

Printed from

BangaloreMirror

Would you live in a villa made out of plastic bottles?

By Vidya Iyengar, Bangalore Mirror Bureau | Aug 9, 2014, 08.37 PM IST



After successful experiments in Delhi, Chennai and Sundarbans, the Samarpan Foundation is building a villa out of plastic bottles in Bangalore

When a one litre plastic bottle fell on Patrick San Francesco's foot it turned out to be a Eureka moment for the founder of Samarpan Foundation. "Why not try out plastic bottles filled with mud as a replacement for bricks?" asked Francesco.

Bangalore's first-of-its kind 'bottle house' will be constructed in Hennur by Samarpan Foundation at the end of this year or early next year. They had earlier successfully experimented with the concept in Delhi, Chennai and Sundarbans.

It all started five years ago with the construction of a classroom in Samarpan School in Kishangarh, Delhi. The one-room structure has been built with 6,000 bottles, which after being laid out was plastered over with cement. "It's the coolest room in summer and the warmest in winter," says Priyanka Jain, a volunteer from the foundation. Jain claims that there hasn't been a crack in the wall till date. Which is the reason, the team took on their next project in Chennai.

For the 240 sq ft room that they constructed in a farmhouse in the southern capital, there was a new twist. Instead of using steel frames and pillars, the group decided to fasten 3X3 cm nylon fish nets onto the bottle caps to give it additional reinforcement. The idea dawned on them when they realised that giant fishing trawlers could haul large quantities of fish from the sea in similar nets without snapping. Volunteers from the foundation got together with labourers to build the structure with over 8,000 bottles in two months. They mainly collect the bottles from hotels and hospitals, but a number of them come from volunteers who donate bottles. The foundation hasn't bought any bottles so far.

The team has been working with instructions from Francesco, who is best known as a healer, teacher and philanthropist but doesn't have an engineering background. So, have they tried consulting civil engineers and architects? "Since it is such a new concept, they have been discouraging. Which is why we've gone ahead on our own," Jain says.

Poornima Harish, another volunteer who is working on the Bangalore project, points out that they were able to build the room at one-tenth of what it might have cost otherwise. “We spent Rs 300 for the fish net for the house in Chennai, while we would have spent Rs 30,000 on steel,” Harish says.

But their biggest project is the ongoing construction of the 7,000 sq ft hospital in the Sunderbans. To be inaugurated in mid-October, Jain explains that the group of 102 islands spread over West Bengal and Bangladesh, is prone to cyclones and affected by the lack of medical facilities. The foundation decided to set up a field hospital on Bali Island to provide proper medical care.

“The nearest hospital (in Kolkata) is at least five hours away by road or boat. This distance proves to be fatal for many patients, particularly snake bite and stroke victims,” Jain explains. And having already experimented with mini structures, the team decided to go ahead with a 30-bed hospital, which would benefit 95,000 inhabitants of Bali as well as the surrounding islands. Using a labour force of 130, they have made use of four one litre bottles and 16 half litre bottles per square foot.

Apart from this, they have also hoisted a 6,000 litre Sintex water tank on top of four 25-foot pillars made with bottles. “We did a layman’s way of testing by first placing sacks of sand on the pillars. When they didn’t collapse, we went ahead with the construction of the water tank,” says Jain.

While it was easier to construct the bottle buildings in other cities, the biggest challenge they faced in Bangalore was finding a space for their project. The team approached Fun World earlier this year requesting them if they could build an office. But when that didn’t work out, one of their volunteers, Meera Pillai offered her one-and-a-half acre vacant plot. The three-storey villa will host a women’s empowerment centre and a volunteer interaction centre. “One of the many reasons we’re going ahead with the villa is to show people that buildings constructed from items that are thrown away aren’t only for the poor,” says Harish. At the same time, they are attempting to turn a bane (plastic bottles) into a boon. “We can’t get rid of them, but at least we can use them in a way that benefits us,” she adds.

These structures are supposed to last till the next millennium (that’s another 1,560 years). Let’s wait and watch.