

These e-toilets turn waste into fertiliser

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Thiruvananthapuram: A city-based tech firm has come up with an innovative idea that could address the waste management crisis faced by the country. The firm, Eram Scientific Solutions here, has developed a fully off-grid electronic toilet that converts waste into fertilizer and water and its prototype installed at Leo XIII Higher Secondary School, Pulluvila, has already garnered positive response from the students and local residents alike. Eram is also the company that introduced the concept of e-toilets in the country.

The new e-toilet is named NEWgenerator and it was developed with the help of experts at the University of South Florida with the support of Bill and Melinda Gates Foundation. The e-toilet is equipped with automatic self-flushing and self-cleaning mechanisms.

According to Bincy Baby, director, Eram Scientific Solutions, the company came up with this project as part of the Global Reinvent Toilet Challenge by Bill and Melinda Gates Foundation and Biotechnology Research Assistance Council (BIRAC) under the central government.

Pulluvila was chosen to install the prototype of the e-toilet because it was a place that was infamous for the sheer number of households that lack proper toilets.

"The system is designed to work completely off-grid, without electricity. It utilizes the mechanism of anaerobic membrane bioreactor (AnMBR) to recycle the waste," Bincy said adding that using the method the solid waste can be converted into fertilizer and liquid waste can be recycled for flushing and sanitization purposes.

The toilet was installed at Leo XIII HSS, Pulluvila, 18 months ago on an experimental basis.

According to school manager Father Jerome Alphonse, who is also the parish priest of St Jacob Forane Church, Pulluvila, the toilet was being used by students and local residents alike ever since it was installed. "We also use the fertiliser received from the toilet in our vegetable and plantain farms on the school campus," he said.

Fr Jerome added that most households in the coastal village lack proper toilets owing to geographic problems. The region lacks a proper drainage system. Since many houses are located close to the sea, septic tanks overflow when the tide rises.

"We are in talks with the firm as well as local body authorities to purchase a few more e-toilets and install them as community toilets here," said Fr Jerome.