



CONTAINER-BASED SANITATION FOR URBAN SLUMS



109 M, IIInd Floor, Jaya Vilas Complex,
Cuddalore Road, Mudaliarpet,
Puducherry - 605 004

www.sanitationfirst.org

Sanitation First – Inner City Container Based Sanitation Project

Introduction to Sanitation First

Sanitation First was started as Wherever the Need in the United Kingdom in 1997. In India, it is registered as Wherever the Need India Services (WTNIS) a not-for-profit company, providing sustainable EcoSan solutions to over 3,60,000 beneficiaries through individual, community, school and Inner-City Sanitation (ICS) projects.

The Problem

About 17.4 per cent of India's population lives in densely populated urban slums, with very little space or options for safe and sustainable sanitation, drainage or water supply facilities. The people who live here are dependent on poorly maintained, and unsafe public toilets or else have to resort to open defecation. The situation is equally poor in semi-urban slums, where although there is space, there are low scope for infrastructure as most of the slums are civil encroachments.

The Solution

Sanitation First has created a sustainable solution for urban slums which do not have the space or the infrastructure for constructing permanent toilets or providing drainage system. This unique low-tech model semi-permanent urine diverting dry toilet has been named “GroSan” toilet and has evolved from the static, twin chamber EcoSan toilet model that has been used extensively around the world. This container-based sanitation system's design has been developed keeping in view the requirements of the Prohibition of Manual Scavenging Act 2013. All operations from containment to composting are governed by the WHO recommended Sanitation Safety Plan.

Advantages of the design

- ◆ Compact and durable
- ◆ Safe Collection service despite minimal pathways
- ◆ Very little sewage infrastructure needed
- ◆ Very little water usage
- ◆ Cost effective to clean and maintain
- ◆ Easy and safe for the communities to understand and use

How the Toilet Works

The GroSan toilet is a semi-permanent movable toilet that is made up of Aluminium Composite Panels. This ensures the toilet does not disintegrate easily while being exposed to the elements of nature in coastal and cyclone prone areas. The squat plate is urine diverting and is made of ceramic for ease of use and maintenance. Four containers sit on rollers beneath the toilet. The user covers the faecal matter with ash, saw dust or soil after use. This cover material is available



within the toilet unit. He / She then proceeds to cleanse himself/herself at the spot designated for the same. The urine and wash water are collected in separate collection tanks below the toilet. Each toilet caters to about ten named families – around 40-45 users per day.

The Programme Genesis

The first GroSan toilet was installed in 2009 in Cuddalore district of Tamil Nadu. It comprised of four toilets and two urinals. Based on performance, the technology and the materials used have since been undergoing change. The current model has Aluminium Composite Panels for the toilets and ceramic squat plates for the basin. All toilets are fabricated in-house by SF/WTNIS team. Our team is involved in constant R & D to improve quality and value addition in the toilets. Recently we have included hinge-mounted tickers to monitor usage of the toilets on an ongoing basis.

Currently we have 125 Grosan toilets in Cuddalore and Puducherry and 25 more being installed. These toilets are constructed and maintained by Sanitation First through support from donors and are free for communities to use. Toilets have steps or ramps depending on the space available within the area of installation and also provide a safe avenue for women and girls to practice menstrual hygiene.



Programme Roll Out

The location or slums where the toilets are to be placed are decided through consultation with the local administrative body – such as Municipal Commissioner. Once the location is finalized, a detailed baseline study is conducted on the socio-economic, health and behavioral situation in that slum.

The programme is rolled out in the following phases:

1. Identifying individual locations and families for use within the slum
2. Education and Motivation
3. Installation of toilets
4. Collection services and ongoing monitoring



Business Model

The cost of each GroSan toilet is currently around Rs. 53,000/- This toilet caters to about 40 users for a minimum period of five years, and the cost per user works out to roughly Rs. 1,200/- The running and maintenance costs are about Rs.100/per family/ toilet/month.

Challenges

1. The nature of tenements in slums where the population keeps moving.
2. Recurring operational costs, which over time we are hoping the community will be able to share.
3. Reluctance to share with neighbours.
4. Space for processing yard

Way Forward

This project has achieved significant impact and results. Going forward, we are looking at expanding its scope of operation into other urban locations. A recent third party evaluation conducted by Sanitation First on the first phase of the programme has provided encouraging results.

Testimonials

Dream Big Ghana - "We went to visit some of Sanitation First's Container Based Sanitation toilets yesterday. This is probably one of the coolest toilets I've ever seen and perfect for an urban area with very little space for permanent structures. Up to 40 people can use this toilet which is great for crowded spaces!"

Mrs. Renuka, Thideernagar - "We were scared to go open places for defecation, if we decide to go the public toilet, we have to walk long distance, walking around one kilometer in the mornings and the evenings will be very difficult for us.. Now we are using EcoSan toilet without any issue and its safer, has good privacy and more importantly it is located very close to our house"



Mrs. Chinnaponnu, GN Palayam - "I was always worried about going out in the vacant flat for defecation and there are no bushes to hide, and men can see us from all sides. The new toilet is a big relief for us"