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FOR ALL IN A FAST CHANGING WORLD****Selection and use determinants of shared toilet facilities  
in Ashaiman, Ghana***A. P. Mazeau, B. J. Reed, K. R. Sansom & R. E. Scott, Norway***REFEREED PAPER 1952**

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*In low income urban areas where a majority of houses do not have toilets, shared toilets are often seen as the last alternative to open defecation or flying toilets; and today, more than half of the urban Ghanaians rely on them. Several book chapters and papers examine the characteristics of the shared toilets from their political management to their technical design, but very little is said about how urban Ghanaians are selecting and using the few public or private shared toilets available in their neighbourhood. This paper analyses what determines the appropriate toilet for different categories of population in the large town of Ashaiman. It concludes that those determinants and the uses of toilets vary from one neighbourhood to another, from one family to another and may vary at individual level from day to day. Those variations answer with pragmatism the dilemma “price” or “cleanliness” that urban dwellers face when looking daily for a toilet.*

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**Introduction**

In Ghana, over 70% of urban dwellers do not have private sanitation facilities in their home and rely instead on an informal network of shared, community and public toilets. The predominance of shared toilets in Ghana is the result of unplanned urbanization, legal restrictions, specific features of housing, socio-economic characteristics of the population and political orientations.

In the study area, several homes are often clustered around a courtyard to form a “compound house”. A landlord may own the whole structure, with rooms rented out to families. Some facilities, such as sanitation, are shared at this house rather than the household level. However, even at this level, not all house units have a toilet. A similar pattern was seen in England in the Nineteenth Century, with water and sanitation provided in a communal courtyard and public baths and wash houses at a municipal level.

In Ashaiman, a fast growing city in Ghana, 432 house units representing over 8, 000 residents were surveyed, over 40 participatory exercises and 38 interviews with a range of stakeholders were conducted. Results indicate that the 90% of households without access to in-house toilets rely on an informal network of shared toilets. These toilets, often set in blocks, are of diverse natures, characterized by different size, access price, ownership, management system and level of comfort and cleanliness. In four selected neighbourhoods, it is observed that dwellers have different options available, offering a range of price and comfort. Through an innovative association of mapping and ranking exercises, this paper investigates how the dwellers select their daily toilets. It looks at the key determinants and also describes and explains the different variations of use observed. The paper finally highlights that externally set standards and criteria important to the service provider may not reflect the myriad priorities of the local population.

**Central role of shared toilets**

The construction of house toilets in Ashaiman is the result of private initiatives (predominantly by landlords) only. Their coverage is limited due to physical, economic, technical and political aspects.

- The rapid and often unplanned development of Ashaiman has led to an urban space characterized by dense housing, dominated by multi-house units with a lack of space in most of the existing houses. There

is no sewage system and in many areas there is a difficult access to some houses which complicates the construction of septic tanks and their regular emptying (Figure 1).

- The landlords, especially when they do not occupy their property, have no great incentive to build toilets and the tenants are not necessarily organized to lobby their landlords. Tenants are often satisfied with securing a house and do not make a toilet a priority.
- Despite the national sanitation policy discouraging the use of shared toilets in residential areas, there are no financial or technical incentives from the local government to support the construction of house toilets. A representative from Ashaiman Municipality (AshMA) explained that they do not have the resources to encourage private sanitation. The large number of public toilets in Ghana can be used as an excuse by the landlords for not providing in-house toilets, confirmed elsewhere in the country (Addai, 2009).
- National and municipal laws have been adopted during the last four years in the country (including Ashaiman) to prosecute landlords who do not provide toilets to their tenants, but enforcement of the law is challenged by the lack of skilled staff and the nature of the unplanned settlements (Adank, et al., 2011, p. 67).
- Cheaper bucket toilets have been banned, resulting in the closure of some household facilities (Figure 2).

Out of the 432 house units surveyed (which housed 2, 900 households), 12% had at least one functioning toilet in their premises and 20% had one toilet in the past that was now closed down. The closures of toilets had been influenced by new environmental policies, natural constraints and bad management of toilets at house level. Given the fact that having a toilet in the house does not guarantee access for all tenants, a detailed survey indicated that only 8% of the residents in the selected neighbourhoods had access to sanitation facilities in their compound.



**Figure 1. Compound house in Ashaiman**



**Figure 2. Closed down bucket toilets in the compound house of Figure 1.**

Combining the decrease of house toilets with the increase of population (26% between the census of 2000 and 2010), the number of people relying on shared toilets outside the house, or on alternative methods such as plastic bag or open defecation, had significantly increased (90% of our sample). Different types of shared facilities co-exist in Ashaiman. These toilets are often set in blocks and are diverse, characterized by different ownership, management system, size and technology which in turn influence their access price, cleanliness and level of comfort and privacy. In 2011, the municipality of Ashaiman counted 25 municipal-owned public toilets and over 150 owned by entrepreneurs. In addition to these, there are informal sharing arrangements, where limited groups of people (e.g. neighbours) share a communal (but not public) facility.

To summarize, three main types of shared toilets are identified in Ashaiman:

- Publically owned toilets are blocks built by the local Government and franchised to an individual or group of individuals to operate. The toilet blocks typically comprise more than 10 cubicles.
- Commercial toilet blocks (privately financed) typically comprising more than 10 cubicles. The operator pays taxes to the municipality.

- Toilet owned by an individual, often comprising less than three cubicles, available for paid use by known neighbours. Most of these facilities are not declared to the Municipality, so the owner does not pay taxes.

### Methodology and fieldwork

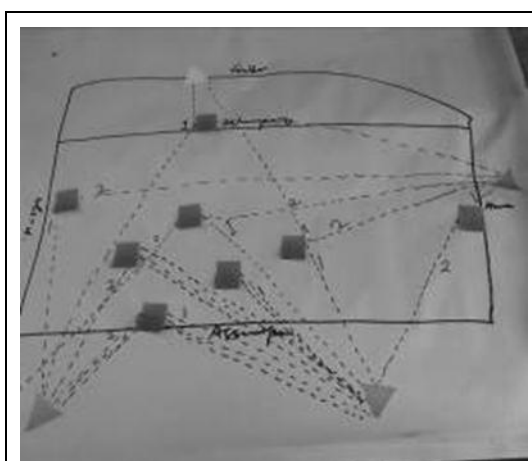
Ashaiman is a part of the greater Accra area. The town has one of the fastest population growth rates in Ghana, growing from 20, 000 in 1970 to more than 220, 000 in 2010. The expansion of Ashaiman was poorly planned and led to several infrastructure challenges, including a high percentage of people using shared sanitation facilities (Mazeau et al., 2012).

The field work, part of a PhD research, done in 2011 entailed a survey of 432 housing units in four low-income areas of Ashaiman, covering 2, 912 households (Mazeau, 2013). Sanitation surveys were done for all shared toilets used by the residents. 15 participatory groups of residents did a mapping of their daily sanitation usages and scored the type of facilities they used. Semi-structured interviews with 30 households and 10 sanitation providers offered a clearer picture on the evolution of the sanitation facilities in Ashaiman. These were triangulated using observation and inspection of facilities.

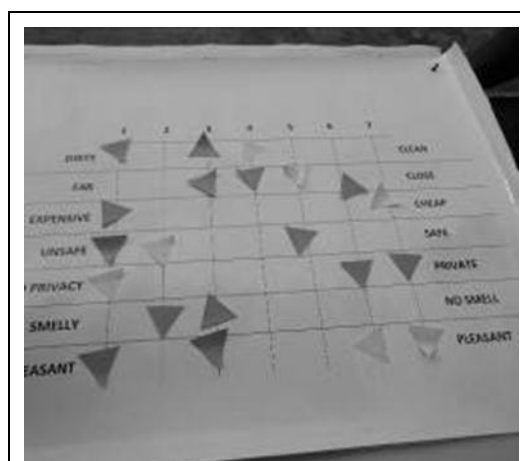
### Pyramid of determinants

A key aspect of the PhD research was to identify the key determinants used by dwellers to select their shared toilets. Areas were selected where different types of sanitation models were available at reasonable walking distance. Focus group participants were asked to first map their use of toilets and then rank these toilets according to a short list of criteria that they had identified. The mapping and ranking exercise provided three kinds of valuable and complementary information:

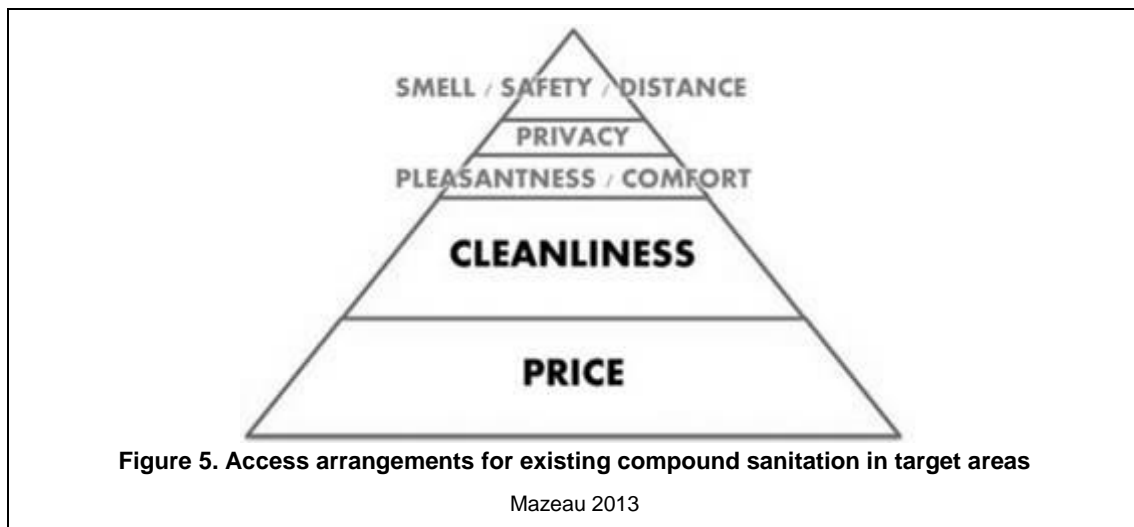
1. On a map, the participants located their house, the different toilets they were using and the toilets used by their spouse and children (Figure 3). These maps were later converted into numerical data indicating the numbers and types of toilet used, noting if they were the cheapest and closest toilet available and if choices were similar within the household.
2. The different types of toilets were scored by all the groups. It was then possible to see any differences in how the toilets were appreciated according to area, gender, age, tenancy status (Figure 4). Different coloured stickers, representing the different type of toilets, were placed on a facilities map. Participants then placed corresponding stickers (the same colours) along a “likert scale” table, to indicate their opinion of each toilet type’s cleanliness, affordability, distance, privacy, safety, smell and pleasantness.
3. The toilet preferences for all the participants were influenced by several parameters. Statistical tools were used to determine the most significant parameters. Using analysis of covariance, the toilet actually used by the participants (mapping) was compared with appreciation of those toilets (ranking) to show which determinants were most important in the selection process of the urban dwellers. Those determinants and their statistical values were then converted into a more visual pyramid (Figure 5).



**Figure 3. Map showing homes (■), sanitation facilities (▲) and patterns of usage by a group of young female tenants in one neighbourhood**



**Figure 4. Ranking opinions of different aspects of facilities (by the same group that drew the map in Figure 3).**



Price and cleanliness were, for all groups of population in all selected neighbourhoods, the key determinants. The two most common shared toilet models in the surveyed areas, the municipally-run (affordable but not always clean) and privately-run toilet blocks (clean but not always affordable) were at opposite ends of the cleanliness and affordability continuum. If we oversimplify, the daily dilemma for Ashaiman's dwellers is between relief provided in either cheap and dirty toilets, or clean and expensive ones. Observations of 18 shared toilets facilities by the research team confirms that a correlation may exist between the observed quality of the toilets and the cost per use; more expensive toilets appear to offer a better quality service (Mazeau, 2013, p. 213).

### **Cleanliness**

Many studies present 'cleanliness' as a central determinant, the reason users would prefer one shared toilet over another (Schouten & Mathenge, 2010; Biran, et al., 2011). In both the participatory groups and individual interviews, it also appears to be one of the central determinants for the study's target population; overall users value commercial toilets more because they are clean and regularly maintained. However, preference does not translate to usage. Observations confirmed that many will queue in front of old, large and poorly maintained toilet blocks because they simply cannot afford their preferred choice.

### **Price**

While prices often vary from 10 pesewas [US\$0.04] (for a "publically" managed toilet) to 25 or 30 pesewas [US\$0.12] (for a "privately" managed toilet); two of the five surveyed persons do not make the cheapest toilet their first choice. While affordability is an essential determinant, users are not always ready to use the cheapest option; the cheapest toilet may be too far, too dirty or too busy.

### **Dilemma and variations of use**

The price /cleanliness dilemma results in dynamic variations in shared toilet use within a neighbourhood and even within a particular household over time. When conditions in certain facilities change, or when new facilities are built, Ashaiman dwellers are not attached to a single toilet. They adopt a pragmatic approach, looking for facilities that best balance their cleanliness-affordability preferences.

### **Neighbourhood variations**

The distribution and quantity of shared toilets in each sampled area was uneven. All dwellers in the four selected neighbourhoods have a reasonable choice between at least two options but the quality of this choice varied from one neighbourhood to another or within a neighbourhood. There was no coordination between providers, or regulation by the authorities to ensure an even coverage of the area. The location of the toilets in a neighbourhood depends on historical factors (such as land ownership, housing development) and on technical ones (e.g. access roads, available spaces). From a geographical perspective, the dwellers were not equally served by the available facilities.

## House variation

Within a compound house, the survey data was analysed to see if there were patterns according to ethnicity or religion, but no obvious variations between groups of people could be seen, given the amount of variation at an individual level.

## Household variations

Main facilities used vary significantly from one area to another but also between men and women. Half of the interviewed men are using open defecation and municipally owned toilets while only 30% of the women used these options, preferring the commercial toilets. The variations of practice within a house unit are explained by the preferences of each individual that may be influenced by their gender, age, physical capacities, working places, incomes, beliefs and past experiences. Each dweller makes a personal choice based on the options available in the neighbourhood and on his/ her set of determinants.

40% of the married respondents did not use the same shared facilities as their partner (Table 1). Within a married couple, price and cleanliness are appreciated differently:

- Women report that their husbands use cheaper toilets, often less clean.
- 63% of the men use the cheapest option available against 41% for the women.
- Men express more concern about the quality and the safety of sanitation for their partner than for themselves.

The possible combinations between the options available and the personal determinants can therefore be different from one individual to another, even within the same household.

	Men		Women	
Participant not using/ accessing toilets in their house/ compound	43		56	
Use only 1 facility	16	37%	33	59%
Use 2 or 3 facilities	27	63%	23	41%
Use different from spouse	13	48%	12	31%
Main option is the closest	24	56%	35	63%
Main option is the cheapest	27	63%	23	41%

## Individual variation

Half of the interviewed people regularly used more than one shared toilet. They changed their means of excreta disposal depending, for example, on the time of the day (night time), the length of the queues or other activities (e.g. on the way to work). Despite distance being ranked as less important, the mapping showed that local toilets were used more often. Short-term variations of sanitation practices also happened, for instance during rain storms where, according to observation of toilet queues and interviews, people reduced their use of shared toilets (and probably used plastic bags). This variety of toilet use within a single day has implications for measuring and monitoring coverage. Current monitoring systems are simplified for ease of taking statistical measurements and comparisons, so do not account for such variations.

In Ashaiman, the toilet landscape has changed during the last five years: closure of some compound toilets, construction on fields used for open defecation and building of new toilets, shared or not. The changes of practice (for example from open defecation to public toilet or from one type of shared toilet to another) were motivated by the building of a new facility either cleaner or closer. In some cases, there were no new facilities but people changed their habits as their previous preferred toilet was spoilt or became dirtier than in the past.

It is to be noted that similar complex and diverse patterns of service access are also observed in Ashaiman concerning the water. The majority of the population who are not connected to pipe water use a range of methods to collect the needed volume of water, associating “for example, sachet vendors, polytanks and neighbourhood re-sellers” (Peloso & Morinville, 2014). Another comparison with water is the issue of

distance. Water collection reduces markedly beyond a certain threshold travel time; the interviewees ranked their criteria, but this data is only ordinal. Proximity may win over cleanliness or price, if the clean and cheap option is at a considerable distance.

### Conclusion and lessons learnt

A large number of Ashaiman dwellers were not loyal to one toilet or another; they are opportunists, looking for facilities that best balance their cleanliness/ affordability preferences, as well as being convenient. They may not use the same toilet as their spouses, children or neighbours and they may use several different toilets during a week or a single day. This has implications for regulators, implementers and evaluators as the concepts of “coverage” and “access” is more complex when considering individuals rather than households and the use of multiple facilities rather than just a latrine located at the building you sleep in.

The research provides previously uncollected data on the variation of use of shared toilets at neighbourhood, household and individual level. The variation of use is influenced largely by two determinants, namely cleanliness and price. Given the toilet options available, these determinants are often mutually exclusive and therefore create a dilemma for the users. Groups of the population answer this dilemma differently based on their preferences, social constraints and financial possibilities. For poorer households in Ashaiman, there is a clear dilemma of choosing between price and cleanliness when using shared toilets. This may be helped by the provision of more affordable and adequately managed shared sanitation facilities and/ or improving the design and maintenance of the facility. Planners and potential providers need to bear this in mind when making plans for future provision.

This research emphasizes yet again the need to consult users of WASH facilities in a meaningful way. Externally set standards and criteria important to the provider may not reflect the myriad priorities of the local population. These priorities are dynamic at both short and long-term timescales.

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### References

- Adank, M., Darteh, B., Moriaty, P., Osei-Tutu, H., Assan, D., & Rooijen, D. (2011). *Towards integrated urban water management in the Greater Accra Metropolitan Area, Current status and strategic directions for the future*. SWITCH / Resource Centre Network Ghana: Accra, Ghana.
- Addai, E. (2009). Discourage the use of Public Toilets. Retrieved November 2012, from GhanaWeb: <http://www.ghanaweb.com/GhanaHomePage/blogs/blog.article.php?blog=1856&ID=1000002859>
- Biran, A., Jenkins, M.W., Dabruse, P., & Bhagwat, I. (2011). *Patterns and determinants of communal latrine usage in urban poverty pockets in Bhopal, India*. *Tropical Medicine and International Health*, 16(7), 854-862.
- Mazeau, A. (2013). *No toilet at home: Implementation, Usage and Acceptability of Shared Toilets in Urban Ghana*. PhD Thesis: Loughborough University, UK.
- Mazeau, A., Scott, R., & Tuffuor, B. (2012). *Sanitation, a neglected essential service in the unregulated urban expansion of Ashaiman*. Sustainable Future Conference. Kampala, Uganda.
- Peloso, M., & Morinville, C. (2014). 'Chasing for Water': *Everyday Practices of Water Access in Peri-Urban Ashaiman, Ghana*. *Water Alternatives*, 7(1), 121-139.
- Schouten, M., & Mathenge, R. (2010). *Communal sanitation alternatives for slums: a case study of Kibera, Kenya*. Physics and Chemistry of the Earth (accepted manuscript).

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