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Eco-friendly houses using discarded PET bottles? Samarpan, an NGO, shows the way

A house made of PET bottles? Well, Chennai is shortly going to boast of one such house in Red Hills. But volunteers at Samarpan Foundation, an NGO, hope the idea will catch on and more people will begin to replicate this eco-friendly model. The idea was conceived of by Patrick San Francesco, founder of the organisation.

“Bricks are expensive. Here bottles, filled with mud and capped tightly, will be used in their place. After being laid out, the walls are plastered. The mud and the plaster provide double insulation and help keep the house cool. This project demonstrates the use of **waste**. PET bottles do not disintegrate and remain intact for around 1,650 years. They trap harmful dioxins and don't release them into the air. The house we are building is eco-friendly, solar-powered and, at night, will use water turbine energy,” explains Romaine San Francesco, Project Coordinator, Samarpan.

Once the construction gets under way, more eco-friendly solutions will be incorporated. As of now, the organisation has collected around 10,000 bottles. A self-help group from IIT is assisting the group of women in their venture by filling bottles with mud but they are still looking for more volunteers.

School in Delhi

This is Samarpan's second PET bottle project, the first being a school made of 6,000 bottles in Delhi.

Samarpan Foundation was first established in Delhi in 2006. It carries out activities in 16 cities across the country and has just started in Dubai, America and Italy. And with the efforts of Romaine San Francesco, Priyanka Jain, Geeta Sriprakash and Meike Weihl, it branched out to Chennai in 2010. “We at Samarpan work towards fulfilling humanitarian, ecological or environment needs,” says Romaine, Project Coordinator-Samarpan. These include orphanages, homes for the elderly, tree planting drives, rainwater harvesting, eradication of mosquitoes, food kitchens for the poor, free schools for slum children, housing for victims of natural disasters, building free hospitals, rehabilitation of bonded labourers, revival of tribal art and culture and vocational training centres.

The first project taken up by Samarpan in Chennai was setting up an Urban Forest Nursery, utilising the free saplings available under the Forest Department's Urban Forestry Scheme. They felt they were not getting important plant species under the scheme, so they set up their own forest nursery. With the help of a few school children, the organisation managed to get 10,000 saplings and seeds of about 12 species.

The team started planting saplings on government campuses and moved to Velachery with the intention of planting 1,200 saplings. “The Corporation of Chennai sent me to Velachery in 2010 for the purpose. But every time we wanted to plant, the roads were being dug up because of water-logging. We noticed the water level varied at different times of the day. The campuses around this area spent a lot of money on getting the land filled and raised but every year there would be waterlogging. We had to identify the root of the problem. After driving around, we finally zeroed in on the cause when we reached the University of Madras, Taramani. We found

a weed growing there that normally grows only in sea water. That made it clear that the water accumulating there was from the sea. This was the result of the locks in the canals having been removed, paving the way for the entry of sea water. So, that's why most of the structures on the OMR have developed cracks or are crumbling. The solution is to plant mangroves," says Romaine.

Samarpan believes mangroves are vital and have been ignored by the civic bodies. Giving an example of the tsunami of 2004 and Cyclone Thane last year, the organisation says mangroves could have helped curtail the damage. Mangroves also help sustain fish culture because crustaceans breed in the backwaters. So, the foundation is working on planting mangroves. "We have identified several species of 'salt absorbing' mangroves that can improve the quality of water," says Romaine.

Besides these activities, the group is busy with rain water harvesting, water conservation and mosquito eradication. Some of the volunteers even undergo training in hydroponics and other activities such as jewellery-making so they can impart the skills to the women in the villages and empower them.

Those interested in contributing bottles or procuring seeds can contact Samarpan at www.samarpanfoundation.org/

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