

# QUISS: Quality Indicators of Shared Sanitation Facilities

Shared sanitation has greatly contributed to sanitation access in urban areas, but is considered at best a “limited” solution, given the lack of SDG6 quality standards. QUISS identified key criteria for “high-quality” shared toilets in low-income urban contexts. Vasco Schelbert<sup>1</sup>, Dario Meili<sup>2</sup>, Mahbub-Ul Alam<sup>3</sup>, Sheillah Simiyu<sup>4</sup>, Prince Antwi-Agyei<sup>5</sup>, Christoph Lüthi<sup>1</sup>

## Introduction

The WHO/UNICEF Joint Monitoring Programme (JMP) monitors progress towards the Sustainable Development Goals (SDGs). To monitor access to safe sanitation, the JMP service ladder is used, which builds on the established improved/unimproved facility type classification. Improved sanitation facilities are those designed to hygienically separate excreta from human contact. The JMP service ladder divides improved sanitation facilities into three categories: limited, basic, and safely managed services. Depending on how excreta are managed, individual household sanitation facilities are categorised as either basic (improved facilities not shared with other households) or safely managed services (improved facilities not shared with other households and where excreta are safely disposed of in situ or transported and treated offsite).

In contrast, shared sanitation facilities (SSF) are at best classified as a limited solution – irrespective of how excreta are managed. The exclusion of SSF from the basic and safely managed service levels is generally justified because of safety, privacy and health issues. There are concerns about 24/7 accessibility and safety, as well as the privacy of SSF [1], and that the lack of hygiene and cleanliness [2] may lead to adverse health impacts [3]. Yet, with infrastructure development lagging in low-income urban settlements worldwide, many of which have high population density coupled with high poverty levels, SSF are often the only viable option in these areas [4].

Worldwide, the total number of SSF users increased from 335 million (7.5 % of the global population) in 2000 to 626 million (9.1 %) at the end of 2017 [5]. There is evidence of sustainably functional, clean and hygienic SSF offering adequate sanitation, but also of SSF in dire conditions [2]. Many SSF are indeed of unacceptable quality. At the same time, there is uncertainty about the criteria that can be used to distinguish between unacceptable and acceptable quality [6].

Furthermore, little is known about user priorities for shared sanitation. However, user perspectives on sanitation priorities are fundamental to consider to meet their needs with public investments, ensure user acceptance, and the success of interventions. Among other activities, the “Quality Indicators of Shared Sanitation Facilities” (QUISS) research project collected data on user satisfaction and the main problems associated with SSF in low- and middle-income settlements.

## Methodology

QUISS was commissioned under the Urban Sanitation Research Initiative of WSUP (Water & Sanitation for the Urban Poor, [www.wsup.com/research](http://www.wsup.com/research)). Based on an extensive quantitative survey of shared toilets and their users, as well as qualitative studies, it aimed to identify key criteria for what constitutes “acceptable quality” of shared toilets in urban contexts. Data collection took place from January to July 2019 in low-income urban settlements in Kumasi (Ghana), Kisumu (Kenya) and Dhaka (Bangladesh).

QUISS conducted an extensive survey, interviewing over 3’600 households, and performed more than 2’000 spot-check evaluations of SSF and individual household facilities (Photo). Households and toilets were sampled, using a combination of systematic and purposive sampling.

The respondents rated their satisfaction using a five-point level Likert-scale, ranging from “very dissatisfied” to “very satisfied”. These reported results were then compared with observational data. For triangulation purposes, enumerators carried out a spot-check evaluation of the SSF, including the taking of photos. The photos were objectively rated for cleanliness by external research assistants. Observed cleanliness was measured by the presence of solid waste, insects inside the cubicle and visible faeces. In addition, enumerators evaluated SSF on safety/security and privacy measures. Observed safety/security was measured by the presence of a solid roof, solid floor (without cracks/holes) and (reported) use at night. Observed privacy was measured by the presence of a functional door (solid, without openings) and a solid wall (without openings).

## Results

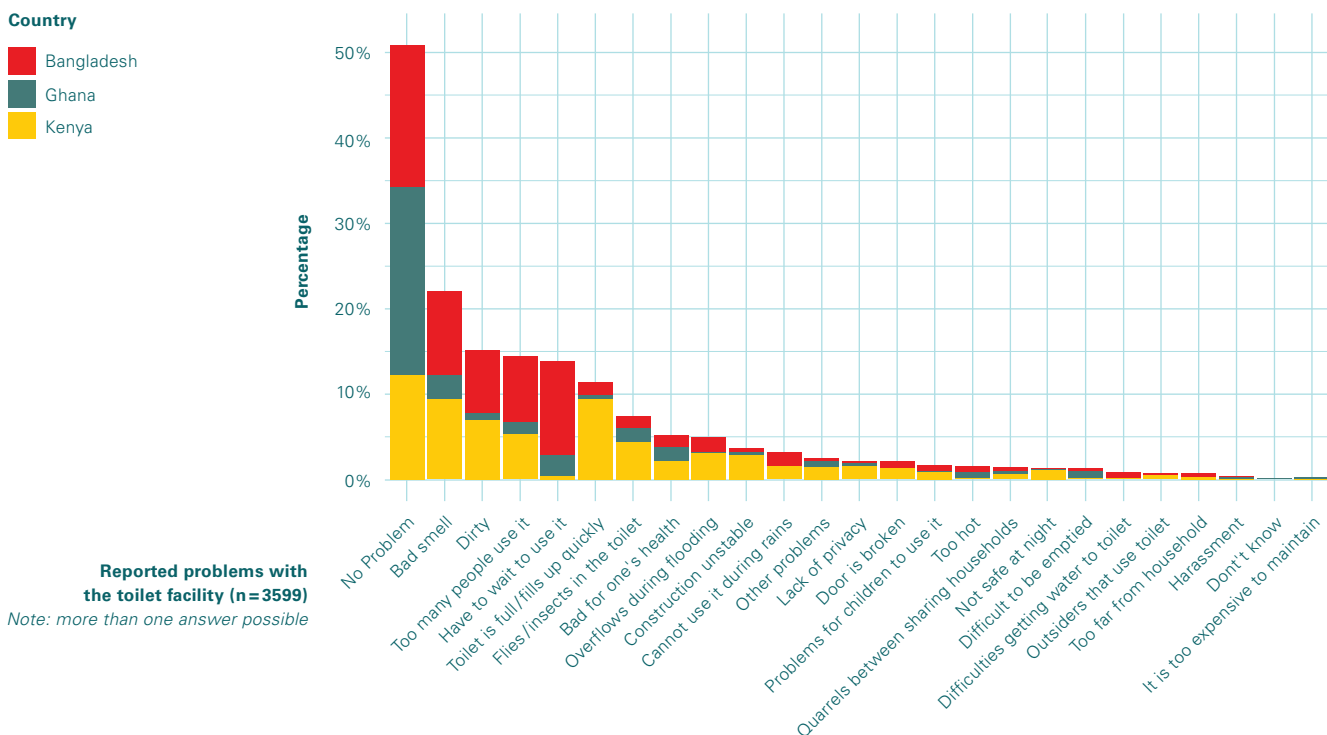
Survey data revealed that in all three countries a sizeable share of SSF toilet users reported having no problems with them whatsoever. Overall, *bad smell, dirtiness, the number of people using the toilet and long waiting times* were identified as the most common problems by the respondents (Figure).

Most users are “satisfied” or “very satisfied” with the cleanliness of their SSF. The share of satisfied respondents is lowest (66 %) in Kenya, compared with 75 % in Bangladesh and 92 % in Ghana.

Vasco Schelbert



Inspecting shared sanitation facilities in Manyatta, a district in the city of Kisumu, Kenya.



Problems reported by toilet users, by country.

Comparing reported and observed cleanliness, the higher the users reported satisfaction with cleanliness, the more likely is the toilet observed as clean. Still, there is a large discrepancy between reported satisfaction and observed cleanliness: only 48 % of the toilets in Bangladesh, 52 % in Kenya and 67 % in Ghana, of which users were “very satisfied”, were in fact observed to be clean.

The share of users reporting that they feel mostly safe using the SSF at night ranges from 63 % in Kenya to 93 % in Bangladesh and 94 % in Ghana. Generally, only a small share of users (5 %) report not using the toilet at night. Our results suggest a correlation between perceived security and actual use at night.

Regarding privacy provisions, the share of users who are at least “satisfied” is 82 % in Kenya and Bangladesh, and 95 % in Ghana. Similar to cleanliness and security, the satisfaction levels are correlated with observed privacy. The higher the users’ reported satisfaction level, the more likely adequate privacy provisions are observed.

## Conclusion

Users and their perspectives on sanitation priorities are fundamental to consider. Bad smell, unsanitary facilities, and a high toilet-user ratio, leading to long waiting times that limit accessibility, were the most common reported user problems. Reported use of a toilet at night has been found to be a good proxy for overall user satisfaction. When only a small share of users report not using the toilet at night, this indicates that most users seem generally satisfied with safety/security and privacy provisions.

Our findings will inform the development of a monitoring framework for SSF. Likewise, they will assist in the identification of quality indicators that are aligned with and respond to user needs and priorities. Increasing the likeliness of meeting user needs improves user acceptance and, thus, supports intervention success. •

## References

- [1] WHO, *Water, Sanitation, Hygiene and Health: A Primer for Health Professionals*, (World Health Organization, 2019).
- [2] I. Günther et al., *When is shared sanitation improved sanitation. The correlation between number of users and toilet hygiene*, (Research for Policy 2 – ETHZ, 2012).
- [3] M. Heijnen et al., ‘Shared sanitation versus individual household latrines in urban slums: a cross-sectional study in Orissa, India’, *The American Journal of Tropical Medicine and Hygiene*, 93/2 (2015), 263–268.
- [4] R. Cardone et al., *Shared and Public Toilets: Championing Delivery Models That Work*, (World Bank, 2018).
- [5] WHO, *Progress on Household Drinking Water, Sanitation and Hygiene 2000–2017: Special Focus on Inequalities*, (World Health Organization, 2019).
- [6] B. Evans et al., Limited services? The role of shared sanitation in the 2030 Agenda for Sustainable Development, *Journal of Water, Sanitation and Hygiene for Development*, 7/3 (2017), 349–351.

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[www.sandec.ch/quiss](http://www.sandec.ch/quiss)

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