



# Improving sanitation in Tanzanian cities

## What do we know about how progress happens?

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### Key messages

- If the human waste produced by quickly growing cities is not safely managed, the tragedies of stunting, cholera, and child mortality are almost certain to persist.
- Historically, political incentives which have driven progress in urban sanitation have varied but strong political commitment was always essential.
- Finance, coordination and technology are all necessary, but finding ways to push sanitation up the political agenda is a critical first step.
- Sanitation programmes require pragmatism and realism. As poor urban households wait for networked sanitation systems to expand, they need intermediary sanitation solutions.

# Key recommendations

## In Tanzania

### Drivers to generate political interest:

- Take advantage of current reforms, and seek to align national plans and policies with more comprehensive approaches to urban sanitation.
- Invest in inter-city competition and awards for improving sanitation.
- Develop locally-led advocacy campaigns on urban sanitation.

### Ways of mobilising resources:

- Technology – creatively use technology to provide location-appropriate services in different areas of the city.
- Knowledge – draw on the experiences of local organisations and communities.
- Finance – enable cross-subsidisation, greater local revenue generation and access to low-cost loans.
- Coordination – promote cross-sector engagement led by public health authorities.

## And elsewhere

### Make sanitation a political priority:

- Find the breaks in the sanitation chain and identify political incentives to address these breaks.
- If political commitment is weak, consider if any of the four different sources of political motivation may be strengthened: Improving sanitation:
  1. for economic productivity,
  2. to reflect cultural values,
  3. to build state legitimacy, or
  4. to improve the city's reputation.
- Identify where local organisations are already having some success and facilitate the expansion and connection of their initiatives and advocacy.



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The infographic features a dark purple background with a white ODI logo. Below the logo is a quote in white text. At the bottom, there is a link to a website. On the right side, there is a stylized illustration of a dark grey pipe system. The pipe starts from the bottom left, goes up, then right, then up again. Three circular icons are placed on the pipe: a red toilet icon on the first vertical section, a green dollar sign icon on the horizontal section, and an orange parliament building icon on the second vertical section. A teal vertical bar is on the far right, partially overlapping the pipe's end.

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## Introduction

Sanitation remains one of the Sustainable Development Goals' (SDGs') poor performers, especially in urban areas where global coverage for 'safely managed sanitation'<sup>1</sup> is only 26%.<sup>2</sup> Solving this problem is not cheap. If we are to reach the 2030 goal of providing safely managed sanitation for all, we need to spend \$49.3 billion each year until then. Ignoring this problem has an unquantifiable human cost for future generations, as poor sanitation remains a leading cause of diarrhoea and stunting, especially in dense urban spaces.<sup>3</sup>

Countries in Africa, Latin America and Southeast Asia continue to grapple with an urban sanitation crisis. Often perceived as an insurmountable technical problem, this research asked how some of today's biggest cities have managed to improve their sanitation systems. Looking at historical examples of nineteenth century British cities, twentieth century South Korean cities and the city of Durban in South Africa post-apartheid, we sought to understand how progress was achieved. This paper identifies factors that made sanitation a political priority in each case, and how this political commitment resulted in public resources and capacity being invested in sanitation services.

To understand what the historical examples of progress can teach modern-day cities struggling to improve sanitation, we examined the situation in two secondary cities in Tanzania, Mwanza and Arusha. Both are rapidly growing cities with numbers of urban households without improved sanitation, and limited control over how faecal waste is treated.<sup>4</sup> Like the historical examples mentioned above, in both cities access to sanitation is a serious and persistent challenge, and both present common sanitation problems: cholera outbreaks, the presence of informal settlements, low local government capacity and autonomy and limited political or public interest in sanitation.

## What has historically driven the prioritisation of sanitation?

In each of the three historical cases, rapid urbanisation combined with inadequate sanitation meant that living conditions were very poor. Urbanisation in **nineteenth century Britain** led to extreme overcrowding in houses in city centres and disease outbreaks were common.<sup>5</sup> In **twentieth century South Korea's industrialising cities**, sanitation coverage and treatment was very low – approximately 2%<sup>6</sup> – and in **Durban in South Africa post-apartheid** around 20% of the population were living in informal dwellings, typically with poor water and sanitation provision.<sup>7</sup>

Why did political leaders take action to improve poor living conditions in cities and invest in sanitation? We identify four main sources of political motivation:

- 1. Prioritising economic productivity.** In South Korea, the government clearly recognised the importance of sanitation for public health in the pursuit of national economic growth.<sup>8</sup> In nineteenth century Britain, waterborne diseases posed a visible threat to entire city populations, including workers and the social elite.
- 2. Reflecting cultural values.** In Britain a strong public health movement emerged which campaigned on the moral importance of improving the living conditions of the poor. Similarly, in Durban, civil society groups lobbied for better services for the poor.<sup>9</sup> Post-apartheid, national and local governments were under pressure to improve equality of access to public services, and sanitation was enshrined as a human right.
- 3. Building state legitimacy.** In South Korea, sanitation was used as a way to strengthen the social contract between state and citizens, especially in periods of political uncertainty.<sup>10</sup> In South Africa, improving access to sanitation and other services was intended to create a greater sense of unity and inclusion.
- 4. Securing a reputation as a modern city.** In South Korea, government investment increased significantly prior to hosting international events (e.g. the Olympic Games in 1988 and the World Cup in 2002).<sup>11</sup> In Britain, public health records became a matter of political pride. In Durban, city leaders are keen to maintain the city's reputation as 'Africa's most caring and liveable city'.<sup>12</sup>

The reasons why sanitation gained political importance in each case are clearly different, but all resulted in governments investing time and resources in sanitation services. In each example, sanitation was improved in different ways, but they all required significant financing, technological capability, institutional mandates and cross-government coordination, once the right political incentives were in place.

## Finance

Across the three countries, different financial arrangements enabled investment in sanitation. In Durban and nineteenth century Britain, GDP per capita was relatively high and local governments had strong fiscal autonomy to raise their own revenues. Local governments in Britain were able to access low-cost and low-risk government loans as part of the 1848 Public Health Act and the 1875 Public Works Loans Act.<sup>13</sup> Local taxation also played a key role in allowing cities to invest more in sanitation. In Britain, local governments borrowed against income from property tax and trading activity, which also included profits from municipal gas and electricity corporations. South Korea received substantial international aid and later made use of subsidies and user charges as household incomes rose.<sup>14</sup>

## Knowledge and technology

In some cases, incentives prompted city leaders and decision-makers to come up with new solutions to

their urban sanitation needs. In Durban, a city-wide approach was devised which took into consideration spatially differentiated needs and creatively used location-appropriate technologies (e.g. toilets in communal blocks) rather than defaulting to more traditional responses (e.g. sewerage systems).

### Clear institutional mandates

In all three countries, a clear institutional mandate was in place for dealing with urban sanitation, supported by a regulatory framework. In Britain, responsibility for the implementation of public health was in the hands of local sanitary authorities and local government action was directed through the 1872 and 1875 Public Health Acts. In South Africa, municipalities are responsible for establishing their own policies and implementation strategies based on national legislation and policy, and are required to meet national minimum service provision standards. In authoritarian South Korea, the mandate for action came from the highest tier of government, and central government closely controlled policies for water and sanitation investment.<sup>15</sup>

### Strong coordination

In South Korea and South Africa, coordination and leadership from central government played a key role in generating momentum across subnational government structures. In South Korea, presidents took a personal interest in projects and held ministers to account for progress. In South Africa, central government plays a key part in making sanitation a national priority and setting service delivery standards, with ministries working closely with city leaders.

Figure 1 shows how various factors helped make urban sanitation a political priority in each case, and how this mobilised public resources and government capacity to take action on sanitation problems.

## The sanitation challenge in Tanzania

In both Arusha and Mwanza there are difficulties across the sanitation chain, from household latrines to the safe treatment of collected wastewater. Using the sanitation chain (Figure 2), our case studies found that the most serious gap in service provision is at the beginning of the service chain (household containment) – an especially acute problem in the informal areas of both cities. People living in these areas usually use traditional latrines which are not connected to a septic tank, and so wastewater soaks into the ground. Even with a connection to a septic tank there may still be containment problems (e.g. tanks are not sealed, or emptying them may not be possible because settlements are inaccessible to vacuum trucks). This is particularly problematic in the rainy season when rainwater washes the latrine waste into city water sources, streams, rivers and streets. In Arusha, where the water

table is high, contamination of water sources poses a constant public health risk, and cholera outbreaks are common there and in Mwanza.

### Fragmented governance arrangements

At the national level, sanitation is managed by the Ministry of Water and Irrigation and by the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC). However, how responsibilities are shared between the two ministries remains vague.<sup>16</sup> Networked and on-site sanitation service provision is the responsibility of Urban Water Supply and Sanitation Authorities (UWSAs). UWSAs, which are accountable to central government and are required to operate on a commercial basis, aiming for full cost recovery. This acts as a disincentive to investing in sanitation facilities in informal settlements, where cost recovery is likely to be more difficult. This arrangement also means that local governments have little formal role in urban sanitation provision and no resources or mandate to intervene; sanitation is treated primarily as a technical challenge to be slowly solved by sewerage infrastructure.

### Inadequate financing

Financing for sewerage and wastewater plants is covered by central government grants to the UWSAs but funds are small and tend to be hidden within budgets for water provision. For example, in 2012 the proportion of Tanzania's GDP that was invested in sanitation was less than 0.1%.<sup>17</sup> Sanitation funding from national government supports the expansion of networked sanitation infrastructure, and does not invest in the first stage of the chain (containment). This means that, if local government in Mwanza or Arusha wanted to intervene to improve the poorest households' access to sanitation, they would need to generate their own funds to do so. However, local government in Tanzania has very low financial capacity since it no longer has control of property tax collection and there are many restrictions on local government borrowing.

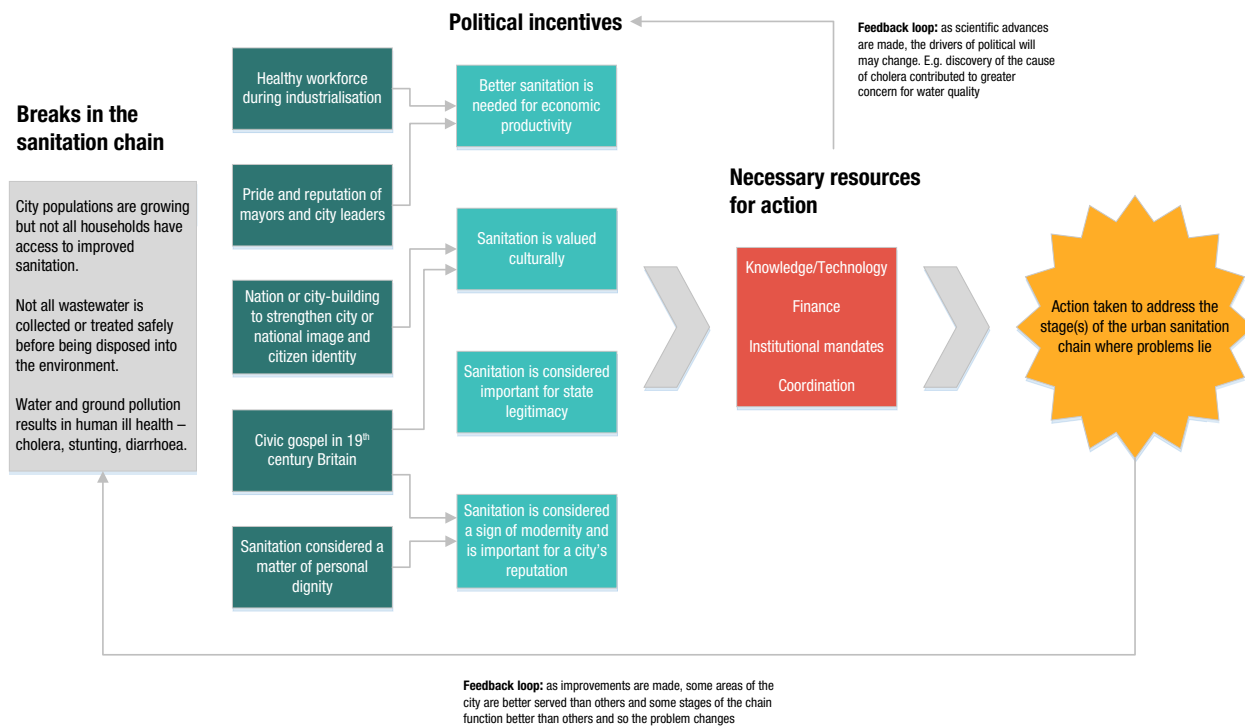
### Local knowledge is overlooked

Central government directs the UWSAs to invest only in sewerage. Non-government organisations and community-based initiatives in informal settlements are working on cheaper technologies which are more appropriate for areas of the city where access is difficult, incomes are low and land tenure is uncertain. These alternative technologies and approaches to sanitation are compatible with sewerage expansion, but are currently overlooked by the government.

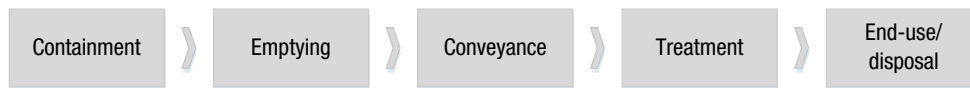
### Drivers of political incentives

Understanding the specific nature of the sanitation problem in Mwanza and Arusha reveals why the change processes which happened in other cities are not driving change now.

**Figure 1: Achieving progress in urban sanitation**



**Figure 2: The sanitation chain**



We reflect on why this is the case, comparing the drivers of change in Britain, South Korea and South Africa in the nineteenth and twentieth centuries to the situation in Mwanza and Arusha.

*Reputation as a modern city.* Of the four political incentives driving the prioritisation of urban sanitation elsewhere, in Tanzania only the fourth argument (about city reputation) played a key role. Local government officials expressed frustration at the presence of informal settlements, which are seen as a sign of under-development. This is similar to visions of modernity, as in South Korea, which could drive public sector investment in services to informal areas.

Other drivers seemed to be less important:

- *Economic productivity.* Public health problems caused by poor sanitation in Tanzanian cities are localised compared to the widespread outbreaks of cholera in nineteenth century British cities. As a result, the health of most urban inhabitants does not appear to

be affected by water-borne diseases and this does not noticeably hold back economic productivity.

- *Cultural values.* Government health departments in Tanzania do not perceive sanitation as integral to their work, as they did in Britain, and interventions to support the poorest households to access sanitation, as seen in eThekweni, are not led by government but mainly come from non-governmental organisations and international donors.
- *State legitimacy does not have much relevance in Tanzania.* While public demands for politicians to improve public services may be growing, this is directed at the most visible services, such as schools and hospitals, whereas less visible services such as sanitation receive little public attention.

Low political commitment to improving sanitation at the household level in urban areas means that sanitation policy is weak, governance arrangements for sanitation are fragmented, financing is insufficient and technology is not used creatively.

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## From policy to practice: what can decision-makers do?

### In Tanzania

Currently, political commitment to urban household-level sanitation is quite weak but the analysis of how progress happened in other cities provides useful prompts for how to build stronger political interest in sanitation in Tanzania. We set out some recommendations that reflect this below.

**At the national level, seek to align national plans and policies with more comprehensive approaches to urban sanitation.** Tanzanian sanitation policy does not prioritise sanitation for the urban poor, but government agencies with a responsibility for sanitation could capitalise on existing government programmes such as the National Sanitation Campaign to direct more attention to the problems with household sanitation. It is highly likely that international donors will continue to fund sanitation programmes and so their financial and technical support could be directed at supporting local government to address persistent problems with sanitation at the household level, especially in informal settlements. Government could work with organisations such as UN Habitat to advance their work to build simplified sewerage supported in informal settlements.

**At the city level, invest in inter-city competition and awards for improving sanitation by linking sanitation to urban development in general, and specifically the upgrading of informal settlements.** Public attitudes to informal settlements are largely negative (viewing them as unsightly and illegal areas), but these attitudes may also encourage city leaders to engage more in urban planning and upgrading informal settlements. This will not only help the city improve its public image but also increase city leaders' credibility. There are early signs of this in the settlement upgrading projects in several cities in Tanzania, and in the Mwanza Urban Master Plan, for example. This could catalyse further efforts to improve services in informal settlements if city leaders are recognised and rewarded for cleaning-up and regularising their city.

**Civil society: develop locally led advocacy campaigns on urban sanitation.** Cross-sector, politically engaged work by non-governmental actors could build alliances and encourage greater attention to public health in cities. This could build on increasing attention to stunting, for example, or leverage the existing presidential directive on better hygiene to argue that hygiene cannot be improved without universal sanitation. Collaborating with others who support better road safety, air quality, waste disposal and other core services which affect environmental and public health may be an effective way of advocating for better urban health. This could also emphasise the importance of developing sanitation as part of a system of urban services.

## Ways of mobilising resources

### Technology

- Improving sanitation in informal settlements is technically difficult. However, we encourage UWSAs to learn from other similar cities in Tanzania on how different types of latrine and latrine emptying systems can work in dense and informal areas (e.g. Dar es Salaam). We also invite local governments to explore intermediary sanitation measures until a full sewerage system has been devised. This could involve a range of interventions, such as subsidising the cost of vacuum truck services, improving road access to informal settlements and investing in shared toilet facilities or communal septic tank systems, similar to actions taken in Durban.

### Finance

- Map out existing financial resources, such as households' willingness to pay, the potential for local government revenue generation, central government budget allocations and the interest of donors and private sector organisations. Identify which of these sources of finance may be most appropriate for different interventions in different areas. For example, donors are often well-placed to fund large infrastructure and provide low-cost loans, whereas local government budgets may be used to redistribute finance to support services which the urban poor often cannot afford.

### Institutional mandates and coordination

- The institutional framework remains vague and government institutions in this sector are unclear on their roles and responsibilities. Is it important for a specific government authority, potentially public health, to be mandated with improving household-level sanitation in cities.
- Foster cross-sector involvement in sanitation by developing interventions that address all aspects of the sanitation chain and enable sanitation programmes to be paid for by the departments, which reap most of the benefits. The current Tanzanian National Sanitation Campaign is an example of this; but more needs to be done in terms of paying attention to household-level sanitation in cities.
- Align and possibly join up government sanitation programming with the work of non-government organisations in informal settlements, capitalising on collective efforts by households to improve sanitation and catalyse wider change.

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## ... and elsewhere

For other national governments committed to delivering universal access to sanitation, as well as policy-makers and practitioners attempting to improve urban sanitation systems, we suggest the following principles:

### Political prioritisation needs to come first

Sanitation has to become a political priority before the technical challenges can be overcome. Finding ways to strengthen political interest in sanitation is a critical first step before the intricacies of government coordination, policy, financing and city-scale planning can be tackled. Consider if any of the four different sources of political motivation to improve sanitation may be strengthened: Improving sanitation to (1) increase economic productivity, (2) reflect cultural values, (3) build state legitimacy, or (4) improve the city's reputation. A good understanding of how political priorities at the national and sub-national level may relate to sanitation is important, as is an understanding of what most strongly motivates political action in a given situation.

### Find the breaks in the sanitation chain

Understand the nature of the sanitation problem – which part of the sanitation chain requires attention for full public and environmental health benefits to be achieved? Through a collaborative process, engage urban planners, development partners and government agencies working in the city, and map what the city sanitation service delivery system looks like in order to identify where the gaps are, who is doing what already and the most problematic areas.

### Be strategic and work collectively

To encourage improvements in public sanitation services, it is useful for organisations and individuals to work collectively and strategically. There may be a range of local, national or international stakeholders with a shared interest in urban health, albeit for different reasons. Building a cross-sector and multi-level alliance across health departments, urban planning departments, community organisations and NGOs, for example to advocate on shared interests around urban health, planning and access to services, could increase political attention to sanitation in cities. Identifying where Tanzanian organisations and initiatives are already having some success may also be a useful way of capitalising on existing initiatives.

### Sanitation programmes require pragmatism and realism

Achieving the long-term goal of universal urban sanitation through a sewerage network is a slow and expensive process. In the meantime, developing intermediary solutions is necessary to meet the most urgent health needs of the poorest. We encourage decision-makers to engage in incremental approaches, experimenting with different technologies and designing flexible and pragmatic programmes. These ought to be framed within a realistic estimation of the time needed to achieve improvements in sanitation, in order to avoid disappointment or fatigue as interventions take time to show results.

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# Notes

1. Pre-SDG consultations by the WHO/UNICEF Joint Monitoring Programme and the UN-Water Wastewater Taskforce established consensus on the need to go beyond access to a sanitation facility and address safe management of excreta right along the sanitation chain. Therefore, the proposed SDG indicator 6.2.1 states that safely managed sanitation services comprise an improved sanitation facility, which is not shared with other households, and where excreta are either safely disposed of in situ or treated off-site. Source: GEMI – Integrated Monitoring of Water and Sanitation Related SDG Targets Step-by-step monitoring methodology for indicator 6.2.1 V1 21 October 2016
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