

Breaking Cultural Rigidity in Promotion of ECOSAN and Excreta re-use in Urban Slums; Linking Urban Ecological sanitation Users to Farmers in Kampala

I.T. Kamara^{1,2}, E.Kebirungi² C.B. Niwagaba^{1,3} & J.F. Kamara⁴

¹Clinical Epidemiology Unit, Makerere University, P.O. Box 7072, Kampala, Uganda, ²Sustainable Sanitation and Water Renewal Systems (SSWARS) NGO, P. O. Box 21302 Kampala, Uganda ³Department of Civil Engineering, Makerere University, P. O. Box 7062 Kampala, Uganda, ⁴Self employed agriculturalist and Veterinary doctor, P.O Box 11734 Kampala, Uganda

Abstract

Ecological sanitation promotion in urban slum areas of high population concentrations remains challenge to the system. Uganda's 10 year national ecological sanitation strategy aims at achieving at least 15 % of the total sanitation coverage in the country by 2018 (Huba 2008).

Sustainable Sanitation and Water Renewal Systems (SSWARS) is implementing social marketing approach to scale-up sanitation and hygiene in urban slums of Kawempe division, Kampala city with ecological sanitation toilets being one of the options. Sanitation is contextualized as a social good and thus marketed using commercial marketing principles of product, price, promotion and place. Because of the high populations and an amalgamation of different cultures of people of different origins, ecological sanitation is less respectable with mysterious attachments and perceptions towards excreta contact and reuse. The other challenge is higher user loads meaning inadequate time for excreta bacteriological processing for agricultural re-use. Lack of land for agriculture for is another challenge in slums.

This paper discusses some of the ways SSWARS is creating in promotion of ecological sanitation in urban slum areas of Kampala city, experiences from farmers, challenges and recommendations which adopted would scale up in most urban areas in developing countries.

Introduction

The promotion and adoption of ecological sanitation in slum communities with high population concentrations remains complex in some developing countries. Not only is there resistance to the approach and application of the sanitized excreta as soil fertilizers to boost agricultural productivity in some areas, ecological sanitation success is also affected by higher user loads and lack of discipline in using them, limited agricultural activities, land tenure systems. In Uganda, the 10 year national ecological sanitation strategy aims at achieving at least 15 % of the total sanitation coverage in the country by 2018 (*WSP 2008*).

An Eko-loo Ecosan facility ready for installation in the community



Sustainable Sanitation and Water Renewal Systems (SSWARS) is implementing social marketing approach to scale-up sanitation and hygiene in some urban slums of Kawempe division, Kampala city with ecological sanitation toilets being one of the options be promoted. Various other organizations including the government (Kampala City Council) have also engaged in the promotion of ecological sanitation in Kampala slums (*Kakooza, J., D. Kyayangayanga, et al. 2007*). As part of the promotion, SSWARS is marketing eko-loos, urine diversion and bio-toilet

facilities. Communities are sensitized on how to use them and sufficient number of recommended user loads, proper maintenance and use of the facilities and identifying farmers in the outskirts of the urban areas who have gardens to always collect the urine and sanitized excreta for fertilizer applications.

Materials and Methods

Based on the needs assessments in three parishes of Kawempe division in Kampala, ecological sanitation in these areas with high populations and constitution of different cultures of people of different origins was less respected with mysterious attachments and perceptions towards excreta contact and reuse. The other challenge is higher user loads meaning inadequate time for excreta bacteriological processing for agricultural re-use and lack of land for agriculture and thus sanitized excreta application. Most people in slums are tenants who do not own the land they occupy in addition to regular re-allocations.

SSWARS staff educating a stakeholder about ecosan using an Ecosan desk model



The information gathered from the needs assessments was then used to develop interventions that were deemed to make ecological sanitation a suitable and sustainable approach to the low toilet coverage in these slums. This is through making them socially and culturally acceptable to the community through marketing and awareness creations, stressing their importance, emphasizing proper use and maintenance as well as creating links with farmers within and outside the urban town areas to often make use of the sanitized excreta to boost agricultural production. Approaches being used in this promotion are;

Regular community sensitizations on use and maintenance and recommended number of users of the various sized ecological sanitation toilets, construction of demonstration units in the communities of ecosan types being promoted, regular field visits to monitor their usage and maintenance, construction of a waste recycling centre where demonstrations of bio-waste and faecal sludge is done, use of information education communication materials (IEC), establishing demonstration gardens on the application of excreta use and marketing use to farmers outside the slum environments.

Results and Discussion

As a result of the on going intervention by SSWARS and her other development partners operating in slum communities, people are beginning to appreciate ecological sanitation toilets as a solution not only for the limited space they occupy but also other associated advantages attached to having an ecological sanitation toilet. Such include durability of the facilities, safe excreta disposal with less risk of environmental pollution and water contamination; reduce exposure to risk of infections from inadequate excreta disposal and use on gardens to boost agricultural yields among others.



Sanitized excreta from an ecosan chamber awaiting removal for fertilizer application

The cultural and individual perceptions, beliefs and fears are being loosened with practical demonstrations and feel from the demonstration units we have piloted in the different communities. A communal twin urine diversion toilet was built at SSWARS community centre located in one of the slum areas to act as a focal point for community members to learn on how to use, maintain and

appreciate the system. Community masons were also trained on how to construct these facilities depending on the costs available to community members. Results are being envisaged with improved use and maintenance of the facilities that had earlier been built by other development partners but were being abandoned without ever using them as well as others abandoned because of poor use and maintenance. Others are now demanding for the facilities which are being built physically or supplied from the manufacturers. Emphasis is as well being put on controlled number of user loads to give time for pathogenic processing of the excreta to take place so as to be rendered adequate for use without posing a health risks. However, since most households in the slum settings lack toilet facilities, higher user loads is still a challenge and thus most of the facilities often fill very fast leaving no room for composting.

The above changing trends are being reinforced with regular community sensitizations on the concepts of ecological sanitation, how to use and maintain them well, how to enhance faster decomposing and pathogen freeing process, and application in gardens. This is done through community mobilization and sensitization meetings, use of IEC materials like posters and fliers, drama groups and through the demonstration centers we have established in the communities. Learning visits are often arranged (*SSWARS Annual Report, 2008*). Sensitizations are regular and continuous because of the regular massive rural to urban migrations. Most of them come out of influence and end up on the streets or in these slum environments. Because of the different environment they find themselves in, sanitation to them is always not given much attention. This explains the high disease incidence and explosion in most of the slums especially during the rain seasons.

Farmer below using urine as pesticide control for plants



Lastly but not least, the slow but increasing success of ecological sanitation in urban slum communities is establishing end users for the sanitized excreta within the slums or in the outskirts. The main challenge with ecological sanitation promotion in the slums is lack of space for agricultural activities that would act as a catalyst for uptake. The land tenure systems in slums do not favor the occupants as most of them are tenants who are never permanent because they do not own the areas they are occupying. SSWARS is identifying farmers in the outskirts of the slums who will be acting as conduits to make use of the sanitized excreta

while giving space for ecosan users to re-use their facilities.

However the complexity of high populations and higher user loads still affect proper use of these facilities as well as giving the excreta adequate time to decompose to make it safe for disposal or use as fertilizers with minimal health risks.

Conclusion

Ecological sanitation toilets remain of great innovation and contribution towards achieving the Millennium Developing Goals on improving environmental sustainability as well as improving food security if used rightly. The success of Ecosan in slums calls for great discipline in use and maintenance of the facilities, checking on the number of user loads to give adequate time for the excreta to decompose to be rendered adequate for use and continued sensitizations and sanitation marketing and establishing a link with agricultural and florists to often make use of the sanitized excreta .

Key words: Ecological sanitation, Excreta use, Culture, Sanitation Slums

Acknowledgments

The author/s would like to extend thanks to WaterAid Uganda for funding the project, SSWARS staff who are implementing the project, beneficiary communities, farmers using the sanitized excreta for agricultural production, Kawempe division government authorities and development partners promoting Ecosan in slum communities

Email addresses of Authors: Innocent K. Tumwebaze*- iktumwebaze@yahoo.com, Elizabeth Kebirungi – kebirungie@yahoo.com , Charles Niwagaba- cniwagaba@tech.mak.ac.ug, Kamara John Fred – kamarakjf@yahoo.com

References

APTS Technology brief.

Available at: <http://www.atpsnet.org/pubs/brief/Technopolicy%20Brief%2017.pdf?pno=870>

Kakooza, J., D. Kyayangayanga, et al. (2007). Ecological Sanitation as a Water and Environmental Conservation Technology Option: The case of slum communities in Kampala. ATPS Working Paper Series No. 47. Nairobi, Kenya.

Sustainable Sanitation and Water Renewal Systems (SSWARS) (2008). Annual report

WSP (2008). Ten Year National Strategy on Ecological Sanitation. M. o. W. a. E. Ministry o Health, Ministry of Education and Sports, Government of Uganda.