

**Strategy of Integrated Solid Waste Management: With Special Reference to Mysore City**

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**Abstract**

India has seen rapid urbanization in the last two decades and it is expected to continue at this pace if not more until 2050. As a consequence of this urbanization in the last two decades, solid waste management and sanitation requirement of the citizens has gone berserk. Nearly all the cities are struggling with piles of garbage either on streets or in the landfill areas causing serious environmental and hygiene challenges. But, the Mysore city has succeeded in the urban waste management. This paper describes the process of the waste management in Mysore city.

**Objectives**

1. To know the Urban waste management in Mysore city
2. To discuss how the India's cleanest city makes money out of its garbage

**Method of Study**

The study was undertaken collecting information from secondary sources- journals; magazines and research articles have been referred to prepare the paper.

**Introduction**

Mysore has transformed into a model for many Indian cities. For, it has been rated as the second cleanest city in India after Chandigarh according to a survey conducted as part of the National Urban Sanitation Policy of the Central Government. It is a matter of pride for Mysore, which has many other distinctions. The recognition of Mysore as the second cleanest city came among 423 cities surveyed for the ratings. Mysore was classified in the blue category, ahead of Bangalore that has been placed in the black category. Having earned the tag, an ambitious Mysore city Corporation has turned its attention to bag the distinction as the country's healthiest city (categorized green). With an idea of making the cities and towns healthy and liveable, the Union Ministry of Development launched the survey in 2009 to rate the cities on the basis of their sanitation standards and public health awareness. The rating creates a baseline that can be used to measure progress in respect of sanitation, which will encourage cities to perform better in the years to come. The best performers will be recognized with a national award 'The Nirma Shahar Puraskar' based on the results.

**Objectives of Ranking for the Clean City**

A totally sanitised city is one that has achieved the objectives specified in the National Urban Sanitation Policy some of it are open defecation free city, universal access to toilets for all including the urban poor, elimination of manual scavenging, adequate provision of personnel protection, equipment that addresses the safety of sanitation workers, safe collection, treatment and disposal of all wastewater, solid waste and storm water, and recycle or reuse of treated wastewater with the ultimate objective of ensuring improved public health outcomes and environmental well being. According to the results, more than half of the cities are in the Blue or Black categories. Mysore secured 70.650 points to be adjudged the second cleanest city after Chandigarh, which earned 73.480 points. Bangalore secured 53.637 points. Incidentally, Mysore is the only city in South India in the blue category.

## **Waste Management in Mysore City**

Urban India is drowning in garbage. According to one estimate, India's urban population of 377 million generates an estimated 62 million tons per year of what experts call "municipal solid waste." The problem is not just the trash you see on the streets and alleys in both posh and poor neighbourhoods. It is also the insufficient processing of trash that is collected. The Government of India has pushed for improvements before. In 2000, it implemented a set of rules for handling municipal solid waste, based on the recommendations of a committee appointed by country's Supreme Court. The rules recommend the use of different technologies by municipal bodies to reduce the possibility of environmental damage and impact on health due to heaps of rubbish left lying on the streets. But for most cities, integrating more systematic waste disposal in landfills with strategies for waste recycling and reuse remains a huge challenge.

To meet this challenge residents have been trained to segregate "wet" organic waste from dry waste, and to use different coloured bins for each. Community workers employed by the Mysore Municipal Corporation, known as Pourakarmikas to pick up the materials and take them by truck and pushcarts to plants around the city. In those plants, more workers sort out materials that can be sold to scrap dealers. It's a decentralized model that leans on municipal resources, on civil society and a lot on cooperation from residents and businesses. Mysore's streets generally not only litter free but also its waste are collected systematically and gets recycled.

### **Engaging Citizens**

A visit to the city's Kumbarakoppal ward is a useful starting point in understanding how this city remains so enviably clean. The ward, home to a waste-sorting site called a "zero waste management unit," sells 95 percent of its garbage; only 5 percent goes into landfills. Kumbarakoppal means the potters' colony. Long ago, most residents in this area were potters. Today, the ward offers valuable lessons on how to re-imagine trash. The waste management plant is run by a local NGO, the Federation of Mysore City Corporation Wards Parliament. Every imaginable bit of trash comes here: footwear, milk cartons, beer bottles, plastic, used deodorants. They are neatly segregated into 35 categories, labelled, and sold to scrap merchants who sell it to recyclers and industries that can reuse the material. Nothing goes waste not even bottle caps. Organic waste sold to farmers can be used as fertilizer. Set up in 2012, Kumbarakoppal was the first zero-waste management unit in Mysore. Today, the city has nine such centres that can handle trash from nearly half of Mysore's 65 wards. Another 47 scattered smaller centres' handle only dry waste.

Made gowda a politician who has been instrumental in making solid-waste management a political issue. Mysore was fortunate to have enlightened rulers, the Wodeyars, a dynasty that ruled the Kingdom of Mysore from the 14th century until India's independence. The Wodeyars not only built magnificent palaces but also put in place a good underground drainage system, and laid the foundation for sound urban planning. "Perhaps this may be the reason for calling Mysore the cleanest city in India today and is known for managing its solid waste systematically. Mysore got India's first urban planning body, the City Improvement Trust Board, in 1903; street lights were provided in 1908; underground drainage was introduced in 1910. Successive local governments in post-independence India have continued the tradition of urban reform and citizen engagement. Getting people to make a habit of segregating waste took years of sustained effort. Madegowda took the second step adopting a ward. This meant mobilizing the resident's welfare associations, getting a community representative for each street, rechristening municipal cleaners as 'friends of the city,' making sure two such workers were appointed for the ward."

BharathiMariappa, a homemaker who lives near the Kumbarakoppal waste plant, credits the Federation with making her aware of the importance of segregating waste. In addition, a women's community group called Stree Shakti was very much involved in the outreach. "Women volunteers of Stree Shakti introduced us to the idea of segregation," she

says. "It was difficult at the beginning. It meant extra work. But they were persistent. My 15-year old daughter is much more aware of segregation than I was at her age." "Six years ago, most householders were reluctant to segregate wet and dry waste," says a Stree Shakti volunteer named Lakshmi. "They said it would mean lots of extra work. But we went door to door, trying to convince them why they should do so. We distributed pamphlets. We also cautioned them about penalties. Anyone who does not follow the rule is fined. I feel happy that I have been part of the story of change that we are seeing today and that Mysore the cleanest city in India."

### **Point of Pride**

Mysore became India's cleanest city because it practiced the 'R' mantra: reduce, reuse, recycle and refuse. Those who collect trash from homes won't collect it unless it is segregated. This has helped the city to monetize the waste it generates. The Corporation also runs a compost plant in partnership with a private company; the Corporation gets a royalty payment from the company that operates the plant. It has 100 percent door-to-door collection of trash; 80 percent is segregated before being processed; 98 percent of Mysore's networks of drains are covered and the drains are regularly cleaned and maintained by the Corporation. Every house in Mysore has a toilet and the toilets have water connections, so Mysore is nearly free of open defecation. In contrast, a recent study found that 52 percent of rural Indians and 7.5 percent of urban dwellers defecate in the open.

Much of this was in place before Modi's Swachh Bharat program, but that campaign and the clean-city contests have helped galvanize the local authorities, strengthen the existing initiatives and put in place additional measures. Plans have been drawn up for two new compost plants. In addition, 425 toilets were identified for repairs and funds were sanctioned to undertake the work; plans are being drawn up to construct even more public toilets in commercial centres. Each sweeper is allotted his or her specific cleaning tasks. Some do sweeping; some go for door-to-door collection, some deal with complaints and grievances. Health inspectors and supervisors carry out random visits. Every morning, attendance of corporation employees as well as contractual workers is checked. Anyone found wanting has penalties deducted from their salary. Besides one-to-one conversation, digital technology is also made use of. Gigantic digital displays spread messages on segregation, the need to keep the Mysore city clean and so on. There is a team of health inspectors, drain inspectors, environmental engineers and NGOs for the successful implementation of the clean city project.

Social media also plays a crucial role in Mysore's efforts. About two years ago, a Clean Mysore group got started on the popular messaging platform WhatsApp; there's now more than 300 members. ShyamSundarSubba Rao, an active member of the group, says it's a tool to hold officials accountable. It helps them to draw the attention of elected representatives towards our problems. Residents can simply click a photo of garbage lying around in their vicinity and upload it on the WhatsApp group. This acts as pressure and often leads to corrective action by municipal officials who attend to the problem immediately. In some ways, Mysore is an outlier for India. With just under 1 million residents, the city till today draws around 3 million tourists thanks to its scenic beauty, valuable heritage places and its clean surroundings.

Still, the city offers a lesson to cities in India and elsewhere: Citizen Engagement can not only create a cleaner city but build community pride in the city as well. Promotional hoardings for Modi's Swachh Bharat campaign typically show images of politicians and celebrities sweeping the streets with a broom. Mysore demonstrates that it is a city known for its own matchlessness.

### **India's Cleanest City now Makes Money out of its Garbage**

Mysore, the cleanest city in India, has efficiently adopted 3 R's – Refuse, Reduce, and Recycle. Now it has added another R – Reuse. This has helped the Karnataka city, boast of door-to-door garbage collection, monetise the waste it generates. By creating garbage processing centres in the city, the authorities concerned have created a workable model where

wet waste is made into compost. The compost plant generates 200 tonnes a day. Mysore City Corporation (MCC) gets ₹6 lakh as royalty from ILFS (who operates the biggest compost plant), while processing centres earn another ₹24,000 a month by selling dry waste (Betsurmah). ILFS Waste Management and Urban Services Limited is a fully-owned subsidiary of Infrastructure Leasing and Finance Services (IL&FS). The processing centres begun encouraging women self help groups (SHGs) and selling dry waste to supplement their monthly wages.

At present, the city has 90 waste management centres and 47 dry waste collection centres. Mysore has achieved 100 per cent door-to-door collection and 80 per cent of its garbage is segregated before being processed. Mysore functions like an ideal city. It has functional toilets, is poster-free and 98 per cent of its 1,586-km network of drains are covered. Mysuru is also free of open defecation, and it is not just because of Swachh Bharat. Its slum rehabilitation programme, under which 6,000 units were built, has been the key to tackling the open defecation problem. The MCC identified land and co-ordinated with Karnataka Slum Development Corporation to rehabilitate slums, opening up some of the congested parts of the city. The units were constructed on multi-level and each unit had toilets, also provided public toilets close to the housing units. The city scores over other cities in the country in its citizen participation. MCC is working out a model of zero waste at home. The solution is to reduce the garbage generated at home by segregation at source, and in recycling.

To get this cleanliness drive deeper, the city is working out a plan to drive or conduct mass education programme on the types of waste and better segregation of waste. The MCC is going ahead with mass education campaign to ban the use of plastic. So far, the rate of success achieved on ban of plastics is 18 per cent. Door-to-door collectors are being trained to educate the citizens on scientific disposal of plastic. (Betsurmah). Within a short span, the Mysore city is likely to set a new landmark for all the major cities in India to go after.

## **Conclusion**

Mysore has set the stage for the noble notion of 'Managing waste to manage the very Society itself.' It indeed, is acclaimed as an epoch making event in the annals of the Swachh Bharat Abhiyan (SBA) in India. Strangely, Mysore has kicked off measures well before the onset of SBA by the Central government of India. The combined efforts of the civilians on the one hand and the role of Government and NGO's on the other have made Mysore what it is today. It is the result of four 'R's- Reasoning, Rationale, Responsibility, and Righteousness of all the concerned who have set a role model for others.

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