

**BIOCENTRE USER SURVEY
CONDUCTED IN GATWEKERA VILLAGE, KIBERA**

**Analysis and inferences
by
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Introduction

Residents of Gatwekera, which is one of the villages in Kibera, have continually lacked access to basic water and sanitation services. During a community focus group session, conducted in December 2005, it emerged that approximately 200 people share one latrine with many families resorting to *flying toilets*. Community members expressed the need for better sanitation. In Gatwekera, water provision is dominated by water vendors who incessantly vary prices from 3-10 KShs per 20 litre jerrican depending on availability of water supply. Majority of the residents are either unemployed or earn below 1 dollar a day thus cannot afford to buy adequate water to cater for their daily activities.

In this regard, Halcrow¹ foundation and Umande Trust established a relationship for the purposes of enhancing the welfare and livelihoods of members of Gatwekera community through the provision of an ablution block, improved hygiene practices and support members on management of water and sanitation services.

TOSHA², a coalition comprising of five community groups where each group is engaged in daily savings for improved livelihoods, was formed and have been engaged in all project phases including project design, planning, implementation, monitoring and evaluation. The TOSHA members contributed to the construction, financed by Halcrow² foundation, by providing labour free of charge. The Biocentre was completed and opened to the public in June 2007. The facility is being managed by a committee elected among TOSHA members.

A user survey was carried out in December 2007 to assess residents' satisfaction with the services being offered at the Biocentre. A questionnaire was formulated and administered to 500 residents within the vicinity of the Biocentre. The targeted population included adults (both male and female), children of all ages and visitors/by passers who could be both children and adults. This report presents analysed results and recommendations stemming from the questionnaire survey.

¹ Halcrow Foundation, a UK charitable trust

²TOSHA an acronym which stands for Total Sanitation and Hygiene Access

Description of Facility

The completed facility is a two-storey bio-centre with a sanitation block on the ground floor, designed to convert human waste into bio-gas and liquid fertilizer, offices and meeting hall on the floors above. The facility provides opportunities for improved water and sanitation access, use of biogas, fertilizer and community hall. The latrine and shower facilities were designed to serve up to 500 people.

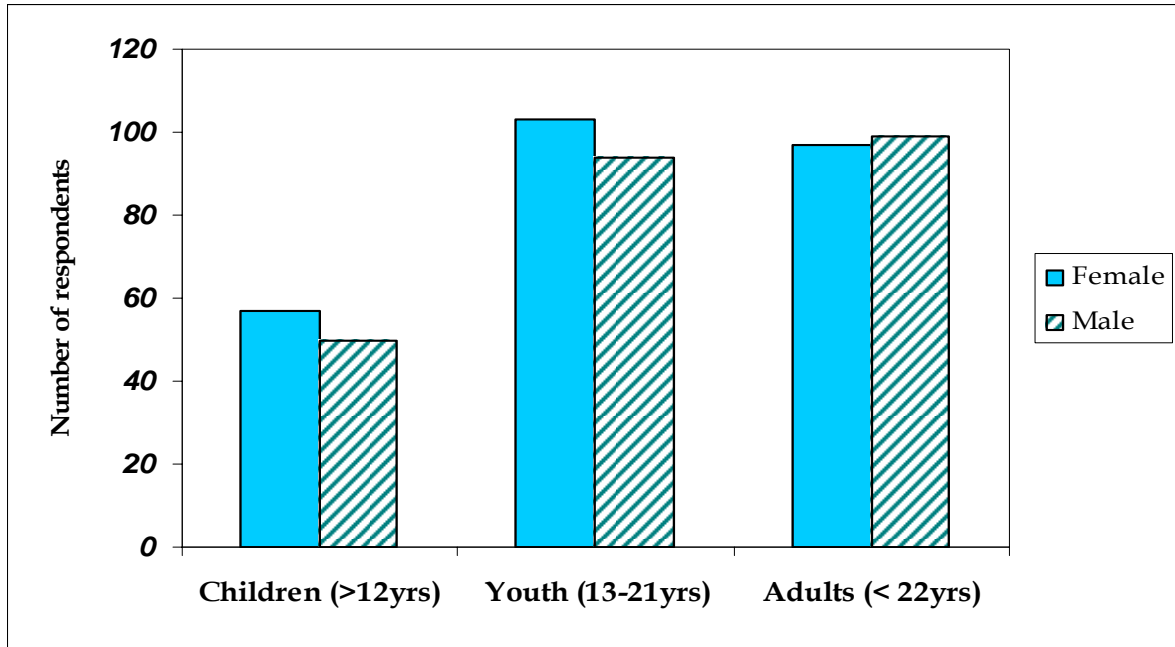
In the month of September 2007, the Nairobi City Water and Sewerage Company (NCWSC) disconnected water supply in Gatwekera in order to curb unaccounted for water. Since then the facility has faced challenges in water provision with virtually no water for use in the facility and for sale to the surrounding community.

Umande Trust is committed to improving the facility as part of post construction services. Umande technical staff, in partnership with gtz-Ecosan promotion team, is working on the Biogas production and Reed-bed systems to support the TOSHA members in managing the biogas and fertilizer enterprises. The biogas would be used for lighting and cooking within the facility and later on piped to neighbouring households. The effluent would be stored in the reed-bed for further treatment and after a prescribed period packaged for sale as fertilizer. Umande Trust is exploring the option of Rainwater harvesting to augment the mains supply.

1. Level of Response

The survey aimed at the assessing the impact of the biocentre in terms of provision of water and sanitation services with respect to differences in needs and priorities for females and males of varying age groups.

Out of the 500 people interviewed, 257 were females and 243 were male. The age groups of the respondents were as follows;



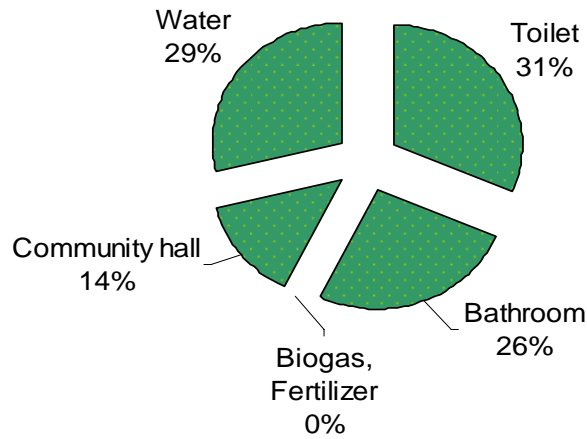
The facility was designed to ensure that all community members whether boys/ girls/ women/men have equal access to a water and sanitation facility. The survey showed that females prefer using the facility over their male counterparts due to the level of privacy being provided. The facility is partitioned to provide privacy for both sexes. 21% of the respondents were children below 12 years suggesting the level of safety of facility use by children. One cubicle on the ladies side is modified for use by children.

2. Use of Biocentre facilities

The Biocentre was constructed primarily to provide affordable water and sanitation access to Gatwekera residents. 31% of the respondents use the toilet facility at the Biocentre, followed by 29% accessing water and 26% use the bathroom facilities.

The community hall was designed on top of the sanitation block to encourage use of facility for community recreational activities. Renting of the hall to community members at low rates has seen the increased use of hall by residents. The biogas and fertilizer facilities are yet to begin operation.

The pie chart below displays the level of facility use in percentage.



3. Reasons for not using facility

Residents were questioned on whether there any reasons that hinder their use of the facilities available at the Biocentre. 458 respondents said that they had no reason for not using the facility. Few responses reported from those who had reasons for not using the facility are presented in the table below.

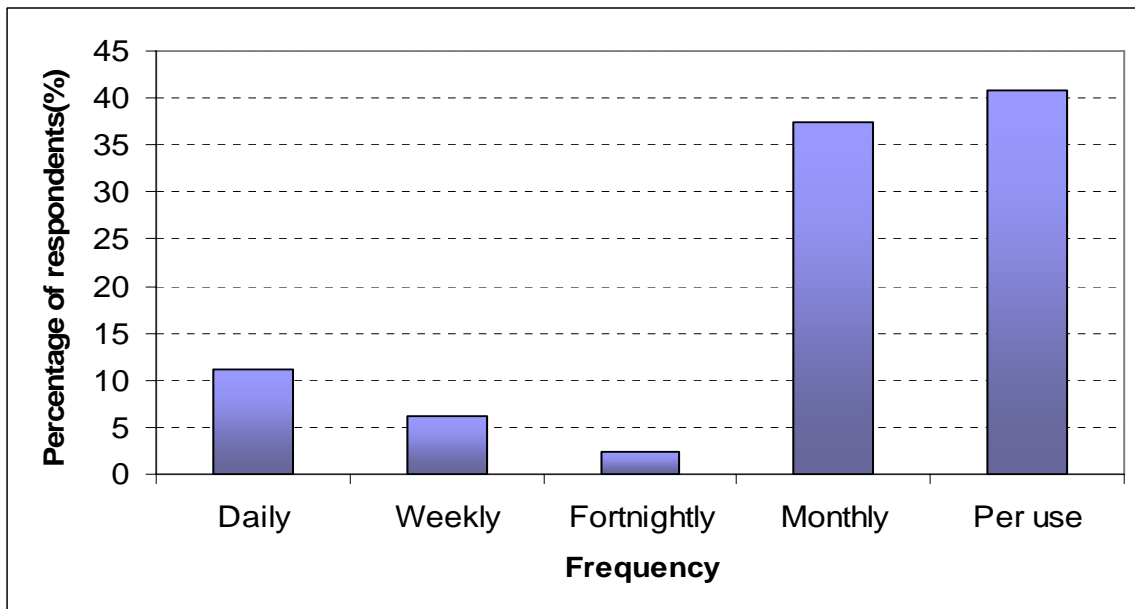
Reason	Rank	Number of Respondents
Distance to facility too great	1	13
Lack of water	2	9
Poor publicity	3	9
Facility at home	4	7
Poor hygiene	5	6
Too expensive	6	4
Improper floor finishing	7	2
Lack of activities in the hall	8	2
Improper management	9	1
Bad smell	10	1
Rude personnel	11	1
Lack of interest	12	1
I am a child	13	1

The highest priority area for improvement was improving accessibility of such facilities. Concerns about lack of water and poor biocentre marketing emerged with others opting to use the facilities available near their households. Some respondents complained about the poor hygienic conditions at the facility while others felt that the charge per use is

expensive. Other responses received were not significant but they provide areas of improvement.

4. Willingness to Pay

Many respondents felt that they are comfortable with paying 2/= for a toilet use, 2/= per bathroom use, 400/= per month for use of Biogas, 200/= for fertilizer, 1000 for renting the community hall and 1/= for water per 20 litre jerrican. 41% of the respondents prefer paying for these facilities per use. The graph below shows preferred mode of payment for facility used.



The current charges being administered on toilet, bathroom, water and hall facilities are adequate for the residents while the information collected on Biogas and Fertilizer charges would provide a basis for product costing once the facilities are in use.

5. Improvements on toilet service

Respondents suggested that the toilets need to be cleaned regularly. They believe that the modification of the toilets steps would facilitate ease of use while there was also concern about the condition of the toilet walls.

The table below presents the various recommended areas that should be improved.

Areas for Improvement	Rank	Number of respondents
Cleaning regularly	1	190
Adjust /improve steps	2	70

Paint walls	3	59
Floor should be improved	4	37
Hygiene observed	5	27
Put tiles on walls	6	26
Minimize smell	7	6
Avail tissue readily	8	5
Enlarge pits	9	5
Use disinfectant	10	4
Strict supervision	11	3
Situation is okay	12	3
Provide water	13	1
wash hand basins	14	1
Avail flush toilets	15	1
Improve safety and comfort of users	16	1
Use sewer services to pump out the wastes	17	1

6. Improvements to Bathroom facilities

The highest priority area for improvement is to improve the drainage system. The residents were not satisfied with the lack of water in the showers. The table below summarizes the priority areas for improvement received from the respondents.

Areas for Improvement	Rank	Number of respondents
Improve drainage	1	191
Water in showers	2	121
Put tiles on walls	3	88
Improve drainage	4	82
Use of disinfectant for cleaning	5	17
Improve floors	6	15
Hygiene observed	7	10
Hot water in showers	8	8
Avoid blockage of bathroom	9	6
Paint walls	10	6
minimize smells	11	3
improve design	12	2
Daily inspection	13	2
situation is okay	14	2
Fix electricity	15	2
Improve ventilation	16	2
Provide items like soap	17	1

7. Improvements in water provision

There was a lot of dissatisfaction with the water facility. Many respondents felt that the lack of water at the Biocentre should be immediately resolved. See below suggestions

received from respondents on measures to be taken to improve the level of water provision.

Areas of Improvement	Rank	Number of Respondents
Address problem of water shortage	1	212
Treat water with chlorine	2	84
Increase water pressure	3	71
Increase number and capacity of storage tanks	4	53
Water company should act	5	27
Employ plumbers	6	10
Tanks should be cleaned	7	9
Install pump	8	5
Investigate allegation of sabotage by other vendors	9	5
Alternative water supplier	10	4
Affordable water rates	11	2
Ensure proper piping	12	1

8. Tenure arrangement and proximity to the Biocentre

66% of the respondents living near the biocentre are tenants, 18% are structure owners while 14% are sublet. The respondents were questioned on the proximity of the biocentre to their households and the results are displaced below;

