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Kayunga residents use plastic bottles to build pit latrines

KAYUNGA. Water and soda plastic bottles are in many cases trashed after one has had a drink because they are regarded worthless at that point. But this is slowly starting to change in Kayunga and Mpigi districts as residents have found a new purpose. Residents are using plastic bottles to construct pit latrines as opposed to the usual bricks.

In Kayunga District, some schools have already embraced 'bottle-bricks' in construction of pit latrines and water tanks. The same technology has been adopted in Mpigi District where some youth are using it to construct houses.

In this type of construction, cement and sand are used to bind the bottles, which are first filled and compacted with moist soil.

According to Mr Steven Ssemutumba, the executive director of Butakoola Village Association for Development (BUVAD), an organisation that is promoting the use of this technology, the residents in Kayunga have been sensitised on how the technology can reduce environmental degradation.

"For a start, we are going to construct 16 bottle-brick toilets in 16 schools in Kayunga District. Under this arrangement, parents will contribute the empty mineral water bottles, something which will help rid our areas of the improperly disposed of bottles," Mr Ssemutumba says.

Adding: "Using plastic bottles for construction does not only provide a solution to the dangerous waste from empty mineral and soda bottles, but provides shelter and conserves the environment".

Mr Ssemutumba went on to reveal that already a two-stance pit latrine has been constructed at Nawandagala Primary School using this technology as a pilot pit latrine.

This school, which is under the Universal Primary Education has an enrolment of 340 pupils, but has been lacking adequate restroom facilities, forcing some pupils to share pit latrines with teachers.

Explaining how the two pit latrines were constructed, Ms Robinah Namuyomba, the head teacher of Nawandagala Primary School, says the pupils collected the used bottles, while parents provided labour and BUVAD contributed the cement and sand they used to construct the new pit latrines at the school.

"A lot of used plastic bottles have been collected from the community and we have used them to improve on the sanitation standards in our school," Ms Namuyomba notes.

Following this successful and very creative and innovative way of building pit latrines, several schools have since showed interest and applied to be helped and embrace the same.

Some of the interested schools are; St Regina Primary School, Gramos Primary School, Kanjuki UMEA and Nnongo Roman Catholic Primary School



New. Members of Butakoola Village Association for Development construct a pit latrine using bottle-brick technology at Nawandagala Primary School. PHOTO BY FRED MUZAALA

which will be used to construct five pit latrines with each school getting one pit latrine.

BOTTLE-BRICKS

Technology. The construction of houses using plastic bottles is the brainchild of Andreas Froese, a German architect and environmental entrepreneur. Froese developed eco-tec, a method which utilises plastic bottles as "bricks" in the construction of houses, pit latrines and water tanks. Froese's idea was to address the problem of millions of littered plastic bottles in developing nations by putting them to use. While Froese began to develop his technique in 2001 in Honduras, the technology was first deployed in Uganda in 2010 towards the construction of a pit latrine by Butakoola Village Association for Development in Kayunga District with the help of an NGO, Jangu International.

Source. According to Mr Ssemutumba, the bottle-brick technology was copied from South America where it was first used in construction of houses. A number of houses in Kayunga have in the past one year also been constructed using this new technology, but Ssemutumba says they would have loved to swiftly roll out this technology in the whole country, but they are still constrained by lack of funds to train people.

Who else is using it. The technology is

Mr Ssemutumba notes that Kayunga District, like many other areas in the country has a challenge of improper disposal of empty plastic mineral water and soda bottles and adopting such technology will help address this problem.

"These plastic bottles block water from moving down into the soil and besides this, they do not decompose, thus interfering in the process of soil formation," Mr Ssemutumba reveals.

A plastic water bottle is believed to last for as many as 100 years in the soil.

He says burning or re-using the old mineral water bottles is equally a health hazard, prompting them to start using the bottles as bricks to construct structures.

"We have also trained several residents, who will consequently use the skills they have gained to construct these pit latrines in their homes and communities," he says.

Mr Ssemutumba adds that unlike the bricks made out of soil, bottle 'bricks' can easily be reused in building another pit latrine in case it gets filled up.

"It costs about Shs2m to construct a two-stance pit latrine using this technology compared to Shs3.5m if bricks are used. Even then, it takes less time to make these 'bricks', which are used for construction immediately after

water bottles are required to erect a two-stance pit latrine.

Mr Ssemutumba says pit latrines built using this technology can last for more than 50 years, depending on how much cement was used.

Weighing in on this innovation, Kayunga District Environment Officer Edgar Basaliiza, says using plastic bricks for construction was a welcome innovation and will boost their efforts to conserve the environment.

"Plastic waste is already a real threat to the environment. Where plastics have not been discarded properly, they have littered populated areas, polluted water systems

as well as creating environmental damage, so this technology is one of the good waste management strategies, Mr Basaliiza says.

He adds: "We are working with BUVAD to interest locals to embrace this technology because it has shown that a waste product can be a resource. At first, I saw them being used to construct water tanks, now they are serving us building materials for pit latrines and I am sure they can also help us construct low cost houses."

Mr Drate Edma, the Kayunga District engineer, says since plastic bottles are water repellants, water cannot easily go through them unlike bricks made from soil.

He says the structures built using plastic bricks have no health risks to humans and BUVAD first sought approval from the district before rolling out the project.

"These pit latrines are safe and durable because they are built on plan," Mr Edma says.

Coverage

Currently, Kayunga District has pit latrine coverage of 68 per cent; however, some schools under the Universal Primary Education find it hard to build modern pit latrines due to lack of funds.

This has forced some pupils, especially girls, to drop out of school because they find it embarrassing to

Voices



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