



Spreading the Concept of Dry Toilet Technology in Uganda for Sustainable Development

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ABSTRACT

Dry toilet is a new technology in Uganda and is mainly called ECO-SAN (ecological sanitation); sometimes it is referred as factory. People have accepted it due to the numbers of advantages it has got. So the dry toilets are being mainly promoted by both the Government and NGOs. It has been introduced in Wakiso district as a pilot project but it seems the people are appreciating its function and ready to adopt the technology due to the following:

- The dry dehydration with urine being separated from faeces.
- The urine is used right away from the toilet to kill worms and fertilize plantations.
- The faeces as fertilizers after decomposition, hence the name factory.

This type of latrine helps to save the contamination of ground water for countries with a shallow water table in many parts like Uganda. The dry toilet is ecologically friendly in away that it can be emptied of pathogen free sludge that can be dumped anywhere without subjecting danger to the people, if not used as fertilizers. It economically saves in a way that the toilet is reused, no problem of constructing other toilets and has a cheap emptying method which is affordable in Uganda.

Dry latrine in Uganda is good due to limited water and technology available for flushing water in the toilets. The products help in the agricultural productivity in a number of ways: improve soil structure, its water holding capacity and neutralize toxics in the soil as they provide fertilizers. The weather in Uganda is very friendly to the decomposition of the excreta as it is always hot.

However the introduction of dry toilet technology has met the following problems:

- On the technical side improper usage of latrine by, poor maintenance, lack of resources for construction and for use e.g. lime and ashes.
- Design of latrine and transfer of knowledge
- Social cultural aspect of handling excreta



- Reuse of products in terms of convenience health and recycle in high population density areas.
- Sufficient hygienic education
- Environment concern
- Proper use by children.
- Land requirement

The following must be addressed properly to make Ugandans appreciate more the concept of dry toilet technology:

- Institutional and funding option
- Social cultural dimension
- Participatory implementation and including all stakeholders to solve the issues of lack of awareness
- Health aspects must be addressed
- Flexibility of design option.

INTRODUCTION

Uganda is a developing country in East Africa with its people basically Agriculturists, mostly subsistence farmers. The government is encouraging modernization of agriculture so that we engage more in commercial farming.

However we have occupations like keeping cattle, goat and poultry breeders. Other activities in Uganda include fishing, artisans and trade.

The dry toilet is a new technology still on pilot projects and is mainly called ECO-SAN (ecological sanitation); sometimes it is referred to as factory. It is encouraging that people are accepting it due to the numbers of advantages it has got for farmers and people living in areas with collapsing soil.

Being on pilot projects the dry toilets are being mainly promoted both by Government and NGOs, it has been introduced in a number of districts to demonstrate to people how the technology is applied. Also a number of NGOs in this country are teaching the poor communities to apply the concept by using the local materials.

However due to its advantages the poor communities are overwhelmingly appreciating the technology and are very ready to take it on. At this stage we cannot talk about success of this technology in Uganda but it is encouraging that the people have seen a ray of hope in it. Hope it will give the expected yields.

At the moment the most widely used sanitation technology is pit latrine which has its problems for people living in swamps, collapsing soils and urban areas which are getting more populated. So government, NGOs and the communities who have known the dry toilet technology in Uganda support it due to the following reasons:



Agriculture – Uganda being mainly a farming country the products of the dry toilet are used as fertilizers in the development of agriculture to sustain the development. The dehydration, with urine being separated from faeces, diluted with water and used right away from the toilet to kill worms and fertilize plantations.

The faeces are also used after decomposition to restore soil fertility, hence the name factory. It has been proved that artificial fertilizers made from chemicals have problems such as destroying the soil so rendering the products of dry toilets better for our farming. The products help in the agricultural productivity in a number of ways: Improve soil structure, its water holding capacity, neutralize toxics in the soil as they provide fertilizers.

Contamination of ground water – the dry toilets technology solves the problems of contaminating the ground water in areas with high water table. This is because unlike in pit latrine there is no digging of pits which can get to the aquifer thus mixing the excreta with ground water rendering it unsafe for human consumption. This prevents spread of water-borne diseases.

Ecological friendly - This type of technology render the excreta safe for the people working on it as all the pathogens are killed in the process. Considering the level of development in Uganda there is no resources for safe methods of emptying latrines and disposing off products. So if this technology is promoted it can help in the reduction of the danger from excreta even if it is not used as fertilizers. Saving space for toilet - Due to rural-urban migration it is increasingly becoming hard to have enough space for building new latrines after filling the old one. So this technology is economical in saving space that the toilet is reused, no problem of constructing other toilets and has a cheap emptying method which is affordable in Uganda and safe to people involved.

Lack of water – In Uganda there isn't enough piped water hence ruling out the flush toilet technology except in some urban centres. So this makes the dry toilet sanitation a better option for poor communities if you are to attain sustainable development.

Favourable weather – The tropical weather of Uganda is simply good for the decomposition of the excreta as it is always hot with enough sunshine. So here you don't need devices such as the solar concentrators in order to effectively kill the pathogens.

Problems of implementation – Introduction of dry toilet technology has met a number of bottle necks to effectively fit in the arrangement of the Ugandan life style as follows:

Design of latrine – There is a problem of designing of dry toilet sanitation, which will suite the people using the local materials and making it safe for them to use. This is a problem in that the technology is new to technical people who are supposed to put up these facilities for the poor communities. So you need to sensitize the construction industry on how to put up these facilities using the appropriate technology, which is understood and affordable to the communities.

Transfer of knowledge – On the technical side there is improper usage of latrine, poor maintenance, lack of resources for construction and for use for example lime and ashes. This means that there should be great transfer of knowledge if the application of this technology is to be successful and be appreciated by the poor communities in Uganda. This knowledge should help the people to accept the use of latrine, understand the technology, and make use of the materials at their disposal.

Social cultural aspect of handling excreta – Introducing the dry toilet sanitation in Uganda met resistance in many areas as it affects some of the cultural aspects of handling excreta in our people. In some of our tribes ladies are not supposed to go to toilets that they prevent them from bearing children. In others pregnant women are not supposed to go to latrine and they may deliver from there hence new born kid may fall into the pit and loose it.

Reuse of products – The reuse of products from the dry sanitation has been a problem for many people to accept in terms of convenience to health and recycle in high population density areas. Many people doubt the safety of reusing of these products saying that the excreta cannot be safe for reuse in their gardens on plants they are going to feed on. So it requires a lot of sensitization in order to promote this technology.

Sufficient hygienic education – The existing hygienic education in Uganda has been very low that some people don't yet know the usefulness of using a latrine. So telling these people of applying this technology you also have teach them first why they need to have toilets, then tell them the new technology and teach the how to apply it.

Environment concern – As the technology is new you also have to bring in other stakeholders to convince them that it is safe to apply the technology without much danger. Such section of people is the environmentalists. This may unnecessarily require more resources than just promoting the technology alone so making it more expensive.

Proper use by children – There is a problem of teaching children the proper use of this technology. This is because we have a problem of illiteracy and many kids are out of school. So the promotion of this type of sanitation should consider more of the children aspect if it's to be successful.

Gender problems – In many cultures in Uganda women leave many of the development work to their husband concentrating on domestic work. So this may disturb the promoting of the technology as it is mainly taught to men and it could be only their views hard.

Religious beliefs – As the technology does not require application of water we have areas dominated by Muslims who use water for anal cleansing. This can also affect the spreading of the dry sanitation in such areas.



So in order for proper promotion of dry sanitation in Uganda the following must be addressed for the people to appreciate more the concept of dry toilets technology in order to sustain development:

Social cultural dimension

The most important aspect to address is the social cultural values as many hold them in high esteem and believe they serve as the basis for gauging the standard of behaviour in the society. So we have to analyze them, pick what is good in the promotion and leave out what is useless.

Participatory/ Stakeholders

Participatory implementation and including all stakeholders to solve the issues of lack of awareness is very important if the promotion of the dry sanitation is to be successful in Uganda. All section of entities which are partners in development must be involved for example government, Non Government Organization, Community Based Organizations, religious leaders, local (poor) communities.

Flexibility of design option

The design of the dry sanitation to be used should be easily adopted by the local communities to be able to implement it. Should be in line with the local material that people will easily access to put up the facilities .It should also be economical for the poor people to afford.

Institutional and funding option

The design of the dry sanitation should be well done so as to attract funds from different sources like the donor community, government, mobilization from the local communities and any other, to promote the use of this technology and sustaining it.

Health aspects must be addressed

The dry sanitation should address all the factors which may render it or the community may suspect to make it unsafe for its use, promotion is to be successful. Other wise if it starts spreading disease or the community suspect it they will reject it.

Gender Issues

The promotion of dry sanitation should not leave women behind, as their contribution for this project to succeed is very important. As you know they are the backbone of the development in a home though in many cases they are left out in the development projects in the developing world.



CONCLUSION

Uganda being an agricultural country with many subsistence farmer the technology of dry sanitation should be seriously considered for adaptation to develop our production as it provides free natural fertilizers, its economical, healthy, and can be applied using the locally available materials which are accessible.