



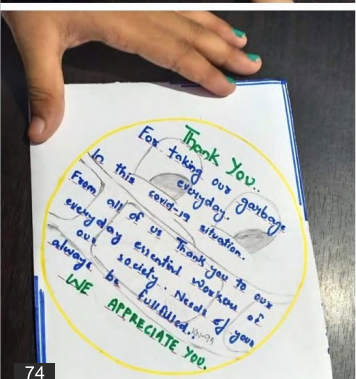
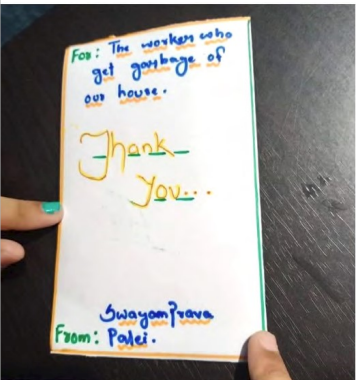
Decentralized Solid Waste Management in Odisha

Till 2019 all the urban local bodies (ULBs) in Odisha were collecting, transporting and dumping the garbage on the outskirts of the city. With tipping fee in the range of Rs. 2500 – Rs. 4500 per metric tonne of waste, the State was spending Rs. 400 crore per annum on collecting, transporting and dumping.

In July 2019, the Housing & Urban Development Department, Government of Odisha adopted decentralised model for setting up of micro composting centres (MCC) and material recovery facilities (MRF) for tackling the issue of growing urban municipal solid waste. A strategy document containing standard operating procedure was issued to all the ULBs to guide them for a smooth transition to a simple, cost-effective and decentralized, community-driven solid waste management system.

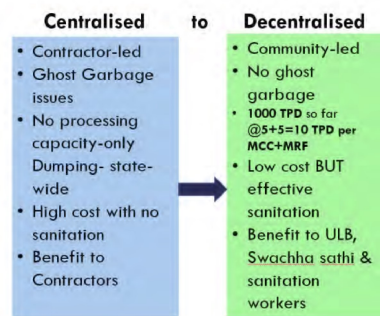
Rs. 567 Crore was allocated in FY 2019-20 for state-wide implementation of the scheme in all 114 ULBs. Within a year, the State could process almost 1000 tonnes of municipal solid waste (MSW) per day. Establishment of dispersed solid waste processing facilities closest to the source, reduced transportation expenses. The sale of organic compost and recyclable dry waste began generating revenue.

The State partnered with a number of women self-help groups (WSHG) and transgender self help groups (TSHG). 2260 Swachh Saathis – members of WSHG, who are change agents of swachh ward mission (SWM) and 609 Swachh Supervisors were trained to induce behavioural changes in household waste segregation practices, affixing ‘Swachh Gruha’ stickers to reward for good



behavior and ‘naming and shaming’ for defaulting households in their locality. The SHG members are incentivized with the proceeds from the sale of waste, ensuring long term sustainability of the model.

The State has set the mission of achieving zero-land fill and the paradigm shift from contractor-driven, centralized waste management system to community-based, decentralized waste management system will boost the cleanliness quotient of Odisha’s urban scenario. The decentralized system with its low-technology and low space requirement is easily replicable elsewhere too.



HIGHLIGHTS OF DECENTRALIZED MODEL



Bringing about behavioral change in waste segregation amongst millions of citizens, in a time-bound manner was a complex task to achieve. 2,355 members of WSHGs and many TSHGs were on-boarded as 'Swachh Sathis' to spread awareness and ensure 100% door-to-door collection of segregated waste. Many informal sector waste pickers have been roped in to this system and provided opportunities to work at material recovery facilities.

The following strategies were instrumental in driving community engagement:

- Door-to-Door Campaigns were conducted by 2355 Swachh Sathis and 609 Supervisors in all 114 ULBs to induce behavioural change and inculcate spirit of 'my waste, my responsibility'
- 'Swachha Gruha' stickers are affixed on households practicing segregating of waste at source, which nudges defaulters to adopt the practice.
- Mixed waste delivered by households is segregated by sanitation workers in front of the household adopting 3E principles (expose-embarrass-educate) which encourages handing over of segregated waste
- Some of the cities had Swachhata Rath (specially designed vehicles), driving around the streets to create awareness.

sanitation related issues over food. To recognize best practices select Swachh Gruhas are also invited and awarded. Key government officials also participate and interesting success stories are shared to inspire and motivate the teams.

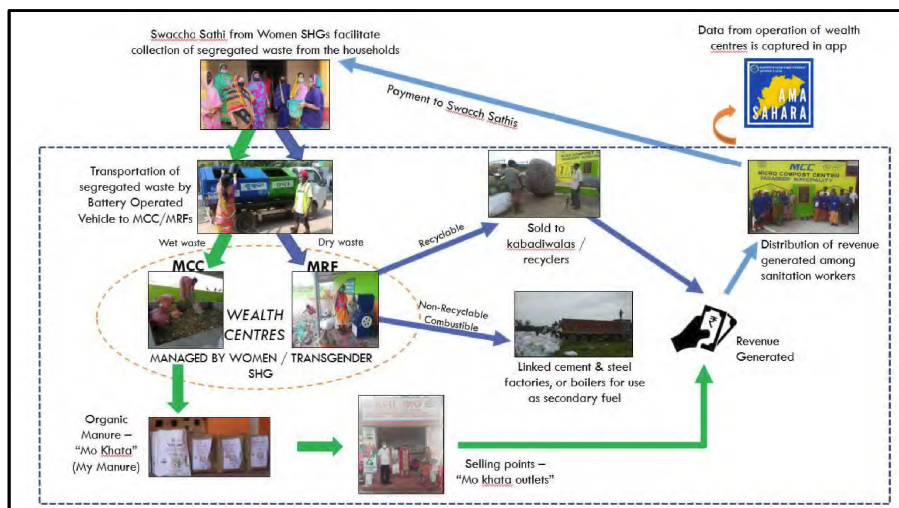
Seamless transition to the new model was made possible through series of training conducted in two phases, to impart training to 28,606 sanitation workers, swachh sathis and other stakeholders.

The practice of 'Bada Khana' (feast) was introduced where sanitation workers, swachh sathis and officials meet every month and discuss

As a result of behaviour change, indiscriminate dumping and incineration of waste has significantly reduced leading to improvement in soil, water and air quality. Organic manure generated from the waste of the households, when returns to the households in a new shape, branded as "MO KHATA" (MY MANURE) creates bondage. This high-quality, organic manure is available at an affordable price of Rs20 per kg.

Now, around 444 tons of dry waste is being recycled every day. Around 65 Tonnes per day of the organic manure is being generated by MCCs, which is being used in households, parks and farmlands across the State. Use of battery-operated-vehicles (BoV) instead of diesel vehicles for waste pick-up has ensured improvement in air quality.

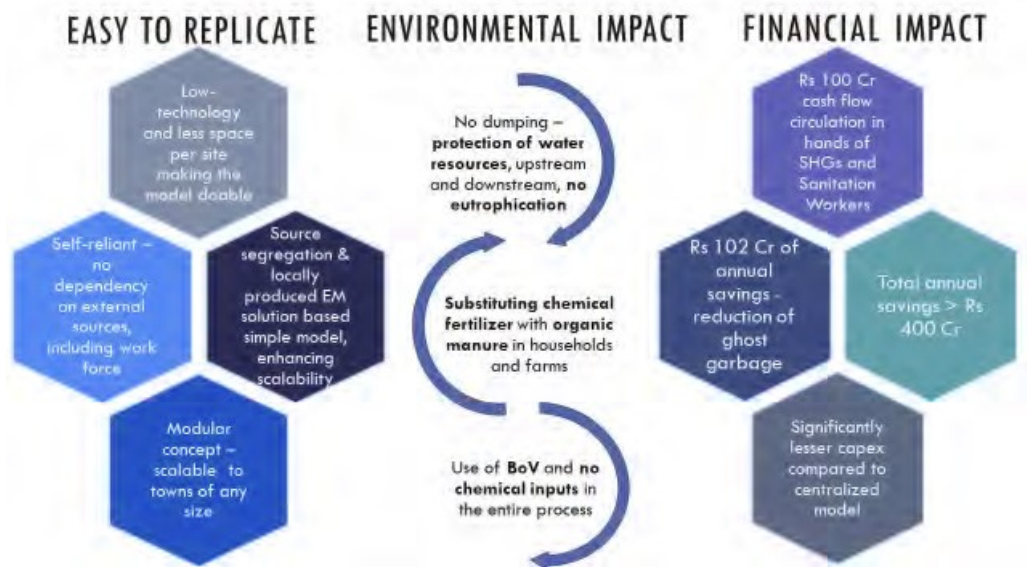
MCCs and MRFs are serving as wealth centres. Decentralised waste management has eliminated the tipping fee model and the associated profit motive of contractors. There is significant reduction in capital expenditure and operating expenditure in the decentralised model. A one-time investment of Rs. 230 crore, by the State Government is saving it an yearly expenditure of Rs. 400 Crores that was paid as annual



Decentralised solid waste management system

tipping fee. Every MCC and MRF as a cluster, would be earning net revenue surplus of about Rs.1.66 Lakh per Tonne per annum of waste treated, resulting in Rs 32 Crore net surplus annually after meeting all expenditures against once all the 245 MCC & MRF clusters are in full-fledged operational mode.

In addition, this model has integrated the community members i.e. Swachha Sathi from WSHGs and TSHGs into the system on performance linked incentive basis creating regular income for them with dignity. This will ensure that these community members will try to sustain this system and act as a barrier to go back to the old contractor centric model. The 'wealth from waste' is accruing to the community. Rs.7.62 Lakhs have so far been distributed as financial incentive to Sanitation Workers and people associated in functioning of MCC and MRF from the sale of organic compost and dry recyclable waste material.



There are vast improvements in living conditions due to cleaner and odor-free streets and higher levels of hygiene in public areas with reduced breeding of flies, mosquitos and insects. 39 cities

have reported removal of garbage bins from markets; vegetable vending areas; commercial areas as the waste is stored inside the premises and handed over to the waste collection vehicles.