

GOLD VI

***Case-Based Contribution
to Chapter 4: Commoning***
*GOLD VI Report on Pathways
to urban and territorial equality*

**Developing pathways to urban
sanitation equality – a case study
of the simplified sewerage solution
in Dar-es-Salaam, Tanzania**

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Developing pathways to urban sanitation equality – a case study of the simplified sewerage solution in Dar-es-Salaam, Tanzania

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CHAPTER

4: Commoning

SUMMARY

Urban sanitation presents one of the most significant service delivery challenges related to poverty alleviation and sustainable development in the developing world. This is due to high population growth that far exceeds the capacity of the Local Government Authorities (LGAs). This paper focuses on Dar-es-Salaam city of which about 70% of its 7 million population are located in informal settlements with poor services. The city utility DAWASA has recorded that only less than 10% of city dwellers are connected to the grid sewerage connections. The majority use off-grid sanitation solutions leading to inequality. One of the sanitation innovations which have been implemented by the Centre for Community Initiatives (CCI) is the simplified sewerage solutions. This is implemented at *Mji Mpya - Vingunguti* in the city of Dar-es-Salaam. The strategies used to develop a pathway to urban sanitation equality include technical innovation of simplified sewerage solution; institution collaboration engaging many players such as utility, LGA, NGOs and communities. Key lessons include: importance of community participation; the critical need for collaboration of actors; the opportunity for the utility to scale up the innovation; and the crucial role of LGA in the processes.

Urban sanitation presents one of the most significant service delivery challenges related to poverty alleviation and sustainable development in the developing world.

This is due to high population growth that far exceeds the capacity of the Local Government Authorities (LGAs) and utilities to provide conventional services in terms of land allocation and housing; and all basic infrastructure services including sanitation services to all. The result is that cities are a patchwork of formal areas and informal settlements where the latter accommodate a large population of people with very poor infrastructure services.

Dar-es-Salaam is one of the fastest growing cities in Africa with a population of about 7 million people. About 70% of its population are located in informal settlements with poor services. One of the major challenges facing the informal settlements in the city of Dar-es-Salaam is the lack of adequate sanitation to all. The city utility DAWASA has recorded that only less than 10% of city dwellers are connected to the grid sewerage connections. The majority of city dwellers use off-grid sanitation solutions which are not sustainable and pose health risks to the population. Due to this Dar-es-Salaam has witnessed significant inequality in terms of access to and use of sanitation services among its city dwellers. While the high- and middle-income people are privileged with installed sewerage connections, the urban poor mostly living in informal and slum settlements are struggling to fix their sanitation solutions themselves with little or no support from the city utility or the LGA. The main challenges which have affected adequate provision of sanitation to informal settlements are due to their topography (land



and high-water table) and high density, which makes it difficult for the water utility and LGA to provide sewerage pipelines to these settlements. Some of these informal settlements are located within hazardous areas. All these challenges have contributed to high costs of providing sanitation services to informal settlements; hence posing inequality in access to and use of sanitation services.

One of the sanitation innovations which have been implemented by the Centre for Community Initiatives (CCI) within the informal settlements is the simplified sewerage solutions. This innovation was piloted at Mji Mpya - Vingunguti in Ilala Municipality in the city of Dar-es-Salaam. This project is funded by SDI (Shack Dwellers International) and UCL through the KNOW project. The approach has enabled the development of a pathway to address urban sanitation inequality in urban informal areas including Dar-es-Salaam. Currently there are 170 toilets which have been connected in the simplified sewerage network which also feeds to the waste ponds.

Leaders of the Network Simplified sewerage in a meeting
Source: CCI Report

1. Strategy used to develop a pathway to urban sanitation equality

General CCI's approach and strategy

The Centre for Community Initiative (CCI) is a not for profit organization registered in Tanzania, committed to helping poor communities, and particularly women, living in informal settlements and rural settings by providing support to community initiatives, including technical support for housing, water, sanitation and microfinance services for income-generating activities.

The main strategic approach for CCI is the empowerment of local communities through their federation networks to be actors for change. Also, to engage the local governments and city utilities in developing precedence-setting, community driven projects which are scalable.

Innovative technical strategy: simplified sewerage solution

Developing pathways to urban sanitation equality requires innovations in technical strategy. CCI embarked upon the adoption of a simplified sewerage solution. This is a sewerage network constructed using smaller diameter pipes laid at a shallow depth and at a flatter gradient than conventional sewers. It allows flexibility of design at lower costs. Conceptually, simplified sewerage is the same as conventional gravity sewerage, but without unnecessarily conservative design standards and with design features that are better adapted to the local situation. Simplified sewerage was invented in Brasilia as a low-cost sanitation system in densely populated, low income areas. **One of the essential and desirable aspects of developing a simplified sewerage project**



is the need for community participation in its planning, construction, operation and management. For instance, while intercept or tanks are essential, further cost reduction is possible on users' end by sharing of the intercept or tank by a group of houses before connecting to the network.

The need for a simplified sewer network (Condominium) at *Mji Mpya - Vingunguti* was considered by facts that sanitation situation was very poor, toilets which mostly are pit latrines were poorly constructed, when pits are filled up, emptying and disposal was unhygienic. While all the fecal sludge was ending up on the environment, polluting the groundwater and other water bodies which later led to disease outbreaks like cholera, diarrhea and typhoid. Hence the technology strategy to use the simplified sewerage provided an option to address sanitation inequality.

Community technician constructing a chamber for simplified sewerage solution at Mji Mpya settlement
Source: CCI Report

Innovative collaboration / Co-production strategy

The implementation of the simplified sewerage requires collaboration of many players in the process including the community, NGOs (such as CCI), Mtaa officials, and ward officials, municipality, DAWASA and EWURA. During the implementation of all phases, there has been a good relationship between all players from the planning stage, designing, implementation and operation and maintenance. A good working relationship among the community is crucial in allowing pipes to pass through neighborhoods. Furthermore, Mtaa officials were available to provide political backup and administrative support which are essential for successful operation and sustainability of the project. Moreover, the role of DAWASA was crucial in providing technical inputs and connection permission to use the sewer ponds and main pipe connection. In addition, DAWASA and EWURA have worked in collaboration with the residents to address the issue of the tariffs relevant to the residents of *Mji Mpya – Vingunguti*. **This model of collaboration through dialogue had enabled the utility (DAWASA) to provide funds for installing an additional 60 toilets connected to the simplified sewerage systems; with further consideration for scaling up the simplified sewerage systems to other informal settlements.**

2. Lessons learnt

Community participation and engagement is crucial

One of the important aspects of the simplified sewerage network is how communities could be well organized and supported to assume their roles and responsibility in the network. During the initial days of surveys and technical profiling, communities were mobi-

lized and sensibilized to participate in the project. CCI worked closely with the Tanzania Federation of the Urban Poor. Community mobilization was done on the initial stage of implementation of the project with the aim of stimulating local communities for the project and getting the demands from the communities themselves for sanitation improvement. The mobilization team was derived from the CCI team, federations and officials from Ward and Mtaa office. This was regarded as a vital process also in preparing the communities to be ready for the project's activities.

Opportunity for scaling up by the utility

The simplified sewerage scheme installed was positively accepted and supported by the utility. The utility is currently considering budgeting for further additional simplified sewerage schemes to other informal settlements in Dar-es-Salaam. Furthermore, other cities' utilities such as the city of Mwanza's utility (MWAUWASA) have visited Vingunguti scheme as part of a knowledge exchange and have implemented the simplified sewerage with additional funding from European Investment Bank.

The crucial role of LGAs in the process

The institution role of LGAs has been important in the realization of the project. The role of Mtaa officials has been critical during the community mobilization, planning, implementation, operation and management phases. Examples of this role are mentioned during the mobilization and planning phase where communities were encouraged to leave spaces for pipes installation. Furthermore, ward level officials were available to build up the capacity of the networks groups as well as ensuring that the project outcomes are informed at the



municipal level. **The municipality has a critical role in scaling future simplified sewerage schemes; and could choose to allocate lands for simplified sewerage and waste ponds installation.**

The need for innovations

Developing pathways for urban sanitation equality is one of the major challenges affecting LGAs and urban utility management in developing countries. New technical solutions and management/institutional way of doing the work are essential for addressing the challenges. This experience has indicated the technical innovations to include simplified sewerage systems and the institutional management to ensure the embedment of co-production practices between various actors, including communities, utilities, LGAs and NGOs. This new set up of partnerships brings together on the table unique quality and recipe necessary to address urban sanitation inequalities.

Leaders of the Network Simplified sewerage in a meeting
CCI Report

This paper has been produced as a Case-Based Contribution to the sixth Global Report on Local Democracy and Decentralization (GOLD VI): the flagship publication of the organized constituency of local and regional governments represented in United Cities and Local Governments. The GOLD VI report has been produced in partnership with the Development Planning Unit (University College London), through the programme Knowledge in Action for Urban Equality (KNOW). GOLD VI focuses on how local and regional governments can address the local manifestations of growing inequalities and contribute to create “Pathways to urban and territorial equality”. The GOLD VI report has been produced through a large-scale international co-production process, bringing together over a hundred representatives of local and regional governments, academics and civil society organizations. This paper is an outcome of this process and is part of the *Pathways to Equality Cases Repository*, which collects the over 60 Case-Based Contributions produced as part of the GOLD VI report.

In particular, the present paper has contributed to Chapter 4 on “Commoning”, which focuses on the trends and pathways in relation to the governance, planning and provision of access to housing, land and basic services. The chapter explores how local and regional governments can promote approaches focused on collective action that contribute to urban equality.

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