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PROMOTING SANITATION AND NUTRIENT RECOVERY THROUGH URINE SEPARATION: A SOCIAL ACCEPTANCE STUDY

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Sanitation through use of the urine diversion (UD) toilet system is on the increase in the eThekweni Municipality. This calls for a reliable social study to assess communities' reactions to this form of sanitation as well as to inform the authorities of any possible problems that might be emerging.

Aim:

This project aims to assess community perceptions, responses and reactions to UD toilets, urine collection and nutrient recycling, and to statistically assess the controls on these views and any changes over time.

Currently, the first round of data is in the process of being analysed. The analysis consists of an in depth statistical examination of a survey that was completed in November 2011. The survey was conducted across 17 000 households. This provides the opportunity to analyse an initial reaction to the proposed sanitation changes. A follow up survey is scheduled to commence in February 2013 to assess changes in the communities that take place as the joint projects progress in time.



Inside view of UDT



Bucket with sand for use
after defecation



UDT (Front View)



UDT (Rear view)

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An initial desktop study will be undertaken to acquire a clearer picture of the sanitation situation for households using UD toilets in eThekweni. The existing survey data of 17 000 households will be statistically interrogated and some results will be mapped using ArcGIS. The statistical investigation will incorporate an analysis of sample clustering, and a multivariate regression analysis to determine which variables explain various outcomes related to the perceptions of and reactions to UD toilets, urine products, and the collection and use of urine for economic gain by the producing households or others.

The temporal elements of this dataset will also be interrogated to determine whether views changed with time after UD toilet installation. Since the data were collected across the Municipality at a particular time, but since the roll-out of UD toilets commenced in 2004, a temporal analysis is possible. Temporal changes will be further assessed through the use of another project (VUNA) being undertaken in Lower Maphepheteni data, as the results from this survey can be compared with those of the earlier survey with respect to perceptions of UD toilets and urine usage.

Once the available datasets have been adequately assessed and the results reported, a survey instrument will be designed to answer questions identified from the preliminary analyses and to test hypothesis developed from the initial study results. At this point it is envisaged that a sample will be randomly selected from each community within the UD toilet programme for the survey to be conducted.

The complete report on the social acceptance study will be completed in June 2013. However, on-going contact between the researcher and the authority will assure that any social acceptance problems will be discussed and a solution sought as they are discovered.

The Objectives of this study include:

1. To assess community perceptions and reactions to:
 - i) The use of UD toilets
 - ii) Emptying of the UD toilet vaults
 - iii) The collection and use of urine products
 - iv) The relationship between the provision of water and UD toilets
 - v) To assess any changes over time as far as the above issues are concerned
2. To assess how changes in toilet design, construction and urine collection options have influenced views of these toilets and the use of the products.
3. To assess community understandings of the economic implications of moving away from UD toilets, including the costs of water and maintenance of alternative systems
4. The impact of educational programs on the above issues
5. To map toilet distributions and spatial controls on perceptions and reactions.
6. To provide continuous feedback to the Municipality regarding community perceptions of the UD toilets and any potential community sensitivities or resistance to the technology and the use of its products.

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