

## POLICY BRIEF

### Water and sanitation action research in the City of Dar es Salaam:

Community mapping towards inclusive development



A poorly constructed pit latrine at Kombo settlement. M.Mkanga 2012.

#### Acknowledgments

This research was conducted collaboratively by

Shack/Slum Dwellers International's (SDI) Tanzanian affiliates, the Tanzania Urban Poor Federation (TUPF) and the Centre for Community Initiatives (CCI).

The research was funded by the Sanitation and Hygiene Applied Research for Equity Consortium (SHARE).

## Who we are: Shack/Slum Dwellers International and its affiliates in Dar es Salaam

SDI is a network of community-based organizations representing the urban poor across 33 countries in Africa, Asia, and Latin America. SDI promotes inclusionary, community-led processes with the poor as agents and not just beneficiaries of development. The network links poor urban communities that have successfully mobilised to develop advocacy and problem solving strategies.

SDI uses savings and self-enumeration schemes, community profiling and mapping to generate information that challenges widely held developmental assumptions. Communities use this information, as well as the support and solidarity of their community-based organisation to leverage resources and assistance and to engage with the state *on their own terms*. SDI believes that the only way to manage urban growth and create inclusive cities is for the urban poor to be at the centre of strategies for urban development.

TUPF is a community-led savings and credit based organisation that mobilises and represents 9500 members of the urban poor across Tanzania. The organisation's mainly female membership has saved over US \$100 000, which will contribute towards inclusive urban development activities benefitting the urban poor and most vulnerable in informal settlements.

CCI is a non-profit organisation that has worked closely with the Federation since 2004. CCI works with women in informal settlements providing support to community-based finance, water and sanitation, land and shelter, and health and HIV related development activities.

The scale of sanitation needs in sub-Saharan Africa is widely recognised. Most of the continent is not on track to meet the Millennium Development Goal (MDG) target for sanitation and in urban areas in the region fewer than half of households have access to safe sanitation. In the absence of adequate state responses, affiliates of SDI, along with the International Institute for Environment and Development (IIED) have been working to develop a bottom-up approach in which the residents of informal settlements engage with their local authority to identify new ways forward. In developing this approach, we seek to address four challenges faced by community-led approaches to sanitary improvement: 1) getting local residents to coordinate and combine their demands for sanitary improvement; 2) finding and implementing improvements that are affordable and acceptable to both the local authorities and the residents; 3) getting local authorities to work with residents and their organisations to co-produce the needed improvements; 4) and ensuring that other poverty-related problems, such as insecure tenure, do not undermine improvement efforts.

This booklet reports on the first year, focused on data collection, of a three-year project. The second year is for the development of precedents to exemplify new and effective sanitation solutions. These precedents have been identified because of their relevance to addressing needs in the city and their potential to scaling up sanitation provision. The third and final year is dedicated to planning to expand provision to those in the city without adequate sanitation. It is anticipated that this final year will develop a city-wide strategy for inclusive sanitation and include agreements with local government that can help provide the foundations for such a strategy.

## The sanitation situation in the communities of Dar es Salaam

Dar es Salaam is the largest city in Tanzania with a population of around four million people, of which 80% live in unplanned/informal settlements. Currently the formal sewerage system only reaches 10% of the urban population, whilst only 0.9% of public funding for sanitation goes to onsite sanitation services, the primary sanitation solution for 83% of the population. There is widespread use of poorly constructed, unhygienic pit latrines that are poorly managed and not emptied well or often enough. The greatest sanitation challenge is the poor quality of sanitation facilities rather than the lack of coverage.

This research found that 27% of the population in densely populated informal settlements live on less than US \$1 a day. Three to six households generally occupy one property and a toilet facility is often shared by more than one house. 65% of people were found to be using a traditional pit toilet, 26% using a pour flush and only 1.9% using an ecological sanitation (ecosan) facility. Most latrines are either old or dilapidated and unsanitary, 50% of people have latrines in areas with a high water table, leading to flooding, and 26% have experienced collapsing pits.

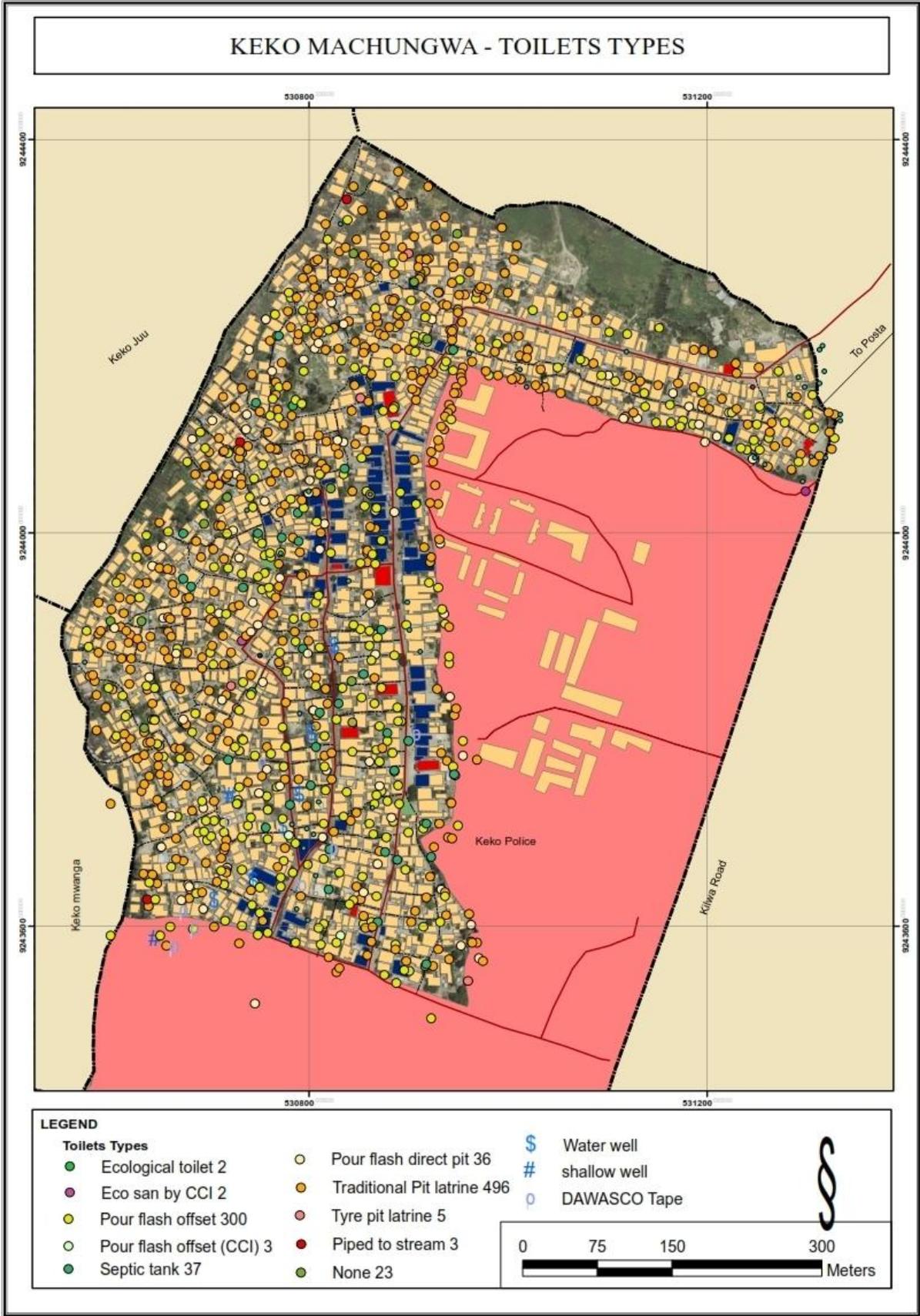
Of these facilities, 28.1% were built within the past five years. The majority of people in these settlements have struggled to build new latrines within this period due to lack of space and high costs. It currently costs between TZS 400,000 and TZS 1.5 million (US \$250-920) to build a new pit latrine, which is well beyond the means of the majority in informal settlements.

The above conclusions were drawn from substantive and detailed data. Community-led mapping and household surveys were conducted in six settlements, two in Kinondoni, two in Ilala and two in Temeke municipality.

The map below shows the distribution of toilet and water facilities throughout the Keko Machungwa settlement in the Miburani ward in Temeke. 15,644 people live in this settlement, which is in an industrial zone that floods frequently due to the nearby canal. The map shows that there is widespread coverage of toilet facilities, but also that a large number of these are in poor or very poor condition. The map also shows that water points are clustered around the centre and south of the settlement and are not evenly distributed.

The mapping exercise combines information from community mapping with household enumeration data. The map allows the community and local authorities to see how water and sanitation facilities are distributed and their condition.

Figure 1: Sanitation and water facilities in Keko Machungwa settlement



## Assessing the sanitation situation: our methodology

This research was conducted as a collaborative process between city authorities and the organised urban poor. The research team consisted of 36 TUPF members, 12 members of the local street-level authority, two staff from CCI and two from the municipal council.

The enumeration was carried out in 200 houses in each of the six settlements. In addition, over 250 people participated in focus group discussions and there were a number of in-depth interviews with key informants.

The household surveys were used to collect basic socio-economic data about the household size as well as the age, gender, education and employment status of respondents. The respondents also spoke about their tenure arrangements and sanitation situation, including details about the age and condition of their facilities.

The TUPF team were trained to use basic GPS devices to physically map their settlement. They recorded the precise location of sanitation facilities as well as their condition, age, how much they cost to construct, their safety and how many households they service.

The focus groups provided detailed qualitative information about the water and sanitation challenges that the residents face.

The processes of profiling, mapping and enumeration included feedback meetings with the communities. Data gathered was shared and community participants were encouraged to respond to the findings and propose solutions to identified problems. The direct engagement of community members in the collection and analysis of data helped communicate the findings to other residents and strengthen the presentation of the results to the local authorities.



Community members participating in a focus group discussion at Keko Machungwa settlement during the situational analysis study. Shame Juma, 2012.

## Four city study on community-led sanitation improvement

Dar es Salaam is one of four cities participating in SHARE funded project into community-led improvement of urban water and sanitation facilities. The purpose of the research project is to secure a model for the development and realisation of pro-poor citywide sanitation through four scalable examples in cities of Blantyre (Malawi), Dar es Salaam (Tanzania), Kitwe (Zambia), and Chinhoyi (Zimbabwe).

The community mapping and profiling is the first step towards developing inclusive, sustainable sanitation strategies. The project has the following two specific aims:

**I. Develop a better understanding of the principal obstacles to city-wide sanitary improvement, and how they can be overcome**

**II. Develop and test an approach to pro-poor city-wide sanitation strategies that can be adopted and driven by federations of community organizations, and supported by public authorities and private providers**

The project is using action research to explore various strategies that can be adopted by federations and other networks of the urban poor to scale up sanitation. In addition to exploring sanitation strategies at the household level, the research is also investigating aspects of sanitation related to both gender and spatial marginalisation.

In its second year this action research project will demonstrate new sanitation precedents. These precedents will exemplify models of sanitation provision that are affordable to low-income households and which have the potential to address the scale of need through replication across the city. The collaboration with local government is intended to maximise the likelihood of leveraging financial resources and the political commitment required for policy and regulatory reform. A partnership between government and organized communities of the urban poor is central in this strategy and the co-production of affordable sanitation solutions is likely to be the most effective way to secure city-wide improvements.



Community member taking GPS coordinates during the sanitation mapping exercise at Kombo settlement. M. Mkanga, 2012.

## Helping form alliances that can drive improvements

The community mapping and self-enumeration process has already produced significant results as community leaders engage with this new self-produced knowledge. Identified benefits to both TUPF and CCI include:

- Increased familiarisation with communities and settlements, through new communication channels and much needed basic household data.
- Generation of information about the way in which sanitation challenges have affected some marginalised groups (including women, children and disabled people) more than others.
- Establishment of a municipal forum to create awareness among stakeholders and discuss issues concerning TUPF and CCI members, such as menstrual hygiene management.
- Development of a strong working relationship between TUPF and the local government.

CCI and the TUPF plan to implement a number of precedents across Dar es Salaam, especially in the Temeke and Ilala municipalities where they have good relations with local authorities. Having established the demand for shared latrines, federation members will negotiate with landlords and tenants in the planning, construction and maintenance of these facilities. Each latrine will cost between USD 500-750 and, on average, serve up to 10 households (50 people). The maintenance and management of the facility will be shared between families. Finance will be in the form of loans to be repaid on an affordable schedule.

As the situational analysis demonstrates, pit emptying in Dar-es-Salaam's informal settlements is a huge challenge. The high cost of traditional emptying tankers, the lack of council resources and narrow streets in some neighbourhoods mean that the collection of waste from latrines is infrequent. Using a smaller and more portable gulper pump, the federation has already begun providing pit emptying at a small fee. The intention is to scale up operations of this service, providing an income generating opportunity for the federation and drawing in local council to help leverage resources and spread the initiative.

In Chamazi, a federation housing project on the outskirts of Dar-es-Salaam, a decentralized waste treatment system is planned and a constructed wetland has already been built. A public toilet in Chamazi marketplace is also being considered, but more information needs to be gathered to assess its feasibility. Developing federation sanitation capacity and using municipal sanitation forums will enhance programmes in an initiative to reach greater scale.



## Partners

### Dar es Salaam City

Dar es Salaam is the largest city of Tanzania, with a population of 4,364,541. It is one of the fastest growing cities in Sub Saharan Africa. Dar es Salaam is the administrative, industry, banking and commercial capital of Tanzania and is also an important economic centre within eastern Africa region. The city is formed of three municipalities: Ilala, Kinondoni and Temeke.

### IIED

IIED is an international development and environment policy research organisation. It carries out research, advice and advocacy work – generating robust evidence and know-how informed by a practical perspective acquired through hands-on research with grassroots partners.

### SHARE

The Sanitation and Hygiene Applied Research for Equity (SHARE) Consortium is a five year initiative (2010-2015) funded by the UK Department for International Development. The Consortium seeks to contribute to accelerated progress on the MDG sanitation target by generating critical knowledge to inform policy and practice in areas of sanitation and hygiene.

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