

CITIZEN MATTERS मुंबई

Mumbai's no.1 source of trash: Food waste

June 13, 2023 Sherine Raj

DECENTRALISED WASTE SEGREGATION



Waste pick-up truck collecting garbage from community bins. Activists and citizens have raised the issue of poor segregation of garbage in several residential societies and institutions. Pic : BMC

For more than eight years, food waste has been the main contributor towards the 6300+ metric tonnes of trash that Mumbai generates every single day. The food waste, that includes fruits, vegetables, plant waste, dairy products, grains, egg shells, meat, newspapers, is called wet waste, which is bio-degradable, that is, it's capable of getting decomposed naturally.

Food waste comprises of more than 70% of the total waste each year, says the Brihanmumbai Municipal Corporation (BMC)'s latest Environment Status Report (ESR). Decentralising of waste – managing the waste at its source instead of taking

it to landfills – is the 'need of the hour' suggests the latest report on civic issues by Praja Foundation.

Experts say, this wet waste can be recycled into compost easily, reducing the pressure on already-overburdened landfills. Moreover, appropriate segregation of dry waste can help in recycling and reusing most of dry garbage.

However, experts and activists point out that several societies and institutions do not segregate wet and dry waste, making it impossible to recycle either ways.

Journey of Mumbai's waste

According to the BMC, waste produced by houses is usually segregated and collected door-to-door after which, it is transferred into community bins. The street sweepings are also disposed in community bins. Municipal staff collect this segregated waste from these bins into a waste collection truck and transport the dry waste to one of the 47 dry waste segregation centers at ward level. The wet waste is transferred to the landfill site at Kanjurmarg, where a waste processing plant uses anaerobic digestion to process the waste.

Mandatory segregation of garbage

The Solid Waste Management Rule 2016 makes it a legal obligation for housing societies to segregate wet and dry waste.

The BMC had framed bye-laws in 2006, titled, "Greater Mumbai Cleanliness & Sanitation Bye-laws". Under Byelaw No. 5 – Segregation, storage, delivery and collection – the authorities are empowered to fine citizens and societies who indulge in mismanagement, non-segregation and burning of waste. The fine amount ranges from Rs.100 to Rs. 20000, depending on the type of violation.

According to the ESR, these laws are applicable to every person and every public place within the limits of Greater Mumbai.

The BMC claims that around 82 percent of this 6,300 to 6,500 metric tonnes per day is currently segregated at the source.

However, activists say that it is difficult to believe this high percentage as many places in the city do not segregate their waste. According to Praja's report based on data from 47 dry waste segregation centers and landfills, it shows that the waste is not being segregated at source.

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Wet garbage includes discarded vegetables and fruits along with cooked food waste, which is biodegradable but ends up in landfills in huge quantities, often with plastic wrappers. Pic: Foerster, CC0, via Wikimedia Commons

Lack of strict enforcement

“I moved to Mumbai around three years ago and have stayed at three different localities including Santacruz, Malad, and Ghatkopar, and to my dismay, not even one of those societies had a separate wet and dry collection,” says Neha Anand, a working professional.

“If the waste is not even segregated at source (by citizens), how is the residential society and the civic body at large going to manage and recycle it?” asks Neha.

“From our experience we have found that people don’t segregate waste due to lack of awareness and because they know someone will pick it up and take care of it,” says Monisha Narke, founder and CEO of the organisation RUR – ARE YOU REDUCING REUSING RECYCLING? They build, design and implement sustainable and decentralised waste management solutions, community composting services and workshops in Mumbai.

At RUR, says Monisha, they follow the circular economy route, where the dry waste (such as paper, plastic, etc.) gets recycled back to its original form, without tapping more resources from the environment. “However, to reach this end-to-end recycling goal, segregation is very important without which it is nearly impossible,” she adds.

Dr Arun Sawant says, “... if strict enforcement could help in segregating the biomedical and nuclear waste then it should be able to help in food waste too.” Arun is Director, Waste to Energy Research and Technology Council (WTERT) and President, Society for Clean Environment – SOCLEEN.

The medical and radioactive waste of the city is segregated and accumulated at Mumbai’s only bio-medical waste plant at Govandi. The waste is sourced from various hospitals and industries all over the city,

that are bound by strict rules for waste management, and the waste generated from them is processed at the Govandi plant where it is incinerated. It is important to note that the bio-medical waste treatment plant has met with resistance because of the pollution it causes.

The BMC authorities say they are helpless and have not been able to enforce the law of dry and waste segregation in the city.

Effective recycling of waste

Arun also cautions saying that there should be an intelligent and well-constructed plan for the recycling of wet waste. “There is no point in setting up waste-to-compost plants in societies and other places. To whom are you going to sell all that compost? There are hardly any buyers,” he says. More than 50% of the wet waste has water and moisture content, which helps in the recycling process. Food waste can be the best source for methane generation, which is a rich source of biofuel.



Inauguration of the waste powered electronic vehicle charging station by former Minister for Environment and Tourism Aaditya Thackeray, at Haji Ali. Pic: (Twitter/@AUPhackeray)

However, there is only one bio methanation plant in the city, located at Haji Ali, Worli, set up last year. This project is India's first Electric Vehicle (EV) charging station powered by biogas that uses food waste to convert to energy. It generates 220 units of electricity from food waste collected from its nearby areas, mostly from bulk generators like hotels and offices. The plant processes two metric tonnes or 2,000 kg of wet waste per day and helps in powering street lights and charging electric vehicles.

Burden on landfills necessitate decentralisation of waste

As of 2023, there are two operational landfills under the jurisdiction of BMC – the Kanjurmarg landfill site and the Deonar dumping ground.

The predominant method of waste disposal followed until 2015 was the dumping and levelling of waste. Now, with the bioreactor technology for the generation of biogas and composting installed at Kanjurmarg landfill, the waste is scientifically treated and converted to energy.

According to the ESR 2021-22, the Deonar dumping ground, which does not have a bioreactor, continues to receive approximately 12% (700 MTD) waste. The Kanjurmarg landfill receives 88% (5,500 MTD) of waste on a daily basis, which is processed in the waste-to-energy plant.

According to the Praja report, dumping grounds produce leachate that causes soil and marine pollution and emits methane into the atmosphere. Burning waste in dumping grounds to reduce the volume of waste is also a major cause of air pollution in the surrounding areas, where people have fallen fatally ill due to respiratory diseases over the years.

Urgent action for segregation

Experts and activists say managing waste at source is crucial and so is utility of the recycled products. “The National Institute of Urban Affairs (NIUA) recommends the Integrated Solid Waste Management (ISWM) system to reduce waste generation, process waste at source and reduce waste sent to landfill,” says Milind Mhaske, CEO, Praja Foundation.

Health hazards and rising pollution points to the alarming need for decentralised waste management, which will reduce the huge amount of garbage being dumped in landfills.

However, for now, that goal seems a long way off.

Link : <https://mumbai.citizenmatters.in/mumbais-no-1-source-of-trash-food-waste-50616#:~:text=The%20Kanjurmarg%20landfill%20receives%2088,emits%20methane%20into%20the%20atmosphere.>