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Title of full paper: **SOLUTIONS TO CULTURAL CHALLENGES AND STIGMATIZATION ASSOCIATED WITH DRY SANITATION IN ABAKALIKI, SOUTH EASTERN NIGERIA.**

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Abstract

World Health Organization (WHO) defines sanitation as group of methods to collect human excrete and urine as well as community waste waters in a hygienic way, where human and community health is not altered. Sanitation methods aim to decrease spreading of diseases by adequate waste water, excreta and other waste treatment, proper handling of water and food and by restricting the occurrence of causes of diseases. Dry sanitation is a type of sanitation in which human waste is disposed without the use of water. This method reduces the demand on water available for use by the public either in the rural or urban locations.

Abakaliki an emerging urban city in South Eastern Nigerian, due to exposure to Western civilization joined the league of cities where it has become a norm to adopt water cistern technology as a toilet system. The city also faces same acute challenge of sustainable water supply like any other in its category due to increased cost of producing water, dilapidated water production facilities, population explosion, red-tape, bearucracy and corruption.

Despite the benefits dry sanitation technology due to low cost and option it offers as environmentally acceptable alternative, there are several challenges associated with introduction and acceptability of the technique in Nigeria. These challenges include: issues of culture and stigmatization.

Achieving a sustainable dry sanitation culture in Nigeria is attainable when the a workable solution is achieved against cultural factors and stigmatization In this paper, we are going to examine the identified challenges facing the adoption of dry sanitation option in Abakaliki South Eastern Nigeria and attempt at proffering solutions to them.

The paper will examine in details the two major terms of the topic: “Culture and Stigmatization” and outline strategies to solutions of the challenges facing dry sanitation option in Nigeria by detailing the following issues:

- Culture and Stigmatization in dry sanitation:
- “Old habits die hard”: The cultural barriers against Dry Sanitation?
- Stigma and psychological connotations of dry sanitation
- Financial and economic perspectives of dry sanitation in Nigeria
- Stakeholder mapping and engagement as effective tools for overcoming challenges against dry sanitation technology acceptability in Nigeria.
- Communications and outreach strategy as panacea to cultural barriers and stigma against dry sanitation technology.

The paper will also use case studies and comparative analogies of similar new initiatives of water and sanitation reforms of USAID Sustainable Water and Sanitation in Africa project in Abakaliki to provide solutions to dry sanitation issues in Nigeria.

Keywords: Culture, Stigma, Communications, Stakeholders

Introduction

According to estimations there are approximately 2, 6 billion people living without proper sanitation. These people have to decide on daily basis how to organize defecation without feeling

ashamed, feel of fear or direct health problems due to lack of sanitation. Some relieve themselves during the night time while others hide in the bushes for defecation. Some people even defecate into plastic bags and then throw the bags as far as they can. If people don't have access to proper toilets, they need to rely on solutions that are neither good for them nor the communities they live in, or for the environment.

World's sanitation problems cannot be solved only by building water latrines and sewerage systems. The building and maintenance costs are too high and furthermore this infrastructure cannot ensure clean environment. In a case of inadequate waste water treatment even more severe health and environmental risks than the use of bushes for defecation purposes can be created. Therefore it is necessary to develop cheap, technically simple and safe sanitation alternatives, which can be adjusted to meet the needs of different cultures and environments.. Considering the water scarcity and the high percentage of people without access to sanitation, especially in rural areas, dry latrines (Dry toilets, DT) are one good solution for this. It is also necessary to increase sanitation and hygiene education for understanding of the connections of dry sanitation to human and environment health.

Dry Sanitation

An increasing awareness worldwide of the environmental problems associated with inappropriate sanitation implementation led to the development of ecological sanitation technology otherwise called waterless toilet or dry toilet. The technology is not new but a refinement of an ancient practice. It has been promoted for environmental reasons, water conservation, recycling of nutrients to arable land, easy operation, negligible maintenance costs, dignity and convenience. It is a shift in relationship between people and nature and has been implemented successfully in many countries and regions in various stages and among communities of different socio-economic strata, religions, cultures and practices.

Dry sanitation provide hygienically safe, economical and closed-loop system to convert human excreta into nutrients to be returned to the soil, and water to be returned to the land in a safe manner. The main objectives of ecological sanitation are to reduce the health risks related to sanitation, contaminated water and waste; to prevent groundwater pollution and surface water pollution; and to reuse nutrients or energy contained within wastes.

Dry toilets, or "dry excreta management systems" are useful in all areas especially in situations where water flushed toilets or sewer-based sanitation systems and their required infrastructure are not feasible or too expensive to maintain. This system aims to save water - when there is either water scarcity, water is costly or because the user wants to save water for environmental reasons, prevent pollution of water. Dry toilets do not mix excreta with water and do not pollute groundwater and to enable safe reuse of the excreta in gardening or agriculture, after it has undergone further treatment by either drying or composting.

Abakaliki, Ebonyi State Nigeria.

Abakaliki the largest town in Ebonyi State became the capital city when the state was created in 1996. Water supply in Abakaliki areas is 15% of the population. In the rural areas access to water supply is mainly through boreholes and water schemes. Access to improved sanitation in rural areas is poor. The Ebonyi water and sewerage master plan anticipates that the state population in 2041 will require 482,000 cubic meters of water a day. An estimated minimum of 4,813 water points are required to reach the desired MDGs. The percentage of the population without improved sanitation is 81.3%. In 1994, Bucket toilet Night Soil Man" toilet system of human waste collection and disposal was banned in Ebonyi State and every house since then is required to install a water cistern. In the entire WASH policy formulation of Ebonyi State, dry sanitation was not an option despite its obvious benefits and suitability for the State.

Imperativeness of Dry Sanitation for Ababkaliki

Water in Ebonyi State of Nigeria is a scarce resource and access to improved sanitation is poor. In Ebonyi State of Nigeria about 80% of people living in rural areas and 50% of the urban population do not have access to sanitation at all and practice therefore open defecation. Therefore western

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lifestyle (waterborne sanitation) does not make sense in an area or community with very poor access to water supply like Abakaliki. In order to improve the quality of life and well-being, to promote the conservation of water resources and prevent pollution, and to stimulate economic development, it is reasonable to implement dry sanitation systems on a large scale in Abakaliki and Ebonyi State in general.

Human excreta, especially urine, are excellent fertilizers and soil amendments, and their efficacy has been proved in many countries, under a variety of climatic conditions. Dry toilet encourages returning of essential nutrients such as nitrogen, phosphorus, potassium, etc. to the lands where the consumed crops were grown and harvested. Ebonyi State is known for its soil features which promotes the production of Ebony long grain rice and yam in industrial quantities. Adoption of dry sanitation will be very useful to the the Abakaliki rice and yam farmers.

The need to adopt dry toilet technology in Ebonyi State can further be linked to the fact that it minimizes the introduction of pathogens from human excreta into the water cycle (groundwater and surface water) - a major consideration in low-lying geographies is groundwater pollution by pit latrines. In areas where the water table is high, pit latrines directly pollute the water table, potentially affecting the large numbers of people but Ecosan system promotes safe, hygienic recovery and use of nutrients (nitrogen and phosphorus), organics, trace elements, water and energy, preserves the soil fertility and improves agricultural productivity and food security. It contributes to the conservation of resources through lower water consumption, substitution of mineral fertilizer and minimization of water pollution.

Culture and Stigmatization in Dry Sanitation

The culture is a way of life of a people which to a large extent determines what is acceptable to them or nor. Deviants to such a commonly accepted way of life are marked out for stigmatization, a distinguishing mark of social disgrace. Such is the case of practicing waterless or dry sanitation to the people of Ebonyi State South East of Nigeria. The dry sanitation toilets in many ways looked similar to the "Bucket" toilet system known among the people as "Night Soil man" system which has become extinct due to government legislation. The night soil man is a person whose occupation it was to collect the contents of chamber pots (faeces) in the morning from domestic households, principally in the 18th and 19th centuries and was practiced in Abakaliki until 1994.

The bucket toilet original design did not make for separation of urine and feces so the structure allowed for quick petrification, odor, breeding of pests and flies and given to spread of sickness. The night soil men were so much stigmatized that popular satirical songs were sang for them when they are sighted around the neighborhood even their extended and nuclear families. In Ibo language, the Night Soil Man is called "Onye Oburu Nsi" meaning the man who carry shit. The popular local song for the people who worked with the Conservancy Service Companies then better explains the stigma attached to it. The song reads: "Onye oburu nsi kedu ihe ineri? Obu nsi, obu moi moi oloko". Translated it reads: "Night soil man what are you eating? I am eating human faeces. I am eating moi moi (beans pudding) that is thick and heavy." The stigma shown to the night soil men were reprised in form of strikes and protests. It was often recorded that the aggrieved night soil men will dump the buckets of "moi moi oloko" at the door mouth of indicted households or living quarters and will require extra fees as compensations before they are removed. No toilet system that share some resemblances with "night soil man" toilet will gain easy acceptance among the people of Ebonyi State in Nigeria.

Night soil is a euphemism for human feces collected at night from cesspools, privies and sometimes used as a fertilizer. Night soil is produced as a result of a waste management system in areas without community infrastructure such as a sewage treatment facility, or individual septic disposal. In this system of waste management, the human feces are collected in solid form. Faeces are excreted into a container or bucket, and are sometimes collected in the container with urine and

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other waste. The excrement in the pail was often covered with earth/dirt/soil. This may have contributed to the "soil" part of the term "night soil." Often the deposition or excretion occurs within the residence, such as in a shop house faced with overpopulation. This system is used in isolated rural areas and is important in developing nations or in areas that lack the adequate infrastructure to have running water. The material is collected for temporary storage and is disposed of depending on local custom.

Social stigma is the extreme disapproval of (or discontent with) a person or group on socially characteristic grounds that are perceived, and serve to distinguish them, from other members of a society. Stigma may then be affixed to such a person, by the greater society, who differs from their cultural norms. Social stigma can result from the perception of a social or cultural practice. Attributes associated with social stigma often vary depending on the geopolitical and corresponding sociopolitical contexts employed by society, in different parts of the world. Culture in itself have been described or defined differently, but the universal agreement is seen from the fact that it is the behaviors and beliefs characteristic of a particular social, ethnic, or age group over time in history of their existence. Culture is transferable, adaptable, adoptable and changeable. It is often seen from the behavioral and attitudinal functions of the person or group. It is the totality of the inherited ideas, beliefs, values, and knowledge, which constitute the shared bases of social action or the total range of activities and ideas of a group of people with shared traditions, which are transmitted and reinforced by members of the group. It is also a particular civilization at a particular period. Shortly before the independence of Nigeria in 1960, the colonial masters have taught the people that it has become a form of civilization to follow the foreign life styles. These include the adoption of water cistern toilets as a way of life. It soon translated and is notched and etched into the psyche of ordinary man in the street that that's the only way to live a better life.

Nigeria is classified as partly developed and partly undeveloped. It is an unequal economy with large discrepancies in wealth between rich and poor. Some of its inhabitants have a high level of service; others have very little at all. The combination of these factors has brought about resistance to the use of on-site sanitation in some parts of the country like Ebonyi. The lack of enthusiasm to embrace dry toilet in these areas centered on a perception that the use of on-site sanitation implies "second class"; this is a real issue of stigmatization. People feel that water cistern toilets are urbane and a status symbol of first class citizen. Construction of dry toilets in private homes with manual or machine evacuation of excreta and urine is messy and unattractive.

Again, there is a perception that there is plenty of money in the country for a high level of service. This is one of the major issues in Nigeria. With her oil dollar and enormous endowment with natural resources, Nigeria can be said to be a rich country. Due to high level of corruption and unimpressive economic management by its establishments, Nigeria remains and is classified as under-developed country. One of the earliest Nigerian leader was quoted as saying that "money is not our problem, but how to spend it". Such negative or erroneous impression etched its way into the minds of many Nigerians and plays out in all perspectives of their lives including adaptation of cheap and sustainable technologies as dry toilet systems which they easily classify as second class.

There is a disbelief that waterborne sewerage costs as much as it does. This pervading perception is one of the greatest challenge of accepting alternative sanitation technology such as dry toilet system. It has become increasingly hard for the people to believe that waterborne sewerage cost much more in the long run both in tangible and intangible terms of quantification. The recycling of urine and excreta in environmentally-friendly manner and means such as agriculture cannot be quantified in terms of cost of building and maintaining waterborne sewerage but in much more beneficial way dry toilet or Ecosan technology contributes to the sustainability and conservation of life on earth. There is also a perception that waterborne sewerage is a robust system, whereas it is in fact a fragile system that is sensitive to misuse.

Again, there is a perception that on-site sanitation is unhealthy, that it does not work as well as full waterborne sewerage, and will cause disease and concern that on-site sanitation may pollute the country's scarce water resources exist as well and that the sanitation sector must continue to innovate low-cost facilities for people with different needs, from different climates, and with different customs. Finally, a perception that it is wrong to choose one or two technologies and push them as "the solution" is working against dry toilet technology acceptability.

“Old habits die hard”: The cultural barriers against Dry Sanitation?

The safety of Ecosan systems in terms of pathogen destruction during the various treatment processes is a continuous topic of debate between proponents and opponents of Ecosan systems. However, the WHO Guidelines on Re-use with its multiple barrier concept, has gone a long way in establishing a common framework for safe re-use. Nevertheless, the question remains whether Dry toilet systems can ever be scaled up to reach millions of people and how they can be made sufficiently safe to operate. The initial excitement in the early 2000s by the pioneers has changed into a realization that changing attitudes and behaviors in sanitation takes a lot of patience.

The up-scaling and delivering of sanitation in many cases in the form of VIPs and its derivatives, as well as urine diversion technology are beginning to pose many technical challenges. The principles on which they have been designed are not always being observed in practice. As a result, some systems are filling up much faster than expected. Most of the people who would otherwise have accepted the technology and possibly adapt and adopt it are scared stiff from what they have learnt from wrong practices. These factors have led to many preferring to stick to conventional water cistern and waterborne systems. The processes of constructing dry toilets and ensuring that the popularly acclaimed modelled template are followed strictly have posed a kind of barrier. Making sure that the standard of depth of pit, systems of evacuation and maintenance to avoid unpleasant odor and health hazard are followed has become a little cumbersome.

Among the people of South Eastern Nigeria, there is a pervading cultural belief of superiority complex in their entire life style. You hear such words as: “Nwa onye Igbo adighi ebu nsi” which translates as: “No man or woman of Igbo extraction can do the work of night soil man”. It is even a cultural taboo among the people of South Eastern Nigeria to even discuss human excreta and certain human anatomical related issues in the public space. It is also considered a taboo to relate with people who have chosen vocations related to human excreta and related field. A clear related case is the stigma and discrimination shown to women in their menstrual period. Aside from the health risk, handling of excreta, especially faeces, remains a social taboo in Igbo communities. If ways can be found to treat the faeces inside the vault such that the end product does not resemble the original material any more, it may be possible to increase the general perception and acceptance of the technology. This treatment should also include the easy disposal of anal cleansing material.

The Igbo communities' culture of distinguishing between *ogbenye* or *onye ubiam* (the poor) and *nnukwu mmadu* or *ogaranya* (the rich) works against the adaptation of dry sanitation in the region. Among the people, anyone who adopts dry toilet technology belongs to poor and second class group.

Stigma and Psychological Connotations Attached to dry sanitation in Nigeria.

In developing countries like Nigeria where there is low interest in the technology, better quality pedestals need to be introduced and actively marketed. If dry toilet is going to be promoted as a superior sanitation technology, then superior fittings should be available. Good quality ceramic products will help create the perception of dry toilet as an upmarket system. This is of particular importance in Nigeria, where dry systems are regarded as second class. If this is done the psychological stigma attached to dry toilet system will begin to dwindle. If it assumed that dry toilet systems are associated with second class and low standard of living, then scaling-up designs of Ecosan systems to be acceptable and compete with water cistern systems is recommended.

Implementation practices for ecosan projects presently suffer from the same shortcomings as conventional sanitation projects, in that the approaches used, coordination between implementing

agencies, skills building, training, hygiene awareness, etc are often not given sufficient attention. The operation and maintenance of urine-diversion toilets, especially, is a crucial issue, and it is thus essential that proper training programmes be provided in order to ensure project sustainability. Adequate education and hygiene awareness campaigns in communities receiving ecosan toilets are therefore a prerequisite for the maintenance of public health.

In most developing countries of the world the most commonly used sanitation technologies are waterborne sewerage at one end of the scale and pit toilets at the other. There are some intermediate technologies, such as septic tanks, but it is a fact that everybody aspires to the top-of-the-range article. This is so despite implications such as high water usage, high operation and maintenance costs, and the advanced technology and institutional capacity required for removal, treatment and disposal of the excreta. Ventilated improved pit (VIP) toilets have unfortunately also acquired the stigma of being a “poor man’s solution” to the sanitation problem, which has tarnished the image of this basically sound technology.

Financial and economic perspectives of dry sanitation in Nigeria

“Conventional” sanitation options may be suited to certain situations, but in other circumstances where both water and space are scarce there is a clear need for permanent, emptiable toilets which do not require water. Such circumstances are becoming increasingly common. When limits are placed on other variables, for example money and the depth of the water table, the circumstances where options such as sewers and pit toilets are viable become fewer, while the need for permanent, emptiable, waterless toilets grows. Even if the sanitation crisis can be communicated to and understood by more people, the need to find sustainable alternatives to conventional approaches for both developed and developing countries remains. Shorter lifespans pits mean an increase in maintenance costs should the dislodging of pits be required. This is expensive and becomes very difficult if the pits and superstructures are not designed to allow for dislodging. Again, should dislodging prove difficult, then the other option is to build new VIPs, which is expensive and contributes to the sanitation backlog. The financial implication of dry toilet system remains a very big factor in the acceptability or otherwise of the technology in Nigeria. In 2004 the eThekweni Municipality in South Africa, study has shown that there is cost involvement of emptying an Ecosan toilet pit. Though the cost of emptying VIP pits varies according to method used, pit contents and accessibility. In fact, the most cost effective option was found to be the use of labor where the waste material in the pits was removed manually using buckets and spades. The waste is then loaded into 100 liter steel drums which are manually moved on trolleys to the nearest road for removal from site. What is commonly agreed is that there is cost involvement in the emptying of dry toilet pit.

The dry toilet approach has been criticized for being overly focused on reuse in agriculture, whilst neglecting some of the other criteria for sustainable sanitation. In fact, Ecosan systems can be “unsustainable” for example if there is too little user acceptance or if the costs of the system are too high for a given target group of users, making the system financially unsustainable in the longer term. Some proponents of Ecosan have been criticized as being too dogmatic, with an over-emphasis on environmental resource protection rather than a focus on public health protection and provision of sanitation at a very low cost (for example UDDTs, which some people call “Ecosan toilets” may be more expensive to build than pit latrines, even if in the longer term they are cheaper to maintain).

Stakeholder mapping and engagement as effective tools for overcoming challenges against dry sanitation technology acceptability in Nigeria.

Stakeholder mapping is a strategic delineation of active stakeholders that are directly or indirectly involved at all levels in an activity. The stakeholders could either be classified as government actors and non-government actors. It could also mean a strategic communication approach to citizen’s participation in governance through extensive and constructive dialogue. It recognizes the priceless impute of the citizen’s, civil society organizations, press, professionals and government officials in sanitation services delivery. It is a bold attempt to take development

policies and actions to the public space thereby making the policies translate into tangible benefits to the citizens. Stakeholder mapping and engagement will bring facts to the fore in the most simplest and intelligent form to elicit participation by all stakeholders especially as they concern the adoption of dry toilet technology in Nigeria.

It is the process of identifying the individuals or groups that are likely to affect or be affected by a proposed action, and sorting them according to their impact on the action and the impact the action will have on them. This information is used to assess how the interests of those stakeholders should be addressed in a project plan, policy, program, or other action. Stakeholder analysis is a key part of stakeholder management. A stakeholder analysis of an issue consists of weighing and balancing all of the competing demands on an issue by each of those who have a claim on it, in order to arrive at obligation in a particular case. A stakeholder analysis does not preclude the interests of the stakeholders overriding the interests of the other stakeholders affected, but it ensures that all affected will be considered.

A stakeholders mapping and engagement designed to promote the adoption of dry sanitation technology must establish collaboration between the state Ebonyi State sanitation sector institutions, development partners and the civil society groups with mandates in sanitation and water services delivery. It should contain clearly the interest of all vulnerable groups: women, children etc. The stakeholder mapping initiative must be designed to promote citizens' participation in sanitation and water projects and particularly defend the interests of private groups and communities in the sanitation and water utility SDAs through continuous citizen's participation on service, performance, and future improvements. The stakeholder mapping must be designed to strengthen service-oriented relations between the groups and the sanitation utilities, ensure that initiators of the Ecosan toilet technology have appropriate knowledge on the people's needs and priorities, improve performance and transparency, and adapt to changing preferences of the people and finally build knowledge and capacity of the people and initiators in key sanitation and water provision issues.

Communications and outreach strategy as panacea to cultural barriers and stigma against dry sanitation technology.

To gain a competitive advantage for dry sanitation, State Environmental Protection Agencies must position dry toilet technology to the people in ways that revolve around its universal environmental benefits but on their economic advantages. This can be done by referencing to dry toilet's features, benefits and competition it poses to waterborne sanitation system. It must push that dry sanitation is safe, affordable, environmental friendly and good for agricultural development.

The communications and outreach strategy for dry toilet system has to be developed to meet the sanitation needs of the people living in communities with poor access to water supply. It must clearly show that it offers safe toilet and sanitation system at low cost and provides convenience of usage and accessibility to its users and that it has been tested and well adapted to all environments with very additional benefits to farmers with a focus on meeting the internationally acceptable sanitation standard. The messages should that users of dry toilet system are healthier physically and psychological, beautiful and happy people and that dry sanitation is setting the pace in affordable and environmentally friendly sanitation. Most importantly, the messages should clearly tell the people that increase acceptability and adaptability of the dry sanitation technology will make it easier to scale-up its production and in the long term makes it the best people friendly sanitation option.

The communications and outreach strategy for dry sanitation need to achieve positive behavioral change of stakeholders toward dry toilet. This is to increase the percentage of households in Abakaliki who associate specific features benefits or advantages with dry sanitation system and increase the number of households who prefer dry toilet systems to waterborne toilets. The strategy need to achieve decrease in the percentage of households who are non-users of dry toilet system in Abakaliki and increase the percentage of customers and other stakeholders who carried

out positive word of mouth talking in favor of dry toilet system. It will also increase the percentage of households who are willing to install Ecosan toilets in their houses and improve the number of people with positive perception of the qualities of dry toilet and increase awareness of stakeholders on the environmental benefits of dry toilet.

Conclusion

Despite the obvious merits of dry sanitation, there still exist numerous challenges to its acceptability in certain parts of Africa. One of the major challenges of ecosan technology is to find ways of reducing the health risks attached to handling of faeces. Innovative solutions need to be found. Improved building methods and materials that encourage higher temperatures in the fecal piles should be developed. Environmentally friendly additives that enhance pathogen destruction could, if suitably priced and promoted, find a ready market in areas where electrification has replaced the need for cooking fires, or in more urbanized communities where ash may not be readily available. In poor areas, especially, most of the operational difficulties are concentrated at the user end of the systems, where personal cleaning materials other than proper toilet tissue paper are used, and also due to a lack of education on the proper use of cistern flush toilets.

Bibliography:

1. Ebonyi State Water And Sanitation Status Overview Report
USAID Sustainable Water and Sanitation in Africa SUWASA | Nigeria, September, 2013.
2. Report to the Water Research Commission by LM Austin, LC Duncker, GN Matsebe
CSIR Building and Construction Technology MC Phasha, TE Cloete
University of Pretoria WRC Report No: TT 246/05 JUNE 2005
3. Challenges with up-scaling dry sanitation technologies J. N. Bhagwan, D. Still, C. Buckley and K. Foxon. 2008 *Water Science & Technology—WST* | 58.1 | 2008, IWA Publishing, South Africa .
4. Behavioral indicators of household decision making and demand for sanitation and potential gains from social marketing in Ghana Marion W. Jenkins, and Beth Scott, a
Department of Civil and Environmental Engineering, University of California Davis, One Shields Avenue, Davis, CA 95616, USA and London School of Hygiene and Tropical Medicine, UK 17 April 2007

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