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**Coproduced
pathways toward
service provision
equality: the case of
simplified sewerage
in Mji Mpya, Dar es
Salaam**

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No. 9 | February 2023



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Design and Layout: KNOW
Proof: Colin Marx

KNOW Working Papers are published and produced by Knowledge in Action for Urban Equality (KNOW)

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Cover image

Kanga

A Kanga is a piece of colourful cloth largely worn by women and a cultural symbol of the Eastern African Coast, including Tanzania. It has been referred to as a great example of coproduction due to being shaped by (and thus documenting) cultural exchanges across Africa and beyond.



KNOW Small Grants Fund

This working paper presents research funded by the KNOW Small Grants Fund. The Fund awards grants that enable UK-based scholars at UK universities, policy research institutions, and NGOs with a research portfolio to conduct research relating to the theme of urban equality in one of the KNOW partner cities.

Suggested citation:

Hofmann, P, Ndezi, T. and Makoba Dominick, F. (2023), Coproduced pathways toward service provision equality: the case of simplified sewerage in Mji Mpya, Dar es Salaam. KNOW Working Paper Series, No. 9, London, United Kingdom.

**Coproduced pathways
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ISSN 2632-7562

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Abstract

This working paper examines a simplified sewerage system in Dar es Salaam to explore its potential as coproduced pathway between citizens and the state toward service provision equality. Sanitation provision continues to lag behind in many cities in the Global South. Despite some noticeable utility efforts, a city-wide approach to address sanitation inadequacies at scale has largely been missing, with sanitation service deficiencies particularly pronounced in informal settlements. Dar es Salaam has been a fertile ground for various actors to experiment with innovative solutions that could help to fill the sanitation service gap. This includes a simplified sewerage system (SSS) in a low-income settlement where sanitation infrastructure and services are co-produced between low-income communities and state actors. The critical analysis of the SSS offered in this paper pays particular attention to the evolution of the scheme within the

wider development of the settlement to examine its scope to enhance the provision of and access to sanitation and address service provision inequalities. The analysis focuses primarily on the coproduction arrangements between actors across the service delivery cycle and their implication for the accessibility and affordability of sanitation services. This emphasises the importance of long-term community involvement across the entire service delivery cycle while highlighting a needed shift from treating low-income residents as convenient participants to meaningful long-term coproduction partners. Tackling existing power imbalances within the community and across co-production partners can prevent negative implications for the most vulnerable, foster inclusion and challenge the reproduction and reinforcement of existing inequalities over time.

1. INTRODUCTION

In Dar es Salaam, and many other cities in the Global South, sanitation provision continues to lag behind. Only an estimated 12% of the city population are connected to a limited underground sewerage network and progress to extend it have been slow (EWURA, 2022). Lower-income settlements, which house approximately 75% of the population, are far away from the sewerage network and their residents engage in a range of alternative practices to meet their sanitation needs. A small percentage of city inhabitants (approximately 10%) have access to a septic tank or soak-away pit, while most rely on a type of pit latrines of varying quality. Many lower-income dwellers regularly deal with different levels of sanitation deficiencies due to unsafe, insufficient/irregular and costly sanitation services with negative impacts on their health, livelihoods and well-being. Despite growing evidence of action in sanitation leading to multiple benefits across all 17 Sustainable Development Goals (SDGs), sanitation remains neglected and under-resourced (Diep et al., 2020; Parikh et al., 2021). Until recently, sanitation efforts of the utility primarily focused on sewerage. An update to the Tanzanian Water Supply and Sanitation Act led to the renaming of DAWASA from Dar es Salaam Water Supply and **Sewerage** Authority to Dar es Salaam Water Supply and **Sanitation** Authority to reflect the expansion of their remit to include the provision of sanitation works and services (GoT, 2019). Despite some noticeable utility efforts to improve sanitation provision, a city-wide approach to address sanitation inadequacies at scale has largely been missing. Nevertheless, Dar es Salaam has been a fertile ground for various actors to experiment with innovative solutions that could help to fill the sanitation service gap. This includes a simplified sewerage system (SSS) in the low-income settlement of Mji Mpya, spearheaded by the local NGO Centre for Community Initiatives (CCI), where sanitation infrastructure and services are co-produced between low-income communities and state actors. Since the inception of a small pilot project, the system has grown incrementally, and important lessons can be learned from its evolution. This is particularly pertinent since DAWASA has concrete plans to roll out simplified sewerage schemes and decentralised wastewater treatment systems (DEWATS) in informal settlements to enhance access to sanitation. This paper provides a critical analysis of the SSS in Mji Mpya considering the context of the settlement where the scheme has been implemented. By paying particular attention to the evolution of the scheme within the wider development of the settlement we examine its scope to enhance the provision of and access to sanitation and address service provision inequalities. While the technical aspect of sanitation solutions is important, the analysis focuses primarily on the coproduction arrangements between actors across the service delivery cycle and their implication for the accessibility and affordability of sanitation services.

2. COPRODUCTION IN THE CONTEXT OF SERVICE PROVISION GOVERNANCE

Traditionally, service provision has been the remit of the state as direct provider whereby service users are seen as a homogenous group of clients. The New Public management model, which took effect in the Global South from the 1980s, proposed government should be run like a business. This prompted a new model inspired by market orientation, a focus on performance and the contracting out of service provision in part or in full to the private sector, with citizens as mere consumers of public services (McDonald et al., 2020). Like in Tanzania, this is often done through liberal reforms in line with Structural Adjustment Programmes (Brennan and Burton, 2007). In this customer-centered model consumers are not involved in any phase of public services management, but they can exercise choice through their ability to exit from any provider if their needs are not fully satisfied. Arguably, there is a coproduction element to this model, but it is focused on individual consumers evaluating the performance of service providers and having the possibility to choose their provider. Public-Private Partnerships (PPPs) and privatisation are promoted on the assumption that they offer greater efficiency and closer attention to user needs. However, in many cases these promises remained unfulfilled and led to remunicipalisation, including in Dar es Salaam (Pigeon, 2012; PSIRU, 2014). For a while, the international debate on governance became almost exclusively concerned with the question of whether services were better run by the public or the private sector ignoring other potential actors and their roles (Allen et al., 2006; Bakker, 2011, 2012). This discussion is particularly limiting in the context of informal, lower-income settlements where neither the private nor the public sector have been able to serve the poor. In fact, cities across the Global South provide numerous examples of alternative service provision arrangements where the role of residents goes beyond that of service users as they have come to play a crucial role in the delivery and management of basic infrastructure and services, either on their own or in partnership with others (Adams et al., 2019; Allen et al., 2016; McGranahan and Mitlin, 2016; Newborne et al., 2012). These include deliberate efforts to link community-led action with those of the state through service coproduction arrangements as viable alternatives to traditional approaches that can address the infrastructure and services deficit in urban areas (Allen et al., 2016, 2017; Walnycki, 2017). Indeed, Bovaird contends that “traditional conceptions of service planning and management are now outdated and need to be revised to account for coproduction as an integrating mechanism and an incentive for resource mobilization” (Bovaird, 2007: 846).

The term coproduction has been coined by Eleanor Ostrom who defines it as “the process through which inputs used to provide a good or service are contributed by individuals who are not in the same organization” (Ostrom 1996, 1073). What distinguishes coproduction from mere engagement or participation of service users is the emphasis on “regular, long-term relationships between professionalized service providers (in any sector) and

service users or other members of the community, where all parties make substantial resource contributions” (Bovaird, 2007: 847). The significance of resource contributions and continuous interactions among parties is reiterated by Joshi and Moore but their definition of institutionalised coproduction focuses specifically on partnerships between citizens and the state (Joshi & Moore 2004). Either way, service coproduction highlights the continuous involvement of multiple actors with clear implications for governance. Some scholars use the concept of ‘production’ in coproduction to refer only to the service delivery phase. Others emphasise the need for coproduction to go beyond this and include the whole cycle of public services, ranging from planning, design, managing, delivering, monitoring, and finally, to evaluation activities (Bovaird, 2007). Indeed, limiting coproduction to certain parts of the service delivery cycle can compromise the fair distribution of and access to services and might do little to enhance residents voices in decision-making processes (Hofmann, 2022; Moretto et al., 2018).

Differences in opinion manifest across actors, which means that their involvement in coproduction arrangements is driven by a variety of interests, motivations and assumptions about the roles and responsibilities for each coproduction partner. In practice, this has led to a range of coproduction arrangements with differing potential for addressing service provision inequalities (e.g. see Allen et al., 2016). Drawing on research in Africa, Asia and Latin America, Moretto et al. emphasise that coproduction is not always intentional or designed (2018) and might not be able to address service provision inequalities. When citizens are largely brought in to fill a gap left by the state with little to no involvement in decision-making, the opportunities for developing more inclusive services are limited.

While the technical aspect of sanitation solutions is important, the analysis focuses primarily on the coproduction arrangements between actors across the service delivery cycle and their implication for the accessibility and affordability of sanitation services.

3. METHODOLOGY

The research presented here is the result of a long-standing partnership between the authors, and more broadly between the Bartlett Development Unit (DPU) and the Centre for Community Initiatives (CCI). The paper builds on extensive work of the authors on service provision deficiencies in Dar es Salaam (Hofmann, 2017, 2021, 2022; Kombe et al., 2015) and draws on several research projects, including a small grant from the UKRI-funded research project Knowledge in Action for Urban Equality focused specifically on exploring sanitation challenges in Mji Mpya. CCI’s strong links with the Tanzanian Federation of the Urban Poor (TFUP) and other key stakeholders in central and local government were key to gain insights into the provision of and access to sanitation and the challenges that particularly lower-income communities in Dar es Salaam face in that respect.

To explore the SSS in the chosen locality, we adopt a normative perspective based on principles of environmental justice to consider the multiplicity of inequalities. This is particularly pertinent in relation to the UN recognition of sanitation as a distinct human right and the role it can play to meet the SDGs (Parikh et al., 2021). The international human rights framework clearly highlights participation, non-discrimination and accountability as key variables in the attainment of human rights and in a life without poverty alongside issues of unequal distribution of infrastructure and services predominantly associated with people’s income levels. Several social and environmental justice scholars emphasise that distributional struggles are reinforced by conditions of misrecognition and lack of participation (see Fraser 2007; Schlosberg 2007). Accordingly, the distribution of, and access to, sanitation infrastructure and services is closely linked to who is recognised as service users/beneficiaries and who participates in the delivery of sanitation infrastructure and services.

We place particular emphasis on change over time and spatial specificity of the settlement in which the SSS has been implemented to explore the transformative potential of the coproduced service provision arrangements toward urban equality. The data this paper draws on was collected by the authors since 2014 through a range of methods including review of secondary sources, household surveys, participatory mapping, community workshops, focus group discussions, interviews with local leaders and residents and a city-level workshop with multiple stakeholders.

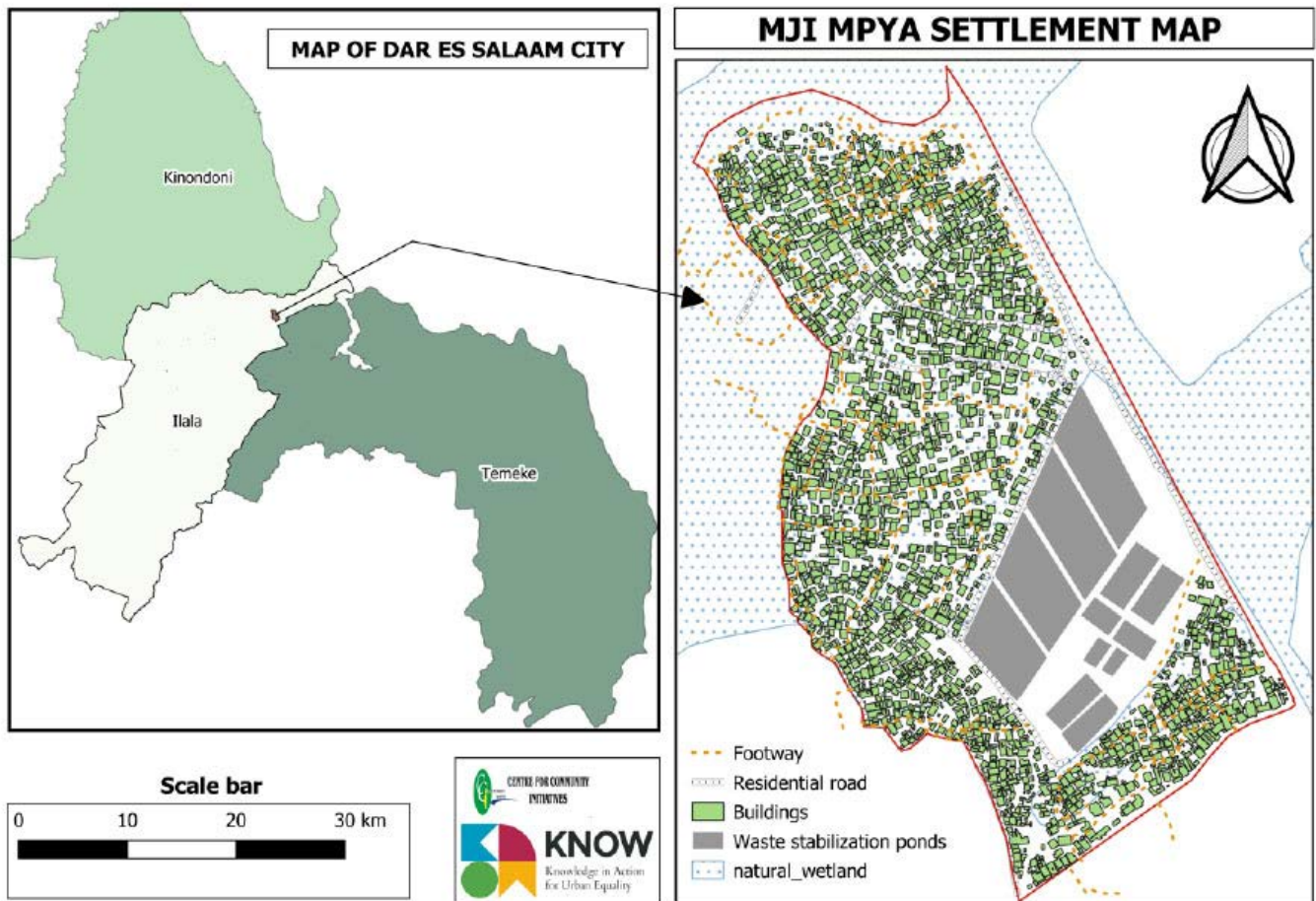


Figure 1
Location of Mji Mpya sub-ward (produced by CCI, 2019)

4. INTRODUCTION TO MJI MPYA SETTLEMENT

Mji Mpya is a sub-ward established in 2014 following the 2012 census leading to the sub-division of an existing sub-ward. The informal settlement has an estimated population of 21,000 and is located approximately 6km from the city centre (see Figure 1). It houses mainly low-income residents involved in small enterprises and casual work earning less than £50 a month. Access to services varies across the settlement and sanitation facilities are largely on-site as there is no connection to conventional underground sewers. According to a household survey conducted by CCI in 2019, the majority of residents uses traditional pit latrines. A small but increasing number of households is connected to a simplified sewerage system and there has been experimentation with other innovative technologies including EcoSan toilets and a small, decentralised wastewater treatment system. Most residents are tenants, which means they lack direct control and rely on their landlords for onsite sanitation facilities and improvements.

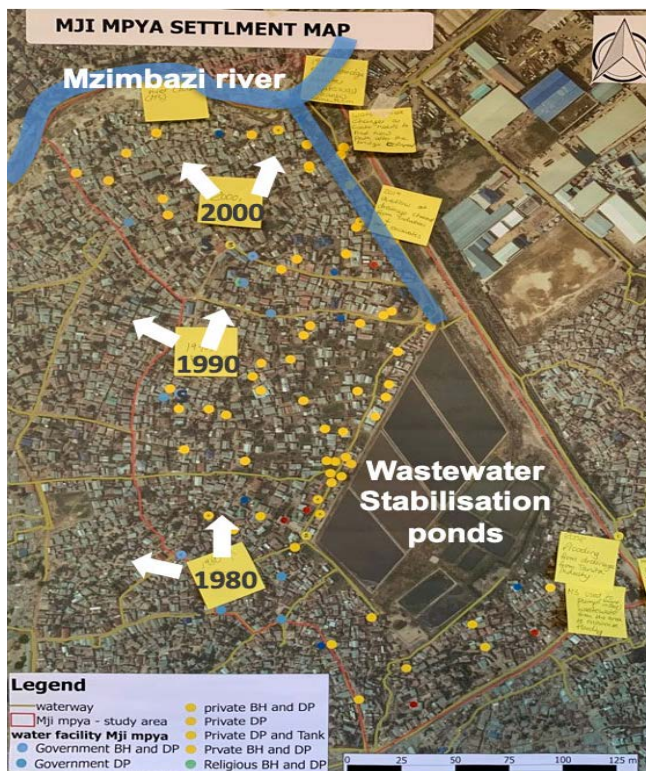
When one of nine sewage stabilisation ponds was established in the area during the 1960s the settlement mainly consisted of farmland. The 1980s witnessed a population influx due to the establishment of nearby industries but this was largely confined to higher-lying areas in the South of the settlement. Access to services was generally poor during the 1980s and 1990s. In the absence of other water supply facilities, residents heavily relied on water from outside the settlement to meet their water needs. With increasing levels of urbanisation, shallow wells became contaminated with faecal sludge and industrial effluents due to inadequate sanitation and drainage and most wells have since disappeared. Nowadays, most residents access water from private and public boreholes while a small but increasing percentage of households has a utility connection. Since 1998 the area has experienced increasing flood incidents and this can be associated with processes of urbanisation and consolidation, particularly in the lower-lying areas near the river and around the ponds (see Figure 2). The impacts of flooding are overall worsened by improper drainage, inadequate sanitation, and deficiencies in solid

1 EcoSan toilets are an alternative sanitation facility that separates urine and faeces and does not require water for flushing.

waste management. Over the years, the government as well as external support agencies, including international NGOs and the World Bank, have put some effort into improving access to services but the impact has overall been limited and sanitation improvements have largely relied on households' own initiatives and investments.

Densification paired with inadequate basic infrastructure and service provision means that residents have been increasingly exposed to the risk of water and sanitation-related diseases. Specifically, the settlement has been regularly affected by cholera outbreaks since 2006 and was among the worst affected areas in 2015. Government action has largely focused on curative measures to contain the epidemic rather than investments in disease prevention through service provision improvements. With limited government action and support, residents have developed their own coping mechanisms to deal with service provision inadequacies and there is also evidence of community mobilisation and collective action. Local federation groups started to emerge in 2012, triggered by an externally funded project, and by 2015, 135 community members were organised into nine groups across Mji Mpya and the neighbouring sub-ward of Kombo. The settlement further shows evidence of other collective savings and loan schemes, including VICOBA (Village Community Banks) and informal 'merry-go-round' savings groups formed by women called 'Upatu' (Brennan and Burton, 2007).

Figure 2
Evolution of Mji Mpya settlement



5. SIMPLIFIED SEWERAGE SYSTEM

August 2014 marks the inauguration of the first phase of a simplified sewerage scheme (SSS) in Mji Mpya, which is constructed using smaller diameter pipes laid at a shallow depth and at a flatter gradient compared to conventional sewers (see Figure 3). This was initiated by CCI together with TFUP and realised in collaboration with the municipality and the utility². The system capitalises on the close vicinity of the wastewater stabilisation ponds where the human waste from the system undergoes primary treatment before being discharged into the nearby Mzimbaizi river (see Figure 2). The 2014 pilot connected 18 households, which were chosen because of their vicinity to the newly established sewer. They were able to connect for a highly subsidised contribution of 40,000 Tanzanian shillings (TSh) (£14.40) and a monthly wastewater charge to the utility of TSh2,500 (£0.90). In comparison, pit emptying costs at least TSh70,000 (£25.20) at a time. The frequency of emptying depends on the depths of the pit as well as the location in the settlement, with toilets in the lower-lying area requiring more frequent emptying multiple times per year due to the increased risk of flooding. In 2015, phase two of the SSS connected another 50 households. Due to limited funds, the implementation of the second phase did not allow connection subsidies and this led to an increase in household contributions to an average of TSh700,000 (£252) per toilet for construction or upgrading of the facility and pipe connection. Household contributions rise to approximately TSh 1 million (£360) if paid in instalments over three years through a loan provided by TFUP. Connections have increased over time with a current total of 290 toilets serving an estimated 700 households, which corresponds to approximately 10% of sub-ward residents. This includes 65 toilets connected by DAWASA using its own resources to fund the pipework and connections while households must cover the costs of toilet improvements.

Over the years, beneficiary households had to cope with the increase and distortion of wastewater charges, which has been challenging for many. From the start, tariff settings for the SSS were based on negotiations between residents, EWURA (the regulatory authority who approves wastewater tariffs), and DAWASA. Usually, wastewater charges are calculated as a percentage of a household's water consumption. However, since many of the beneficiaries are not connected to the utility water network, wastewater charges for the SSS are decoupled from water bills. Following the initial agreement of TSh2,500 per toilet per month, the utility introduced a minimum charge of 20 cubic metres per facility per month, which corresponds to TSh7,720 based on the EWURA approved wastewater tariff of TSh386 per cubic meter (EWURA, 2014). This is equivalent to 666 litres or 33 20-litre buckets per day. Over time, the zonal utility office tasked with issuing bills and collecting

² The idea for the scheme was born out of a project funded by the Association of African Planning Schools, which identified the need for improved sanitation and a desire of residents to connect to the nearby ponds. Findings were consolidated and deepened within a UK-funded project on Sanitation and Hygiene Applied Research for Equity (SHARE). Implementation of the pilot was supported by the Cambridge Community Initiative.

the fee started to inflate monthly charges to TSh17,000 and above per households. This adds up to more than twice the agreed amount and would allow 73 20-litre buckets per day flushed down each connected toilet. Importantly, neither of those charges reflect the actual amount of wastewater that households discharge through the system. A survey of 60 beneficiary households indicates that the majority uses between 3 and 9 buckets of water for sanitation per day (see Figure 4). Even when considering the maximum of 9 cubic metres for some households, charges should not exceed TSh3,500 per month based on the EWURA tariff.

The data collected by CCI and TFUP presented in Figure 4 formed the basis for tariff renegotiations in 2019 in which CCI and EWURA played a key role to arrive at a more affordable rate. The agreed TSh6,450 per month better reflects actual discharge amounts but some households still struggle with the payment. The fee is supposed to cover DAWASA's costs for maintaining the system, but this is not done systematically.

6. COPRODUCED SERVICE PROVISION ARRANGEMENTS FOR THE SSS

There are two mechanisms that have shaped the planning, implementation, and operation of the SSS. First and foremost, the scheme builds on several community-based initiatives that have enhanced the capacity of low-income communities to negotiate better access to services and enter into a coproduction arrangement with the state. In this case, sanitation improvements provide an opportunity to generate benefits not just for individuals but for an entire neighbourhood or settlement. Community-based action has been facilitated by CCI in collaboration with local TFUP groups with the aim of mobilising the community and building local capacity. This has been done through a number of ways. Firstly, community mapping and enumeration



Figure 3
Inspection chambers along the sewer line and newly constructed toilets connected to the scheme (photos by CCI and P. Hofmann)

- Monthly maximum of wastewater per household: 9m³
- Minimum monthly amount: 1.8m³
- Average monthly amount: 4.2m³

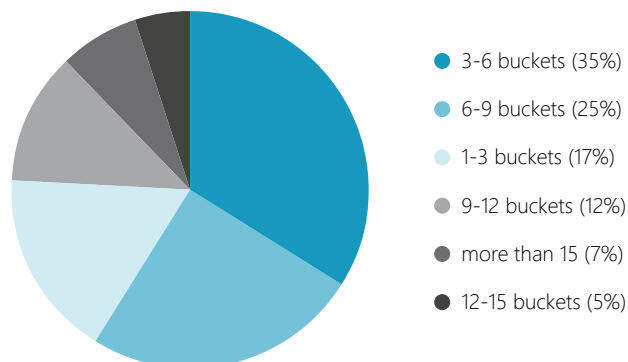


Figure 4
daily household water use for the simplified sewerage (Source: CCI household survey 2019)

generated local data to empower local residents in their demand for better services from the government (Glöckner et al., 2004; Hofmann, 2021; Mkanga and Ndezi, 2014; SHARE, 2012). Secondly, setting up savings groups has not only enhanced the financial capacity of low-income dwellers but also mobilised local communities as a key ingredient towards more democratic processes (DeVries and Rizo, 2015; McGranahan, 2015). Thirdly, the training of community sanitation technicians has built local capacity for the operation and maintenance of the system.

Community-based action and capacity building formed the basis for entering into dialogue with the municipality and the utility. CCI and TFUP strategically used the new technology of SSS to engage with local government officials (at sub-ward, ward and municipal level) and the utility and forge new partnerships with these key stakeholders. Training and capacity building enabled community members to contribute to the construction and maintenance of the system and the data collected through enumerations and participatory mapping provided the necessary baseline for the development of the scheme on the ground. Collaboration with the utility and municipality has been a lengthy process but is a key requirement. Specifically, authorisation from the municipality was necessary for residents to gain access to the wastewater ponds as discharge outlet for the system and DAWASA had to provide the manhole that connects the system to the ponds. The utility further plays a central role in tariff negotiations. As mentioned above, EWURA, the regulatory authority, was a key arbitrator in the discussions between the community and the utility when charges became distorted and has to approve any future increases. This has been established in a set of guidelines developed by CCI that serve as a Memorandum of Understanding (MoU) between the local community, sub-ward, ward, municipal government, DAWASA and EWURA. The document sets out the roles and responsibilities for each of the stakeholders, provides guidance for tariff setting and conflict prevention (CCI, 2021). Accordingly, DAWASA is responsible to establish future connections, following the participatory process introduced with the inception of the SSS, while the community plays a key role in the day-to-day operation and maintenance of the system. The latter is important to prevent blockages but thus far the liaison between the community and the utility has been limited.

While this initiative has overall achieved the active involvement of low-income residents in decision-making, the process has not been free of challenges, particularly regarding the evolution and sustainability of the service provided. An examination of the roles and responsibilities across actors and their diverging interests for entering into this coproduction arrangement can shed some light on the

tensions that seem to limit the potential for sustainable and inclusive sanitation solutions. The process has not been fully inclusive and in some cases led to the reproduction and reinforcement of existing inequalities over time. This is evident between landlords and tenants but also among residents with different socioeconomic status as well as between informal dwellers and the state. The government has embedded participatory approaches in their mainstream practices with a tendency to conflate efficiency and cost recovery goals with claims of enhancing the agency of low-income groups through collective action and coproduction arrangements. This resulted largely in a pragmatic approach to community engagement where communities primarily serve as convenient coproducers without challenging hegemonic relations and unequal service provision arrangements. This indicates that the overall aim of the scheme to provide a more sustainable and inclusive sanitation solution is not necessarily a top priority across actors. Challenging existing power relations and structural conditions toward more inclusive participation and service provision requires continued engagement across coproduction partners beyond the provision of infrastructure, as exemplified through the tariff distortions and renegotiations.

While the initiative has overall enhanced community cohesion through a collective approach that has improved relationships among participating neighbours, until today, the potential for inhabitants to benefit is spatially defined and further dependent on residents' socioeconomic status. In other words, it matters where in the settlement you live, direct beneficiaries need to be landlords/landowners (even though tenants can benefit indirectly) and able to afford the financial contribution (including the cost to join the scheme, the monthly wastewater charges and the cost of water for flushing) (see Figure 4). While the spatial reach has increased, and continues to do so, the SSS will never meet the sanitation needs of all settlement inhabitants³. The topography of the settlement prevents certain parts from being connected since the SSS relies on gravity flow. This has motivated CCI and community Federation groups to consider a portfolio of sanitation systems, including a small simplified sewerage network (or DEWATS) that connects up to 20 households to a biodigester that treats wastewater and generates biogas.

Besides topography and location in the settlement, changes to household contributions have implications for who in the settlement can benefit. Some beneficiaries of the highly-subsidised pilot phase would nowadays not be able to connect given the significant increase in upfront costs (Hofmann, 2017, 2022). Tensions arise between the affordability for beneficiaries and the financial viability and sustainability of the system. While the utility is primarily

³ It is also worth mentioning that the capacity of the wastewater stabilisation ponds is limited in terms of how much wastewater they can receive and treat, with clear indications that they are already operating beyond capacity.

motivated by the latter, CCI has explored different approaches to minimize the financial burden on participating households, for example by encouraging them to accumulate building materials to upgrade/build their toilet facility before connecting to one of the schemes. This can significantly reduce loan repayments, which those with an irregular income tend to struggle with.

The inclusivity of the system and its potential to address service provision inequalities is further challenged by existing power imbalances within the community and across co-production partners with negative implications for the most vulnerable. Not all residents have access and even those who do, do not benefit equally. For instance, while the local NGO and the federation have emphasised that beneficiary landlords should not use their connection to the scheme not increase rents, this has been difficult to implement in practice as some landlords have transferred the cost to tenants, including a local federation leader. She was acting in her interest as landlord, rather than federation leader, for whom rents are an important source of income.

"In 1993 our tenants were paying 7,000 shillings (£2.52) rent and it gradually went to 10,000 shillings (£3.60), 15,000 shillings (£5.40), 20,000 shillings (£7.20), 25,000 shillings (£9.00) and currently it is 30,000 shillings (£10.80). This went up last year [2014]. [...] We increased because of the services that we added, that is electricity three years ago and the water connection two years ago. We also improved the toilet last year and did some house repairs."

Interview with simplified sewerage beneficiary (November 2015)

While federation groups have been growing over the years, they face challenges with raising awareness about their activities, recruiting new members, and invigorating local leadership. Unlike examples from elsewhere, particularly India, federation membership is still quite low when compared to the total sub-ward population and some local federation leaders are reluctant to recruit new members as they feel this could threaten their leadership position. Generally, the ways in which low-income communities in Dar es Salaam mobilise run the risk of (re)producing unequal power relations, both within lower-income communities and between communities and the government, rather than tackling injustices and challenging structural positions (Hofmann, 2022). The foundations for this can be traced back to postcolonial policies and politics. Today, remnants of postcolonial efforts to hinder decentralised power in an attempt to unify the nation together with liberal reforms and structural adjustment programmes have reduced the role of the state and created a social void with nobody equipped to take on protective functions.

6. CONCLUSIONS

A city-wide sanitation strategy can help boost efforts to enhance access to sanitation but is not sufficient for developing concrete sanitation solutions at the local level. Evidence from Mji Mpya emphasises the importance of considering the local context in any attempt to enhance inclusion and sustainability. This includes a detailed understanding of the specific settlement trajectory. Changes in the ways in which residents access sanitation are closely linked to the evolution of the natural and built environment. Accordingly, the feasibility for different sanitation solutions varies within and across neighbourhoods and is subject to changes over time. For instance, the establishment of the wastewater stabilisation pond in Mji Mpya is a key component of the SSS but, as evidenced, a connection is not feasible for the entire settlement (let alone other informal settlements across Dar es Salaam). Consequently, meeting the sanitation needs of all city inhabitants requires a portfolio of sanitation solutions that are sensitive toward diverse socioenvironmental conditions.

A thorough understanding of the socio-economic fabric in a settlement is key to provide the basis for developing financial arrangements that can improve sanitation in informal settlements in a way that is affordable to most households without heavily relying on external funding sources. The experimentation undertaken by CCI and the TFUP over the years has helped households to improve their access to sanitation without the burden of a large loan, which is still an impediment for many. However, attempts to blend different funding sources to scale up sanitation improvements while catering for diverse financial capacities, for instance integrating civil society savings and loan schemes into government budgets, are still lacking.

Service coproduction offers an opportunity for low-income communities to play a key role in infrastructure and service provision to address inequalities in the provision of and access to services. However, as substantiated by a range of authors, service coproduction does not automatically contribute to more inclusive and sustainable arrangements (Allen, 2013; Allen et al., 2016; Hofmann, 2022; Moretto et al., 2018). In the case of SSS in Mji Mpya, low-income residents helped shape the planning, design and delivery of the infrastructure, which has led to the development of a sanitation system that is more in tune with the needs and capacities of low-income dwellers. As a system evolves, it is key for the community to be actively involved in decisions defining the terms and conditions of extending connections. This equally applies to interactions between the community and the state in the operation and maintenance of the system but in Mji Mpya these remain limited and have not been able to prevent service charge distortions. Some resolution was achieved to agree on more affordable tariffs and the above-

mentioned MoU aims to make sure low-income residents participate in future decisions around tariffs. This emphasises the importance of long-term community involvement across the entire service delivery cycle, but challenges remain to shift from low-income residents as convenient participants to meaningful long-term coproduction partners, which is currently not a priority shared among all. This relates to the need to tackle existing power imbalances within the community and across co-production partners to prevent negative implications for the most vulnerable and foster inclusion. Only then can coproduction arrangements become more inclusive and challenge the reproduction and reinforcement of existing inequalities over time.

Some resolution was achieved to agree on more affordable tariffs and the MoU aims to make sure low-income residents participate in future decisions around tariffs. This emphasises the importance of long-term community involvement across the entire service delivery cycle, but challenges remain to shift from low-income residents as convenient participants to meaningful long-term coproduction partners.

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KNOW

Knowledge in Action
for Urban Equality

This Working Paper is published as part of Knowledge in Action for Urban Equality. KNOW is a four year GCRF funded research programme tackling global inequality to help shape fairer cities for all.

Published and produced by

Knowledge in Action for Urban Equality

© KNOW | February 2023

ISSN: 2632-7562



UK Research
and Innovation