

Strengthening the business model for FSM services in Lusaka: a tariff review process

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Chazanga Water Trust has provided an affordable, accessible and safe pit-emptying service to low-income customers in Lusaka since August 2014, the result of a partnership between Lusaka Water and Sewerage Company (LWSC) and WSUP. This Practice Note explains the process behind LWSC's recent price adjustment for its FSM service in Chazanga, and situates that within its wider journey towards becoming a viable and sustainable FSM model.

Chazanga Water Trust's FSM business model

CWT is a community-based organisation delegated by LWSC to deliver water and sanitation to residents of Chazanga, one of Lusaka's peri-urban areas. CWT and Kanyama Water Trust (another LWSC-delegated manager) are the only Water Trusts that cover the full FSM service chain from collection to re-use. In Chazanga, emptying of faecal sludge from pit latrines is performed by pit emptiers contracted by CWT and paid on commission from customer payments; the sludge is treated and sold for re-use as biosolids by CWT.



Image: Biodigester in Chazanga. Credit: Gareth Bentley

The FSM business, 2014-2018

Since the establishment of the FSM service, there has been a steady upward trend in sales with a compounded annual growth rate of 38% from 2014-2018. The number of jobs performed by the CWT emptiers and paid for by customers, however, is not enough to cover the cost of the services supplied, and the FSM service has been loss-making since its inception. For example, the average cost recovery per cubic metre of sludge removed in 2017/18 was below 50%.

The largest cost by far is salaries, which account for more than half of total costs. Other costs include management and administrative overheads and fixed/variable operational costs.

WSUP continues to support CWT with marketing and community engagement, business development, and technical and operational support; but these costs will need to be paid by CWT if the FSM service is to be viable beyond grant financing.

Reviewing the tariff

Prices were initially set at a low level to stimulate consumer demand, with the intention to increase prices after the service launch. However, tariff adjustment was delayed due to perceived political sensitivities; and turnover of senior management at LWSC further prolonged the review process.

As a result, the pricing structure of the emptying and primary transport aspect of the business did not change from August 2014 until September 2018, even to match inflation.

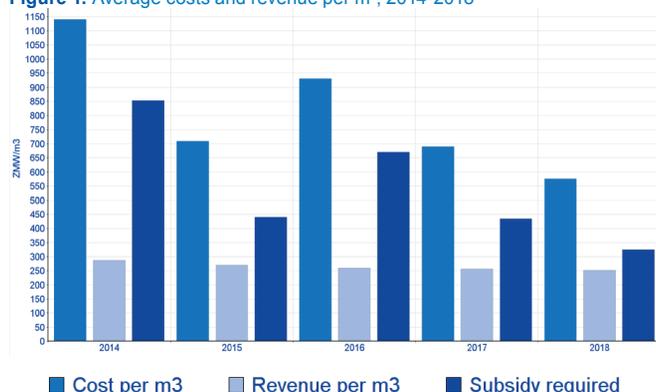
Box 1: Pricing for CWT pit emptying, 2014-2018

12 sixty-litre barrels	250 ZMW (USD 21)
24 barrels	380 ZMW (USD 32)
32 barrels	450 ZMW (USD 37)

Towards financial viability: revising the tariff

Following WSUP analyses demonstrating the challenges caused by inflexible pricing, as shown in Figure 1, LWSC formed a steering committee with responsibility for tariff adjustment and FSM operations in late 2017.

Figure 1: Average costs and revenue per m³, 2014-2018



In July 2018, LWSC approved a tariff readjustment for the FSM service that was implemented by CWT in September 2018 (Table 1). The new prices are based on two financial assessments conducted by WSUP that indicated that an increase in price would be acceptable for existing customers, while allowing for a degree of cost recovery for the Water Trusts.

Table 1: Tariff revision, October 2018

Old pricing ZMW	New pricing ZMW	% change	Price/m ³ ZMW
250 (12 barrels)	350	40	486
380 (24)	500	32	347
450 (32)	600	33	313

The impact this increase will have on demand and on CWT's bottom line is still unclear. However, even if the new prices are fully accepted by the market and demand continues to grow, some degree of subsidisation will still be required to cover costs as the new pricing results in roughly 375 ZMW (USD 31) earned per cubic metre of sludge, leaving a shortfall of 140 ZMW/m³ (USD 12).

Further cost reduction

The FSM service in Chazanga is purposely pro-poor, but if the business is to be accessible to lower income households, as few costs as possible should be passed on to the consumer, so the recent price rise does not cover the total costs of the service. Additional cost-reduction strategies that could be implemented include:

Increasing the sales of biosolids produced by CWT

Currently only 3% of biosolids produced by the CWT biodigester are sold, partly due to the disuse of the biodigester during the 2017-18 cholera outbreak and challenges to taking the product to market, including lack of regulatory standards to allow the biosolids to be certified, and marketing and sales efforts concentrated on the emptying component of the business.

If sales were to increase to 50%, average additional revenue for CWT would rise by 42,000 ZMW (USD 3,484) each year, reducing the cost per m³ by 4-5%. This could be achieved by more rigorously targeted marketing to institutions that use biosolids for landscaping.

Introducing a full-emptying service option at a fixed price

There are numerous informal pit emptiers operating in Lusaka, many of whom completely empty pit latrines – a service not currently offered to CWT customers as variation in pit depth makes it difficult to standardise pricing from one to another. The addition of a full pit empty option as well as the 12, 24 or 32 barrel options could position CWT to compete more effectively with informal providers. Mapping the location and physical characteristics of toilets in Chazanga could allow for pit depths to be estimated and prices set for full emptying.

Transitioning from commission to fixed wages

60% of monthly revenue from the CWT service is evenly split between employees; wages therefore vary each month. If this structure remains, this cost will continue to rise in proportion with business growth. An alternative would be to fix wages, and to reduce the number of employees to match utilisation rates (currently, staff work less than 50% of total time) – such a strategy could increase revenue and ensure staff receive higher wages.

Conclusion

The provision of financially viable sanitation services to low-income households is fundamentally challenging; the Chazanga experience underlines the reality that some form of subsidy is required, at least in the formative stages. The cost reducing measures outlined above assume that demand will continue to grow following the increase in prices, which is not guaranteed. However, if the FSM service remains safe and professional, and the business is feasibly optimised and costs further reduced, the CWT service could be one of the few working models of sustainable, safe, pro-poor FSM in Zambia.

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