actions might be taken to strengthen a model in the right-hand column.

You can use the following four pages to get a high-level overview of how well different models perform in different scenarios. Click on the factor or page number to read more in depth information.

Several scenarios may apply at any one time. It is important to weigh up the pros and cons of each scenario in order to arrive at the most appropriate model.



KEY Applicable but might face significant challenges Face significant challenges Applicable Not relevant to the model

A. Commercial viability and economies of scale

FACTOR / OPERATING CONTEXT	PAGE	CBM1	СВМ2	СВМЗ	СВМ4	LG1	LG2	LG3	PB1	PV1	PV2
Remote, rural, dispersed, small individual schemes, with limited potential for aggregation under one service provider	8										
Multiple schemes bundled together under one service provider	8										
Low to medium potential to generate sufficient tariff revenue to meet operating costs	8										
Medium to high potential to generate surplus from tariff revenue to meet operating costs and potentially some aspects of capital aintenance	9										
Greater proximity to higher density urban or peri-urban centres, with potential to be networked with urban utilities, either physically or through aggregated or umbrella management arrangements	9										
Low interest of utilities or private sector to assume some or all aspects of scheme management	10										
High interest of utilities or private sector to assume some or all aspects of scheme management	10										
Low standardisation of technologies in an area	11										
Scheme integrated with alternative, economic uses of water	11										

KEY

Applicable

Applicable but might face significant challenges

Face significant challenges

Not relevant to the model

B. Technical complexity, connectedness and local capacity

FACTOR / OPERATING CONTEXT	PAGE	CBM1	СВМ2	СВМЗ	СВМ4	LG1	LG2	LG3	PB1	PV1	PV2
Low scheme technological complexity (for both operation and maintenance)	12										
Low complexity of scheme operation, but complex maintenance	12										
Higher complexity of (daily) scheme operation, and complex maintenance	13										
High levels of service required (e.g. set performance indicators on pressure management, water quality, service outage, leakage management, and/or high rates of domestic connections)	13										
Low capacity (e.g. administrative, financial, organisational) of the local private sector to manage the schemes	13										
Low capacity of the local service authority to provide timely and adequate technical support to the service provider	14										
Low capacity of the service provider or contracting authority to develop and enforce contracts	14										



C. Sector policy, legislation and financing arrangements

FACTOR / OPERATING CONTEXT	PAGE	CBM1	СВМ2	СВМЗ	СВМ4	LG1	LG2	LG3	PB1	PV1	PV2
Unclear policy and legal framework for supporting Community Based Management (CBM)	15										
Policy and legal framework, with supporting legislation, for public-private partnerships (PPP) or outsourcing of services not clear or well developed	15										
Legal ownership of assets is poorly defined in sector legal framework	15										
The mandate for who can delegate management of public/ water supply assets is unclear	16										
The legal framework prevents the delegation of public or state- owned assets to the private sector or community operators	16										
Financing for support to service authority and formal regulatory function is limited	16										
Sector financing guidelines unclear about responsibility for financing of capital maintenance	17										
Access to alternative financing sources through loans and (commerical) credit, as well as potentially through remittances	17										

KEY Applicable but might face significant challenges Face significant challenges Applicable Not relevant to the model

D. Regulation and accountability mechanisms, local preferences, and ensuring inclusive services for all

FACTOR / OPERATING CONTEXT	PAGE	CBM1	СВМ2	СВМЗ	СВМ4	LG1	LG2	LG3	PB1	PV1	PV2
Management model enables equitable and inclusive service provision to all members of the community	18										
Management arrangements are gender sensitive and include women in key positions for greater sustainability	18										
No or limited formal regulation of rural water services by independent regulator	19										
Low capacity of the service authority to oversee and monitor service delivery or to fulfil delegated regulatory functions in absence of independent regulator	19										
Strong informal accountability mechanisms in place at the local level between local leaders, users and service providers, but weak formal regulatory processes by external (to the community) stakeholders	20										
Low public and political acceptance of private operators	20										
Low public confidence or acceptance of services being run (or managed) by local government or state utilities	21										
Low public confidence and local political acceptance of any 'outsiders' (i.e. external to the community, including public or private entities) running schemes and strong user preference for accountability of service providers to communities/households	21										

CBM1

CBM2

CBM3

CBM4

LG1

LG2

LG3

PB1

PV1

PV2

Actions which could increase the viability of models identified as facing challenges or unviable

Community management **Community management plus**

Local government

Public utility

Private

Remote, rural, dispersed, small individual schemes, with limited potential for aggregation under one service provider

Model is applicable, but will be undermined external support

Appropriate where service authority can realistically provide external support

Mav be

Limited

Unlikely to be

Model may be applicable stipulate performance standards and external support is available

oundled or

bundled or

oundled or

Strengthen the technical and administrative capacities of local service providers for observation and maintenance of the scheme. Strengthen the 'wider system' at the service authority level so they provide bundled or adequate external support to this service provider.

Multiple schemes bundled together under one service provider

Aggregation may be possible if schemes are close together but not if far apart

Model is based on principle of aggregation

Only appropriate where local government has adequate capacity and resources

Allows for greater economies of scale and operating efficiencies, but requires high level of professional management Allows for greater economies of scale and operating efficiencies

Allows for greater economies of scale and operating efficiencies

Allows for greater economies of scale and operating efficiencies

Allows for greater economies of scale and operating efficiencies

Undertake studies and surveys to develop the evidence on which decisions on bundling schemes can be based, and support consultations with stakeholders on this. Ensure selection of schemes does not just pick the most commercially viable schemes, to the detriment of services in surrounding schemes.

Low to medium potential to generate sufficient tariff revenue to meet operating costs

Possibility to draw on voluntary labour and community contributions to offset tariff

Possibility to draw on voluntary labour and contributions to offset tariff

Possibility to crosssubsidise

Possibility to crossin larger networked areas or to provide public Possiblity to inject public subsidies, but unsustainable in the long

Possibility to crosssubsidise in larger networked areas or to provide public subsidies

Possibility to crosssubsidise in larger networked areas or to provide public subsidies

Efforts to strengthen the financial viability of the scheme could include: capital investments to the scheme to ensure it is well functioning and to reduce upcoming O&M costs; identifying users' willingness and ability to pay for services to ascertain the viability of tariff increases; facilitating users' ability to obtain domestic connections, to increase volumetric consumption; carrying out measures to reduce levels of non-revenue water.

CBM1

CBM2

CBM3

CBM4

LG1

LG2 LG3 **PB1**

PV₁

PV2

Actions which could increase the viability of models identified as facing challenges or unviable

Community management

Community management plus

Local government

Public utility

Private

Medium to high potential to generate surplus from tariff revenue to meet operating costs and potentially some aspects of capital maintenance

Verv unlikelv

Unlikely to be able to generate surplus where tariffs are not based on some level of cost recovery and revenue collection is infrequent and/or partial

Unlikely to be able to generate ' surplus where tariffs are not based on some level of cost recovery and revenue collection is infrequent and/or partial

Potential to generate surplus through tariff setting based on some level of cost recovery and cross subsidy which could be reinvested in capital maintenance

Unlikely to potential to surplus unless tariffs reflect some level of cost recovery

Unlikely to potential to generate surplus unless tariffs reflect some level of cost recovery

While there is potential management is efficient, to generate surplus that profits are could be re-invested, re-invested, technology innovations are taken operators up and cost also present control an additional measures put cost and may nto place, seek to extract possible to revenue generate that would surplus otherwise

Likely to generate surplus, but unless lease contracts are well designed and enforced, potential for private investors to extract profits may undermine ability to cover capital mainten<u>ance</u> requirements over long

term

Likely to generate surplus, but unless managed effectively and profits re-invested, unlikely to be able to cover capital maintenance requirements, especially where private investors extract profits Work with service providers and management entities to ensure surplus generated through tariff revenues is ring-fenced and reinvested in capital maintenance interventions. Support providers to establish bank accounts and develop forecasts for capital investment planning (links with asset management).

Greater proximity to higher density urban or peri-urban centres, with potential to be networked with urban utilities, either physically or through aggregated or umbrella management arrangements

Unlikely this model will be relevant where there is potential for utility management

Unlikely this model will be relevant where there is potential for utility management

Unlikely this model will be relevant where there is potential for utility management Unlikely this model will be relevant where there is potential for utility management

Potential for this model to work well where there is effective municipal management and revenue streams fenced, but dependent on commitment of local

Potential for this model to work well where there are well designed and enforceable lease contracts and where CBM is effective management

Allows for greater economies of scale and operating efficiencies where private sector management is effective and where lease contracts are well designed and enforceable

be available

maintenance

to fund

Allows for greater economies of scale and operating efficiencies where private sector management is effective and where lease contracts are well designed and enforceable

greater economies of scale and operating efficiencies where private sector management is effective and where lease contracts are well designed and enforceable

Allows for

Allows for greater economies of scale and operating efficiencies where private sector management is effective and where lease contracts are well designed and enforceable

Where appropriate, encourage larger utilities (and the line ministries that oversee them) and asset holders to provide incentives to extend networks into adjacent rural areas and/or establish umbrella mangement entities linked to the utilities that can provide more professional aggregated management of smaller rural schemes in these areas.

CBM1

CBM2

CBM3

CBM4

LG1

LG2

PB1

PV1

PV2

Actions which could increase the viability of models identified as facing challenges or unviable

Community management plus Community management

Local government

Public utility

Private

Low interest of utilities or private sector to assume some or all aspects of scheme management

Not relevant to model model does not involve utilities or private sector actors

Not relevant to model model does not involve utilities or private sector actors

Likely to

Not relevant to model model does not involve utilities or private sector actors

Not relevant to model model does not involve utilities or private sector actors

Not relevant to model model does not involve utilities or private sector actors

Likely to

LG3

Likely to

Likely to

Likely to

Carry out studies to determine the commercial viability of the scheme and understand non-commercial barriers to external engagement. Seek to address such constraints with the community and service provider. Explore alternative service options that may be more applicable in this context i.e. self-supply

High interest of utilities or private sector to assume some or all aspects of scheme management

Not relevant - model does not involve utilities or private sector actors

Not relevant - model does not involve utilities or private sector actors

Likely to be attractive, but limited potenital for private sector to maximise profits

Not relevant - model does not involve utilities or private sector actors

Not relevant - model does not involve utilities or private sector actors

Not relevant model does not involve utilities or private sector actors

Incentive for private sector involvement

Incentive for public utility involvement

Incentive for private sector involvement

Incentive for private sector involvement

Where appropriate, encourage larger utilities (and the line ministries that oversee them) and asset holders to provide incentives to extend networks into adjacent rural areas. And/or establish umbrella management entities linked to the utilities that can provide more professional aggregated management of smaller rural schemes in these areas. Where required, identify and support capacity building needs

CBM1

CBM2

CBM3

CBM4

LG1

LG2

LG3

PV2

Actions which could increase the viability of models identified as facing challenges or unviable

Community management

Community management plus

Local government

Public utility

PB1

Private

Low standardisation of technologies in an area

of access to

of access to

Associationthrough of access to scale

based models may be able to overcome low standardisatior economies of

Difficulties with standardisation may be overcome depending on guality of local government support

Difficulties standardisation may be overcome depending on quality of service support

Larger operators with greater economies of scale and buying power likely to be less affected by a lack of standardisation

Larger operators with greater economies of scale and buying power likely to be less affected by a lack of standardisation

Larger operators with greater economies of scale and buying power likely to be less affected by a lack of standardisation

PV₁

Dependent on size and level of expertise of private operator some small firms may struggle

Ensure the technologies are appropriate to the context. For example, taking caution introducing solar systems for a scheme where there are no others in the surrounding area. Support the service authority and sector level authorities to enhance coordination of sector investments and standardisation of technologies (where appropriate).

Scheme integrated with alternative, economic uses of water

Productive uses of water likely to increase users' ability to pay tariffs more regularly, if sufficient quantities of water are available for productive water use

Productive uses of water likely to increase users' ability to pay tariffs more regularly, if sufficient quantities of water are available for productive water use

Productive uses of water likely to increase users' ability to pay tariffs more regularly, if sufficient quantities of water are available for productive water use

Productive uses of water likely to increase users' ability to pay tariffs more regularly, if sufficient quantities of water are available for productive water use

Productive uses of water likely to increase users' ability to pay tariffs more regularly, if sufficient quantities of water are available for productive water use

Productive uses of water likely to increase users' ability to pay tariffs more regularly, if sufficient quantities of water are available for productive water use

Requires enforcement of volumetric block tariffs linked to different user categories to ensure fair water use

Requires enforcement of volumetric block tariffs linked to different user categories to ensure fair water use

of volumetric block tariffs linked to different user categories to ensure fair

Requires

Requires enforcement of volumetric block tariffs linked to different user categories to ensure fair

Where absent, work with line ministry and/or regulatory body to develop block or volumetric categories for tariffs linked to different users (e.g. small-scale agriculture, livestock).

B. Technical complexity, connectedness and local capacities

Actions which could increase LG1 CBM1 CBM2 **CBM3** CBM4 LG2 LG3 PV1 PV2 **PB1** the viability of models identified as facing **Community management plus** Community **Local government Public utility Private** challenges or unviable management

Low scheme technological complexity (for both operation and maintenance)

Suitable Suitable Suitable Suitable Suitable Suitable Ensure the complexity Suitable Technology Technology Technology for service may limit may limit may limit of technologies being providers providers introduced is appropriate providers providers providers providers providers service to service to service to with limited more densely more densely more densely to the context. Strengthen the viability and capacity of capacity capacity capacity capacity capacity capacity capacity populated populated populated potential maintenance service areas areas areas providers. Strengthen the necessary capacities and tariff structures of the management service provider to enable them to contract and pay for maintenance services. Strengthen supply chains where required.

Low complexity of scheme operation, but complex maintenance

Appropriate Appropriate Suitable for Unless Suitable if Likely to have Suitable if Ensure the complexity Depends Dependent on if support maintenance if scale of on local community contracting adequate contracting size and level of technologies being from service contracts with operations is government management a private skills and a private of expertise introduced is appropriate to the context. Strengthen and unable authority specialised large enough capacity entity has contractor resources contractor of private includes to have in-house with such internally with such the viability and capacity of service operator – to meet high potential maintenance service reliable/timely provider adequate technical skills (inskills (insome small technical skills in-house providers. Strengthen the expertise or house or subhouse or subfirms may necessary capacities and tariff support for can outsource contracted) contracted) struggle structures of the management maintenance service provider to enable them to contract and pay for maintenance services. Strengthen supply chains where required.

B. Technical complexity, connectedness and local capacities

CBM1

CBM2

CBM3

CBM4

LG1

LG2

LG3

PB1

PV₁

PV2

Actions which could increase the viability of models identified as facing challenges or unviable

Community management **Community management plus**

Local government

Public utility

Private

Higher complexity of (daily) scheme operation, and complex maintenance

inappropriate to needs

Model likely to be nappropriate to needs

Probably unless private technical expertise or outsources

Appropriate if scale of operations is large enough to have adequate skills in-house

Viability depends on local government techncial capacity

Probably technical

outsources

Suitable if contracting private contractor with adequate technical skills Likely to be large enough to have access to skills – but need to be in-house at scheme level

Suitable if contracting a private contractor with such skills (inhouse, at scheme level)

Dependent on size and level of expertise of private operator – some small firms may struggle

Ensure the complexity of technologies being introduced is appropriate to the context. Build the capacity of the service provider in O&M skills, potentially with contractual technical support from a specialist firm. Strengthen spare part supply chains where required.

High levels of service required (e.g. set performance indicators on pressure management, water quality, service outage, leakage management, and/or high rates of domestic connections)

Unlikely to attain high service level standards

Unlikely to attain this expertise at scheme level

Appropriate if private operator has capacity and community can oversee reporting enforcement against service level standards

Appropriate if scale of operations is large enough to have adequate techncial skills in-house

Viability depends on local government technical capacity at the level of the scheme

Likely to be expertise at level

Suitable if contracting a private contractor with adequate techncial skills (in-house, at the scheme level)

Likely to be large enough to have access to skills – but need to be in-house at scheme level

Suitable if contracting a private contractor with such skills (inhouse, at scheme level) Dependent on size and level of expertise of private operator – some small firms may struggle

Improve the capacity of the service providers to attain and internally monitor service levels. Strengthen the regulatory framework and monitoring and enforcement processes to ensure attainment and accountability of service providers against such targets.

Low capacity (e.g. administrative, financial, organisational) of the local private sector to manage the schemes

Not relevant to model

Not relevant to model

Likely to have significant on extent of outsourcing

Unlikely to have significant impact on functioning of model

Not relevant to model

Unlikely to have significant impact on functioning of model

where there is no or limited

Not relevant to functioning of model

appropriate where there is no or limited

Not where there is no or limited

Support initiatives that develop the management and technical capacity of the private sector. For example, through business development support efforts, such as providing technical training, supporting legal registration, and improving creditworthiness and access to credit.

B. Technical complexity, connectedness and local capacities

CBM1

CBM2

CBM3

CBM4

LG1

LG2

LG3

PB1

PV1

PV2

Actions which could increase the viability of models identified as facing challenges or unviable

Community management **Community management plus**

Local government

Public utility

Private

Low capacity of the local service authority to provide timely and adequate technical support to the service provider

Already operates independent of external support

Problematic from service Community can source technical expertise to substitute for service authority support

Typically less dependent on the service authority due to economies of scale and greater technical and management capacity

Application appropriate potentially undermined by limited government s also the support to the service community authority and service nas limited providers by technical and weak local government

Potentially Likely to viable if work as typically less contractor is competent dependent on the service and where contracts authority due are well to economies designed and of scale and enforced, and reliance on the service professional networks authority can provide of utility adequate operators oversight and and/or technical monitoring ministries of central government

Likely to work as typically less dependent on the service authority due to economies of scale and contractual relatiosnhip to asset holding entity or central government ministry

Unlikely to have impact except for oversight or monitoring functions if these are carried out by service authority

Strengthen the wider 'systems' and capacities of local authorities. Strengthen linkages with the higher levels of government that (should) support such service authorities with major maintenance and subsidies etc.

Low capacity of the service provider or contracting authority to develop and enforce contracts

Already operates independent of contracts

Problematic some level from local

Unlikely Risky unless to have significant impact on can provide reliable and functioning of model

behalf of the

Unlikely to have significant impact on functioning of model

While low capacity undermines this model, it may be less of a risk delegating to community than private operators

Risky if the

Unlikely to have significant impact on functioning of model

Risky if the

undermine model where authorty regulates or licences private providers

Potential to

Strengthen the capacity of the service provider or contracting authority at all relevant levels to develop and enforce contracts based on clearly defined tariffs and service levels. Produce sample contracts, and consider how to increase access to arbitration and legal support.

C. Sector policy, legislation and financing arrangements

CBM1

CBM2

CBM3

CBM4

LG1

LG2

Not relevant

to model

LG3

PB1

PV₁

PV2

Actions which could increase the viability of models identified as facing challenges or unviable

Community management **Community management plus**

Local government

Public utility

Private

Unclear policy and legal framework for supporting Community Based Management (CBM)

Unlikely to effectively especially when major Unlikely to effectively over long especially when major challenges arise

Unlikely to function effectively over long especially challenges arise

Unlikely to function effectively over long especially challenges arise

Not relevant to model

Strengthen legal and policy frameworks to avoid ambiguities and lack of clarity around status of CBM entities, PPP, asset ownership and contracting authority for delegation at service authority and sector level.

Policy and legal framework, with supporting legislation, for public-private partnerships (PPP) or outsourcing of services not clear or well developed

Not relevant to functioning of model

Not relevant to functioning of model

Caution needed in design of contracting for outsourcing

Not relevant to functioning of model

Not relevant to functioning of model

Not relevant to functioning of model

Not likely well if PPP not in place or Not relevant to model

Not likely well if PPP not in place or weak

May not be an issue for model if no reliance on public contracting authority

Strengthen legal and policy frameworks to avoid ambiguities and lack of clarity around status of CBM entities, PPP, asset ownership and contracting authority for delegation at service authority and sector level.

Legal ownership of assets is poorly defined in sector legal framework

Risk to model but can still function

Risk to model. but can still function

Undermines model, but possible to still function under existing arrangements at local level

Undermines model, but possible to still function under existing arrangements at local level

Risk to model in long term, particularly for long-term responsibilities for asset management and re-investment

impediment to model and ability of sset holder to delegate long-term O&M

Undermines model if not possible, but may still function under existing at local level

Strengthen legal and policy frameworks to avoid ambiguities and lack of clarity around status of CBM entities, PPP, asset ownership and contracting authority for delegation at service authority and sector level.

C. Sector policy, legislation and financing arrangements

CBM1

CBM2

CBM3

CBM4

LG1

LG2

LG3

PB1

PV₁

PV2

Actions which could increase the viability of models identified as facing challenges or unviable

Community **Community management plus** management

Local government

Public utility

Private

The mandate for who can delegate management of public/water supply assets is unclear

Unlikely to be barrier to functioning of model

Unlikely to be barrier to functioning of model

level

Authority under existing at the local

Unlikely to be barrier to functioning of model

Not relevant to model if local government is also contracting authority

Not relevant to model

Model not if delegation not clear

Not relevant to model if no delegation through contracts

impediment to model and ability of asset holder to delegate long-term O&M

Model still viable if private operator invests in own assets, but may complicate commissioning and transfer of assets under a Build Operate Transfer (BOT) arrangement

Strengthen legal and policy frameworks to avoid ambiguities and lack of clarity around status of CBM entities, PPP, asset ownership and contracting authority for delegation at service authority and sector level.

The legal framework prevents the delegation of public or state-owned assets to the private sector or community operators

Not relevant to functioning of model

Not relevant to functioning of model

This may prevent for the daily operation but not stop

Not relevant to functioning of model

Not relevant to functioning of model

This may prevent for the daily operation but not stop maintenance contracts

This may prevent delegation for the daily operation but not stop maintenance Not relevant to model if no delegation through contracts

impediment to model and ability of asset holder to delegate contracts

Unlikely to be barrier to functioning of model

Support the development of legal and policy frameworks (if appropriate).

Financing for support to service authority and formal regulatory function is limited

Not relevant to model

Undermines support functions

Risk to model. but can still function

Less likely to undermine model as support provided by associations, but may affect regulation

Risk to model where service authority is local government

Undermines oversight and regulation of contracts

Undermines oversight and regulation of contracts

Less relevant to model as utilities unlikely to be supported/ regulated by service authority

Undermines contracts by the service which is a to ensuring effective performance by private perators

Model can function but oversight will be limited

Work with line ministries/ ministries of finance and local government to increase funding made available through fiscal decentralisation channels. Support service authority capacity to better account for, use and report on increased funding.

C. Sector policy, legislation and financing arrangements

CBM1

CBM2

CBM3

CBM4

LG1

LG2

LG3

PB1

PV₁

PV2

Actions which could increase the viability of models identified as facing challenges or unviable

Community management

Community management plus

Local government

Public utility

Private

Sector financing guidelines unclear about responsibility for financing of capital maintenance

Can still function with ad hoc approach to capital maintenance, but ultimately breakdown

Can still function with ad hoc approach maintenance, but ultimately when there s a major breakdown

Can still Can still function function with ad hoc with ad hoc approach approach to capital maintenance, maintenance, but ultimately but ultimately when there is a major is a major breakdown breakdown

Local kely to struggle to cover captial maintenance costs

CBM providers unlikely to be credit worthy, but may be able to access funds through remittances benefactors

Should be specified by contract terms and risk sharing

Utility model likely to struggle to cover captial maintenance costs

Should be specified by contract terms and risk sharing

Model can still function but relies on selfinvestment

Work with line ministries/ ministries of finance and local government to clarify responsibilities for capital maintenance and issue guidelines to service authorities and management entities. Support service authorities and providers to calculate and budget for full service costs.

Access to alternative financing sources through loans and (commerical) credit, as well as potentially through remittances

CBM unlikely to be credit worthy, but may be able to access funds through remittances benefactors

CBM providers unlikely to be credit worthy, but may be able to access funds through remittances benefactors

Still viable and may improve performance in instances where alternative financing is needed

Still viable and may improve performance in instances where alternative financing is needed

Still viable and may improve performance in instances where alternative financing is needed

Still viable and may improve performance in instances where alternative financing is needed

Likely to benefit public utilities and private operators if credit worthy

Likely to benefit public utilities and private operators if credit worthy

Likely to benefit public utilities and private operators if credit worthy

Likely to benefit public utilities and private operators if credit worthy

financing institutions to develop affordable credit (i.e. with the assurance of up-stream) quarantees. Develop micro-finance institutions that can offer affrodable lines of credit. Establish revolving fund to provide low-cost loans to operators. Establish business development support programmes to assist operators to develop business plans and prepare loan or credit applications.

Work with state and non-state

CBM1

Community

CBM2

Community management plus

CBM3

CBM4

LG1

LG2

LG3

PB1

PV2

Actions which could increase the viability of models identified as facing challenges or unviable

management

Local government

Public utility

Private

Management model enables equitable and inclusive service provision to all members of the community

social cohesion may inclusive services, but capture and

social inclusive services, but Possibility inclusive retains control, but runs risk of

Opportunity for crosssubidies in model to ensure poorer households have access to In theory, Local Government should ensure service delivery, but

In theory, Local should ensure service delivery, but to oversee contract conditions

In theory, Local should ensure service delivery, but to oversee

Greater opportunities to apply crosssubsidies within service area and utilities more likely to be subject to benchmark performance indicators

and extent

PV1

Carry out assessments to understand barriers to equitable and inclusive service provision. Carry out reviews and evaluations to determine the performance of models, and pre-requisites within the models, that deliver inclusive services. Support the development of regulatory frameworks and guidelines for inclusive service management and delivery. Strengthen accountability measures. Support tariff setting processes to ensure a balance of affordability and scheme sustainability.

Management arrangements are gender sensitive and include women in key positions for greater sustainability

potential for inclusion of women in key positions, but possible risk to women if social of female

potential for inclusion of women in key positions, but possible risk to women if social of female

potential for inclusion of positions, but possible risk to women if social of female

Good potential for inclusion of women in key positions, if associations set up in gender sensitive way

Inclusion of will depend policies and of local government

Inclusion of will depend policies and of local government of women in to be

of women in to be encouraged

Involvement of women in to be

of women in to be

Promote gender inclusive management arrangements with a view to achieving greater stability and sustainability of service management. Support the development of regulatory frameworks and guidelines for inclusive service management. Undertake research to understand gender power dynamics and how this may affect access to services and participation in decision making.

CBM1

Community

management

CBM2

CBM3

CBM4

LG1

Local government

LG2

LG3

PB1

Public utility

PV1

Private

PV2

Actions which could increase the viability of models identified as facing challenges or unviable

No or limited formal regulation of rural water services by independent regulator

Community management plus

Lack of regulation unlikely to impact model community accountability mechanisms may provide some form of informal regulation

Some impact likely to be by internal community accountability

Some impact on model, but accountability

Some impact on model, but likely to be partially offset by internal

Viability will depend which local government to account by

Some impact, be offset by service contracting performance

Concerns

Concerns

Concerns

Concerns

Support sector reform processes for the establishment of independent regulator. Work with policy-makers to identify and delegate discrete regulatory functions to appropriate state or third party entities and provide them with the training and resources to put them into operation and enforce them.

Low capacity of the service authority to oversee and monitor service delivery or to fulfil delegated regulatory functions in absence of independent regulator

to function not ideal

Only viable if the has adequate carry out regulation

Potentially viable, but risk that model can become a 'monopoly' without any external oversight

will face but potential to the community at local level

Urban utilities less likely to be overseen or regulated by service authority, and functions likely to be more centralised/ carried out by ministry in absence of regulator

Appropriatenes depends on extent to which service regulates or oversees operators, a centralised function

Build capacity of service authorities (local government) in service performance monitoring. Advocate release of greater financial flows under decentralisation mechanisms to increase ability of service authorities to fulfil mandates.

CBM1

CBM2

CBM3

CBM4

LG1

LG2

LG3

PB1

PV1

PV2

Actions which could increase the viability of models identified as facing challenges or unviable

Community management plus Community management

Local government

Public utility

Private

Strong informal accountability mechanisms in place at the local level between local leaders, users and service providers, but weak formal regulatory processes by external (to the community) stakeholders

Likely to be viable where service provider held to account by users and local leaders

Likely to be viable where service provider held to account by users and local leaders

Potentially viable if the alone are able to contracts, but risk to model

support

Service provider held to account by users and local leaders, if the aggregated management entity is still 'in reach' of the users to be held to account

Viability will depend government to account by guaranteed

still viable between operators, but likely to suffer from lack of contractual

would be

Concerns local utility, be strongly influenced by

Concerns

Strengthen local accountability mechanisms to help put pressure on service providers from users. Strengthen the sector-level regulatory framework, and local capacities to monitor and enforce the regulations.

Low public and political acceptance of private operators

Not relevant to model

Likely to be

Strengthen accountability and regulatory mechanisms, and showcase examples of success of privately managed schemes. Increase public-private dialogue at various levels.

Actions which could increase LG1 CBM1 CBM2 CBM3 CBM4 LG2 LG3 PB1 PV1 PV2 the viability of models identified as facing Community management plus Community **Local government Public utility Private** challenges or unviable management Low public confidence or acceptance of services being run (or managed) by local government or state utilities

Not relevant to model	Not relevant to model	Not relevant to model	Not relevant to model	Likely to undermime trust and acceptance of model leading to operational challenges	Low public confidence in local government may be mitigated by delegating O&M and management functions to a community entity	Potentially unpopular if community does not trust in the local authority's capacity to regulate the contracted operator	Probably unviable unless the utility is localised, includes community representation in its governance structure, and is accountable to the community	Potentially unpopular if the community does not trust in the mandated authority's capacity to regulate the contracted operator	Not relevant to model	Strengthen capacities and systems for state contracted or delivered service provision. Strengthen regulatory and accountability mechanisms – particularly 'downwards' accountability arrangements from government to users.
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Low public confidence and local political acceptance of any 'outsiders' (i.e. external to the community, including public or private entities) running schemes and strong user preference for accountability of service providers to communities/households

Likely to reinforce underlying principles of management model

Likely to reinforce underlying principles of management model

Acceptance of this model operator is, the contract is

periodic

Potentially there are that the entity moves the 'control'

or viewed as

or tension

Likely to be to users

Likely to be

to users

Strengthen local accountability mechanisms. Demonstrate to the community the success of alternative models. Increase accountability and customer orientation of potential 'external' service providers. to users

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