

# REDUCE, REUSE, RECYCLE - A college has a solution for the Deonar mess: Zero waste

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## **The Vivekananda college in Chembur has entirely erased its garbage footprint**

Most mornings of this year, students at Vivekananda Education Society (VES) in Chembur have had to choke through the acrid smoke that settled across their campus, blowing from the nearby Deonar dump. But they took solace that they were not a part of the problem, and in fact had a solution. Earlier this year, the BMC declared the two 4-acre VES campuses zero-waste facilities.

What does this mean? Essentially, that the progressive institute has implemented policies to process all of the garbage generated on campus, for reuse and recycling. The efforts Centre on the segregation of waste, and creating fertilizer from compost. But there are also collection procedures in place to deal with the non-biodegradable substances such as plastic and electronic waste (e-waste).

## **IT'S SIMPLY SCIENCE**

The department of microbiology at VES, in association with the NGO Stree Mukti Sanghatana (SMS) conceptualised and spearheaded the program. “Every day the tonnes of garbage dumped in the Deonar is a mixture of plastic, electronics, vegetable waste, paper and so on. Each has to be treated separately. In the absence of any such segregation mechanism by the corporation, we decided to do our bit to save the environment, “said Dr Jayashree Phadnis, Principal of the college.

It began by establishing two composting pits in each of the campuses, 6 feet wide, 4 feet long and 2 feet deep. The wet waste from the canteen and the hostel is taken to the pit in two shifts afternoon and late evening. As the waste is deposited to the pits, a team of five people take turns to churn it. Twice a day, a liquid solution made from fermented fruits is added along with some water to speed up the degradation process. “Once in a couple of weeks, magic powder, which is a compound of limestone and rock, is sprinkled on the garbage to get rid of the foul smell. This way, we look at garbage in a productive way and not just as dirt which we need to get rid of, “said Rekha Bathija, the college accountant, who coordinates the work.

The total dry and wet waste generated in both the campuses is around 90 100 kg per day approximately, of which 70 80 kg is biodegradable via the pits. “Every month around 70kg of manure is created out of the waste without much effort, which is then used for the plants in our own campus “said Phadnis.

“Using this manure not only saves the cost of buying it from outside but also maximises the soil fertility” said Rashmi Joshi, the coordinator at Stree Mukti Sanghatana.

## **WASTE NOT, WANT NOT**

The use of plastic and glass products on campus has decreased significantly, students and teachers say, attributable to the growing awareness brought about by the venture. The BMC's M-West ward, as evidence of their support, sends a separate vehicle to collect the dry waste from the institute's premise.

The e-waste is recycled in two ways. Stree Mukti Sanghatana sends a special vehicle as they run a program specifically for the reuse of e-waste. A portion of the e-waste is also salvaged by the engineering students at VES who then use it for their own projects.

## **SCALING THE TRASH HEAP**

Richa Shah is a second year MSc -microbiology student, who has been working intensively on the project that was piloted in 2014. It has truly been inspirational for her. "I realised that this initiative when carried on a small scale basis in our own homes, can lead to some amazing results and might end all of the city's garbage woes," said Richa. She has now focused her future research on home composting.

Students are actively involved in the popular endeavor. "The project is very important for the students to know about the simple way of waste segregation and management. As they closely work with the project, they contribute at each stage from segregating waste to learning how to treat it with the simple method that we are using in the campus," said Santhini Nair, associate professor at the institute.

There are already plans for expanding their scope of operation.

## **A FUTURE FOUNDATION**

The college has targeted vegetable markets in the neighborhood, which have a substantial accumulation of compostable refuse.

"Tonnes of wet waste is generated in the vegetable markets in the city. We want to collect this waste and convert it into manure. However, we need the support of the BMC in order to transport the waste from our ward's markets to the pits where the waste can be degraded," said Dr Jayashree Phadnis.

The BMC has been laudatory, and very supportive. AMC of M-West ward, Harshad Kale said that the corporation will soon launch such a partnership. "We are happy with the excellent work that the institute is doing and would love to take their help in waste management. "

# REDUCE, REUSE, RECYCLE

PICS: SACHIN HARALKAR

The compost pits are churned twice a day and sprinkled with limestone



Workers sprinkle water in the pit to accelerate degradation



Waste from the canteen is poured in the pits twice a day



Waste is scanned before it is disposed to avoid any glass, plastic.



Students use the manure for the plants on the campus