Zambian Case Study
FSM as of delegated management model

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Context

In Zambia 99% of Water and Sewerage services provided by Commercial Utilities (CU)

CUs core business is water provision and sewerage

Mandate for onsite sanitation is unclear (Local Authorities vs. CUs)

Good FSM experience with delegated management model in peri urban areas (community based water trusts) in Lusaka exclusively.

National Urban Sanitation Strategy proposes three FSM Management Concepts related to four service delivery models and areas (see ANNEX) and enhancing delegated service delivery

Key questions

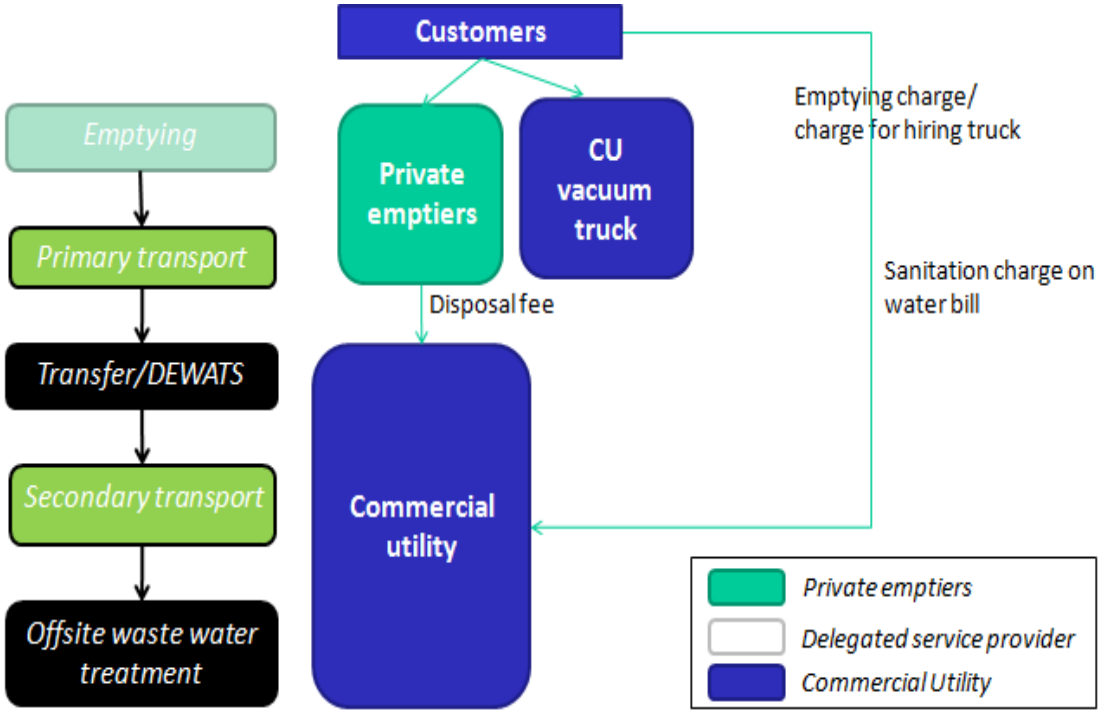
1) How can commercial utilities adopt delegated management models for peri-urban areas (onsite sanitation) widely (yet only for Lusaka)?

2) What indicators shall the regulators monitor regarding FSM fore commercial utilities and delegated/private service providers?

3) How best to ensure competition btw private emptier?

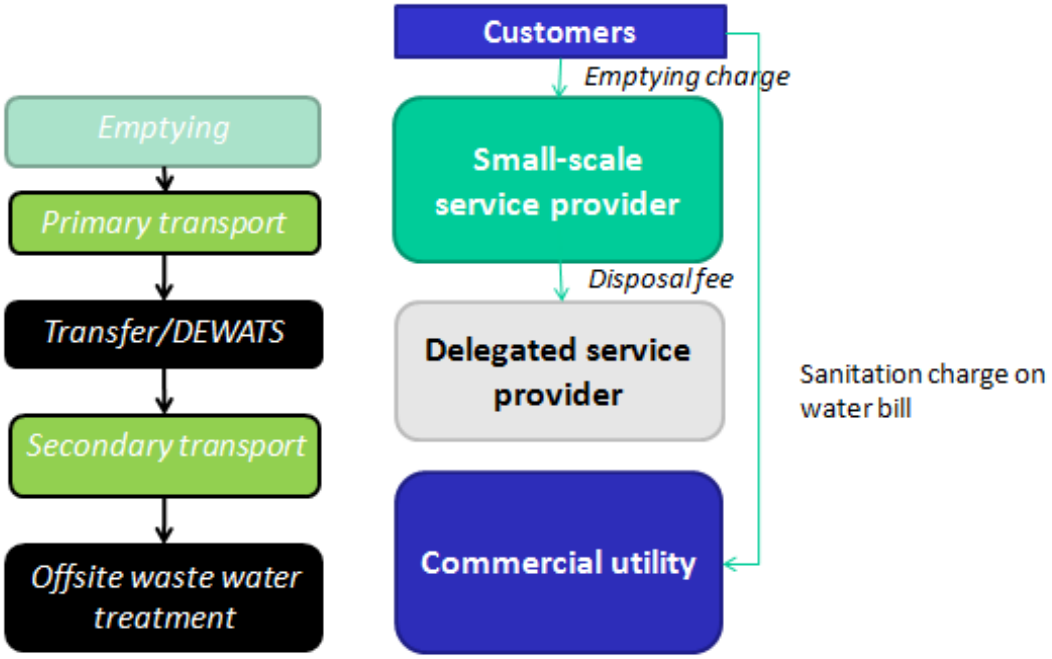
Model 1 : CU integrated management

is most appropriate for conventional sewerage and for formal areas where the commercial utility is responsible for all aspects of service provision.



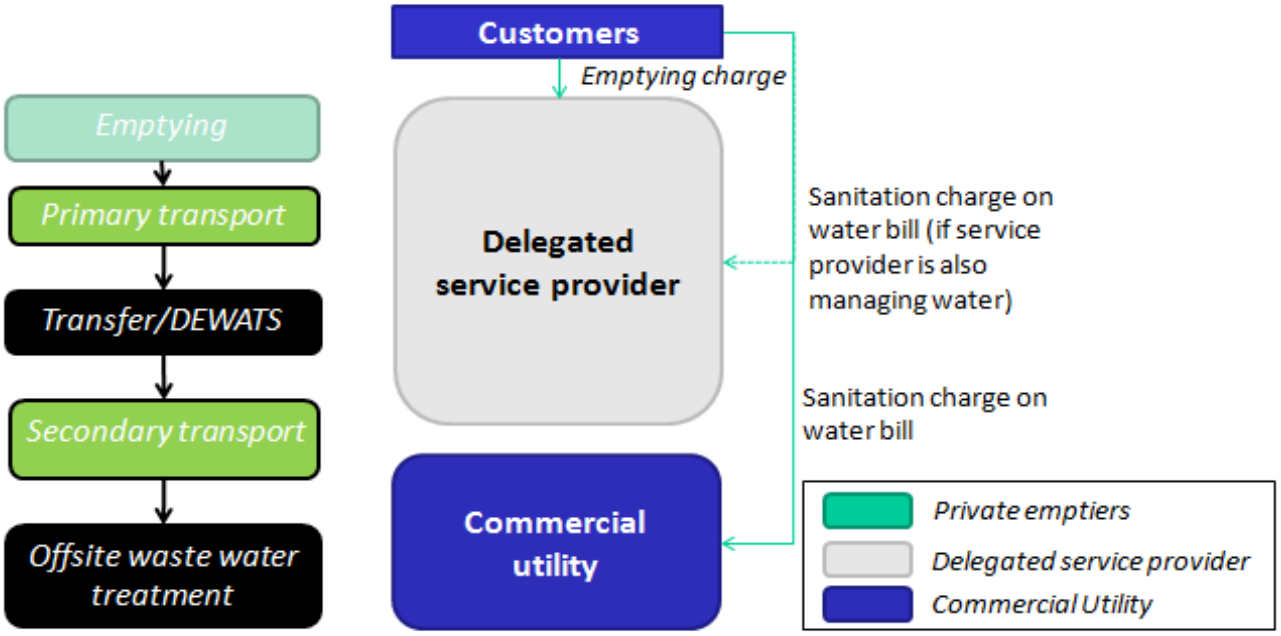
Model 2 : Semi-delegated management

is suitable for Onsite sanitation (DEWATS) or dry toilets with emptying and transfer stations in medium cost areas.



Model 3 : Full- delegated management

Is suitable for service provision by delegated provider for DEWATS and On-site dry sanitation in peri-urban/low income areas.

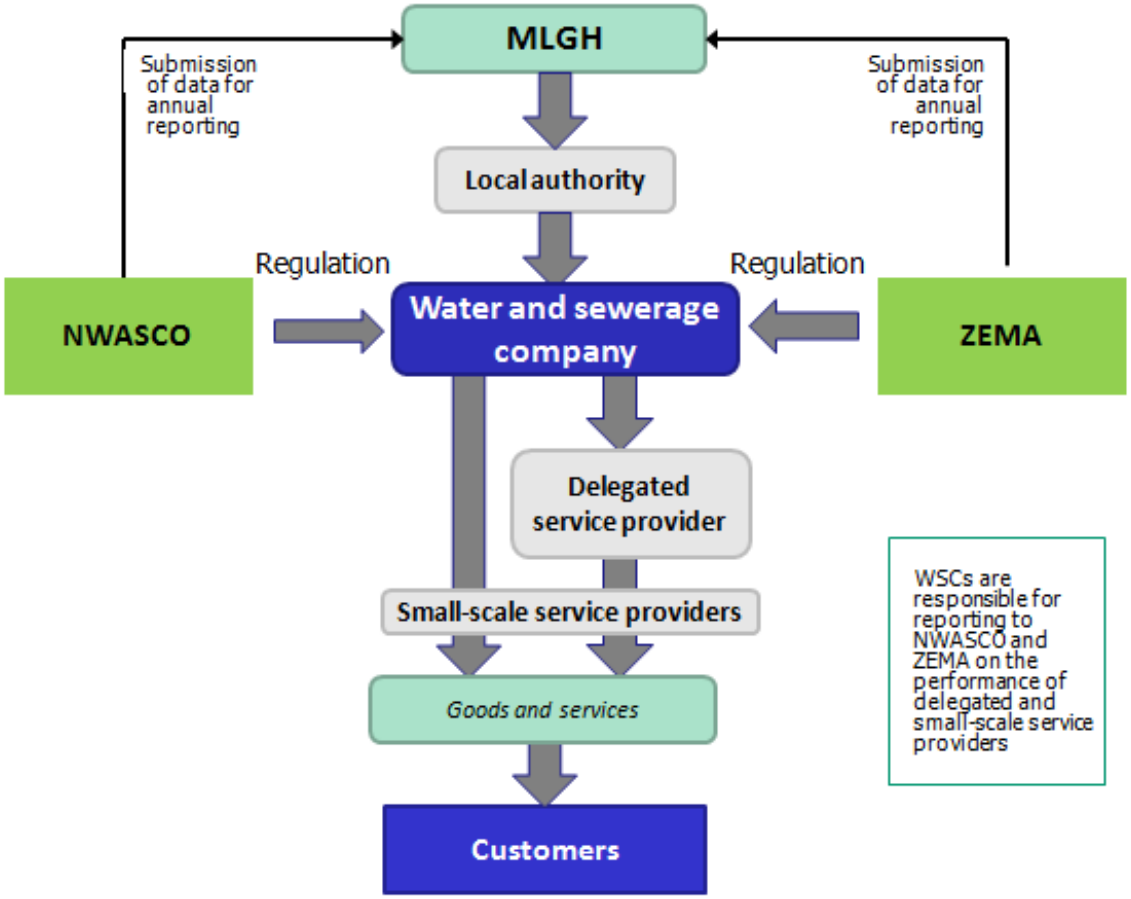


ANNEX

Thank you for your attention!

Abbreviation	Full name
CU	Commercial Utility
LA	Local Authority
MLGH	Minitry of Local Governement and Housing
NWASCO	National Water and Sanitation Council (regulator)
ZEMA	Zambian Environmental Management Authority

Overall institutional framework



Service Delivery Model 1: conventional sewer

Service Delivery Option 1 : Conventional wastewater system					
Components of sanitation chain		Household facility	Greywater collection and disposal	Waste collection and transportation	Off-site treatment
		WC	Greywater combined with blackwater	Combined wastewater conveyed by conventional sewerage	Large scale wastewater treatment
		Responsibility	What needs to be financed?	Financing	
Household facilities	Construction of facilities	Developer or house owner	In house full flush water closet (WC) and connection up until boundary of private land.	Households / developers pay for the WC. Options for financing connection up until boundary of private land: 1) Households pay connection fee 2) Paid for by CU and then recovered though service charges	
	Promotion, capacity building, supervision		None		
	Operation and maintenance	Household responsibility	Operation and maintenance of latrines and removal of blockages in household connection.	Household self-financed	
Collection and transportation	Infrastructure development	Commercial utilities	Conventional sewerage up until household boundary up until sewer pipe line	Low interest commercial loans from development banks. Results based Grants channelled through an earmarked fund to finance extension of sewerage systems.	
	Promotion, capacity building, supervision	Consultants	Technical assistance for managing OBA funding and developing asset management strategy	Grants from donors/GRZ	
	Operation and maintenance	Commercial utilities	Sewer cleaning and repairs	Service charges (households and non-domestic users)	
Treatment	Infrastructure development	Commercial utilities with private consultants and companies contracted for design, supervision and construction	Conventional wastewater treatment	Financing from international development bank (potentially under OBA financing arrangement)	
	Promotion, capacity building, supervision	External consultants	Technical assistance for managing OBA funding and developing asset management strategy	Grants from donor	
	Operation and maintenance	Commercial utilities	Operation and treatment of treatment plant and sludge management	Customer service charges	

Service Delivery Model 2: small bore sewer - DEWATS

Service Delivery Option 2 : Decentralised sewerage connected to DEWATS					
Components of sanitation chain		Household facility	Greywater collection and disposal	Waste collection and transportation	Off-site treatment
		Flush toilets (WCs or Pour flush)	Greywater combined with blackwater	Simplified sewerage	DEWATS (or connection to centralised sewerage)
		Responsibility	What needs to be financed?	Financing	
Household facilities	Construction of facilities	Households or private developer	Pour flush toilets and connections to simplified sewerage.	Households pay for the toilet Options for financing connections to sewers: 1) Households pay full connection fee 2) Connections subsidized via sanitation surcharge 3)Revolving fund to finance improvements and connections (established with donor funding) 4) Costs paid for by CU but paid back though service charges	
	Promotion, capacity building, supervision	Agent contracted by MLGH	Technical support to households, sanitation promotion, and dissemination of information about financial support for households	Donor grant funded	
	Operation and maintenance	Household responsible for OM of latrines and connections up to house boundary.	Maintenance and repair of latrine and connection pipe	Self-funded by households	
Collection and transportation	Infrastructure development	Commercial utility	Simplified sewerage up until private boundaries and connection/access chambers	i) Grant / Loan to CU, ii) Sanitation surcharge for areas with significant poverty.	
	Promotion, capacity building, supervision	Utility partnerships (WOPS)	Capacity building for CUs	Donor funded	
	Operation and maintenance	CU responsibility or delegated management to private sector	Cleaning/maintenance activities (rodding/jetting to remove blockages and structural repairs).	Service charges from users (households and non-domestic users). Potentially cross subsidies between high and lower income users	
Treatment	Infrastructure development	Private consultants/companies (or BORDA) responsible for design and construction under supervision by CU.	DEWATS (small scale wastewater treatment facility) owned by CU	Grants channeled through DTF – revolving fund based on CU performance.	
	Promotion, capacity building, supervision	Umbrella technical support agency (through WAZAZA)	Capacity building / Technical support for operator of DEWATS	IFI funded – to be phased out over period of time.	
	Operation and maintenance	Treatment plant managed by CU or delegated management to another private operators if there are many DEWATS		By users service charges (households and non-domestic users) Cross subsidies between high income users and lower income user	

Service Delivery Model 3: onsite pour flush

Service Delivery Option 3: Onsite sanitation (pour flush)					
Components of sanitation chain		Household facility	Greywater collection and disposal	Waste collection and transportation	Off-site treatment
		Pour flush toilets combined with washing facility with individual or shared septic tank	Greywater reused for flushing	Desludging trucks	Septage treatment
		Responsibility	What needs to be financed?	Financing	
Household facilities	Construction of facilities	Household with local masons contracted for construction	Pour flush toilets combined with washing facility connected to low-cost septic tanks	Microfinance revolving fund (supported by IFIs) to enable households to invest in latrines.	
	Promotion, capacity building, supervision	NGOs or private companies contracted by MLGH for a) Social marketing to promote demand b) Provision of technical support to households once they have decided to invest	Promotion and IEC but these households are likely to be upgrading from a pit latrine to an improved pour flush latrine, therefore less software/ promotion activities will be required than for option 1.	Donor funder	
	Operation and maintenance	Households responsible for cleaning and maintenance	• Desludging • Other latrine OM cleaning (including and soap)	O&M costs covered by households	
Collection and transportation	Infrastructure development	CU's	Desludging trucks	Grants to purchase and lease trucks. Loans for desludging companies buy trucks with Leasing companies could offer to lease desludging trucks to desludging companies	
	Promotion, capacity building, supervision	Organised by CUs/ city councils	Training and equipment for desludging Support to structure the market	From the sanitation surcharge for lower income households	
	Operation and maintenance	CU offer mechanical desludging service or outsource these services to private desludging companies. Private desludging companies operate independently from the CUs	Emptying of latrines by desludging trucks	Companies receive payment directly from households for emptying latrines	
Treatment	Infrastructure development	CU with private companies for design/supervision and construction	Septage treatment plant	Grant	
	Promotion, capacity building, supervision		None		
	Operation and maintenance	CU or delegated management to private operator	OPEX and capital maintenance	Desludging companies pay a tipping fee to operator Pay licensing fee to the local authority Local authority pays the CU or private operator	

Service Delivery Model 4: onsite dry sanitation

Service Delivery Option 4: Onsite sanitation (dry toilet)					
Components of sanitation chain		Household facility	Greywater collection and disposal	Waste collection and transportation	Off-site treatment
		Improved dry pits	On-site disposal or discharge to drains	Improved manual emptying	Anaerobic digester
		Responsibility	What needs to be financed?	Financing	
Household facilities	Construction of facilities	Household with local masons contracted for construction. Private companies/manufacturers of toilet	Construction of improved dry pits latrines. Support to supply chain to produce good quality/affordable materials /components for latrine construction	• Microfinance revolving fund (supported by IFIs) to enable households to invest in latrines.	
	Promotion, capacity building, supervision	NGOs or private companies contracted by MLGH for a) Social marketing to promote demand b) Provision of technical support to households once they have decided to invest	• IEC campaign • Sanitation marketing (setting up Sanimart, hiring salesman) • Training masons and artisans • Support to supply chains • Setting up a microfinance scheme	Grants (supported by IFIs)	
	Operation and maintenance	Households responsible for cleaning and maintenance	• Desludging • Other latrine OM cleaning (including and soap)	O&M costs covered by households	
Collection and transportation	Infrastructure development	Manual emptiers borrow equipment for desludging from manager of digester / transfer station).	Desludging and other equipment for manual emptiers	Financed by CUs using grants financing	
	Promotion, capacity building, supervision	Umbrella training institution	Training of manual emptiers	Donor financed	
	Operation and maintenance	Manual emptiers, with support from the DEWATS operator.	Manual desludging costs	Either manual emptiers are paid by households or are contracted for work through the operator of the treatment / transfer station who receives the payment from households and schedules the desludging activities in the area.	
Treatment	Infrastructure development	Asset is owned either by CU or Water Trust. CU responsible for construction with private companies/consultants contracted for construction	Construction of anaerobic digester (or transfer stations)	Co-financed by CUs using grant financing and funds accumulated from sanitation surcharge	
	Promotion, capacity building, supervision	"Umbrella" technical support agency	Operator to receive ongoing assistance	Financed by CUs who receive monthly payments from operators	
	Operation and maintenance	i) CU or ii) Private company under lease contract from CU; or ii) Water trust Contract specifies O+M requirements.	O+M of anaerobic digester. Sludge emptying	Either manual emptiers pay fee to discharge OR operator collects payments from households and pay for all O+M costs, capital maintenance and money for technical support agency.	