

# **Kameswaram Tsunami-hit village becomes a Model village for Eco Sanitation.**

## **History of Ecosan in India:**

The Ecosan (Ecological Sanitation) concept was pioneered in Kerala in 1995 by Mr. Paul Calvert and it has been recognized widely as a hygienic, low cost, eco-friendly method of sanitation. Awareness of this new technology was extended beyond Kerala through a Workshop, conducted by Paul Calvert and Supported by UNICEF in September-2002.

The introduction of Ecosan in Tamilnadu was done by SCOPE, a Trichy based NGO predominately involved in Water and Sanitation development activities over a decade. Initially, SCOPE has constructed a model Ecosan toilet in its training centre in Thaneerpanthal village near Trichy in 2003. In the year 2004, a pilot project of 18 dry composed toilets constructed in Kaliyampalyam village, with the financial aid from Government through District Rural Development Agency (DRDA) and technical support in design from UNICEF. Followed by this, scaling of ecosan toilets was extended to more districts include Erode, Villupuram, Cuddalore, Nagapattinam and Namakkal etc.,

Kameswarm is the first tsunami-hit fishing village, has the distinction of getting the maximum number of “ECOSAN” compost toilets in the country with the usage of 100 Household centered Environmental Sanitation Toilets (HCRST).

## **Why Eco San?**



Kamesweram is a coastal village 18 k.m. away from Nagapattinam. The nature of soil is sandy and the water table is less than two meters below the ground. In the non fishermen's habitations, most of the houses are located separately near to their agriculture fields and in low lying areas. Therefore, ECOSAN is the most suitable sanitation technical option in these villages.

## Ecosan Technology:

Ecosan technology involves a cycle which treats human excreta as a resource. In this system, excreta are processed on site until they are free of pathogenic (disease-causing) organisms. Thereafter, the sanitized excreta are recycled by using them for agricultural purposes. Key features of ecosan are therefore:

### 1 side view of ecosan chamber



### Urine & Wash Water collection



1. Chambers of Ecosan Toilets are built above the ground level
2. Consists of two chambers, each having a capacity to store faeces for about six months.
3. UNICEF/SCOPE model ecosan squatting plate is three one model prefabricated with a drop hole in the middle, a urine bowl in the front and the anal washing bowl at the rear.
4. The squatting slab can be given cement finish or red-oxide finish after the superstructure construction.
5. After defecation, the drop hole can be closed with a lid.



**Black painted Vent Pipe .**



**Human Excreta covered with ash inside the Chamber.**

6. A vent pipe painted in black is fixed to the two chambers for accelerating the process of dehydration.
7. One of the four walls (generally back side) of each chamber is a detachable concrete slab for removal of compost.
8. The pipe from the Urine bowl hole at the bottom of the squatting slab takes the urine to a mud pot with holes outside the toilet.
9. The pipe from the wash water bowl at the bottom of squatting slab takes the wash water to a filter bed with plants (Indiana- cannabis plant) outside the toilet.
10. Ash is kept in a small container for sprinkling inside the drop hole after use.
11. The toilet should have jolly work or small opening for ventilation.
12. The toilet must have a roof to prevent rain water entering the toilet.

### **Usage and Malignance Ecosan:**

- ✓ The user needs to ensure seating on the squatting plate in such a way that the stools are dropped vertically straight in to the pit mouth of the chamber.
- ✓ Ash/lime stone powder/sand is to be sprinkled over the human excreta after defecation.
- ✓ Then the drop hole should be covered with a lid.
- ✓ The user should not wash himself over the drop hole. After closing the lid he should move a few inches back and wash his body.
- ✓ The first chamber can be used 6- 9 months. When it is full the toilet lid must be sealed so as to prevent its usage till the composting process is complete.
- ✓ From then on, the second chamber is put to use.
- ✓ Urine is collected in a mud pot with hole for leaching.
- ✓ The wash water runs through a filter bed.

### **Merits of Ecosan :**

- ✓ Environmentally friendly and easy to maintain.
- ✓ Prevents pollution and disease caused by human excreta.
- ✓ Prevents entry of pathogens into water sources.
- ✓ Minimal use of water than in other toilet models. Ecosan does not use water as a carrier to dispose off human waste and hence conserves precious water.( In this way an individual can saves 6-8 liter per day and minimum of 70,000 liters of water in his life time)
- ✓ No need for de-sledging or pumping out black as the case of septic tank latrines.
- ✓ No need to dig pits

- ✓ No need for sewers or treatment pits
- ✓ No need for external infrastructure.
- ✓ No Pollution of ground water and soil.
- ✓ No flies or foul smell
- ✓ No mosquito breeding due to lack of water stagnation problems.
- ✓ Recycling of human waste improves soil fertility.
- ✓ The compost increase soil productivity.
- ✓ Reduces expenditure on chemical fertilizer and Pollution caused by them.
- ✓ Treatment of human excreta as a resource rather than as a waste product.

**For more information, contact;**

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