



## Toilets with attached gardens

Women's Feature Service

***An ecosan toilet is an eco-friendly sanitation product that was devised mostly for women who suffer from poor sanitation facilities. With the ecosan model being able to channel effluent productively and enabling it to be used as compost, setting up of kitchen gardens seemed the best thing to do, finds out Fehmida Zakeer***



Margathammal, 55, in village Kaliyapalayam near the Kaveri River in district Trichy, is delighted. "The yield from my trees has increased substantially after using the bio-fertilisers and I have managed to save around Rs 1,000 in six months." Margathammal is, of course, referring to effluent from the ecosan toilet that she has installed, like many others in and around her village.

The installation of ecosan toilets was part of the 2004 tsunami rehabilitation efforts of the Trichy-based NGO, Society for Community Organisation and People's Education (SCOPE). The NGO worked closely with Institut National de la Recherche Agronomique (INRA), France, on this project. The

beneficiaries are contract agricultural workers earning about Rs 30 to Rs 40 per day.

### **Ecosan toilet**

"An ecosan toilet, as the name suggests, is an eco-friendly sanitation product. It was conceptualised by Paul Calvert, a British engineer, who happened to be posted in Kerala in the early 1980s'. Distressed by the poor sanitation facilities available, especially to women, Calvert experimented with various designs until he came up with the eco toilet," explains Sangeeta Venkatesh, a consultant.

"The eco toilet comes with three holes (in a row), each serving a different purpose. The liquid waste goes into the first hole, the solid into the second and the wash water into the third. Ash or sawdust is thrown into the second hole to facilitate decomposition of matter. The wash water is allowed to percolate deep into the ground. Urine is let out through pipes into the garden surrounding the toilet, and works as a readymade fertiliser. There is no smell nor is there any danger of insects, because solids and liquids do not get mixed up. The solid matter gets converted into compost within a period of six months," elaborates Dr Shyama Ramani, INRA.

By contrast, the most popular models of toilets in India — the pit latrine, the septic tank toilet, and the central sewage disposal system — are highly water intensive, requiring 10 to 12 litres per use. States Dr Shekar Raghavan, Director, Rain Centre, a Chennai-based NGO that introduced the concept of ecosan in Kovalam village, "There is a danger of ground water contamination (in the case of pit toilets), especially in coastal areas where the water table is very high. People in the villages mostly use well water for their cooking and cleaning purposes.

The contamination and subsequent after effects can be imagined."

Even the septic tank toilets with their underground sewage tanks in which anaerobic bacterial environment decomposes the discharged waste, can contaminate ground water. The third model — the central sewage disposal — is prevalent in developed and planned urban areas.

### **Multipurpose use**

With the ecosan model being able to channel effluent productively and enabling it to be used as compost, SCOPE, which offered an 80 per cent subsidy on the cost of each toilet, encouraged the setting up of kitchen gardens.

Planned alongside the toilets, the gardens yield rich results as the compost is used to fertilise the soil. Villagers were encouraged to grow vegetables and fruits for self-consumption or even commercial purposes, in which case the toilet became a source of income at no additional cost.

For women such as Shanti, 35, the toilets have become a means of empowerment. She was the first person in her village to go in for an ecosan toilet. Convinced of its benefits, she encouraged her community to do the same and ended up being recognised for her leadership skills. As a result, she was eventually elected unopposed to the post of the panchayat's vice-president. Kameshwaram, with a population of around 5,300, has bagged the Nirmal Gram Puraskar, awarded by the Government of India, and is heading towards the additional achievement of being a village where every household has a toilet.

Interestingly, ecosan public toilets are also gaining acceptance. SCOPE, which displayed the first ecosan model in late 2002 in its training centre at Thanneerpandal village in district Trichy, has turned around the concept of 'Pay and Use' into 'Use and Be Paid' in Musiri, in the same district. When villagers use the two free public utilities developed by SCOPE on Saliyar Street and Parisalthurai Street in Musiri, they receive a token amount. According to Subburaman, the Musiri scheme has increased usage of these toilets by 90 per cent, with the majority of the users being women and children. Meanwhile, the conventional public toilets lie unused.

The eco toilets have brought about a sea change in this area. Not only have they considerably reduced contamination of water bodies, ground water and potable water sources of the area, they have helped improve the quality of life of ordinary villagers.