



World Toilet Day – Drawing attention to those in need



November 2016

On 19 November each year the world celebrates World Toilet Day – a day officially recognised by the United Nations to promote awareness and inspire the world to tackle the global sanitation crisis. Sudhir Pillay highlights the link between job creation and toilets (this year's theme), with specific focus on South African and continent-wide initiatives led by the Water Research Commission (WRC) to bring the dignity of the toilet to more people.



Background

The toilet. Defecation, faeces and urine. A conversation about sanitation does not sit comfortably with everyone. And yet access to a toilet is one of the most fundamentally important services to have. A toilet provides a barrier against disease and pollution.

Yet the importance of sanitation, the world is still struggling to provide access to all – in 2012 it was reported that there were 644 million people in sub-Saharan Africa (that is 70% of the population) using an unimproved toilet facility or having to resort to open defecation.

For this reason, World Toilet Day is celebrated across the world – it is not only about breaking the taboo about toilets and poop, but also to raise awareness of the challenges facing the developing world in rolling out this service. This year's theme was 'toilets and jobs', a field the WRC has contributed to significantly in the last few years.

Franchising sanitation services

In 2009, the WRC launched a project that saw the piloting of the concept of social franchising project for water and sanitation delivery for schools in the Eastern Cape. With funding support

from Irish Aid and in partnership with the Eastern Cape Department of Education, the franchising-like partnership model approach was demonstrated at 400 schools and 250 households. Amanz'abantu Services, a service provider based in East London, set up a subsidiary, Impilo Yabantu Servies, to be a franchisor, and microenterprises from the community were trained to be franchisees.

The pilot enabled the services rendered by the local franchisee to be of a specific standard, enabled franchisees to have easy access to highly-trained and experienced personnel as part of the franchise deal, and protected the franchisees from delays in cash flow and payments. Through the pilot, more than 20 sustainable jobs and more than 50 part-time employment opportunities have been created. This pilot project clearly showed the relationship between job creation and service delivery through an innovative public private partnership.

In 2010, the WRC funded the development of an innovative off-grid sanitation technology called the 'pour flush' toilet. The toilet filled a technological gap for low water usage, providing flushing toilets where there is no sewerage infrastructure available. The promising R&D outputs saw the



Facility built for schools housing the pour/low flush units.

technology moved from pilot stage to demonstration stage across the country through a partnership with the Department of Science & Technology. EnviroSan, a local plastic toilet manufacturer, saw potential in the R&D product and invested in developing a commercialized product called the EaziFlush. This product could be upgraded to include a low-flushing cistern. Through the demonstration programme, over 1 000 units have been installed, with 290 temporary local jobs created through the installation of the toilets. While the jobs may have not been permanent, it did facilitate the training of local people with basic construction skills.

In Kampala, Uganda, Water for People, a non-governmental organisation, was commissioned by the WRC in 2013 through a partnership with the Bill and Melinda Gates Foundation, to lead a project titled 'Sanitation as a Business: The Kampala SaniHub Project'. The purpose of the project was to provide services to people by incorporating innovative products across the sanitation value chain that

makes sanitation servicing businesses more viable.

Similar to the South African product, the team developed a pour-flush system for the Ugandan market, called the DuraSan. The latrine superstructure is made from pre-fabricated interlocking Lego-like concrete blocks to reduce the construction time and the level of skill needed for construction. Further, it allowed the latrine superstructure to be easily disassembled in order to relocate the latrine.

Ten DuraSan latrines were installed in Mukono district, an eight-day operation in which on day one all the components for ten latrines were loaded onto two pick-up trucks and delivered to each of the ten households. All ten latrines were then successfully assembled over the following seven days. The total cost for installation for one latrine was around US\$343 (about R4 802), including labour costs.

Customer feedback and performance surveys were carried out to test the acceptance and usability of the

technology. Over 90% of respondents indicated that the DuraSan was better than their current facility, with over 80% indicating that the system was affordable at the market price of close to US\$600 (about R8 400). The results indicated that users were willing to pay more for an innovative and better toilet product compared to a simple latrine.

Water for People Uganda has also been promoting pit emptying businesses using low-cost, locally fabricated equipment. This business has attracted entrepreneurs, however, transporting the sludge profitably over long distances to sludge disposal points has proved a challenge. The research team investigated not only more efficient sludge emptying devices (to increase loads per day and generate more income) but also the possibility of introducing decentralised faecal sludge treatment (DeFAST) units that could be installed in close proximity to emptying services.

The beneficiation of dewatered faecal sludge using carbonisation techniques, vermicomposting and black soldier fly digestion has been explored by the research team. These products have potential monetary value and could stimulate the establishment of an industry-based collecting faecal waste and converting it into beneficial products.

To conclude, as there are so many people in the world requiring sanitation services, there will always be an opportunity for job creation linked to sanitation services.