WIN-SA
WATER INFORMATION NETWORK
- SOUTH AFRICA -

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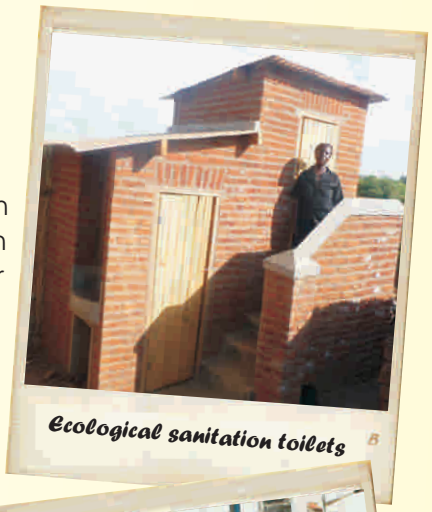
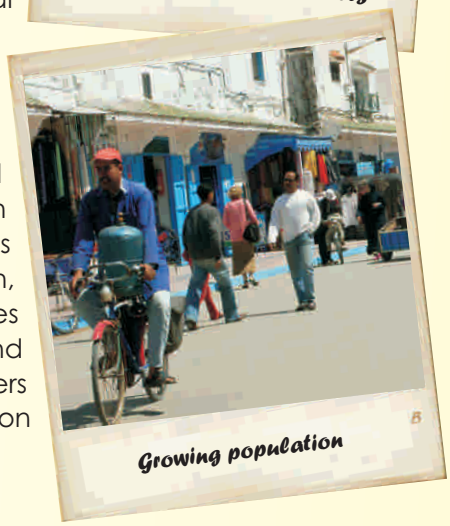
September 2011

USE OF ECOSAN PRODUCTS IN MALAWI

Experiences from Users in Peri-Urban Areas

1 Introduction


Ecological sanitation toilets


Growing population

Ecological sanitation toilets are almost new phenomenon in Malawi. The majority of Malawians use pit latrines and flush toilets. While the use of pit latrines is still being promoted, their sustainability in the face of limited space due to an exploding population and a high urbanisation rate, estimated at 5.22 percent (UN-Habitat, 2010), is gloomy. Thus ecological sanitation toilets have become a viable alternative because they can be emptied and waste used for agricultural purposes.

In Malawi, marketing of ecological sanitation toilets has largely exploited the relevance of their products to subsistence farming. Community mobilisation activities and messages aimed at promoting adoption and use of Ecosan toilets accentuate the use of products and view of waste as a source of income. So effective has this approach been, that as more users are coming forward with their testimonies on how manure has improved the yields in their fields and ultimately their food sufficiency at family level, many others are getting convinced to construct the ecological sanitation toilets.

This fieldnote documents the use of Ecosan products in Malawi. Apart from focusing on the motivations of the users for adopting the Ecosan toilets, it also sheds some light on the orientation of the users towards the use at the level of awareness and adoption of the Ecosan toilets. In addition, it chronicles the lives of the users, i.e., how the use of the products has impacted on their socio-economic wellbeing, their experiences as well as bottlenecks in terms of perceptions of others on the use of the ecological sanitation products.

The case studies presented in this fieldnote are drawn from findings on the use of ecological sanitation products in three cities of Malawi, namely, Lilongwe, Mzuzu and Blantyre. The Centre for Community Organisation and Development (CCODE) in alliance with the Malawi Homeless People's Federation has, since 2008, been supporting communities in these cities, exploring sustainable and affordable sanitation loans and offering loans for construction of ecological sanitation toilets. The data collection process used structured questionnaires for focus group discussions, field visits and in depth interviews with key informants. Through the exercise a number of lessons have been learnt on the use of Ecosan products.

2 Socio-Economic, Sanitation Situation, Policy and Coordination In Malawi

Malawi is a predominantly agricultural nation. Agriculture accounts almost 80 percent of the county's GDP. Poverty levels are high and it is ranked as one of the least developed countries on the Human Development Index that measures the living standards of people in a nation.

As one way of improving the food situation in the country, the government introduced a fertiliser subsidy programme a few years ago, so that poor subsistence farmers could afford the fertilisers and therefore improve their agricultural output. However, as much as this programme has improved the food situation, the majority of Malawians do not have access to the subsidised fertilisers. In addition, there are hitches that surround access to the subsidised fertilisers programme. Reportedly, some poor people get the coupons but fail to purchase the commodity[1].

Map of Malawi

As one of the fastest urbanising countries in the world, Malawi faces numerous challenges in the area of sanitation in both towns and cities. The majority of Malawians live in informal settlements where sanitation is awfully poor. For example, the Lilongwe City Development Strategy (2009) reports that 76 percent of the city's population live in informal settlements characterised by lack of access to sanitation and potable water.

While the government has put instruments in place to improve such conditions, the performance is dismal. In terms of sanitation, the Ministry of Irrigation and Water Development is the policy holder and the directorate of sanitation has been critical in addressing issues of sanitation. For example, the country developed a new National Sanitation Policy (NSP) in 2008, which recognises the need to achieve universal access to improved sanitation and safe hygiene practices. In addition, the NSP is taken as a path that the country must follow towards achieving Goal 7c of the Millennium Development Goals: to halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation.

Lilongwe - new city

http://www.malawiproject.org/about-malawi/geography/districts-cities-villages/cities/

[1]http://www.nationmw.net/index.php?option=com_content&view=article&id=18217:mulli-nyiombo-caused-subsidy-delay&catid=62:national-news&Itemid=59 A

However, recent assessments show that the country has been off-track in its efforts to address the goal as many people continue to live in poor sanitary conditions. This has called for more coordinated efforts among players in the sanitation sector and other stakeholders in the country.

Besides the Millennium Development Goals, the overarching policy document in Malawi is the Malawi Growth and Development Strategy (MGDS). The MGDS spells out the development direction of the country in five year terms, with focus on specific areas. Sanitation falls among the priorities in the MGDS. The strategy has targets for each development sector and cost activities and outputs. The MDGS is meant to set priorities for the country and act as benchmark for assessment of performance of the various sectors.

To ensure coordination in the implementation of the strategy, the Ministry of Economic Planning and Development Cooperation, which is a development planning entity, is anchoring the policy as well as strategic frameworks to ensure achievement of medium and long term goals of the country. In this vein, there has been the development of a Sector Wide Approach (SWAP) to bring stakeholders in key sectors together for proper coordination of the sector programmes and resources.

The Water SWAP, where sanitation falls, was launched in December 2008. It has sector working groups as the highest structures and under them there are thematic groups that include the sanitation Thematic Working Group (TWG). The sanitation TWG has representation from all the stakeholders including key government ministries and NGOs working on the ground, e.g. Plan Malawi, Water Aid, UNICEF, CCODE, to mention but a few. This approach has ensured coordination, efficiency and information sharing that has improving delivery in the sector.

3 Ecological sanitation: A brief Introduction

Ecological sanitation (Ecosan) might be a new concept in some countries, but its underlying principles are centuries old. Ecosan views human waste as nutrients that can be recycled for use in agriculture. The Ecosan toilets that are constructed in Malawi have a urinary diversion system that ensures that faeces and urine go separate ways and therefore do not mix. The idea is that the urine can be used as a form of fertiliser for crops and plants.

On the other hand, the faeces are mixed with ash, dry soil and sometimes leaves, and are made into some form of compost manure. When an individual has visited an Ecosan toilet, they are supposed to apply ash and dry soil after they have relieved themselves. The ash and the dry soil are used as absorbents, so called bulking agents to lower the water content, improve aeration and increase carbon content and therefore improve the composting process[2].

The Ecosan toilets have two vaults/ chambers, with each having a hole. One hole is used at a time until its vault is full. When the vault is full, it is closed for the faecal matter to decompose. Decomposition periods may vary depending on environmental conditions; however, a period of six months is often regarded enough for optimum decomposing of the faecal matter. This process is also important in the elimination of pathogens that are present in faeces. At this time, the other hole is used. When it is full, it is closed and by this time the faecal matter in the first chamber is fully decomposed and it taken out of the vault. This means that with Ecosan,

[2]http://www.netssaftutorial.com/fileadmin/DATA_CD/04_Step4/Composting_toilets__general_descriptions.pdf

unlike pit latrines, families can always change from one vault to another instead of having to dig more pits when the latrines are full.

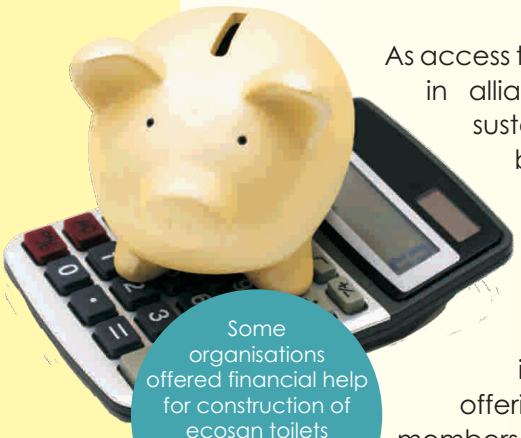
When the faecal matter has fully decomposed, it is then regarded as compost that can be used for agricultural purposes. In this regard, Ecosan is described as a closed-loop technology as it ensures that nutrients are not wasted in the nutrient cycle. Thus, for example, the human being will eat maize that has been fertilised by compost manure; then this will be taken to the toilet where is decomposes and used on the maize crop as manure.

Conceptually, Ecosan has the following objectives[3]:

- To reduce the health risks related to sanitation
- To prevent the pollution of surface and ground water
- To improve soil fertility
- To optimise the management of nutrients and water resources.

These objectives of ecological sanitation are at the centre of promotion strategies in Malawi. First, as most Malawians depend on agriculture, Ecosan is regarded as one way of alleviating problems that people face in getting inorganic fertilisers to use in their fields. In the Malawian context, much as there is the fertiliser subsidy programme, its reach is limited due to resource constraints, and of late there has been increase in calls for an exit strategy of the programme. As much as there is political will to continue with the programme, its sustainability is at stake. Thus technologies, such as Ecosan, that reduce reliance on inorganic fertilisers, are not just welcome but also urgently needed. Furthermore, since the ecosan products, particularly the compost, have the ability to improve the soil structure and hold moisture content, they are comparatively better off than inorganic fertilisers. Besides that, as subsistence agriculture in Southern Africa is mostly linked to women, the easiness with which they can access farm inputs like fertilisers or their alternatives is becoming increasingly becoming important in the economic emancipation of women. Finally, the Ecosan toilets provide a sustainable way of managing available space in a growing and highly urbanising southern Africa.

4 Project background: A Case for Ecological Sanitation Toilets in Malawi



Some organisations offered financial help for construction of ecosan toilets to interested community members

As access to sanitation is one of the key Millennium Development Goals, CCODE in alliance with the Federation has been exploring affordable and sustainable sanitation technologies for the urban poor. The alliance has been conducting community-to community learning visits in order to understand, embrace and adapt what is working for other communities.

It is through this community exploration that the alliance learnt about ecological sanitation in 2008. Since then, CCODE, through its urban poor revolving fund called the Mchenga Fund, has been offering loans for construction of ecosan toilets to interested community members. A number of development partners such as WaterAid, Homeless international, African Development Bank, Slum Dwellers International, WASTE, UN-Habitat and Global Water Challenge, have provided capital assistance to

[3]According to ^ International Water Association (2003). "10 Recommendations for Action". International Ecosan Symposium. Lübeck, Germany: Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ).

increase access to these Ecosan toilets. Besides that, the alliance has trained masons in the construction of the toilets. These activities are part of the organisation's water and sanitation programme's broader goal of facilitating access to improved, cost effective and sustainable sanitation.

Ecosan toilets

- space rationalisation
- permanency
- cost effectiveness
- economic value
- compost used for agricultural purposes

Since 2008, over 1,000 Ecosan toilets have been constructed, with more still being constructed under different projects anchored by the CCODE water and sanitation programme. As way of marketing, promotion of these toilets has focused on space rationalisation, permanency, cost effectiveness and their economic value that comes as a result of the compost that is used for agricultural purposes. As much as the diffusion of the Ecosan toilets in Malawi has been a success story, as seen from the increasing demand, and testimonies from adopters using the Ecosan products, there has been a huge challenge attached to the affordability of a toilet unit, estimated at around MK 35,000. This has been worsened by fluctuations in the prices of building materials that have pushed the unit cost upwards. For example, in January 2010, the unit cost was MK 20,000 but in December the same year, the cost of materials had pushed the unit cost to MK 30,000 and in January 2011, MK 35, 000. However, to reduce the costs beneficiaries are encouraged to provide their own materials, such as sand and bricks. In addition, there are perceptual problems in terms of use of the toilets. Some users find it more demanding to add the bulking agents (sand and ash) after use though training on management and monitoring are addressing this challenge.

5

CCODE Approaches to Training of Adopters

The general practice for the CCODE and the Malawi Homeless People's Federation in diffusing the Ecosan innovation is to train the new adopters on use. Community mobilisation teams that the alliance has put in place are responsible for creating awareness as well as training the new users on management of the toilets and the use of the products. Besides that, the CCODE sanitation programme, hugely focuses on Ecosan toilets and uses community leaders as entry points in the creation of awareness and favourable attitudes towards the adoption of Ecosan toilets. As the community leaders are the focal point, CCODE and the federation trains them in the management of the toilets and the use of the products as well.

The training on management of the toilets dwells on the urine diversion system, the application of ash and dry soil, how the toilet should be cleaned, and ensuring that water does not get into the hole.

In terms of the use, the training covers the following major areas: general characteristics and composition of urine and faeces, handling of the waste, the nature of manure and the relative advantage over inorganic fertilisers, such as ability to hold moisture and when and how the urine and the manure can be used on crops and other plants.

To further convince the adopters, the mobilisation team sometimes walks around communities with samples of the manure and maize cobs grown using the Ecosan products. The community mobilisation team uses the maize crops and the manure samples in its community exhibitions and drama. The adopters are told that if they follow the instructions, then they will have a good crop.

6 Considerations for adopting Ecosan toilets

When they were first introduced, the primary considerations for adoption of ecological sanitation toilets were their permanency and the saving of space. Optimum utilisation of space on located plots in the face of rapid population growth and urbanisation remains a critical consideration. Thus while the marketing strategy has hugely focused on branding the Ecosan toilets as "zimbudzi zamanyowa" meaning composting toilets, the major consideration in adoption has been space.

However, when some of the users harvested the manure from their toilets, there were often doubts in terms of appeal and usability. Some participants said that the general feeling was that people would end up harvesting faecal matter as opposed to manure that can be handled.

> *"When it was time to harvest the manure, I was doubtful, I thought I was going to see excreta and I was going to feel ashamed because I was one of the first adopters. Much as I was telling other families that the manure looks like soil, and it does not smell, this was all based on what I had heard and not seen and had my doubts as well. So when I knew that I was going to take out the manure after six months of decomposition, I made sure that I did it all alone without anybody else around. I wanted to see the shit myself before my neighbours or I would leave it as a closed chapter. But when I took out the slab, my doubts were cast away! What I saw instead were lumps of soil and there was no odour."*
>
> *- Female Participant in Lilongwe*

As more and more users harvest the compost from their toilets and use them in their fields, considerations have begun to shift towards focus on manure. Users who have used the compost in their fields have reported higher yields compared to the use of inorganic fertilisers. The users also cite economic implications of the use as they save quite substantial amounts of money on fertilisers, with organic fertilisers prices ranging from MK4,500 to MK 5,500, and time they would have spent on queues trying to access coupons for subsidised fertilisers.

Users who have used the compost in their fields have reported higher yields compared to the use of inorganic fertilisers.

Usage of the compost manure has excited demand for the toilets based on what communities have seen from the primary adopters in terms of improvement in their crop yields and food sufficiency at family level. Despite this improvement, there are still some perceptions that are affecting the use of the Ecosan products.

Perceptions and Use

The general perceptions on the use of Ecosan products border on a cultural orientation that handling human waste is a taboo. Besides this taboo, some claim that because the toilets are used by different people with different ailments, there is an unfounded belief that even when the compost has fully decomposed and it is odourless, there might be some pathogens particularly from family members who are HIV positive.

> *"People say that because Aids is incurable, then the faecal matter from those infected should have numerous pathogens that cannot die as a result of the decomposition process and if you use such compost in your field, those pathogens will end up in the food crops and anyone who eats them..."*
> *Female Participant, Blantyre*

Some of these perceptions are not so deeply rooted and can easily be dealt with by more civic education and community-to-community learning. However, the unfounded beliefs connecting the un-usability of the manure and people living with Aids has serious connotations on the adoption of the Ecosan toilets, its subsequent users and the use of its products. Such claims imply that if one is to make compost, then they must exercise regulation on the nature and health of the users.

Meanwhile, continued the use of the Ecosan products on food crops such as maize and the success stories reported so far, is gradually making those claims irrelevant.

> *"When we first started using the compost in our garden, people used to say a lot of things like (balyenge busu- meaning they will be eating shit...). But we did not give up. Some users used to come to us when their compost had decomposed and asked us to empty their vaults. They would say, 'your things are ready come and get them.' So we would take our sacks, empty their vaults pack them in the sacks and take them to the field. Interestingly, our maize is usually healthy and they call it 'shit maize'. ..Then the maize was mature and we started selling the green maize to vendors who roast maize by the road sides while we kept some for our food. At first, our neighbours could not accept a green maize gift from us, they would reject it by saying there was no way they could knowingly eat shit. But things have changed, the more maize we are growing the more they are realising that they are lagging behind and some can accept the green maize gifts whilst others have stopped calling us to collect the compost from their vaults, they use it in their field too."*
> *– Key informant, Mchenga Utuwa Mzuzu.*

Much as there are these perceptions on the use of Ecosan products, the anecdotal evidence coming from the successful users, though at an almost experimental level, is casting off the misconceptions and increasing interest to the use the products. Interestingly, as publicity grows on the use of Ecosan products, the new generation of adopters is being wooed by the economic benefits of the toilets apart from the health and demographic factors.

> *"...I am very much motivated to construct this toilet because I am a farmer. Fertilisers are getting expensive these days and I think from what I have seen we have fertilisers running in our bodies, so this toilet will help me collect those fertilisers and I will not need to buy them anymore..."*
> *Male Interviewee in Lilongwe*[4]

Techniques in using 'shit' and urine in the field

In 2009, CCODE with technical expertise from Bunda college of Agriculture carried out on the effect of urine and compost on maize production. The study reported higher yields from the plots where urine and compost had been used than from plots where inorganic fertilisers had been used. Apart from allowing lab tests on the presence of pathogens in the compost, the study helped to set records on the methods of application as well as the quantities that can be used in maize production. In terms of modes of application, a 50 grams bowl was used to apply the humanure (manure from human faecal matter) at a planting station, based on lab tests on the nutritive content of the humanure.

According to the study, once the humanure was applied to the station, a twig was transfixed for easy location and planting was done two weeks after pouring the humanure to the planting station and covering with soil. The two weeks waiting period was justified for humanure that has decomposed for a period of 6 months. The reasoning was that the two weeks allowed for the total elimination of pathogens as well as pests that would end up destroying the seeds. However, for humanure that has decomposed for up to eight months, the waiting period was not necessary and planting could be done on the same day because of the longer period of degradation that allowed for total elimination of pests. Urine was then applied when the crops were knee high.

As the techniques used in the study were aligned to what is scientifically right, most of the families are being encouraged to follow these methods and techniques. Though this is the case, there are noticeable differences in the use techniques of both the urine and humanure from Ecosan toilets. These the use techniques are very much matters of common-sense to the communities, as individuals apply the compost based on a non-established approach that is replicated across the population. In this respect, the differences are expected. However, there is agreement in terms of the nutritive value of each product as it relates to the stage of growth of the crops. The striking similarities in terms of application of urine and decomposed faecal matter to maize crops is that the former is used when the maize is knee high with the later being used at the earliest stage to aid growth as is the case with such inorganic fertilisers as 23:21:0+4s.

Whereas there is conformity in terms of what stage urine or faecal matter should be used, there are variations in terms of quantity and method. The participants often disagreed on the right method of application and quantity in absence of clear instructions and common sense mattered more than being systematic.

[4]According to an interview with an applicant for a sanitation loan at CCODE offices in Lilongwe, CCODE manages the Mchenga fund that offers loans for construction of ecosan toilets.

There were users who said that they mix the soil with the compost when they are preparing the field for planting and ensured that at least three days elapse before they can plant. This group of users used zero-tillage method, where there are only planting stations with no ridges. The other users said they make ridges and apply the compost using side dressing method on the planting stations.

Users also said that they apply urine when the maize is knee high. Again, there were differences in terms of the method of application. Some said they apply the urine directly to the plant station whilst others said that they make a hole between planting stations where they apply the urine. The latter group reasoned that, "urine is very strong and when you apply it directly to the plant it gets scorched. However, the users also said that they dilute the urine with water to neutralise it.

In terms of quantity of the applied compost, the participants used various utensils for quantity. The volumes of those utensils like cups, jugs, mugs and bowls ranged from 50 to 500 grams.

Besides the quantities and modes of application of the urine and compost, there were also variances in terms of the amount of ash and soil one applies when they have used the toilet, frequency of application and the composition of the mixture. This in some way affected the quality of the compost, its nutritive value for the plants and ultimately the yield of the crops. Thus there is need to provide the users with the right methods, and quantities rather than relying on trial and error methods. However this does not mean that the current methods are not working except that systematisation can further enhance the yields.

> *"In my case I did not hear how to use the manure from anybody...I just used my common sense. Of course at first I made a mistake, I applied the manure to the field and planted immediately and the maize got burnt because the manure was too strong. So i decided to change. I apply the manure and wait for some three weeks before I plan and I ensure that it well mixed with the soil from the ridges..."*
>
> *- Female Participant, Lilongwe.*

6 Women and Use of Ecosan products

Women are responsible for basic household food security in many countries in the world[6]. In Malawi women take a big stake in subsistence farming and this is also true for the use of Ecosan products.

As farming is somewhat a predominantly women's venture, it means that they largely bear the burden of taking care of the field as well as looking for fertilisers. Ironically, studies show that the majority of the women in the country have limited capacity in terms of earning an income to sustain their farming activities.

"As women we are responsible for the availability of most of the things including availability of food at home. So it has been my duty to look for fertilisers to apply at the field and this has been a challenge to me. The cost fertilisers have been going up and I do not have any other sources of income apart from farming.

[6]Besides the maize, the humanure is used on plants like flowers and trees Richert A. et al, 2010

My husband's job is also seasonal and there are children to send to school who need fees. So every farming season was a challenge to me. I had to think where and how to get fertilisers. Then I heard about these toilets, I constructed one and we harvested our manure....we were late because it was past the rainy season and we couldn't use the manure.... We waited until the next season and applied the manure with the urine I collected in gallons and the harvest was good. Since then I do not have to buy fertilisers anymore. At least I cannot worry about where I will get the fertilisers when the farming season is approaching.... As we speak I have over 40, bags of maize weighing 50 kgs each in my house."- Female Key informant, Mtandile, Lilongwe.

the use of Ecosan products is not just of economic benefit to the women but can also emancipate them from the constraints they face in trying to fend for their families. With 4-6 bags of humanure in 50kg hessian sacks per harvest, the woman is relieved from the task of having to get MK 4,500 to MK5,500 or to be on a queue for a number of hours for a 50kg bag of subsidised fertiliser at MK800 per bag.

Economy in Use of Ecosan Products

The use of Ecosan products for farming has improved the economic wellbeing of the families that are involved in the exercise. Besides foregoing the fertiliser expenses, there are households that sell the Ecosan products to others. The price ranges for a bag of Ecosan products; humanure is MK 100- MK 500. However, there is need to re-assess the pricing systems as this might be on the lowest side. Besides selling, families such as those of the informants quoted above use the maize for food. According to the government of Malawi, an adult needs up to 6 bags of maize per year for food, whereas a child needs 3 bags (according to the law, a child refers to anyone below 16 years old.).

Thus roughly, the 40 bags that a family harvests can feed up to 6 adults and a child. If the 40 bags were to be sold at the current market price of MK 2,500 per 50kg bag then the family would make around MK 100,000. In other words, this is the amount that the family will save as a result of farming. Much as the figure is not wholesomely the result of urine and faecal matter, it is important to note that the huge cost incurred in farming is on fertilisers and rent for land.

Lessons Learned

Space considerations and permanency of the toilets remain the major reason for adoption of the toilets though other users are motivated by the products;

- Disseminating and sharing information on success stories on the use of Ecosan products inspires new community members to adopt the Ecosan toilets;
- There is an economy in the use of Ecosan products;
- Establishing demonstration gardens that use Ecosan products can facilitate adoption of the toilets for the use; and
- Ecosan products can reduce the economic burden that the majority of women subsistence farmers face in acquiring farm inputs, particularly organic fertilisers.

Conclusion

As many families have other reasons for adopting Ecosan toilets, the use of Ecosan products is attracting new adopters of the toilets. The testimonies from the people using the Ecosan products are being instrumental in managing perceptions that people have about faeces and their place in agriculture. As more people begin to realise the results of using Ecosan products, it is becoming increasingly important to share their experiences to validate promotional strategies that focus the economic benefits of the toilets such as manure for agriculture. Setting up demonstration gardens can be one of the ways.

Finally, the use of Ecosan products has also helped in the emancipation of women who are the major stakeholders when it comes to subsistence farming in Malawi. By reducing dependent on fertilisers, the use of Ecosan products has lessened the burden that women face in their subsistence farming process and empowered them as they either sell the products or the crops. However, there is need to harmonise the use techniques, management of the toilets in terms of amounts of ash and dry soil applied as these have a bearing on the quality of the compost and ultimately the harvest.

CCODE

About CCODE

The Centre for Community Organisation and Development (CCODE) is a local Non Governmental Organisation that works with poor communities in Malawi. CCODE is in alliance with the Malawi Homeless People's Federation, hereinafter the Federation. The Federation has clusters of community savings groups across Malawi. CCODE supports and capacitates the Federation in the areas of water and sanitation, health, energy, livelihoods, low cost housing and community savings.

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About SAKNSS

The Southern Africa knowledge node on sustainable sanitation aims to fast track and accelerate the delivery of sanitation through sustainable solutions. The node aims to facilitate and coordinate capacity and skills development, knowledge sharing and collaboration.

Southern Africa knowledge node on sustainable sanitation

Benefits for members:

- Link and exchange information with peers
- Access to new information and experience
- Practical support and capacity building
- Lessons learned
- Analysis of policies and sector trends
- Documentation and sharing of best practice
- Facilitating platforms for sustainable sanitation dialogue
- Awareness raising and Networking

www.afrisan.org

The website aims to facilitate collaboration and information sharing among stakeholders in the SADC region. It serves as a SADC gateway to sustainable sanitation information. The website is the first regional website with dedicated on sustainable sanitation information. We encourage our stakeholders to register on the website and share with us any documents that will contribute to knowledge sharing and capacity building in the region.

The SAKNSS website consists of:

Document management system

The SAKNSS document management system is a user friendly component that allows users to search documents by Document Type, theme, country, keyword and advanced search

How to access SAKNSS items?

Users should first register their details before they can have full access to the SAKNSS items.

Contact management module

The contact management module provides an opportunity for the stakeholders to access their peers, contractors, suppliers, NGOs and government officials. It further allows stakeholders to advertise their own organisations/companies on the website.

Links database

The Links database provides access to organisations, private companies and government ministries working with the water and sanitation field.

SADC country information on sanitation

The country information page presents the status of sanitation in SADC countries with links to the responsible ministries and their contact details.

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Our mission is to ensure the body of knowledge in the sector is well managed, readily accessible and applied, leading to improved decision-making and performance, especially of local government.

Southern Africa knowledge node on sustainable sanitation

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