

Mismanagement of waste could increase global warming: IISc study

The study also points to a rise in amount of plastic waste due to increase in use of packaged food

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BENGALURU: The dismal coverage of the segregation-at-source initiative in the city could be having a direct impact on the temperature. A study by T.V. Ramachandra and his 'Energy and Wetlands Research Group' at the Centre for Ecological Sciences (CES), Indian Institute of Science (IISc), has found a correlation between ill-managed waste and global warming.

With the city generating nearly 4,000 tonnes of garbage a day, 55 per cent of it coming from households, segregation of waste has gained prominence. The study has found that each citizen generates 580 grams of waste a day, up from 160 grams in the past due to changes in amount and types of waste. It has also established that 72 per cent of all the waste generated is organic/biodegradable.

"Some of the waste is also dumped on roadsides and open plots, or is burned in the open air, causing health hazards and incomplete decomposition. When biodegradable waste is composted effectively, there is very little amount of greenhouse gas emission. For effective de-



BURNING PROBLEM: Heaps of unsegregated garbage are often burned on roadsides and open plots in the city. — FILE PHOTO

er, when biodegradable waste is mixed with non-biodegradable materials, less oxygen is available for decomposition. As a result, a high quantity of methane is released, instead of limited quantities of carbon-dioxide," the study says.

The total methane emission from solid waste in the city is said to be about 32 kg/day, and the carbon-dioxide emission is 404 kg/day.

Worrying trend

The study also points to a "significant increase" in the

WHAT THE SCIENTISTS SUGGEST

The IISc report suggests an 'incentive-based' segregated waste collection system that involves:

- Mobile vans with the provision to collect segregated and unsegregated waste
- Lane-friendly mobile vans with GPS
- Giving residents who

segregate waste an incentive of Rs. 1-2 per kg of organic waste

- Collection of a fine of Rs. 5 per kg from those who give unsegregated waste

HIGHLIGHTS OF THE STUDY

- Bengaluru generates 3,000-4,000 tonnes of solid waste every day
- Household waste makes up about 55 per cent of the total waste
- Hotels and eateries generate 20 per cent of the waste
- 72 per cent out of the waste is organic/biodegradable
- One citizen generates

an average of 580 grams of waste daily

- It was around 160 grams a few years ago
- Low-income groups use unprocessed vegetables and products with minimal packaging, unlike high-income groups
- Total methane emission from solid waste is about 32 kg/day, carbon-dioxide emission is 404 kg/day

aged food in recent years. "Plastic waste is a worrying phenomenon. The use and unsystematic disposal of plastic waste is choking storm water drains, leading to floods in city areas. It is entering the food chain through animals or directly affecting human

Roughly 21 per cent of the total waste generated in Bengaluru is said to be made up of materials like paper, plastic, glass and metal — all of which can be recycled.