Case study: Mwanza

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Introduction

This case study explores how the city of Mwanza is experiencing political and financial challenges of ensuring improved sanitation. Comparing political interest in sanitation, diverging political priorities at the national and municipal level, sources of finance, and population characteristics, the case study aims to assess the potential for government-led improvements in the whole sanitation chain. These case studies are based primarily on interviews conducted for the main report and on government sources.

Decentralisation and urban governance of sanitation in Tanzania

Local government in urban areas is comprised of city, municipal and town Councils, ward development committees (WDCs), and mitaa (neighbourhoods). However, local government in Tanzania, as in many other sub-Saharan African countries, remains heavily controlled by the centre (Boex and Martinez-Vazquez, 2006). For instance, national party leaders nominate candidates for local Council positions and the ruling party Chama Cha Mapinduzi (CCM) has, until recently been strongly represented by Councillors at the local level, and there was limited political opposition (Venugopal and Yilmaz, 2010). The situation has changed following the last national election in 2010, which saw a significant increase in representation of the opposition parties at the local level, especially in the urban areas, where some are governed by opposition parties. Examples include Dar es Salaam and Arusha City Councils, and Kinondoni and Ilala Municipal Councils in Dar es Salaam. Likewise, the Public Service Recruitment Secretariat (PSRS), which is a central government agency, recruits civil service staff for local government positions, and the most senior positions are appointed by the President or the President's Office - Regional Administration and Local Government (PORALG) (Ridder, 2015).

The relatively high centralisation of political and administrative power in Tanzania persists despite two national decentralisation reform programmes; the Local Government Reform Program (LGRP) I and II. By 2008, after the first phase of the LGRP, responsibility for some basic services had been decentralised to LGAs along with the deconcentration of some responsibility for water, sanitation and roads (Government of Tanzania, 2016). However, the second phase of the LGRP has not been fully implemented and central government has recentralised the management of local government staff (Government of Tanzania, 2016).

For urban water and sanitation, decentralisation processes have resulted in significant management changes. At the national level, sanitation is primarily the responsibility of the Ministry of Water and Irrigation (MoWI) which develops water policy and strategy. However, urban water supply and sanitation authorities (UWSAs) have been introduced which are now responsible for water and sanitation in urban areas. UWSAs are accountable to the MoWI and are regulated by the central Energy and Water Utility Regulatory Authority (EWURA).

The provision of sanitation and wastewater management concerns public and environmental health, local infrastructure development, human settlement planning, and road development which is the responsibility of local government authority (LGA) departments as well as their respective ministries; the Ministry for Lands, Housing and Human Settlements Development (MLHHSD) and the Ministry for Health and Social Welfare. LGA plans and budgets are also closely overseen by the PORALG. UWSAs are accountable upwards to the MoWI but not to the LGAs operating in the same area, and so UWSAs can contradict LGA by-laws and plans which may obstruct cross-sector coordination of urban sanitation services at the local level (Government of Tanzania, 2016). Financing for urban services has also changed as a result of decentralisation. The LGRPs led to an increase in intergovernmental transfers to local government budgets due to higher intergovernmental transfers, although the proportion of public funds transferred from central government to LGAs has hardly changed (Tidemand and Msami, 2010). LGAs are highly dependent on intergovernmental transfers, on average receiving 91% of their revenue from central government (Government of Tanzania, 2016; Tidemand and Msami, 2010). To support LGAs to generate greater revenues themselves, the government has passed a Public Private Partnership Act (2010) and a Public Procurement Act (2011), which allow UWSAs and LGAs to seek private sector involvement in the provision of services (Government of Tanzania, 2016).

A new mechanism for financing infrastructure at the local level was introduced in 2004 in the form of the Local Government Capital Development Grant (LGCDG), which has now become the Local Government Development Grant (LGDG) System (Government of Tanzania, 2016). However, central government strongly influences how these transfers are spent resulting in the alignment of

nearly all LGA plans with central government spending priorities (Fjeldstad et al., 2010; Tidemand and Msami, 2010). Besides, central government often issues directives to LGAs that have significant expenditure implications for the approved budgets. A massive drive to provide primary and secondary schools desks and a previous directive on construction of laboratories in all secondary schools are recent examples. In addition to this development funding, LGAs receive intergovernmental transfers for recurrent and concurrent costs, of which the bulk is for concurrent expenditure and this is managed by central government. Intergovernmental transfers for local recurrent costs are mostly spent on staff salaries, over which LGAs also have little control because the number of staff recruited locally and their salaries are largely decided by central government (Venugopal and Yilmaz, 2010). Consequently, local government has limited power to direct its budget towards locally determined development planning priorities.

LGAs also have very little control over their tax rates, the ceiling for which is set by central government and any changes to LGA taxes require the approval of the PORALG (Venugopal and Yilmaz, 2010). The central government agency, the Tanzania Revenue Authority (TRA) is charged with collecting simple local taxes, such as taxes on large businesses and hotels, while LGAs are responsible for more time intensive revenue collection, such as business licencing (Kombe and Namangaya, 2016). LGAs may lack up-to-date databases to collect such taxes, and these are also politically unpopular taxes to impose. Moreover, LGAs have limited power to enforce local taxation, and as a study by Braathen et al. (2004) reports, 51% of people interviewed in Tanzania towns and cities thought that people should refuse to pay taxes until services improve. The Local Government Finance Act does allow LGAs to impose fines for non-compliance but pursuing this can be a lengthy process (Venugopal and Yilmaz, 2010). A recent programme (the Support to Local Governance Programme- SULGO), co-funded by the Government of Tanzania and Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ), supported the technical capacity of local governments to collect property tax and so widened urban authorities' tax bases (Masaki, 2015). However, the responsibility to collect property tax has recently been transferred to the TRA. It is not yet known how this will be redistributed and given that property tax is often a large proportion of local revenues, this could have a significant impact on local government budgets. Considering the limited local power to allocate intergovernmental transfers towards locally defined needs, expanding forms of revenue available at the local level could be important for funding improvements in services which are not prioritised at the central level.

National government approach to urban sanitation

At the national level, wastewater management and wider sanitation services are not prioritised in budget or policy. Budget allocations to solid waste management are much greater than allocations to wastewater management, and sanitation is not very visible in the national budget. Policy on sanitation is also limited. A central government policy on sanitation was begun in 2005 but this is still in draft format and responsibilities for sanitation across government departments have not been clearly defined since legislative changes in 2009. Consequently, there is some confusion over the sanitation responsibilities of different departments. Most of the responsibility for sanitation rests with the MoWI but the EWURA and the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC) also have roles to play and this leads to institutional disagreements

The lack of funding and clear policy around sanitation services is primarily because neither central nor local government perceive sanitation as a priority activity. The sector lacks political appeal because there is little demand from the general public for improved sanitation. In addition, the MoWI assumes that the urban water and sanitation authorities can provide sanitation services on a cost-recovery basis, cross-subsidising sanitation services with revenue from water services. This means that central government does not provide substantial grant funding to expand urban sanitation services.

National government priorities strongly influence local development and these are channelled to local governments through the PORALG. In line with national government plans, PORALG priorities include education, infrastructure, health, energy and the urban sector. Investment in infrastructure in urban areas aims to support employment creation and revenue generation. Most of this infrastructure is built using donor funds and local government is expected to be able to manage and resource the operation and maintenance costs. For example, the Tanzanian Strategic Cities Project is a World Bank funded scheme which is investing in urban infrastructure, in particular roads.

Sanitation is not a national government priority but following a recent cholera outbreak, government interest in hygiene increased. For example, the President has issued a directive designating every last Saturday of the month for public general cleansing. It is telling however that this directive focuses on solid waste management, which is more visible than wastewater management, but not as important for preventing cholera.

The National Sanitation Campaign

One government scheme which is focused on sanitation, however, is the National Sanitation Campaign (NSC). This was initiated in 2012, is funded primarily by donors, and is led by the MoHGEC in collaboration with Ministry of Education and Vocational Training, MoWI, and the PORALG (SHARE Consortium, 2016). The Campaign is focused on sanitation in schools and in households in rural areas. Community leaders worked with Health, Education

and Community Development Officers at the local level to develop a sanitation profile of their community. Households in the community then collectively committed to improving their own sanitation facilities (ibid).

The experience of the NSC is particularly interesting for two reasons. Firstly, it shows that national government, with support from donors, takes a more proactive role in improving rural households' access to sanitation. In contrast, in urban areas households are not given any support to build latrines and the focus is only wastewater collection and treatment despite there being many households without access to an improved latrine. Secondly, as more households have flush or pour latrines and so the volume of wastewater increases, local government has to address the later stages of the sanitation chain as well. This highlights the need for government to address the whole sanitation chain and view it as a system which needs integrating with wider urban or rural development plans.

Sanitation transfer to urban water supply and sanitation authorities

Government responsibility for sanitation in urban areas is currently being transferred from urban municipal governments to urban water supply and sanitation authorities (UWSA). This is meant to delineate responsibility for these services and relieve local governments of what is perceived to be technical urban development task. LGA directors in urban areas will no longer have planning control over water and sanitation infrastructure in their city as the UWSAs are controlled centrally by the MoWI and EWURA.

In order to improve management of sanitation and improve hygienic standards, MoWI now requires every water supply project to have a wastewater and faecal waste management project included alongside it. More investment is being put into the construction of dry beds and oxidation ponds and the acquisition of vacuum emptying trucks. Noticeably, however, this only addresses the latter part of the sanitation chain and so urban households which do not have a latrine connected to a septic tank or sewerage pipe will not benefit from these investments.

In urban areas, only a few NGOs such as the Centre for Community Initiatives (CCI) and WaterAid are supporting household sanitation, on-site wastewater treatment in informal settlements, and latrine subsidisation. CCI, for example, champions micro-financing to households to improve their latrine; giving out loans and working with communities.

Overall, sanitation in urban areas receives very little government attention. Low political interest in sanitation services or in informal urban settlements, and high public demand for investment in more visible urban infrastructure, such as roads and schools has pushed sanitation to the bottom of the list.

Sanitation at the city level

Urban sanitation provision across Tanzania continues to be a serious public health problem. In urban areas, the proportion of residents using traditional pit latrines is high, at 50% in Dar es Salaam, 54% in Arusha, and between 36% and 44% in other cities (CPCS, 2015). Sewerage is very limited in Tanzanian cities and so nearly all sanitation facilities are on-site. On-site sanitation requires systems for wastewater collection, treatment and disposal. If household latrines are not connected to secure containment facilities, such as septic tanks, they are liable to overflow. Households may not always pay for emptying services and instead empty the contents of septic tanks into stormwater drains which leads to underground water sources being polluted (CPCS, 2015; Government of Tanzania, 2016).

The following two case studies explore the factors underlying these problems in detail in the cities of Mwanza and Arusha.

The case studies are structured as follows:

- An introduction to the city
- Urban governance arrangements, and the formal governance structure for urban sanitation.
- The fiscal profile of each city and its water and sanitation utility
- Accessibility to and quality of sanitation services in the city
- International donor and NGO support to sanitation in the city
- Analysis of how the governance arrangements and financial capacity of the city affects sanitation services

The case of Mwanza – an introduction to the city

Mwanza City, situated in north-west Tanzania on the shores of Lake Tanzania, is the second largest city in Tanzania and is the capital of Mwanza region. The city is divided into two districts: Nyamagana and Ilemela districts. Mwanza City Council has jurisdiction over Nyamagana district and Ilemela Municipal Council with jurisdiction over Ilemela district. The population of each district is similar: 363,452 in Nyamagana and 343,001 in Ilemela, according to the 2012 census (Tanzanian National Bureau of Statistics, 2012).

Both areas of the city have growing populations. The 2012 census shows annual population growth rates of 5.5 for Nyamagana and 2.6 for Ilemela between 2002 and 2012. The 2012 census data shows that the population of the Mwanza region as a whole grew by 722,592 over the same period. Between 2002 and 2012, the proportion of the region's population living in urban areas increased from 25% to 33% (Tanzanian National Bureau of Statistics, 2012). According to the 2012 Census data, 24% of households in urban areas of Mwanza region did not have a legal right to the land on which their dwelling was located, suggesting these households are living in informal settlements. However, the actual proportion of households living in informal settlements is likely be much higher since this figure is unlikely to include households in the rental sector.

Policy formulation is a prerogative of central government. City and municipal councils are responsible for decision-making at the local level while administrative staff prepare council plans conforming to national policies. Administrative staff provide legal and technical advice to the councils and committees, implement plans approved by the councils and report back to the councils through council committees. Councillors regularly seek the support of local government officers to address projects or problems in their wards (Ridder, 2015).

Urban governance and politics

In 2016, Mwanza City Council and Ilemela Municipal Council were governed by a majority of Councillors belonging to the national ruling party, CCM. The councillors and mayor of each council are influential in decisions over which areas of the city receive funding for development projects. Ward Interviews with council officers found that councillors typically demand physical improvements in their wards in response to common demands from their constituents for a health clinic, a medicine dispensary, better roads, or equipment in schools. Inevitably, the mayor and the Councils' central management teams have to negotiate the competing interests of each ward and attempt to allocate the budget to the areas which are most in need of improvement.

Within Mwanza society, the most influential groups are deemed to be local politicians, religious leaders, and the wealthiest business owners. According to interviews with council officers, participation in consultation over urban planning does not appear to attract a lot of public interest beyond the older generation, who are mostly concerned with preserving Mwanza's cultural heritage. More widely, council officers reported that issues of public concern in Mwanza are primarily road construction, solid waste disposal, access to healthcare and medicines, water supply, and the growth of informal settlements. Sanitation does not appear to be of public interest but there is public criticism of the presence of street traders and hawkers, and the existence of informal settlements in the rocky raised ground around the city, where people often do not have improved water, sanitation or waste collection. Various interviewees blamed the councils for not preventing people from squatting in these areas, and considered the inhabitants to be from rural areas and lacking respect for city rules about formal trading and housing.

The budget and planning process for local government expenditure is described as 'bottom-up' and so begins with ward-level consultation of citizens and their demands. However, as the planning process proceeds upwards from ward, to local, to national government, it is clear that the priorities for the councils' investment are largely defined and controlled by central government. Central government bodies set spending guidelines, and review and approve local government budgets and spending plans. After annual budgetary plans have been finalised, central government also continues to influence local government spending. As will be described in more detail in the following section, the two urban councils have to manage competing, often ad hoc requests for investment in infrastructure or services from all central government ministries. These may not have been included in the budget for the year and the directives

are announced without additional resources for their completion.

Political relations between the elected councillors and central government are aligned in Mwanza but Council officers still have to react to unforeseen instructions from central government which are not necessarily in line with local priorities. Interviews with council officers reported that while these directives, such as the provision of desks and science labs in schools are perceived to be valid in and of themselves, they disrupt the annual budget expenditure plan and often result in existing development plans being suspended to pay for the directives instead. As a result, central and local government relations appear to be characterised by a lack of respect from central government for local government strategic planning and frustration on the part of local government over its financial dependence upon central government transfers.

Governance arrangements for urban sanitation

Water and sanitation provision in Mwanza is the responsibility of both the Mwanza Urban Water Supply and Sanitation Authority (MWAUWASA) and the City and Municipal Councils. Prior to the 1990s, water and sewerage services were funded and managed only by government and at the Regional Administrative Authority level (Kyessi and Lupala, 2016). Following a review of the water sector in 1993, a Water Works Act (no.8) was passed which established urban water supply and sanitation authorities (Kyessi and Lupala, 2016).

Throughout Tanzania, the Urban Water and Sanitation Authorities manage the reticulated water supply and waste water systems but they are now in the process of becoming responsible for all on-site and reticulated water and sanitation services in urban areas. Thus wastewater collection from all urban households now falls under the mandate of MWAUWASA but only if the household latrine is connected to a cesspit, septic tank or sewerage pipe. The urban councils remain responsible for the provision of water and sanitation in only the peri-urban areas. For Nyamagana district, where almost all wards are classed as urban, this means that nearly the whole population should be served by MWAUWASA.

In Ilemela district, four of the district's 19 wards are still classed as peri-urban and so the water and sanitation needs of households in these wards are the responsibility of Ilemela Municipal Council. In these areas, households are unlikely to be connected to the piped water network and so mainly source water from a borehole or well. In these areas, the councils manage community-based water schemes to encourage communities to take responsibility for their water supply, and the councils encourage households to build improved latrines to avoid groundwater pollution from wastewater.

The Mwanza Urban Water Supply and Sanitation Authority operates under the Water Supply and Sanitation Act No. 12 of 2009 and has a Memorandum of Understanding (MoU) with the Ministry of Water and Irrigation (MoWI) and holds an operating licence issued by the Energy and Water Utility Regulatory Authority (EWURA). MWAUWASA is monitored and regulated by the MoWI and the EWURA and is managed by an Executive Board of Directors, which sets the policy and direction for the Authority. It is the MoWI that appoints the 10 representatives comprising the Board and this includes a representative from the Ministry as well as local domestic consumers, large consumers, commercial consumers, Councillors and representatives from the City Council Administration and Regional Administration (MWAUWASA, 2016).

UWASAs are semi-autonomous public corporations. They finance their operations and maintenance from revenue in metered sales of water and charges for sewerage connections. The central government often finances large water schemes in the cities via central government grants which may also be supported by donor loans. In Mwanza, these schemes concern sewerage expansion and the development of new wastewater disposal sites but do not include on-site sanitation or latrine construction except for public areas such as markets or schools. There is a national government goal for more people to be connected to sewerage systems and so MWAUWASA is required to contribute to this. MWAUWASA is not responsible, however, for ensuring access to improved sanitation for the poorest people and there are no subsidies or schemes to assist low-income households to improve their latrine or pay for wastewater treatment costs.

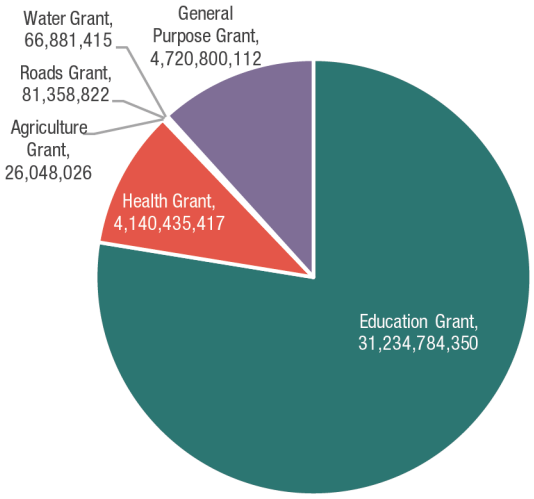
The two city councils report that they have good relations with the Mwanza Urban Water Supply and MWAUWASA although they do not appear to work closely together. MWAUWASA has a separate urban water and sanitation plan to the Mwanza City Urban Masterplan. The two plans have been developed in coordination but they have separate funders and neither plan has legal power over the other, which may present coordination challenges in their implementation. MWAUWASA responds to central government direction, primarily from the MoWI and the EWURA while the urban councils are directed by the President's Office for Regional Administration and Local Government (PORALG), but also respond to requests from officials and politicians from all central government departments. The councils' budgets and plans are, in theory, influenced by and accountable to local citizens but there is not an equivalent local channel for democratic influence by citizens over the work of MWAUWASA. MWAUWASA thus functions more as an implementing arm of the central government MoWI rather than a locally governed public service institution.

Local government fiscal profile

In 2011, the estimated GDP/capita in Mwanza region was TNS 640,801, compared to 1,961,074 in Dar es Salaam and 1,038,097 in Arusha region (Tanzanian National Bureau of Statistics, 2011).[1] According to PORALG data (PORALG, 2011), Mwanza City Council (MCC) received TZS 54,000 million in intergovernmental transfers and generated TZS 7,000 million of its own revenue to cover costs in the year 2012-3. Ilemela Municipal Council (IMC) has a smaller budget. IMC received TZS 31,892 million in intergovernmental transfers in 2014-15 and generated TZS 3,806 million in own source revenues (PORALG, 2011). As figure 1 and 2 show however, the amount the Councils received was lower than the amount expected in their respective Local Government Authorities (LGA) budgets, which is a frequently cited problem for LGAs when planning their annual expenditure.

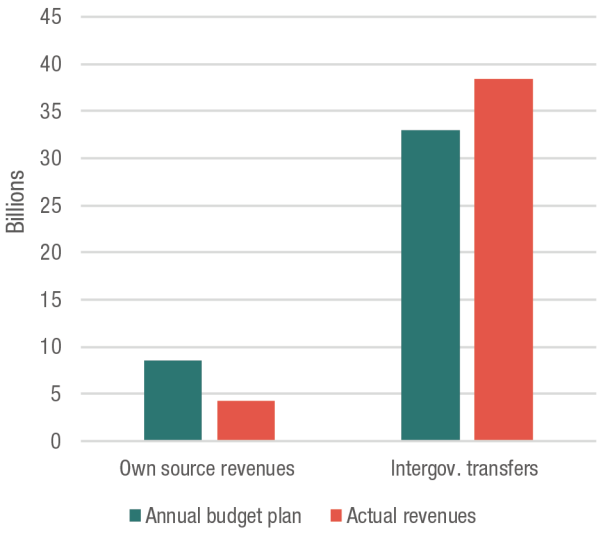
The majority of the funds transferred from central to local government are recurrent block grants which are allocated to service sectors (figure 4 and 5). Recurrent grants constituted 90% of MCC and 92% of IMC's respective annual budgets (in 2012-13 and 2014-15 respectively). As is common across Tanzania, central government allocated large proportions of these funds to health and education services in Mwanza (figure 3). Within these service sector allocations, most of the funds are obligatorily spent on staff salaries (figure 4 and 5).

Figure 3: Budget allocations of central government recurrent block grants to LGAs, 2012-13



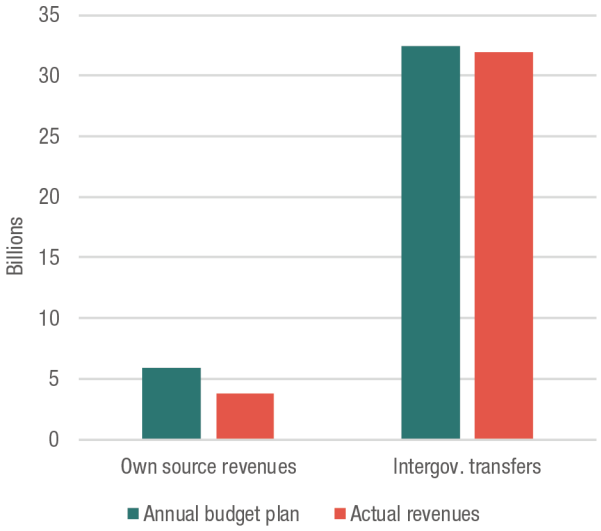
Source: PORALG, 2013

Figure 1: Budgeted and actual revenues of Mwanza City Council, 2012-13



Source: PORALG, 2013

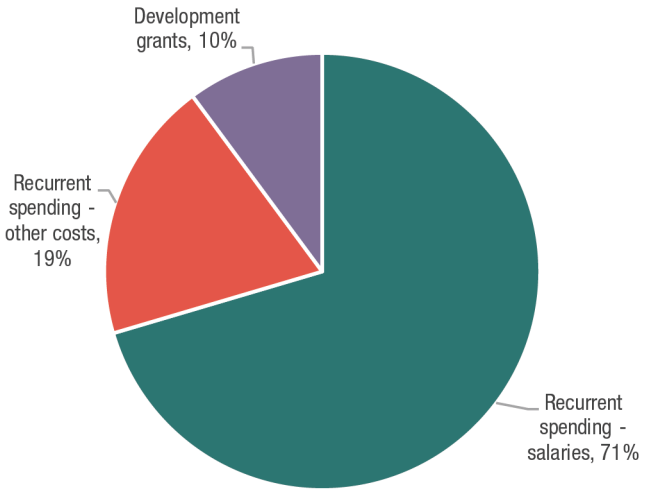
Figure 2: Budgeted and actual revenues of Ilemela District Council, 2014-15



Source: PORALG, 2013

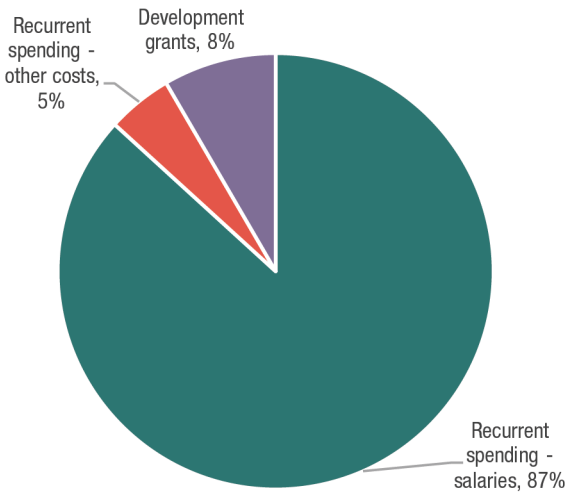
1. Source: National Bureau of Statistics, Tanzania, Original data: http://www.nbs.go.tz

Figure 4: Mwanza City Council - total expenditure, recurrent vs. development, 2012-13



Source: PORALG, 2013

Figure 5: Ilemela Municipal Council - total expenditure, recurrent vs. development, 2014-15



Source: PORALG, 2013

Outside of recurrent cost grants, the development grants from central government may offer more scope to MCC and IMC to determine how they are spent. In 2012-3, most of the local development grants which Mwanza City Council received came from the Tanzania Strategic Cities Programme fund (figure 6). While this fund is allocated to the top infrastructure priorities decided by the central management team, the purpose of the fund itself is directed by the donor and central government. Furthermore, given that MCC now has very little responsibility for water or sanitation, these services are not supported by Tanzania Strategic Cities Programme.

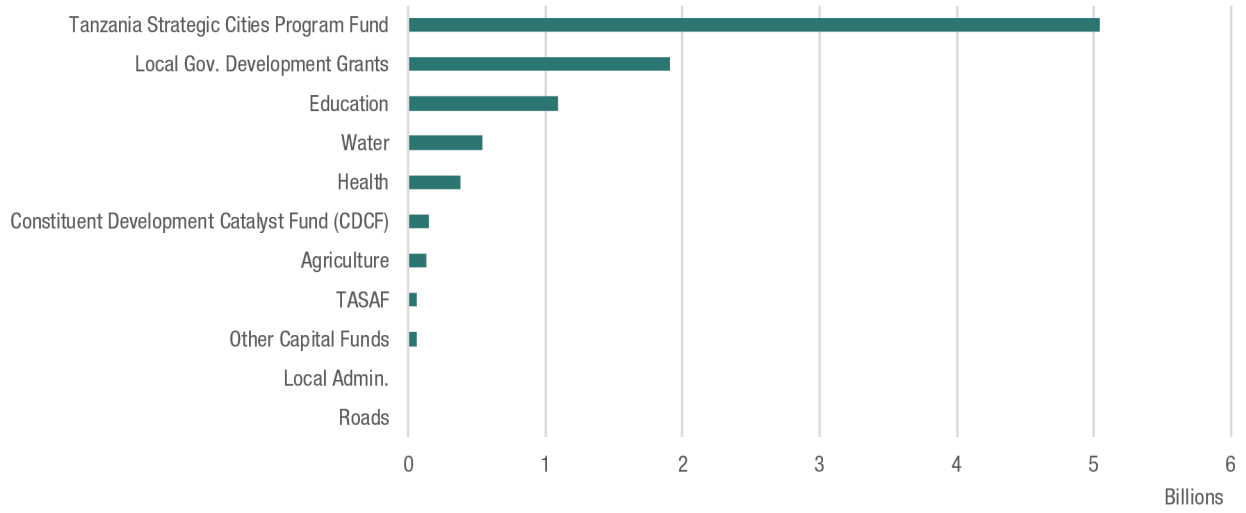
The Council budget preparation process begins with consultations at the ward level over local priorities for spending. These are relayed to the council and the council prepares a budget and allocation of funds for activities for the coming year. However, the budget has to be approved by the PORALG and finally by the Ministry of Finance which has the greatest influence over the councils' budgets. The Ministry of Finance gives detailed guidelines for how the budget should be planned and ultimately determines what will and what will not be financed from central government transfers. As one Urban Council Economist commented; "You can make good plans but when central government scrutinise them, they can change or delete whole budget lines."

Central government funding priorities do not always reflect local priorities but rather apply the same ratio of spending requirements across all councils regardless of specific needs of each locality. For example, a council economist described how LGAs have been instructed by central government to allocate 60% of development funds to development projects, 10% to loans for women and youth, 15% to fishing, and 20% for grazing, which amount to a total of 105%. Yet, LGA officers said they could not protest against these allocations and that if their budgets do not reflect this ratio, they will not be approved.

Furthermore, central government transfers do not always materialise according to the approved council budgets. For example, PORALG data shows that for the financial year 2015/2016 receipts from central government transfers to MCC amounted to TZS 4,530 million or 78% of the approved budget of TZS 5,796 million (PORALG, 2011). Of the transfers received, TZS 2,369 million was earmarked for Tanzania Social Action Fund, an item that had no allocation in the approved budget. In the same year, MCC had a budget of TZS 1.65 billion allocated to the Local Capital Development Grant but did not receive any funds for this at all and only 25% of the allocation for Other Charges. This was the case for all LGAs and creates serious disruption for how councils try to cover their own running costs while also meeting the statutory obligations.

MCC and IMC, like other urban LGAs, use a range of sources to generate its own revenue over which it should have more control. Sources of own revenue include, parking fees, solid waste management fees, property tax, and fees for markets, livestock auction and abattoirs (Fjeldstad et al., 2009). MCC was the first LGA to attempt outsourcing revenue collection which was in response to local accusations of corrupt practices among Council revenue collectors. However, regulating the private revenue collectors has proved to be difficult and revenues have not significantly increased (Fjeldstad et al., 2009). Ilemela City Council have had a similar experience and have now decided to do revenue collection in-house instead. For example in 2014-15, a council economist described how IMC collected 65.2% of is estimated own source revenue which it attributed to the abolition of some of the

Figure 6: Mwanza City Council development grants and funds - actual budget allocation, 2012-13



Source: PORALG, 2013

council's own revenue sources but also to an inexplicable withdrawal by some private revenue collection agents. ICC are now pursuing other ways of raising revenue including using a well-known individual who fundraises for an Ilemela trust and by inviting international donors and investors to support infrastructure development projects in the Ilemela district.

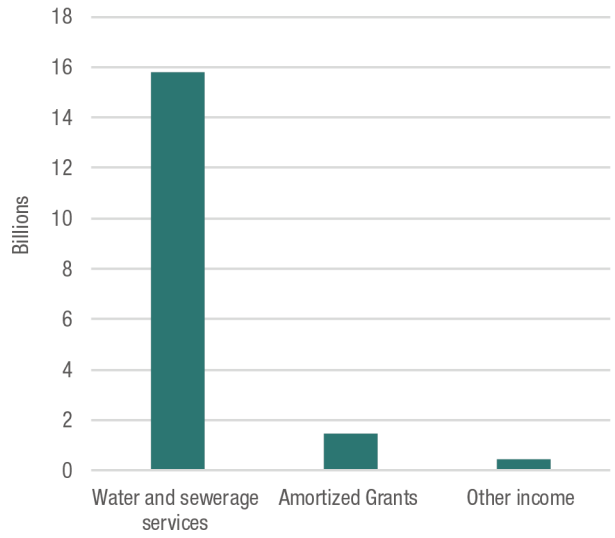
However, the revenue base which both Councils are able to draw upon is very small. During 2014-15, the IMC's own revenues were only TNS 3,806 million and 2012-13 MCC's own revenues were TZS 7,000 million (PORALG, 2011). Both council's Chief Economists described how the councils have to work hard to gather the revenues they can and have to think creatively of ways to do so. For example, the councils sell advertising space on public buildings, take out loans, rent land to businesses and property developers, and have user charges for public buildings such as car parks. One chief economist explained; "We would like to borrow money to increase revenue but there are many problems with this. We took a bank loan of TZS 1.279 billion to finance the school lab constructions but now have to repay TZS 32 million per month for five years. The interest rate is high and we will lose TZS 500 million. We didn't have an alternative".

However, even when councils generate their own resources, they have limited control over the allocation of their budget due to ad hoc, unplanned directives which are given throughout the financial year and to which councils have to respond. This can mean that the council has to rely upon its own revenues to cover basic operating costs because the funds which would have covered operating costs have to be reallocated to meeting the additional directives from central government. Consequently, even when local revenues are collected, the council cannot necessarily allocate them to locally defined priorities but rather has to use them as emergency funds to cover unforeseen costs. As a council officer described; "Ministers visit and never leave without giving a directive […] the directives are all for a good cause but they disrupt the budget and we can't plan or manage the Council funds properly when this happens."

Financial profile - MWAUWASA

The annual income of the MWAUWASA for 2014-5 was TZS 17,748 million which was just below the total annual expenditure for the same year at TZS 17,901 million (EWURA, 2015). The following charts show the sources of this income and distribution of expenditure. As can be seen from figure 7, almost all of the authority's revenue comes from its provision of water and sewerage services, not from grants or transfers. The majority of this income is spent on water production and on staff salaries, together accounting for 60% of all expenditure (figure 8). Wastewater collection and treatment is not listed as an expenditure category and MWAUWASA does not provide data on the revenue and costs of on-site sanitation service provision.

Figure 7: MWUAWASA - Sources of income, 2014-15



Source: EWURA, 2015

Data provided by IBNet suggests that the Authority has managed to be financially self-sustaining between 2006 and 2015 (IBNet, 2015). Figure 9 shows that from 2012 – 2015, the operating costs have been covered, if not exceeded by the annual revenues and these figures have been relatively steady. Table 1 below supports this showing that the unit operational cost for water and waste water ($US/m3 produced) and the labour costs vs. operational costs have been steady over the past four years.

Table 1: MWAUWASA – Annual labour against operational cost 2012- 2015

Indicator	2012	2013	2014	2015
Unit Operational Cost Water and Wastewater (US$/m3 produced)	0.33	0.32	0.32	0.27
Labour Costs vs Operational Costs (%)	29.47%	33.98%	34.87%	32.93%

Source: IBNet, 2015

However, in 2015 the annual operational and maintenance costs were reported as TNZ 15,583 million which was higher the annual collections at TZS 14,545 million (EWURA, 2015). Non-revenue water is considered high at 41.8% (EWURA, 2015) which suggests that the authority could be more financially sustainable if it improves control over water usage and billing. MWAUWASA also currently struggles to recover costs from sewerage provision which could pose a problem as more responsibility for sanitation is transferred to the utility. Households often do not want to connect to the sewerage network because the charges are far more costly than paying for septic tank emptying. Households with a septic tank or cesspit may only have to pay once every one or two years for their tanks to be emptied, costing up to TNS 100,000 each time. In contrast, to connect to the main sewerage, households would have to pay the connection charge as well as a monthly fee which is calculated as 50% of their water bill, which is likely to be between TNS 15,000 – 25,000 per month according to MWAUWASA officers. Consequently households with piped water and a cesspit or septic tank do not consider sewerage a worthwhile investment, especially since the water table in Mwanza is generally low, and so MWAUWASA's plans to expand the sewerage network may not be financially feasible.

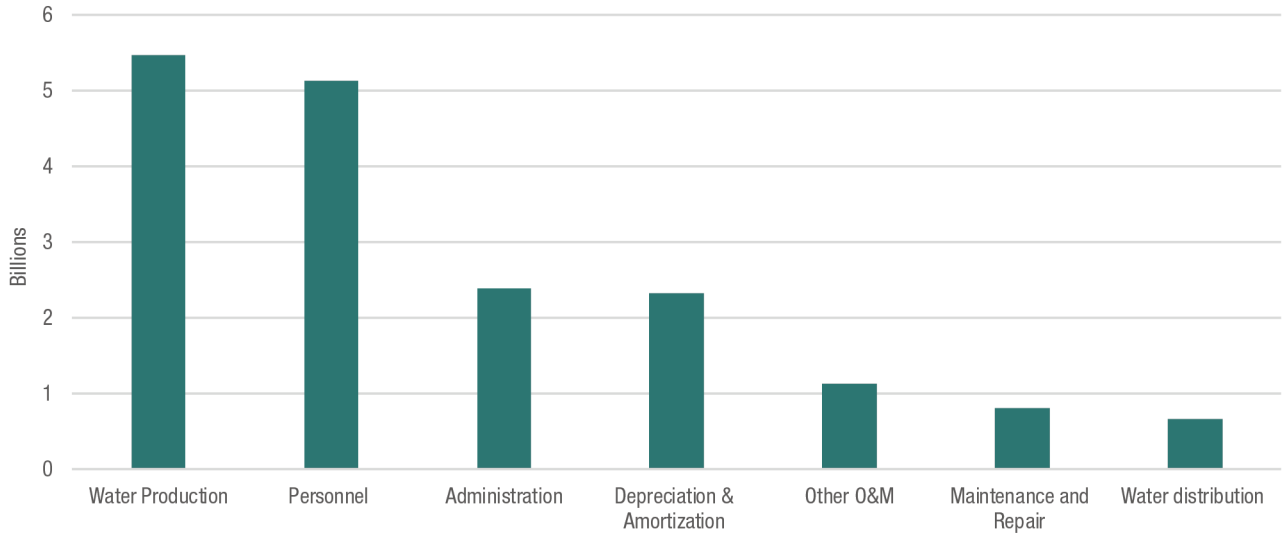
MWAUWASA central management prepare the budget and plan for the year, this has to be approved by the board and then by the treasury registrar. Budgeting is based on anticipated activities to supply clean water and to treat and dispose of wastewater correctly, according to EWURA's standards. A small proportion of the budget is allocated to sanitation relative to water supply. EWURA regulates the proposed tariffs and the MoWI and EWURA set guidelines and performance indicators, which MWAUWASA has to meet. Indicators measure service quality, such as the quality of water provided, and coverage of population for sewerage. The MWAUWASA Business Plan states that 20% of households should be connected to sewerage by 2017/18 though in Mwanza this is currently between 8% and 15% according to different sources (MWAUWASA, 2014; IBNet, 2015).

Water and sanitation profile

Data from the 2012 census (Tanzania National Bureau of Statistics, 2012) shows that most households in Mwanza City Council area (Nyamagana) (95.5%) and Ilemela (84.6%) have access to improved water but only 71.3% (Nyamagana) and 58% (Ilemela) have piped water to their dwelling or yardplot. A similar percentage of households have improved sanitation. In Nyamagana and Ilemela this was 78.9% and 73.8% respectively, which is much higher than the regional average (33.4%) and slightly higher than the average for urban areas (70.3%) in the Mwanza region.

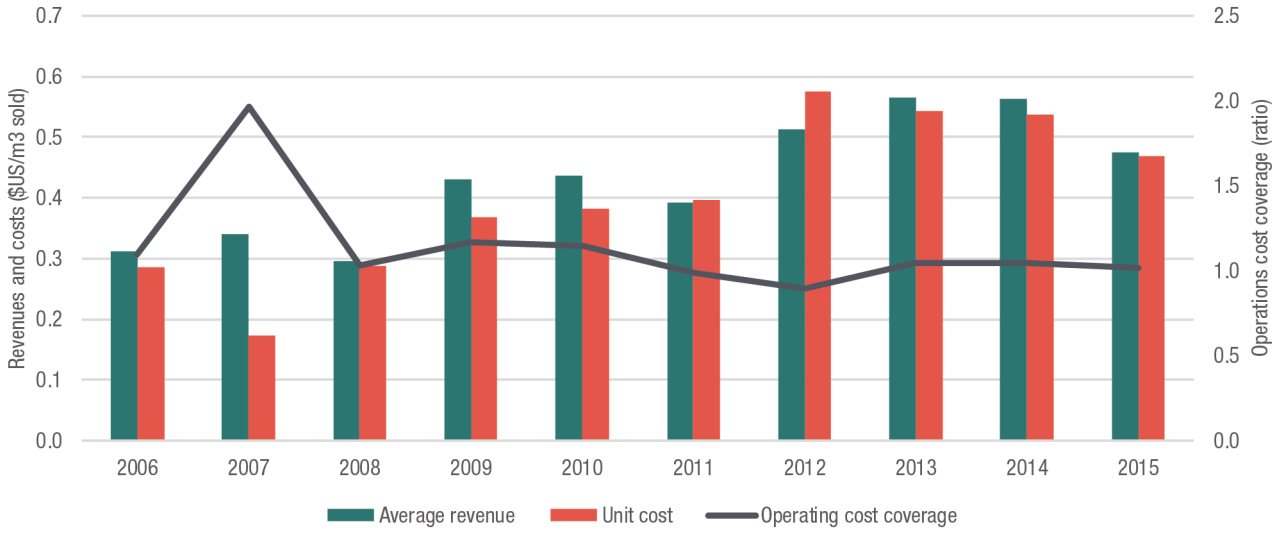
Yet, the percentage of households in Nyamagana and Ilemela with access to a piped sewer system is only 6.1% and 7% respectively. Of the remaining households in these two municipalities around 15% had a flush/pour toilet to a septic tank, around 29% had a flush/pour toilet to a pit, and around 25% used a latrine, while approximately 24% have unimproved or no toilet facilities (ibid). Over the region as a whole, there has been an increase in the use of flush toilets from 3.6% in 2002 to 20.8% in 2012, which suggests an increased volume of fecal sludge as more water is used in sanitation facilities (ibid). Furthermore, the distribution of toilet facilities across households in Mwanza city (as shown in table 2) indicates that the vast

Figure 8: MWUAWASA - Expenditure, 2014-15



Source: EWURA, 2015

Figure 9: MWAUWASA – Annual operational cost coverage, 2006-15



Source: IBNet, 2015

Table 2: Percentage distribution of households by household toilet facility, 2012

	Improved toilet facility	Unimproved or no facility	Flush/ Pour to Piped Sewer System	Flush/ Pour to Septic Tank	Flush/ Pour to Covered Pit	Non-flush/ pour latrine
Nyamagana	78.90%	21%	6.1%	14.4%	30.6%	27.8%
Ilemela	73.8%	26.1%	7%	16.1%	27.3%	23.4%

Source: Tanzania National Bureau of Statistics, 2012

majority use on-site sanitation and so waste removal and treatment services are necessary for most households. Importantly, the data on sanitation does not capture the estimated volume of fecal waste is produced nor what proportion of it is safely treated and disposed of.

According to the 2015 IBNet report for the Mwanza water utility, sewerage coverage has increased slightly to 8% of the city population. MWAUWASA website states that the number of household connections to sewerage is 3500 and these are located in the central business district and in some of the surrounding areas such as Kirumba, Nyamanoro, Kilimahewa, Pasiansi and Igogo. The sewerage system is connected to a central pump station which pumps the wastewater via a transmission mains to the treatment plant in Butuja Ilemela (MWAUWASA, 2016).

IBNet data on the number of households covered by on-site wastewater removal is however absent despite most households relying upon this service rather than sewerage. The lack of data is probably because various operators provide wastewater collection services; MWAUWASA, both urban councils and private operators. According to interviews in 2016, MWAUWASA currently operates two vacuum trucks, financed by donors, which have a capacity of 6.5m3 and 10m3 to empty septic tanks and cesspits. On average, each truck makes between 30 and 40 trips per month, collecting approximately 560m3 of fecal sludge, which is treated in MWAUWASA waste stabilisation pond in Butuja-Ilemela. In 2016, the urban councils also managed a vacuum truck each for on-site sanitation to households (for a fee) and to public institutions. This is not a service which the councils intend to expand since MWAUWASA now has more responsibility for urban sanitation and because there is currently sufficient private sector provision. The private sector appears to be able to meet the demand from households for cesspit or septic tank emptying since households with a cesspit or septic tank seem to be willing and able to pay for this service. A private sector operator commented on how profitability is worsening slightly as more operators enter the market and as household sewerage connections.

The vast majority (approximately 94%) of the Mwanza city's households have non-networked sanitation. However, MWAUWASA is focused on expanding the sewerage network and does not provide household latrine, septic tank or cesspit construction, only the sewerage connection. Households have to pay to connect to the sewerage network and also pay a monthly sewerage charge. On-site wastewater removal is also not free of charge, although MWAUWASA charges less than private providers.

Removal of on-site waste water is increasingly done by licensed private operators. They do not have a contract with either council but do require a licence from the environmental department of the council where they operate. Private operators pay a fee to empty their trucks into the MWAUWASA managed sewerage treatment plant and their practices are regulated by council officers approximately every three months. Only one incident of a truck not disposing of its waste correctly was reported during interviews and according to local council interviewees given the volume of waste each truck collects, it would be very difficult for a privately-owned truck to dispose of wastewater incorrectly without it being reported.

Interviews with Mwanza residents found that households which do not have latrines connected to a cesspit or septic tank cannot have their wastewater collected and disposed of in the treatment plant. Some of these households have deep soak latrines which rarely fill up as the wastewater gradually seeps from the bottom into the ground. Others, particularly households living in informal settlements in the rocky areas of the city, have shallow latrines which easily fill up when it rains and the contents flood out. Some of these households will empty their latrine when it is full, often by paying someone to dig a hole and empty the latrine contents into the hole so the latrine can be reused. The frequency at which this has to be done depends on the number of people using the latrine.

Informal pit emptying is not an organised task but rather something which the poorest people may agree to do as a form of paid labour. Community organisations do exist within wards and mtaa but these do not concern latrine emptying. Such community organisations may encourage people to dispose of solid waste correctly or encourage hygienic practices but only one was reported to be involved in latrine construction. This organisation is the Tanzanian Federation for the Urban Poor which is affiliated to Shack Dwellers International. Among their activities, they support their members and others in their community to take loans to pay for the construction of Ecosan or another form of compost latrine. This is small scale work which is not supported by government but does enable individual households to have access to improved sanitation which does not require wastewater removal.

The only role which the two councils now play with respect to urban household sanitation is through education programmes and fines for pollution and non-hygienic practices. Ward officers hold occasional meetings and use local radio to advise people on good sanitation practice and instruct them to not empty their latrines into the gutters and river. Health and community development officers advise people to build a latrine in their house which is deep enough to not overfill when it rains. In peri-urban areas of Ilemela, the council does have a programme for teaching households how to construct low-cost latrines but this is limited to the peri-urban wards where the council is still responsible for sanitation.

Household sanitation challenges in Mwanza

Problems with household sanitation in Mwanza primarily concern the lack of access to improved household latrines among the poorest households who generally live in informal settlements. Where households do not have an improved latrine, wastewater is not collected safely and so cannot be treated and disposed of safely either. It was widely reported during interviews that households without an improved latrine connected to a cesspit or sewerage network, usually empty their latrines into the ground or the river, and rain water easily floods unimproved latrines. This causes a pollution problem in the informal settlements as well as in settlements downstream and in the lake, where some of the poorest people wash their clothes and cooking utensils as well as swim. The release of fecal waste into the ground and water sources during the rainy season seems to contribute to regular cholera outbreaks, and illnesses such as dysentery and diarrhoea which are common in unplanned settlements in Mwanza.

A survey by a community organisation, the Tanzanian Federation for the Urban Poor which was conducted following a cholera outbreak in 2016 found that open defecation is common, especially in informal trading areas. According to Federation members, between 10% and 15% of households in informal settlements do not have any toilet facilities in their house. The government response to the cholera outbreak was to try to close informal trading areas and instruct health officers to raise awareness at the ward level of the health risks of unhygienic practices.

The local government also responds to pollution caused by poor sanitation through its environmental health department. Soak pits, which many people use, are not considered environmentally safe, particularly if people are using boreholes or dug wells for water access in the same compound or neighbourhood. Using soak latrines which are shallow pose a risk to environmental pollution and so are not allowed. Ward Health Officers and the Ward Health and Environment Committee representatives carry out household inspections to ensure that households comply with these environmental health regulations. Council officers reported that if someone is found to be committing a hygiene offence they may be served a fine, usually TZS 50,000 to be paid to the ward committee.

The National Environment Act 2004, Water Quality Standards Regulations, 2005 and Mwanza city by-laws for wastewater management 2010 are the main legal instruments applied in the city in this respect. However, council officers explained that the current by-law is very vague and so difficult to enforce. It is now under revision and stakeholders consultations on the new by-law are planned for October 2016. Enforcing officers often make reference to the 2005 Water Quality Standards Regulation that are far more specific. If the wastewater by-law is broken, fines range from TZS 50,000 – TZS 300,000. Cases of households contravening the by-laws are usually resolved at ward level by the Ward Tribunal. Cases which cannot be resolved at ward level may go to the Residents' Magistrates' Court.

However, interviewees described how political interference often prevents the enforcement of by-laws. If a ward officer tries to penalise a household for improper environmental practices, a member of the household may request their ward councillor to intervene so that their fine is dropped. Furthermore, council officers struggle to regulate households and enforce by-laws due to low department capacity. The local government environmental health departments in MCC and IMC both described solid waste management as the most urgent and time-consuming problem which they are trying to address, rather than wastewater treatment.

MWAUWASA urban water and sanitation plan

MWAUWASA operates within the policy framework of the *National Water Policy (2002)*, the *National Water Sector Development Strategy (2006 – 2015)*, Environmental *Management Act, 2004, and the Tanzania Vision 2025* which among other key issues, aims to achieve universal access to safe water and provision of sanitation services. The Mwanza Urban Water Supply and Sanitation Authority Strategic Plan 2013 – 2018 and the MWAUWASA Business Plan 2014 -2017 have been developed in accordance with this policy framework and according to the EWURA guidelines provided for each utility's strategic plan, which are the same for every Tanzanian city.

Improving sanitation appears as the second objective of the MWAUWASA Business Plan (MWAUWASA, 2014):

> *"Increase sewer laterals and construct new WWTP at Igoma area*
>
> - *Sensitize the public to connect to sewerage system*
> - *Sensitize the public on proper use of sewerage system*
> - *Introduce sanitation service in un-served areas -*
>
> *Two wards of Bugogwa and Sangabuye with a total population of 58,428 which exhibits rural settings. This area lacks water network infrastructures such as Intake, water distribution networks and reservoirs.*
>
> *Some parts of Nyasaka, Ibanda, Mji Mwema, Igogo, Buswelu, Nyegezi Calfornia, Buhongwa and Capripoint hilly areas which have their elevations well above MWAUWASA water distribution reservoirs."*

The business plan and strategic plan demonstrate that 'improving sanitation' is understood only as 'increasing sewerage connections' despite MWAUWASA also becoming responsible for on-site sanitation. Objective two

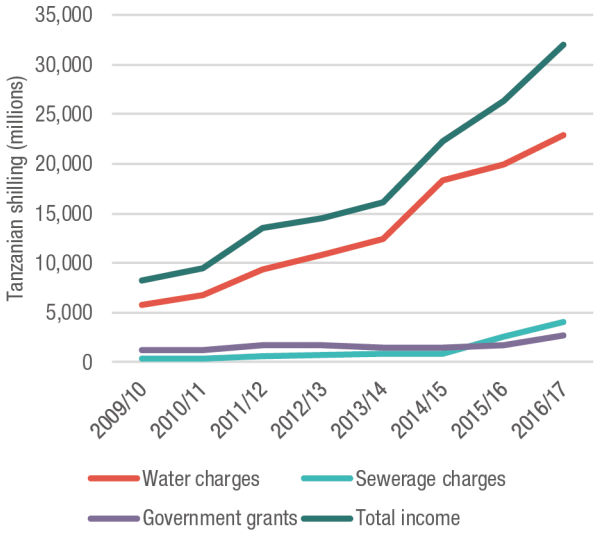
is planned to be achieved by constructing an additional 500 household sewerage connections and using fliers, a workshop, and a television advert to encourage households to connect to the system (MWAUWASA, 2014). Seemingly disconnected from the provision of sanitation is 'Key strategic issue 11'; 'Environmental pollution of water quality' (ibid). The actions proposed to address this issue involve monitoring piped water quality and sensitising the public against causing water pollution. It appears that MWAUWASA does not consider actions to improve the sanitation facilities of the poorest households which cause water pollution as interventions which could or should fall within its work.

MWAUWASA's plan is to expand sewerage and enforce household connections to the central sewerage system rather than invest in more on-site sanitation vehicles or on-site sanitation facilities. Local government officers from various departments stated a preference for sewerage over on-site sanitation, arguing that it is environmentally safer to have a sewerage network than latrines and tanks which could more easily leak. They also argued that since MWAUWASA has a monopoly on sewerage in the city, it has more control over prices and cost-recovery than if it has to compete with private sector operators, as is the case for on-site sanitation. As one engineer commented; "Sewerage is better because it ensures safe disposal of wastewater and means people aren't tempted to dispose of their wastewater incorrectly." Similarly, another MWAUWASA staff member suggested "Sewerage is safer, simpler and more efficient than on-site sanitation and waste removal. There is still a risk of disease if people have septic tanks so we have to educate them that they must pay for sewerage."

According to the business plan, MWAUWASA will not construct any cesspits in the coming five years and does not have any planned expenditure on on-site delivery until 2018-19. MWAUWASA intends to spend TNS 5,999 million on the construction of new sewerage networks between 2014 and 2017 (MWAUWASA, 2014). The new sewerage is expected to cover more than 50% of the city area but MWAUWASA does not expect this to reach more than 50% of population. There is not however any plans for other forms of sanitation to be expanded or increased to reach the population which will not yet have access to sewerage. It is assumed that they can pay for private collection and treatment or find their own solution.

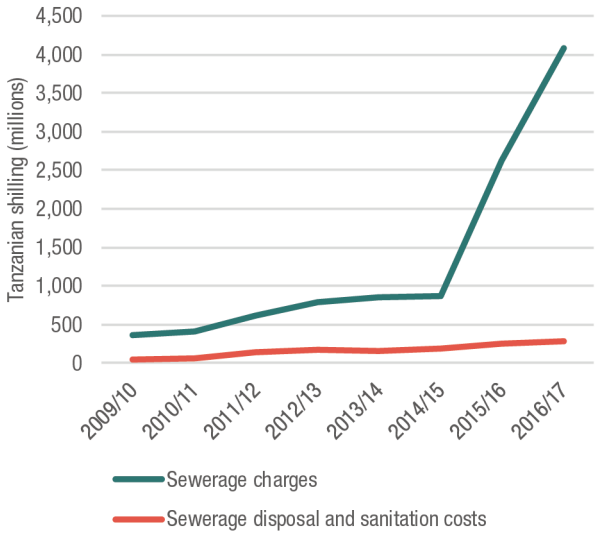
The business plan for the sewerage expansion relies upon an increase in water and sewerage fee revenue collection as well as an increase in government grants to MWAUWASA (figure 10 and 11). As figure 10 and 12 shows, MWAUWASA expects to make a surplus as it invests in water and sewerage infrastructure. However, interviews with MWAUWASA staff and local government officers suggest that collecting sewerage fees may be difficult and that they are unsure of whether expanding sewerage will be financially feasible and so will rely upon central government and possibly donor financing. MWAUWASA is expecting a by-law to be passed which would require all households within 30m of the sewerage network to connect and pay the charge each month. This may be an important measure for enabling the sewerage network to increase in economies of scale and so be able to reach more people and even offer subsidies. Whether such a by-law could be enforced, however, is unclear.

Figure 10: MWAUWASA projected income, 2009-17



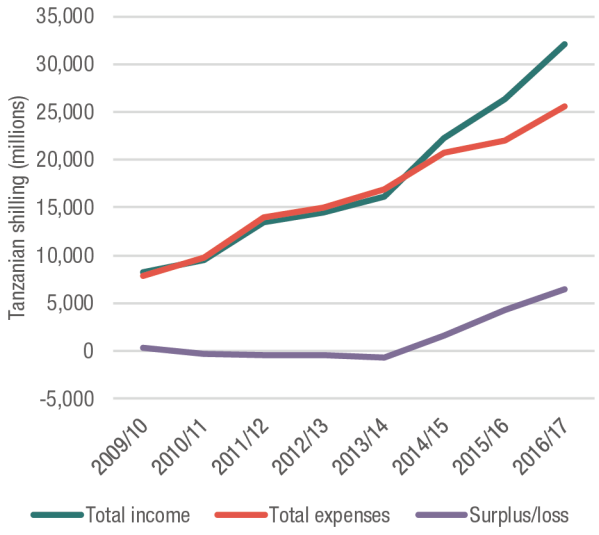
Source: MWAUWASA, 2014

Figure 11: MWAUWASA expected sanitation costs and revenue, 2009-17



Source: MWAUWASA, 2014

Figure 12: MWAUWASA projected financial viability, 2009-17



Source: MWAUWASA, 2014

MWAUWASA has little autonomy over its own financial sustainability since while it is expected to function as a commercial organisation covering its own operating costs, it cannot set its own tariffs. Rather, EWURA decides the tariff boundaries with a view to making them affordable for customers. There are no subsidies for low income households for sanitation charges but these do exist in a minor way for water supply. Under this, ward officers can propose that households with very low incomes receive free water. If accepted, MWAUWASA provides a set volume of water per month to these households free of charge.

The implementation of the sewerage expansion plan will require collaboration with MCC and ICC since permission is needed to build the infrastructure. MWAUWASA officers describe having good relations with MCC and ICC over this. MWAUWASA collaborates with the Councils at the very beginning of their planning phase to discuss which areas of land will be affected and how households can be compensated for any disruption.

Simplified sanitation project

The Lake Victoria Water and Sanitation Programme (LVWATSAN) is an African Development Bank programme working in 15 towns in the Lake Victoria Basin, one of which is Mwanza. According to the MWAUWASA business plan (MWAUWASA, 2014), the programme is currently in its second phase and the areas of work include:

- "Expansion of water distribution network in Mwanza, including addressing the water services challenges to the hilly areas which are located above water distribution reservoirs.
- Expansion of Mwanza sewerage network including construction of new WWTP at Igoma in Mwanza
- Developing sewerage networks and WWTPs for Musoma and Bukoba
- Developing new water supply facilities for the satellite towns of Misungwi, Magu and Ramadi
- Institutional and operational support to all water utility companies"

To undertake this work, MWAUWASA and MCC are working with UNHABITAT, a Danish consultancy firm COWI Consult and engineering support from Mott MacDonnell, and with financial support from the European Investment Bank (EIB) and French Agency for Development (AFD). According to interviews, the estimated cost for the Mwanza interventions is 54.2 million Euros and is financed by EIB, AFD and the United Republic of Tanzania. An important part of the programme is expanding the piped water and sanitation network to the hilly areas. UN Habitat, which has been involved in urban development in Mwanza for a long time, is supporting this work. Currently, this involves a pilot project to construct a simplified sewerage system for informal settlements in the hilly, unplanned areas. Under this project, MWAUWASA is constructing communal septic tanks linked to an over-ground network of pipes connected down to the main sewerage at the foot of the hilly area. A project officer reported that the budget for this is considered significant at 10 million euros, of which 15% is from the Government of Tanzania.

According to project staff, households will not have to pay for the septic tanks but they will pay a small monthly fee for connecting the septic tank to the sewerage network. This will be appended to their water bill. Only households which already have piped water and which expressed a willingness to pay the monthly charge have been included in the pilot which is due to start in September 2016. Detailed costs of this project were not available at the time of reporting because the project was in the tendering process. Following how this project proceeds could provide important lessons in the feasibility of expanding sewerage to informal settlements.

Mwanza City Urban Master Plan

Mwanza City Council already endorses a draft report of the Master Plan. The Master Plan is coordinated with other infrastructure development plans under preparation. Progress on the implementation of the plan will be reported on by MCC and IMC to the Ministry of Land. Interviews with council staff confirmed that the Ministry of Land financed the plan and owns it but the cost of implementing the plan lies with the two Councils. The Master Plan is an integrated development plan for land use, economic development and public services which includes standards for how the plan should be implemented. According to one of the Master Plan designers, the plan makes a comprehensive assessment of informal settlements in the city and includes a supplement

for informal settlements. The plan aims to present informal settlements as having potential for future prosperity, describing their upgrading as an opportunity not a problem. The Master Plan proposes in-situ upgrading and regularisation of the informal settlements, introducing mixed-use buildings. A Master Plan designer reported that Mwanza has 53 informal settlement areas and about 30 of these have begun a regularisation process. Some settlements are deemed inappropriate for upgrading and so the plan proposes that they are redeveloped and their current inhabitants relocated. According to a Master Plan urban designer, local government in Mwanza cannot afford compensation for all households which could be affected by upgrading or redeveloping informal settlements and so redevelopment has to be profitable.

A key challenge with the implementation of the urban Master Plan is likely to be coordination. Officers within the Mwanza City Council urban development department suggest forming a city-wide unit which would combine representatives from all the utilities and relevant departments. This unit could work to agree a common plan for the city and the respective responsibilities of the councils and MWAUWASA. However, it is unclear who could ultimately lead this and facilitate decision-making. Each council department and MWAUWASA has their own regulations and the various development plans are legal documents which have the same legal status and so cannot override each other. Another proposition for managing the coordination of the different urban development plans is to form a Mwanza city district development agency, which would have authority over MWAUWASA and the two municipal councils. However, this would go against the Local Government Agencies Act which requires all agencies to report directly to central government rather than an intermediary body. This partial decentralisation of power without a local coordinating body may pose problems for joined-up urban planning and implementation at the city level.

Donor and NGO support to sanitation in Mwanza

Tanzanian Strategic Cities Project

In addition to the Lake Victoria Water and Sanitation Programme, another internationally funded urban development project in Mwanza is the Tanzanian Strategic Cities Project (TSCP). Funded by the World Bank, this aims to improve the quality of and access to basic urban services in participating Local Government Authority's (LGAs). There are three components to the project. The first component of the project is core urban infrastructure and services (World Bank, 2010). This component will support improvements in core infrastructure and key urban services in the participating LGAs.[2] The second component of the project is institutional strengthening, including strengthening the fiscal and management capacity of LGAs. The outcomes of which should include greater capacity for urban infrastructure development and management and improved cost-recovery of key urban services. The third component of the project concerns implementation support and preparation of future urban projects (ibid).

In Mwanza, TSCP comprises two components: Component one covers infrastructure and component two involves institutional strengthening through which bilateral donors aim to assist MCC to increase its own revenue. A MCC manager reported that TSCP is implemented in two phases. In phase one, TZS 15 billion and additional funding of TZS 7.3 billion was allocated to infrastructure, and a total of TZS 198,144 million was spent on institutional strengthening activities. How the funds are spent in each city is decided according each city's priorities but this is developed in accordance with World Bank guidance on how the budget should be used. The Mwanza City Council central management team developed the city level TSCP plan. The MCC reports to central government on the implementation of the project and the government reports to the World Bank. The TSCP provides finance for public infrastructure but this does not include sanitation since this is no longer a responsibility of urban local governments. Rather the funding prioritises road construction, solid waste management, and drainage.

Tanzanian Federation for the Urban Poor

The federation is a community organisation which formed itself voluntarily, as did the 66 community groups under the federation in the Mwanza city area. Federation members described how their focus is to assist the urban poor, especially those living in informal settlements. Their activities include: mobilising communities to form saving and credit groups, improving community safety, environmental protection, water supply, and latrine construction, and low-cost housing, and HIV/AIDS prevention. A national NGO, Centre for Community Initiatives (CCI) works with the Federation and supports them with capacity building and training and peer-to-peer learning activities. To improve access to sanitation, the Federation helps people to build safe latrines using the Ecosan (Ekolojia) or mshazari model and offers loans to cover the cost of building materials and/or labour.

In Mwanza, the Federation conducts studies of problems in the communities in which it works. Recently, it has carried out three studies; one into access to sanitation, another for informal housing, and a third following a

2. It will comprise two subcomponents that will provide: (a) investment in core urban infrastructure and services for subprojects prioritized by the participating LGAs; and (b) technical assistance for construction supervision and support for the implementation and monitoring of Environmental and Social Management Plans (ESMPs) and Resettlement Action Plans (RAPs) linked to individual subprojects, including the payment of compensation costs.

cholera outbreak. The Federation wanted to know why the outbreak had happened and if its work to improve household latrines had been insufficient. They discovered that non-improved latrines were still a problem in the area affected by the outbreak.

The Federation produces quarterly reports of its activities and these are submitted to the Executive ward officer and the two councils. The councils do not engage with the Federation except when they require their support with awareness raising or community administration tasks. Otherwise they seem to be unaware of the Federation's work. A Federation member described how IMC did have a district commissioner who supported the Federation and wanted to employ the Federation to build public toilets in the municipality. However, the commissioner has now left and the Federation does not have a champion within either council.

Factors explaining the funding and regulation of fecal sludge management in Mwanza

The following questions guide our analysis of how the governance arrangements and financial capacity of Mwanza shape provision of sanitation to the city's residents.

- Who is responsible and who is considered responsible for the different stages of the fecal waste management chain?
- What importance is given to given to household sanitation and faecal sludge management (FSM) compared to other government activities?
- Who influences how the different stages of the sanitation chain are managed at the city level?
- What conditions have led to the different types of sanitation provision (or non-provision) in different areas of the city? E.g. compare rate of expansion, potential for cost-recovery, formalisation of settlement etc.
- What drives private sector investment in which types of sanitation technology and for whom?
- What are the overall factors which are preventing the safe disposal of *all* fecal waste in the city area?
- Are there emerging areas of improvement in the city's sanitation provision re. FSM? What is driving this? What limits this?

Perceptions of responsibility

The first stage of the faecal waste management chain is the household latrine and this is considered a private household responsibility. Regardless of household income, it is government policy that individuals should invest in an appropriate latrine and method of collecting the wastewater so that it can be disposed of safely. Subsidies for latrine construction are not available in Mwanza city and the use of an improved latrine and correct disposal of wastewater is required by a by-law.

The national School WASH Programme supports the construction of latrines in schools but public intervention in household sanitation is limited primarily to awareness raising on hygiene and sanitation issues by ward level health officers. The local government environmental health departments also try to encourage good sanitation practices by issuing fines to households which are found to be polluting streets or the river with untreated faecal waste.

The next stages of faecal waste management are perceived to require government intervention. The collection and treatment of wastewater is undertaken by government directly and by private organisations which are regulated by government. As long as households have their own latrine with waste collection tank, MWAUWASA, the local government, or a private company can empty the household tank and remove the wastewater for treatment. This may be by a vacuum truck collecting waste and transporting it to a treatment plant or by connecting the household to the sewerage network. Emptying on-site sanitation facilities using a vacuum truck is generally considered a private sector task while expanding sewerage is considered the responsibility of MWAUWASA. The final stage of the service chain; treatment of wastewater is treated as a government responsibility. The management of the wastewater plant has been transferred from local government to MWAUWASA and so remains a publically-owned and controlled service. Regulation of the whole service chain is also considered a public sector responsibility indicating that government is concerned by the externalities of inadequate sanitation. Local government regulates the first stage of the service chain by monitoring the quality of water in rivers and the lake and regulating the use of appropriate household latrines, although its capacity to do this is limited. The following stages of wastewater collection and treatment are regulated by local government through the licencing of private vacuum trucks and through quality control of the treatment plant by EWURA and the National Environment Management Council.

Finally, the development of the simplified sewerage pilot project led by international donors in collaboration with MCC and MWAUWASA indicates that government does assume some responsibility for sanitation provision to informal settlements. The financial and technical support of international organisations through the Lake Victoria Water and Sanitation Programme are supporting MCC and MWAUWASA to try to improve faecal waste treatment services to the informal settlements. In line with the separation of private and public responsibilities for sanitation outlined above, the project does not assist with the first stage of the sanitation chain; latrine construction, working only with households which already have a latrine connected to a septic tank. The project considers

the affordability of providing this service by charging subsidised rates for the service but it does not offer assistance to households to first construct an appropriate latrine and septic tank.

The relative importance of FSM

Urban fecal waste management, and sanitation more broadly, is given very little attention by local or national government relative to other services. Government intervention to improve household sanitation in cities is directed at ad-hoc education campaigns and expanding urban sewerage networks. Central government priorities are largely replicated at the city level and these focus spending on desks and laboratories for schools, medicine in dispensaries, and more road construction, not sanitation improvements. Additionally, priorities for Mwanza and Ilemela local governments include solid waste management, and the construction of health clinics and schools.

None of the stages of the sanitation service chain receive political attention nor are they prioritised in the budgets of the local governments. This is unsurprising given that sanitation is being transferred to the urban water and sanitation utilities. However, although a new treatment plant is being constructed in Mwanza and MWAUWASA does plan to increase sewerage construction, there are no plans to allocate financing to the earlier stages of the service chain. Household-level access to sanitation remains absent from local government and MWAUWASA work. This also reflects the lack of wider public concern for sanitation improvements. Sanitation is not a prominent issue in ward level consultation of public priorities, and even households which lack adequate sanitation may not raise this with their local representative.

Influential actors in FSM management

The transfer of responsibility for sanitation from local government to MWAUWASA means that FSM services are primarily shaped by central government through the MoWI and EWURA. MWUAWASA develops its own service plan and budget but this is in line with MoWI and EWURA regulation and priorities and it receives capital investment funds from central government to support service expansion. MWAUWASA does not receive direction from local government on city sanitation needs but rather follows central government direction for urban water and sanitation services. Consequently, central government has the most influence over how FSM is managed through its role in financing, policy, and regulation of the urban water and sanitation utilities.

Others who influence FSM at the city level are the local government environmental health officers through their (partial) enforcement of environmental regulations. Local government also provides some FSM services to public institutions, in particular to schools but does not engage in shaping FSM services more widely. Urban development plans supported by international donors have a stronger influence on the provision of FSM services through financing infrastructure development and supporting plans for simplified sewerage. They do not however engage in household latrine or septic tank construction but rather support the subsequent stages of the sanitation chain; transportation and treatment of wastewater.

What factors are preventing the safe disposal of all wastewater in the city area?

There are three main types of sanitation provision used by Mwanza residents; household connection to main sewerage, household connection to septic tank with vacuum truck waste removal, and unconnected soak-away latrine. Interviews suggested that typically the wealthier households in central areas of the city can afford a latrine connected to a septic tank and can afford to pay for waste removal by vacuum truck. If the sewerage system reaches their residence, they may choose to connect to this but households generally consider it to be an unnecessarily expensive option. Households in informal settlements are far less likely to be able to afford a latrine with a connection to a septic tank and so soak-away latrines are common.

How sanitation is perceived is fundamental to how it is provided as a public service. The study has found that the different stages of the sanitation service chain are treated distinctly with only wastewater treatment managed as a public good. The first stage of the service is widely held as a private household responsibility, regardless of household income, while the following stages of waste collection and treatment are perceived as technical services necessary for environmental health. It is evident that sanitation is not considered from a public health perspective. Those involved in its provision are either engineers or environmental health officers, while the notion of public health is almost absent from local government work and certainly is absent from MWAUWASA's work and plans.

The local government health budget and plans are focused on curative not public health and the department director is a doctor. Preventing ill-health is considered a personal responsibility and government intervention for public health is limited to public education initiatives. The environmental health departments do not address the public health impact of poor sanitation because they consider this to be the work of the health department. However, the health departments also do not consider the public health impact of poor sanitation because they consider sanitation to be MWAUWASA's responsibility. As a local government health officer confirmed, "In the past, there was a Comprehensive Community Health Plan which included plans for improving sanitation at the household level but three years ago a directive from the Ministry of Health reduced these activities".

Consequently, the need for low-income households to have access to adequate sanitation is overlooked by all government departments which have a role in

the sanitation service chain. The non-intervention of government in household latrine improvement means that household income is the primary factor influencing the type of sanitation used. Household income determines the type of latrine a household can build or buy and whether they pay for their latrine to be emptied formally or released informally into the ground or waterways. This is therefore a critical factor affecting public and environmental health in Mwanza.

The emphasis on public payment for sanitation services also affects private sector waste collection and the expansion of the public sewerage network. Competition between private providers appears to keep the price of their service affordable for households which have a septic tank. The waste which vacuum trucks collect is determined by the waste which the treatment plant can accept but currently the treatment plant has enough capacity and the new plant is able to accept more types of wastewater and process it safely. The affordability of private wastewater collection means that households usually prefer to pay for this service than for a connection to the main sewerage, which is more expensive. This hinders the ability of MWAUWASA to recover costs and expand its sewerage and so may be a factor limiting public provision of sanitation. However, expansion of sewerage is not necessarily an important problem in urban sanitation. Rather, the main gap in service provision which is causing public and environmental health problems is the lack of adequate sanitation facilities in very-low income households and this does not fall under the remit of any government department.

From a political perspective, the lack of government intervention in improving household sanitation facilities may reflect the lack of public interest or pressure on this issue. The impact of poor sanitation is most visible during the rainy season when soak-away latrines typically overflow into waterways and trigger a cholera outbreak. Yet, only those who lack adequate sanitation are usually vulnerable to cholera outbreaks and so there is not a wider outcry about poor sanitation. On occasion a cholera outbreak does attract the attention of local government since it places pressure on health services. In such cases, local government typically responds with education campaigns in the affected areas on personal hygiene and sanitation. However, the interviews suggest that local government officers are unaware of the extent of poor sanitation in informal settlements. For example, one environmental health officer explained the focus on solid rather than liquid waste collection, saying "It feels like people are already emptying their septic tanks and so will continue to do so but many people do not dispose of their household waste properly so more Council services are needed for this. On a day-to-day basis improper solid waste management is a greater problem". The prioritisation of solid waste management may be due to the greater visibility of the problem affecting the whole city. Sanitation, conversely, affects mainly informal settlements and so how local government perceives its role in relation to the informal settlements also affects services in this area.

Urban planning departments at the local and central government level have had little relatively little power in recent years and so informal settlements have been able to emerge without much state intervention. Furthermore, the topography of the hilly informal settlements in Mwanza, combined with the difficulty of charging customers in these areas for services, and households' lack of land tenure all act as a disincentive for government to engage in formalising these areas. Currently, informal settlements are viewed as a problem in the city, causing pollution and existing outside the formal system. This negative perception may however drive action towards more formal service provision, including sanitation, to these areas as part of an effort to 'clean-up' and formalise these areas of the city.

Finally, the transfer of responsibility for sanitation from local government to MWAUWASA suggests that central government views sanitation as a standalone technical and commercial service. This re-homing of the service is likely to remove it even further from local public health and urban planning concerns. Rather than the different stages of sanitation being integrated into local government services for public health, environmental protection, housing, and land management, sanitation is likely to be treated solely as sewerage expansion. MWAUWASA, as a centrally managed utility, has no mandate to respond to local public health problems. It is reliant upon central government funding for construction costs and it aims to recover costs to fund operation and maintenance tasks. The focus on cost-recovery and financial sustainability does not give space for subsidising services to low-income households. It is outside of MWAUWASA's mandate to assist households to build adequate latrines and connect them to septic tanks or sewerage. The only action currently being taken to address is by the Tanzanian Federation for the Urban Poor which on a small scale financially and practically assists low-income households to build improved latrines.

Emerging areas of improvement

The simplified sewerage pilot project, funded through the Lake Victoria Water and Sanitation Programme and facilitated by UN Habitat is a sign of local and international commitment to improving access to sanitation. The drivers of this initiative appear to be UN Habitat's continued attention to sanitation provision and willingness by the African Development Bank to invest in urban sanitation and public perception of informal settlements as problem areas which need formalising. Interviews revealed strong public frustration that urban planning regulations did not prevent people from building informal settlements in the first place and that now the city

has no choice but to try to redevelop and formalise them. For example, one local government officer explained 'It is a priority for our council, it's a matter of pride for everyone to be in a formal settlement'. While another interviewee explained 'the root of the problem isn't sanitation but poor planning. The hill settlements wouldn't exist if planning had been stricter and properly enforced'. Despite rather negative perceptions of the informal settlements, the simplified sewerage project aims to include informal settlements in formal sanitation services rather than resettle people and demolish the settlements. There may be limitations to the initiative if many households are unwilling or unable to pay for the service, and up-scaling the project to areas which do not have networked water could be difficult. Nevertheless, the pilot project is an interesting development for urban sanitation in Mwanza.

Other signs of improvement in urban sanitation may be a change in public attitude towards investing in household latrines. Interviewees involved in educational programmes encouraging household latrine construction reported an increase in low-cost improved latrine construction by low-income households. One interviewee commented, "There has been a change in behaviour and attitude. People don't want to share toilets with others any longer so they are building their own." Although anecdotal, this suggests that perceptions of pride may be a factor leading households to invest in better sanitation facilities.

Conclusion

Several key findings emerge from the Mwanza case study to explain why government investment and planning for urban sanitation is not meeting the city's needs:

The main break in the sanitation chain, resulting in cholera and other public health concerns, is the lack of adequate household latrines. Without an improved latrine, which is either a compost toilet or connected to a septic tank or sewerage pipe, wastewater cannot be managed safely. Household access to an improved latrine in urban areas is perceived as a private responsibility and no government subsidies are available to assist low-income households to invest in their own latrine. Government intervention in this first stage of the sanitation chain is limited to awareness raising on hygiene matters and fines for non-hygienic practices.

The transfer of responsibility for sanitation from local government to urban water and sanitation authorities emphasises sanitation as a technical service provided by sewerage networks. This divorces the issue from local government policy on urban planning, environmental health, public health, and land use. Public health is missing from all government discussion of sanitation. Without an awareness of the public health costs of inadequate sanitation, it is unlikely that financing will be made available for it.

Moving sanitation to the urban water and sanitation authority means that finance for these services is protected from the budgetary challenges facing the municipal and district governments. However, this also means that there is not a clear democratic channel for Mwanza citizens to influence government spending on sanitation in their city. Consequently, decisions over sanitation services and financing at the city level are largely determined by central government plans and interests.

Lack of political interest at at the national level in improving household access to sanitation is passed onto the local governments and MWAUWASA through expenditure guidelines focused on solid waste management and water supply, an absence of policy directives on sanitation, and a lack of clarity over government responsibility for household sanitation.

To address local urban household sanitation problems, MWAUWASA and the local governments would need to petition several central government departments to support them financially to address these problems. This would go against the usual flow of policy and funding directives which, are determined centrally and communicated to lower tiers of government.

For a full list of recommendations, please refer to the main report.

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