

SOCIETY FOR COMMUNITY ORGANIZATION AND PEOPLE'S EDUCATION (SCOPE)

- **Background**

The Society for Community Organization and People's Education (SCOPE), an NGO based in Tiruchi, established in 1986, concentrates on rural development, empowering the marginalized women in rural areas. They found out soon that open defecation due to inability to construct toilets was one of the basic problems that prevented their economic development. Increased income was always eroded by increased medical bill, and fall in income due to increased absenteeism.

- **Location, Date**

Trichy & other areas of Tamil Nadu, 1986 onwards

- **Areas**

Rural

- **Stage/Scale**

Pilot, on the verge of full scale model

- **Objective of the assignment**

Providing a sustainable system that will fight open defecation, at the same time generate revenues

- **What was done**

- Each individual generates 500 litres of urine and 50-60 kilograms of faeces per annum. Of this urine is sterile and can be used directly as a liquid fertiliser as it contains nitrogen, potassium, phosphorus after proper dilution.

- After studying this, SCOPE concentrated on building toilets with the help of State

Government TSC, and other agencies, and built over 15,000 pit pour and flush pit latrines. For the past 5 years scope has been focusing on Ecological Sanitation and has constructed over 2000 Ecosan Toilets on the banks of the rivers Ganges and Cauveri and in Tsunami hit Sandy coastal villages of Tamil Nadu.

- Sevanthilingapuram, on the banks of the sacred River Cauvery, about 35 kms from Trichy on Trichy- Musiri road, consists of three habitations, Sevanthilingapuram North with 201 dwellings, Sevanthilingapuram south with 87 dwellings, and Umayalpuram with 96 houses. Only 42 out of 246 houses had toilets. Hence 80% of the villagers were




forced to defecate in the open mostly on the banks of the River Cauvery and an irrigation canal flowing in Sevanthilingapuram. The residents were interested in having toilets in their houses but due to water logging, pit latrines promoted under the TSC were not feasible in the village. Septic tank latrines were too costly for them. SCOPE came forward and built community toilets for them.

- These toilets are made up of three parts—the front consists of a hole that collects the urine, the second part contains a hole for defecation and is connected to a chamber below that collects the faecal matter for a year, and the third portion is meant for washing hands and body, as the used water goes out to a filter bed through a connecting pipe. The structure and working of these toilets is shown in the following picture.

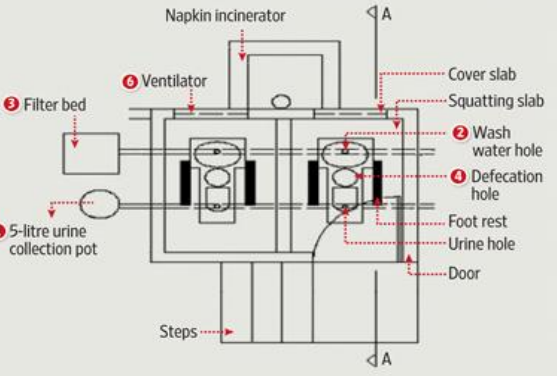
HOW THE ECOSAN TOILET FUNCTIONS

- 1 Urine from the urine hole goes to a perforated kitchen pot filled with sand and charcoal, so that it comes out treated and is usable for watering plants
- 2 Water used for hand/body wash goes to a filter bed through a pipe and can be used for watering plants
- 3 The filter bed is made of sand, blue metal and charcoal
- 4 The defecation hole is covered with a lid that can be removed when defecating
- 5 The user throws ash on the faecal matter so that the moisture is absorbed, after which it enters the faecal chamber
 - The faecal chamber faces the sun which helps kill pathogens faster
 - After nine months or a year, the faecal matter becomes compost which is ready for use
- 6 Ventilator pipes and ventilators help get rid of the odour

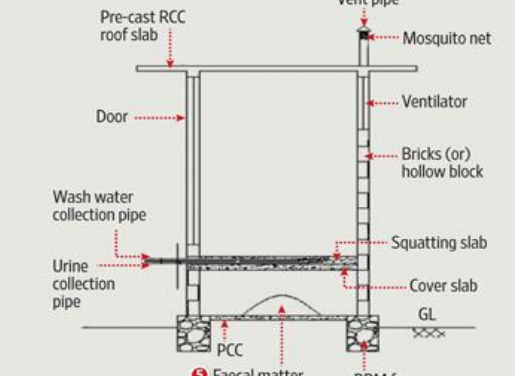


An Ecosan toilet

Plan



Layout



• Impact

- In the past few years, SCOPE has built over 2,000 such waterless toilets on the banks of the Ganga and the Cauveri, and in Tsunami-hit coastal villages of Tamil Nadu. Subburaman's waterless toilet model is finding acceptance in many parts of the country.
- Recently, under the sustainable sanitation improvement programme of the Tripura government, the state's Bishalgarh municipality has decided to construct 2,000 Ecosan toilets.

• Challenges and Issues

- At the initial stages, dearth of trained masons for ECOSAN toilet construction

- It was very difficult to change the mind set of those who were in a practice of flush and forget.
- ECOSAN is little bit higher than pit latrines cost wise.

• Innovation

- In Ecosan toilet urine and faeces are collected separately. SCOPE constructed the first Ecosan Community Compost Toilet (ECCT) in the country in Musiri with the Support of WASTE, Netherlands which is now efficiently maintained by Musiri Town Panchayat.
- Ecosan toilets save water and electricity, the two biggest expenses in water-borne sewerage by eliminating the need for sewage treatment plants, elaborate sewer network, and the expenses on maintenance and operations of such systems.
- This also means that it can provide sanitation in extreme areas; in desert areas, where water scarcity necessitates frugal use of water; in rocky areas, where it is not possible to dig for pits and sewers; in coastal and flooded areas, with very high water tables; in earthquake prone zones, as there is no danger of sewage leaking through cracked sewer lines or pits.
- In fact, this method got a big boost in the efforts to rehabilitate coastal areas destroyed by the 2004 tsunami as Ecosan toilets could contain excreta (and the infections it could unleash) even in water-logged areas.

• Lessons learnt

Almost all the public toilets are paid in nature. But the toilets developed by SCOPE go beyond this paid concept. The benefits of this toilet clearly outweigh the cost. The implementation of “**use toilet and get money**” instead of pay and use has got a tremendous response from the public.

• Financials

N/A

• Economic sustainability/Revenue Model

It has been estimated if the urine of the 30 crore population could be collected it could produce fertilizer of 1.65 million tonnes of value INR 800 crore per annum. And since the toilet generates revenue on a long term basis, the popularity is increasing sharply.

• Implementer Contact Persons

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