



Prospects for the poor

Water reforms and private sector participation in Dar es Salaam, Tanzania

BRIEFING PAPER—WATERAID TANZANIA

Paper written by:

Dominick de Waal,
WaterAid Tanzania

Introduction

This paper aims to inspire debate on two questions central to private sector participation in the management of Dar es Salaam's water supply system. The two questions are:

- Will there be an increase in the availability of clean and safe water?
- How will poor people be affected?

However, it is important to note that the information available to answer these questions with any certainty is limited. Most notably the lease contract between the Dar es Salaam Water and Sewage Authority (DAWASA) and the Private Operating Company (POC) has not been made publicly available.

Will private sector participation lead to increased availability of clean water?

DAWASA, pre-public sector participation, was a semi-autonomous government agency responsible for all water supply and sewerage services in the Dar es Salaam area. What is being privatised under a 10 year lease contract is the billing, tariff collection, operation and routine maintenance component of DAWASA's portfolio of responsibilities. The rehabilitation and development of the whole system will remain the responsibility of DAWASA, although DAWASA may choose to let development contracts to the POC. Both DAWASA and the POC will be regulated by the Energy Utility and Water Regulatory Authority (EUWRA) which is being set up by the Parastatal Sector Reform Commission (PSRC).

Privatisation in Dar es Salaam is currently under debate because private sector participation (PSP) was a pre-condition for debt relief and was therefore effectively a condition for the proposed rehabilitation and development loans from the World Bank.



The water and sewerage system in Dar es Salaam has been in a state of disrepair for many years. In 1997 Davies reported that over \$620 million would be needed to repair and rehabilitate the existing infrastructure and to expand the network to reach currently unconnected communities. So far around \$160 million has been approved for this development contract called the Dar es Salaam Water Supply and Sanitation Project (DWSSP). Privatising the billing and revenue collection system is seen as part of the business plan or mechanism by which the loans are to be repaid.

To understand how this business plan is meant to work it is helpful to have a picture of where the water is going now and how much of it is actually being billed for. Figure 1 (overpage) shows, as a percentage, where the 268 million litres of water that are pumped every day from Mtoni, Upper and Lower Ruvu for customers in Dar es Salaam actually end up.

Even if all the water that was actually getting to customers (20% to registered connections and 6% to community kiosks) was paid for, it would only amount to 26% of the water pumped. Estimates of what DAWASA is actually being paid for range between 8% and 16% of the total water production.

Initially the job of the POC will be to improve tariff collection from existing registered

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Where does the water go?

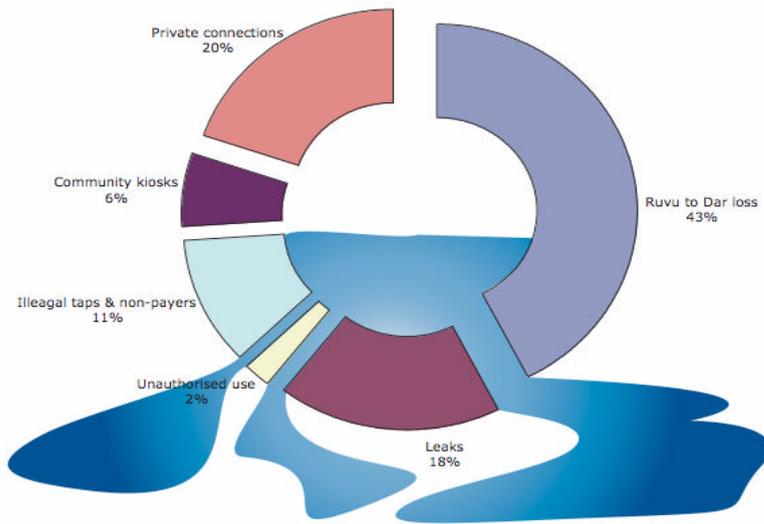


Figure 1. A breakdown of where water pumped from Upper and Lower Ruvo ends up.

customers. The other 74% of the equation – illegal taps, unauthorised use and leaks - will still be under DAWASA and the DWSSP. A process of negotiation between DAWASA and the POC on ways to turn parts of the remaining 74% of unbilled water into billed water is on-going. For example, DAWASA will let a metering contract to the POC with the aim of converting existing flat rate connections into metered connections and offering metered connections to people with illegal connections within 30 meters of the existing water supply network.

In parallel with this, money from the development banks to Tanzania will finance the DWSSP. This project will rehabilitate and expand the system resulting in more water to be billed by the POC. In other words the DWSSP will go around fixing the system while the POC follows behind collecting revenue where the system has been fixed. The loans will then be repaid by DAWASA from a percentage of revenue collected by the POC.

It would, therefore, seem very likely that private sector participation will lead to increased availability of clean water in Dar es Salaam.

Things to watch out for:

- How much of the loans will end up being repaid outside this business model ie by the Treasury from national tax revenue rather than from water users in Dar es Salaam?
- Will the POC get all of the development contracts?
- What happens if the POC withdraws?

Will PSP lead to significant increases in tariffs, particularly for the poor?

DAWASA has around 98,000 direct customers in a city of around 2.5 million people. These existing connections are mainly to middle and upper income households, industry and Government institutions. The vast majority of people in Dar es Salaam purchase water indirectly from DAWASA either from vendors or from neighbours with connections. DAWASA customers pay around 0.29 Tanzania shillings (Tsh¹) per litre while vendors sell water for 1Tsh/litre when supply is good, an amount that rises up to 20Tsh/litre when there are severe shortages in the city.

The fact that there is a 30% planned increase in tariff in the first year of the Private Operating Company's (POC) tenure is neither surprising nor unreasonable. Already in 1997 it was reported that the cost of supplying one litre of water to a private connection was 0.4Tsh/litre while customers were only charged 0.29Tsh a litre. This meant that the Government was effectively subsidising private connections by 0.11Tsh/litre (Davies 1997).

However, the impact of the 30% planned increase will be compounded by the metering program, particularly for the poor. As mentioned above one of the first tasks delegated to the POC will be metering existing flat-rate connections². This will mean that all directly connected customers that draw more than the flat rate equivalent will effectively have to pay more for every litre. This is certainly the case for those directly connected customers currently selling water to their neighbours and vendors. It is most likely that these direct customers will pass this rise on to their customers who tend to be from poorer groups. A study done by CEEST³ in 1998 reported that 77% of households from low income groups got their water from neighbours or vendors while only 3% got water from public taps.

Developing community stand posts or water kiosks would reduce the impact of price rises and metering on the poor. Yet while there are plans for a Community Water Supply and Sanitation Component (CWSSC) of the broader DWSSP this component is principally focused on dealing with the communities who will be affected by the rehabilitation of the trunk main and transmission lines. Many communities along the trunk main and transmission lines have tapped into the lines without authorisation. During the rehabilitation all these illegal connections will have to be removed and alternative sources or networks built in their place.

1. 1000 Tsh = 60p / £1 = 1663 Tsh – September 2003

2. Un-metered connections are currently charged at a flat rate of between 9,000 and 26,000 Tsh per month depending on which pressure zone they are in and when they were 'assessed' by DAWASA

3. M.J. Mwandosya and H.E. Meena (1998). *Dar es Salaam Water Demand: An End-use Perspective*. Centre for Environment Science and Technology, Dar es Salaam, 2003

In addition to the CWSSC the development of 250 community stand posts have also been mentioned. However, while these will be welcome, they will not have a great impact on mitigating the tariff changes that will be faced by the poor. Furthermore, while the single biggest budget-line in the DWSSP is for the installation of 900km of pipeline this will mainly replace existing networks or plug existing leaks, rather than be an extension of the system.

Impact of effective price rises on the poor

Given the limited available information on the lease contract and scope of works the following analysis is a scenario of possible impacts on the poor rather than an analysis of the actual impact. The analysis is based on data from the basic needs and food poverty lines developed by the National Bureau of Statistics.

The 2000/1 Household Budget Survey reported that 17.6% of the two and a half million people⁴ in Dar es Salaam live below the basic needs poverty line. People living below the basic needs poverty line are those classified as living on less than 9203Tsh a month or 329Tsh a day.

Though water prices in the city vary according to factors such as location, type of supply, season and DAWASA breakdowns, research done by WaterAid and its partners show that households in low income areas buy around 30 litres of water per person per day at a cost of around 1Tsh a litre. For people living on 329Tsh this represents just under 10% of their daily expenditure.

While a 100% price rise in water only amounts to 30 Tsh a day, it has the potential to prevent a further 4% of the population from affording these basic needs. In other words around an additional one hundred thousand people would be forced to substitute a proportion of bought water with water from other often unprotected sources such as open 'tyre' wells or polluted streams with the inevitable consequences on their health (see appendix A).

Aside from price rises, poor people are particularly vulnerable to water shortages or cut-offs. Few things in Dar es Salaam hit the papers faster than DAWASA breakdowns as they are really dreaded by residents. Water costs can increase from 1Tsh to 20Tsh a litre in 24 hours. For people living under the basic needs poverty line these breakdowns are particularly cruel. Just one three day breakdown can send an additional 10% of Dar es Salaam's residents below the basic needs poverty line for the month, while further oppressing those already below the line.



Addressing the real impact of the Dar es Salaam water reforms on the poor calls for a reassessment of the role and importance of community water supply schemes. The actual price rises faced by the poor need to be monitored. Space for negotiating better access to water and genuinely pro-poor tariff structures needs to be created. The impact of water shortages on poverty should be translated into regulatory requirements to supply alternative water sources to low-income areas where works necessitate extended cut-offs. All of these steps require a strong, pro-active and pro-poor regulator. In other cases of private sector participation in developing countries this has been the weakest link.

Things to watch out for:

- **Life-line tariffs.** The idea behind life-line tariffs is that the first five cubic meters to each customer per month is at a reduced rate (25-30% under full tariff) enabling even the poorest customers to access some water. However, as previously explained, those customers that are connected tend not to be the poor and so in the short to medium term a life-line tariff would actually be a case of the poor subsidising the better off as it is unlikely that customers with connections would pass the discount on to the water they themselves sell. A pro-poor alternative would be to commit to operating a life-line tariff on all community bulk supply schemes and public standposts.

- **Will a 30% rise in tariffs be enough?** Though the efficiency of the system will improve with rehabilitation it is unlikely that a 30% rise in tariffs will be enough to cover the debt burden that will be incurred by DAWASA let alone any profit margin for the POC.

- Will the POC renegotiate the contract on the basis of unforeseen circumstances and then institute large tariffs increases because of currency exchange rate fluctuation?

This briefing paper is based on a forthcoming WaterAid report entitled 'Water Reforms and private sector participation in Dar es Salaam, Tanzania'.

4. Tanzania Population and Housing Census (2002)

Appendix A.

Figure 2. Graph of Dar es Salaam population by expenditure in categories of 1000 Tsh. (Expenditure is adult equivalent per capita⁵ for 28 days from HBS 2000/1)

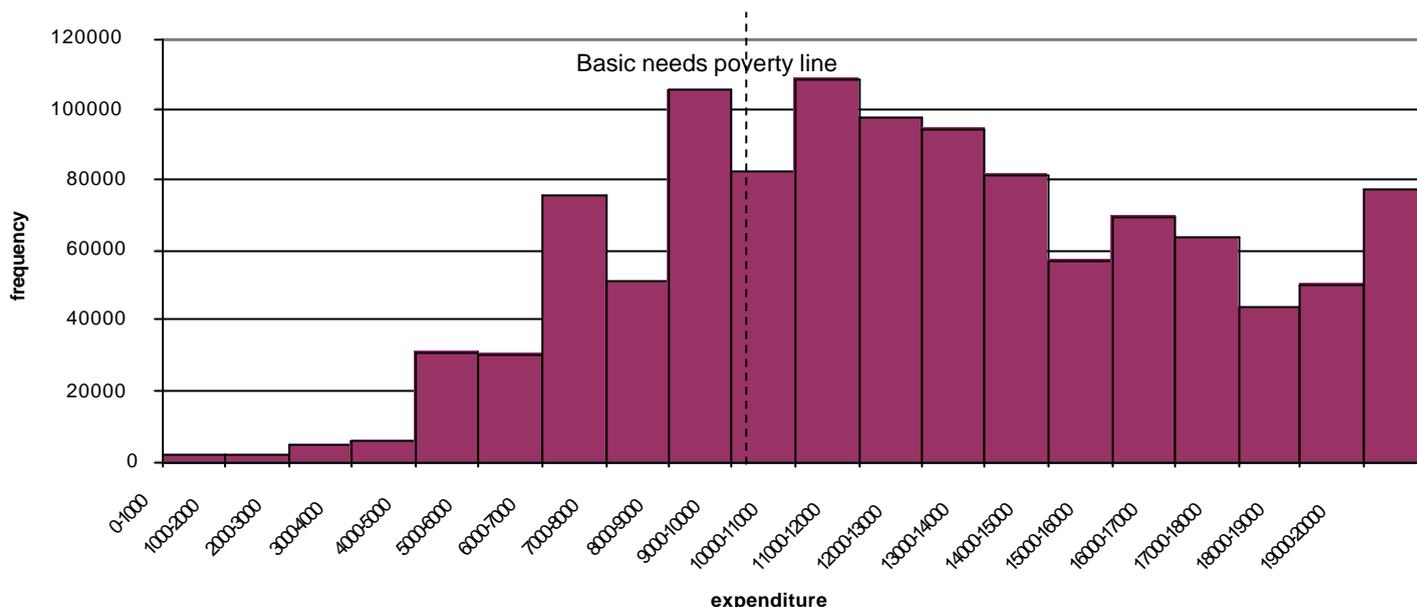


Table 1. Impact of effective water cost changes on poverty in Dar es Salaam

	Change in actual cost of water	Average expenditure on water (28 days)	Change in poverty line	Headcount index	Additional % under poverty line
NB. Change in effective water cost to poor communities is likely to be a compound of metering and changes in water tariff.	0%	840	9203	17.60 %	0%
	10%	924	9287	17.90%	0.3%
	20%	1008	9371	18.20%	0.6%
	30%	1092	9455	18.50%	0.9%
	40%	1176	9539	18.87%	1.27%
	50%	1260	9623	19.32%	1.72%
	60%	1344	9707	19.78%	2.18%
	70%	1428	9791	20.23%	2.63%
	80%	1512	9875	20.68%	3.08%
	90%	1596	9959	21.14%	3.54%
100%	1680	10043	21.67%	4.07%	

⁵ Average expenditure in 28 days based on community survey of informal settlements in Temeke Municipality.

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For more information about WaterAid please contact:

WaterAid
Prince Consort House
27-29 Albert Embankment
London
SE1 7UB. UK

Telephone: 00 44 (0)20 7793 4500
Facsimile: 00 44 (0) 20 7793 4545
Email: wateraid@wateraid.org