



Shared Sanitation in Low-income Urban Settlements in Kenya

This policy brief presents the main results of a three-country study on Quality Indicators of Shared Sanitation (QUISS). QUISS assessed when shared sanitation is acceptable and what is needed to establish minimal acceptability requirements. Qualitative and quantitative data were collected in Ghana, Kenya and Bangladesh in 2019. This brief highlights the research findings for Kenya and provides recommendations for strengthening the acceptability, functionality and sustainability of Kenya's shared sanitation facilities in low-income urban settlements.

Key Points

- 44% of Kenya's urban population use shared facilities that are mostly on-site, non-sewered facilities.
- The poor sanitary conditions of shared facilities are due to high user-toilet ratios, the unavailability of water in close proximity, poor user behaviour and the lack of social organisation around managing shared facilities.
- Sanitation quality is determined by its accessibility and availability, privacy, safety and security, the toilet technology, cleanliness and location.

I. Introduction

Shared sanitationⁱ has immensely contributed to sanitation access, with the global percentage of users increasing from 5.4% in 2000 to 8.3% in 2017 [1]. Within Sustainable Development Goal (SDG) #6, shared sanitation is only considered a “limited” solutionⁱⁱ due to the lack of quality standards. Quality standards and indicators are, thus, needed. Using a mixed-methods approach, QUISS identified key criteria of what constitutes “acceptable quality” shared sanitation facilities (SSF) in urban contexts.

i Shared sanitation facilities (SSF) is taken to mean any sanitation facility that is used by more than one household, but not facilities the whose primary purpose of which is to serve a public area, such as a market or bus station.

ii Limited sanitation = Improved sanitation (facilities designed to hygienically separate excreta from human contact) that is shared by two or more households.

An overview of shared sanitation in Kenya

Kenya's population is 47.5 million and 31% live in urban areas [2]. 40% of the urban population live in low-income areas (LIAs) with Kisumu city having the highest proportion (47%) [3,4]. In 2017, only 29% of Kenyans had access to at least basicⁱⁱⁱ sanitation. Approximately 22% of the country's population and 44% of the urban dwellers share their sanitation facilities, which are mainly on-site, non-sewered sanitation facilities^{iv}[1,5]. Disregarding shared sanitation as a basic option, therefore, does not reflect the reality that many Kenyans face. SSF provide a critical sanitation alternative in high-density settings and LIAs, and serve to reduce and/or eliminate open defecation.

Policies and institutional factors relevant to shared sanitation facilities

The Kenyan Constitution accords citizens the right to sanitation. Kenya's Vision 2030 proposes strategies to improve urban sanitation, including partnerships between the public and private sectors. The Kenya Environmental Sanitation and Hygiene (KESH) policy aims to increase access to improved sanitation to 100% of the population by 2030 and provides strategies and measures towards this goal [6]. However, these strategies and measures are not explicit about shared sanitation. Sanitation is currently under the Ministry of Water & Sanitation and Irrigation, which is responsible for policy development, sanitation services, sub sector coordination, and investment development. County governments are responsible for (among others) sanitation service provision, resource mobilisation and community support. State and non-state agencies support the national and county governments, and household heads are required to provide their own sanitation facilities.

Table 1: Quality criteria from a user perspective in Kisumu, Kenya (distribution binarised).

| User Quality Criteria | Women-only | Men-only | Mixed |
|----------------------------------|------------|----------|-------|
| Water Availability | ✓ | ✓ | ✓ |
| Sanitation Technology (Flush WC) | ✓ | ✓ | ✓ |
| Toilet-User-Ratio | ✓ | ✓ | ✓ |
| Queuing / Waiting Time | ✓ | ✓ | x |
| Gender Separated Toilets | ✓ | ✓ | x |
| Cleanliness | ✓ | ✓ | x |
| Lighting | ✓ | ✓ | ✓ |
| Lockable door | ✓ | ✓ | ✓ |
| Privacy | ✓ | ✓ | ✓ |
| Safety / Security | ✓ | ✓ | x |
| Tiling | x | ✓ | ✓ |
| Handwashing | x | ✓ | ✓ |
| No Odour / Smell | ✓ | x | ✓ |
| No Vermin | ✓ | ✓ | x |
| Tissue / Toilet Paper | ✓ | ✓ | x |
| Space Availability (inside) | ✓ | x | ✓ |

The urban sanitation sector, however, faces several challenges, including overlaps in responsibilities across ministries at national and county levels, limited enforcement, and weak incentives at the county level [7].

II. Main results of the evaluation

User perspectives on acceptable sanitation and quality criteria

Users and their perspectives on sanitation and quality criteria are fundamental to consider in order to properly meet users' needs with public investments, and in terms of ensuring user acceptance of available SSF to support interventions that improve public health. In a first phase, to evaluate how SSF users define the quality of an SSF and which aspects they consider as essential criteria for good quality SSF, we used a qualitative approach and conducted six focus group discussions (three women-only, one mixed, and two men-only) in Kisumu [8].

Users acknowledge that toilets prevent open defecation and they value toilets that are connected to sewers as a better form of sanitation. Yet, with SSF mainly using on-site technologies, users highly prioritise clean SSFs in plots because they lead to cleaner environments in general. User quality criteria were defined as those that were mentioned in at least two different types of focus group discussions. Given this criterion, the reported quality criteria to adequate SSF are (Table 1):

- Water availability;
- Flush toilet technology;
- Appropriate user-toilet ratio (no queuing and reduces waiting time);
- Gender separated toilets, lighting and lockable doors (particularly important to women, providing adequate safety, security and privacy);
- Tiled floors (improves cleanability);
- No odour/smell and no vermin;
- Availability of toilet paper and handwashing stations;
- Adequate space availability inside cubicle.

Qualitative data show that current sanitary conditions are poor due to insufficient user-toilet ratio, the unavailability of water in close proximity, poor user behaviour, the lack of social organisation around managing SSFs, including cleaning and emptying, poor (solid) waste management and constraining environmental-physical

ⁱⁱⁱ Basic sanitation = Improved sanitation (facilities designed to hygienically separate excreta from human contact) that is not shared with other households.

^{iv} Sanitation systems where human waste/excreta collection, storage and treatment (where it exists) are contained within the place occupied by the dwelling; or where the waste is generated. Examples include pit latrines and septic tank systems with soak away of liquid waste.

conditions ('high groundwater'). These have led to dysfunctional, dirty, and/or quickly filled toilets. These challenges are also amplified due to the lack of support for sanitation service provision from landlords and the county government.

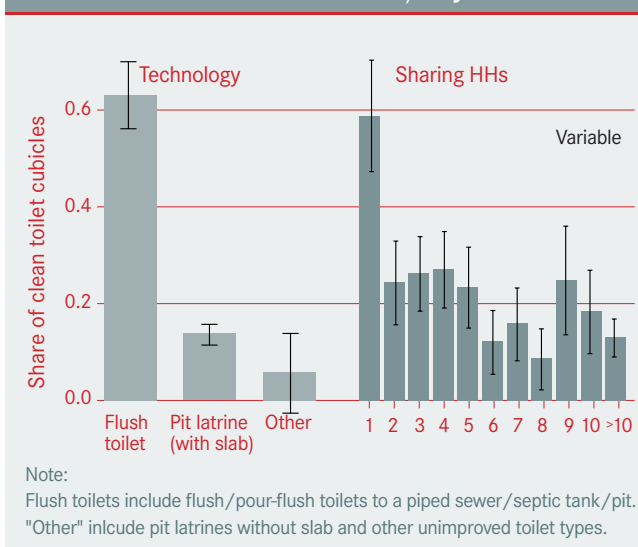
Indicators for assessment and monitoring of SSF quality

In a second phase, to evaluate the indicators for assessment and monitoring SSF quality, we collected quantitative data and used regression analysis [9]. Quantitative data was collected through a survey of 1229 households and 690 spot-check observations of individual household and shared toilets, using geographic sampling. Descriptive statistics from the household survey reveal that over 80% of the toilets were improved pit latrines, and 24% were shared by more than 10 households. According to the current classification, 89% of the toilets were 'limited sanitation' (shared by two or more households). Approximately 83% of the toilets were located on the plot/compound, 78% had solid doors and walls, 56% had a solid roof and floor, 74% had outside locks, less than 1% had a handwashing station with soap, and 3% had functional lighting. In 37% of the cases, the landlords resided on the same plot as the tenants. Only 15% of the respondents reported that there was a cleaning arrangement in place, and similar to the qualitative results, the respondents complained of dirty, smelly toilets that filled up quickly (Table 2).

Table 2: Descriptive statistics Kisumu, Kenya.

| Characteristics | N = 1,229 |
|-----------------------------------|-----------|
| Shared toilet (>1 HH) | 94% |
| Toilet clean (observed) | 21% |
| Toilet clean (reported) | 66% |
| <i>Technology:</i> | |
| - Flush to sewer/septic/elsewhere | 15% |
| - Improved pit latrine | 82% |
| - Unimproved pit/other | 2.8% |
| <i>Location:</i> | |
| - Elsewhere | 16% |
| - On plot | 84% |
| Wall material (high quality) | 84% |
| Floor material (high quality) | 83% |
| Roof material (high quality) | 64% |
| Handwashing facility with soap | 1.9% |
| Improved water on premises | 37% |
| Landlord on plot | 37% |
| <i>Cleaning rota:</i> | |
| - yes | 14% |
| - no | 80% |
| - private | 5.9% |

Figure 1: Relationship between cleanliness and toilet characteristics in Kisumu, Kenya.



Sanitation quality covered such variables as: representing cleanliness, reported use at night (accessibility, safety and security), floor and roof without cracks/holes (safety/security), and solid doors and walls without holes (privacy). Cleanliness was defined using observable characteristics (presence of solid waste, insects, and visible faeces). Cleanliness is highly correlated with other quality variables, implying that a clean toilet is also likely to provide safety, security, and privacy.

The majority (81%) of the toilets were not clean – they had, insects, solid waste, and/or visible faeces. Improved and unimproved pit latrines (with as well as without slab) were significantly less likely to be clean than flush/pour flush toilets (see Figure 1).

III. Main recommendations

SSF can be considered a basic sanitation solution for LIAs provided that quality standards are met. The results indicate that, although users in LIAs are dissatisfied, they appreciate SSFs as they are a better alternative than with total lack of sanitation services. To improve SSF quality, the Ministry of Water & Sanitation and Irrigation together with County governments should develop guidelines and bylaws that outline the indicators essential to high-quality SSF. Contextualised standards are needed and should include:

- improved toilet technology types (e.g. Flush/pour-flush to sewer/septic/pit where water is available);
- a recommendation of the minimum and maximum number of users (per facility based on design);
- effective structure of social organization (e.g. duty roster) to improve operation and maintenance of the SSF;
- education and sensitisation programme, targeting improved toilet user behaviour.

In addition, it must be guaranteed that SSF are

- accessible and available (no restrictions, e.g. reported use 24/7, incl. at night);
- safe and secure (floor and superstructure without cracks/holes, functional lighting, and located close to dwelling e.g. inside dwelling/inside compound/on plot);
- offer adequate privacy (gender-separated toilets, and lockable/functional doors);
- are clean (no solid waste, no visible faeces, no insects, and tiled floors);
- offer functional handwashing stations.

Although the national policies and frameworks call for enhanced access to sanitation for all by 2030, much more should be done at all levels to meet these goals. The various policies guiding sanitation at the national level need to be streamlined and should feed into the policies at the county government level. The national frameworks need to take into account the use and importance of shared facilities in both urban and rural areas. At the local government level, there is the need for greater involvement of the stakeholders from the Ministries of Water, Lands & Physical planning, Health, and Environment, and the water utility companies in increasing sanitation service provision especially in LIAs. Efforts should also focus on improving relationships between landlords and tenants and to enhance self-organisation and collective action among tenants. Alongside sensitisation on user behaviour, landlords could be encouraged to construct sanitation facilities that are easy to clean.

State and non-state actors should collaborate, and together with the local community define standards for acceptable shared sanitation. This will enhance coordination with the users and community leaders/representatives and allow for the establishment, monitoring and maintenance of these standards.

Defining sanitation service levels should take into account the different contexts where sanitation facilities are shared

(for example, in LIAs). Contextualised indicators provide better data for the measurements of the SDG targets, highlighting gaps and setting priorities for the post-SDG agenda for sanitation. It is becoming understood in the field that the current reliance on the number of households and/or users of toilets to distinguish between basic and limited sanitation should be revisited. This policy brief recommends a reclassification of the sanitation ladder based on quality indicators tailored to SSF. Further research to confirm these indicators as improved quality indicators of shared sanitation is, however, needed.

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About QUISS

QUISS was commissioned by Water & Sanitation for the Urban Poor (WSUP) under the Urban Sanitation Research Initiative, funded by UK Aid from the British People. Based on an extensive survey of shared toilets and their users across cities in Bangladesh, Ghana and Kenya, as well as qualitative studies, it aimed to identify key criteria of what constitutes "high quality" shared toilets in urban contexts.

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