

## **NISARGRUNA PLANT FOR DISPOSAL OF BIODEGRADABLE WASTE**

The NISARGRUNA technology has been developed at Bhabha Atomic Research Centre mainly for decentralized processing of the biodegradable waste that would help in reducing the transportation cost and health menace associated with it. It is expected that Nisargruna units of 1 to 2 metric tons per day capacities would be ideal for urban local bodies in the country. Similar units would also be workable in rural areas for handling agro-waste. Concept of community kitchen useful for group of households in the village can be worked out using this technology. The project is expected to generate employment in the downtrodden sector of the society. It would help the ever-depleting energy sector by generating fuel for domestic cooking. The technology has evolved in last several years and more than 250 such NISARGRUNA plants are operative in various states of India.



**Photo of Nisargruna Biogas plant, TCS, Thane (MS)**

BARC's NISARGRUNA plant offers "Zero garbage, zero effluent" method for waste disposal. There is a good potential for energy generation in this biphasic biomethanation plant. A substantial portion of our biodegradable waste is food waste (38-40%) which can generate about 60-80 m<sup>3</sup> of biogas (about 30-40Kg of methane) per ton of the waste processed. This can be used as fuel for domestic purposes or generator. It can also be used for generation of electricity. Manure is another by product of the process which acts as an excellent soil conditioner. This is another area where our waste can provide us wealth. The NISARGRUNA plant returns as organic manure 10% of the total waste processed.

The main aim of the NISARGRUNA plant is to pay back Nature's loan in the form in which NATURE will appreciate. This is essential for smoother functioning of various biogeochemical cycles in NATURE suitable for getting sustained uninterrupted returns from NATURE.

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