



**DECENTRALIZED SOLID
WASTE MANAGEMENT
IN MUZAFFARPUR,
BIHAR**



BACKGROUND

On 15 December 2016, the 'Swachhta Swasthya Samridhi' programme was launched in Muzaffarpur under which a Memorandum of Understanding (MoU) was signed between CSE, Muzaffarpur Municipal Corporation (MMC) and ITC Ltd for facilitating better solid waste management in the city. The programme is helping transform Muzaffarpur into a clean city by adopting segregation and processing at source.

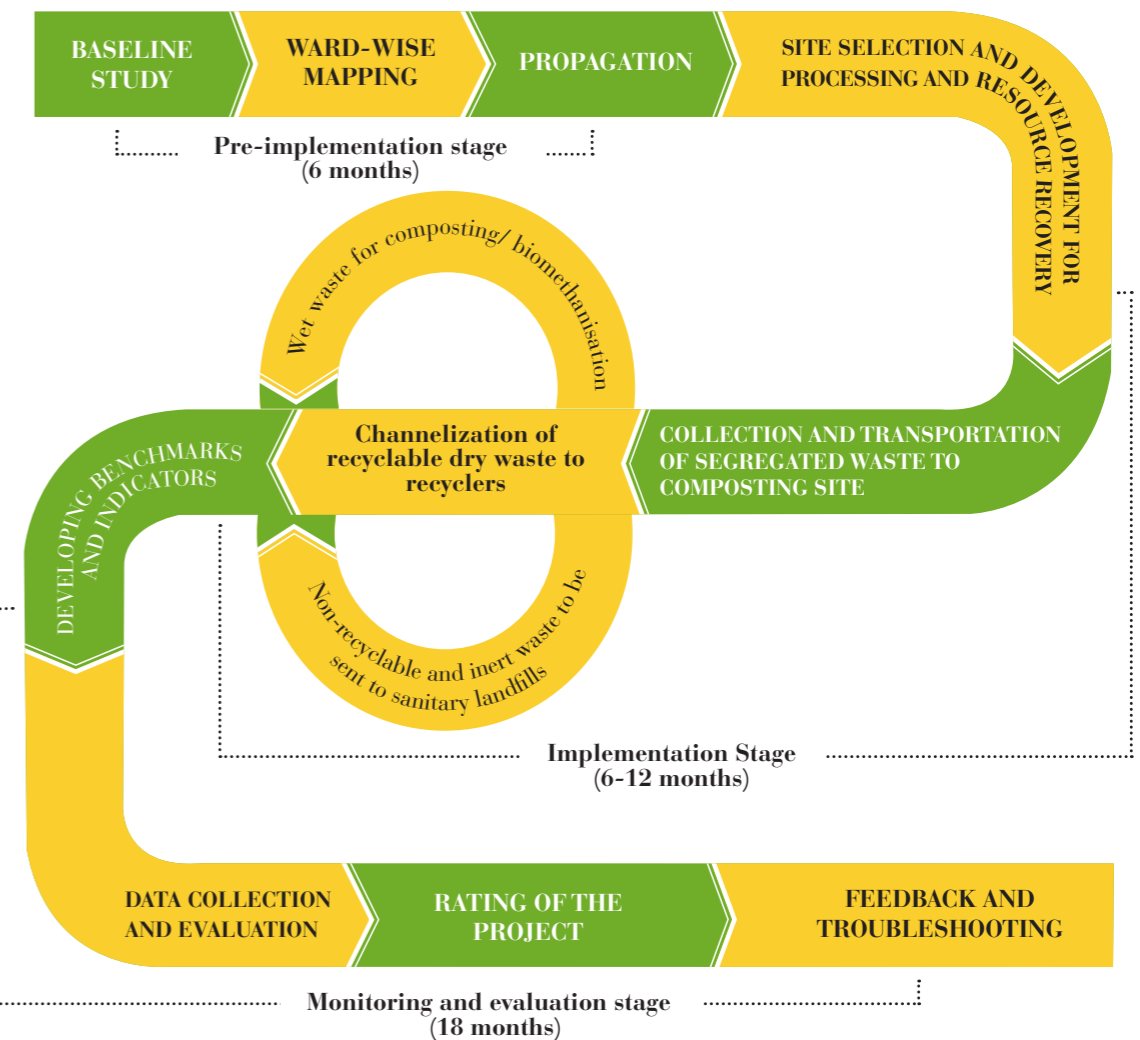
STAKEHOLDERS INVOLVED

CSE is working together with Urban Development Department, Bihar, MMC and Well-being Out of Waste Initiative (a CSR initiative by ITC Pvt. Ltd.) to push for and implement decentralised waste management systems in Muzaffarpur city and ensure the model is replicated in different cities of Bihar.

MUZAFFARPUR WASTE STATISTICS

The 49 wards of Muzaffarpur city are divided into ten circles. Each ward consists of 1,500–3,000 houses. As per information provided by MMC, Muzaffarpur generates about 170 metric tonne of waste daily, with the daily per capita waste generation being close to 300 grams. As per CSE estimates, the per capital waste generation is between 600-800 grams.

STEPS FOR DECENTRALISED WASTE MANAGEMENT IN MUZAFFARPUR





AWARENESS AND PROPAGATION FOR WASTE SEGREGATION

About 70 volunteers chosen from the city are responsible for door-to-door propagation to educate residents on segregation of waste into wet, dry and domestic hazardous. The volunteers accompany waste collector and check the levels of segregation. Their role is to ensure that over a period of time, segregation becomes a habit of the citizenry. So far, households in 34 wards and commercial establishments in all 49 wards are giving segregated waste.

MMC has provided all households in these wards with two superior quality plastic bins (green for wet and blue for dry waste). Commercial establishments such as shops majorly generate dry waste and store it in cartons. Any biomedical, sanitary or hazardous waste is handed separately from the wet and dry waste.

The details of the residents of the houses that have received the bins are noted and houses are marked with stickers to keep a track of the progress of segregation. The citizens also receive pamphlets explaining the process of segregation.



WASTE COLLECTION, TRANSPORTATION AND PROCESSING

MMC has a fleet of 20 tippers with partition, tractors-20 with partition and 30 without partition, 120 tricycles and 50 pushcarts to support collection and transportation of segregated waste to the processing and disposal site. The collection happens daily between 6 AM to 10 AM. About three-four tonnes of wet waste is collected every day from the 34 wards and sent to two aerobic composting facilities. The facility near the MRDA campus has 40 pits, each with a capacity of 1,000 kg, whereas the facility at Chandwara has 66 pits. MMC is planning to set up five such decentralized composting centres in the city.

Collectors (both formal and informal) are incentivized as they earn about 2,000 INR per month by selling dry recyclable waste to the local scrap dealers (dry waste franchise) at their collection center where it is further segregated into different kinds of waste for recycling purposes. All the low value plastics and multi-layered packaging is stocked at the MRDA facility. This shall be further channelized for co-processing once it achieves a desirable quantity of 8-10 tonnes.





Compost packets for sale

OUTCOMES

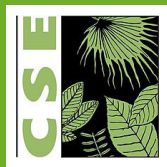
The model of waste management in Muzaffarpur is a unique model—frugal and generating wealth from waste. The programme has witnessed tremendous participation from the residents with over 80 per cent segregation at source achieved on a daily basis. Muzaffarpur has seen incredible improvement in cleanliness with streets and public areas looking very clean. Litter spots have declined, and so has waste burning. Segregation of waste has also helped in improving the livelihood of the waste collector. The selling of compost shall further help MMC to make profit from waste. The city also improved its rank in the Swachh Survekhsan 2017 and 2018 (state rankings) and has been included in the list of smart cities. Muzaffarpur has become the first in Bihar to have its own solid waste management bye-laws. As per the direction of Urban Development Department, Bihar, all the major cities in Bihar are to adopt the Muzaffarpur model of decentralised solid waste management.



Cleanliness drive and tree plantation led by Mayor in Muzaffarpur



Local Madhubani artwork done at the model processing unit near town hall



FOR MORE INFORMATION

<https://www.cseindia.org/muzaffarpur-8962>

Centre for Science and Environment

41 Tughalabad Institutional Area, New Delhi- 1100 62

Ph.no.: 011-29955124,29956394