

STATUS OF IMPLEMENTATION OF SOLID WASTE MANAGEMENT RULES IN WEST BENGAL

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Abstract

Waste has tremendous impact on both the environment and human health. The rate of generation of variegated types of waste has increased with the rise in population in urbanised locales and has become a major cause of concern in today's time. The author in this article has explored the nature and impact of solid waste on human health, and thereafter analysed the various legal instruments brought about to tackle the same. She particularly explored the status of implementation of municipal waste management rules in the state of West Bengal and tries to identify the loopholes in the law that is preventing the optimum management of the municipal solid waste generated in the state.

Keywords: *Waste, Environment, Legal instruments, West Bengal, Management*

I. Perils of Poor Waste Management

Walking past a landfill may be an unpleasant sight and the persistent strong stench coming from it may bother us. However, the problems related to having a landfill grow larger by the day has real consequences in the society for the health of the ecosystem and that of human beings. Several studies have shown that many short-term and long-term diseases¹ are linked to unscientific waste management structures. E.g., infantile diarrhoea (or diarrhoea in adults), malaria, typhoid, tuberculosis, plague, marine typhus fever, leptospirosis, rabies, rickettsia pox, other gastro & parasitic diseases, respiratory ailments etc are just few

of such diseases. These health conditions exacerbate with the increase in vulnerability of persons and those living with co-morbidities carry a higher risk of contracting these diseases and living their entire life with such irreversible conditions.

II. Laws governing Waste Management in India

The prime law in India concerning waste management is the Environment Protection Act 1986 and several rules promulgated under it concerning different types of waste. In this section few important provisions of The Solid Waste Management Rules 2016 will be discussed.

¹ *Municipal Corporation vs Bvg India Limited* on 27 March, 2018

The 2016 Rules recognize: - the importance of scientifically treating solid waste (in waste processing facilities²) before it's finally disposed in sanitary landfills³ (that are to replace open landfills); the role of government entities⁴ in creating a market for products recycled from waste (like compost etc); extended producer responsibility on manufacturers⁵; and lays out standards to test the quality of ground water⁶ and to check for leachate⁷ contamination. The Rules have provisions concerning differentiated standards for setting up landfill facilities according to land type (plains or hilly regions⁸) and season (e.g. monsoons⁹); and it underlines the fact that all members of the society; right from the individual waste generator to bulk waste generators, including governmental entities and informal sector players—need to collaborate to make any real difference in the waste management structure of India.

² R. 15(v) of The Solid Waste Management Rules, 2016

³R. 16(1)(b), 16(1)(e) and 16 (4) re/w Schedule II of The Solid Waste Management Rules, 2016

⁴ Department of Fertilizers in the Ministry of Chemicals and Fertilizers, under R. 7 of The Solid Waste Management Rules, 2016

⁵ R. 3(17) r/w R. 17 of The Solid Waste Management Rules, 2016

⁶ Schedule I (E), of The Solid Waste Management Rules, 2016

⁷ “An environmental study on potential health risks due to dumping of garbage in a metropolitan city”, Urmila Nyalkalkar Kulkarni, SNTD Women’s University, 2004, as available at

III. Role of the Judiciary

A. Supreme Court (SC)

Before the National Green Tribunal was constituted in 2010, the SC dealt with environmental disputes. The earliest cases reaching the SC, on waste management were: related to industries¹⁰ that discharged toxic untreated waste into various water bodies. The SC was tasked with the responsibility of balancing various competing rights: protection of the environment, livelihood, economic growth etc. The SC held the errant industries liable and always laid out elaborate methods for the judgement-debtor to comply with. One of its primary solutions was the treatment of waste in plants, before it was discharged into the environment. However, the errant industries seldom complied with such orders. Their defence was always pegged on the lack of sufficient finance to set up or maintain such expensive effluent treatment plants.

<http://hdl.handle.net/10603/110226> [Last visited: 24.04.2021] at p. 5

⁸ R. 20 R/W Schedule I (I) of The Solid Waste Management Rules, 2016

⁹ Schedule I (C) (iii), of The Solid Waste Management Rules, 2016

¹⁰ *Vellore Citizens’ Welfare Forum v. Union of India and Others*, AIR 1996 SC 2715; *Indian Council for Environmental-Legal Action v. Union of India (Bicchri Village Pollution in Rajasthan)*, AIR 1996 SC 1447; *M. C Mehta v. Union of India (Calcutta Tanneries case)*, AIR 1997 [2] SCC 411; *Indian Council for Enviro-Legal Action v. Union of India and Others*, AIR 1998 [9] SCC 580; *Tirupur Dyeing Factory Owners Association v. Noyyal River Ayachudars Protection Association and Others*, AIR 2009 SC 3645

However, an in-depth analysis of the cases¹¹, reveal that the real reason behind such non-compliance on part of the industries and the municipalities were otherwise.

a. Industries did not comply with the statutory mandate or the court orders because:

- i. not-treating effluents before it was released into the environment did not immediately pose any threat to the industry owners. It affected the industry workers and the poor residents only—a cost that they had learnt to externalize to their business account.
- ii. Cost of setting up and maintaining waste treatment facilities was high and those who did not set up were seldom hauled up¹²; which in turn made compliance with law appear financially unviable and an irrational business decision.
- iii. Industrialists had started noticing that the courts were reluctant to pass a ‘closure

order’ against polluting-industries, since the courts were always worried about infringing one’s right to livelihood and contributing further to the rate of unemployment in India.

- iv. Further, the industry owners had figured out that even if an adverse order were secured against them, the judgment-holders would have to struggle to execute the court orders since they lacked the capacity to follow up¹³.
- b. While, municipalities and pollution control boards did not comply with the statutory mandate or the court orders because they were corrupt, laid-back, severely understaffed, poorly funded and insufficiently trained¹⁴.

Management of municipal solid waste as a category on its own became an issue much later¹⁵. In most of these cases the municipalities tried to defend themselves by pleading lack of fund and manpower. But the SC while directing them to comply with their

¹¹ “Environmental Jurisprudence and the Supreme Court (Litigation, Interpretation, Implementation)”, Geetanjoy Sahu, (Tata Institute of Social Sciences, Orient BlackSwan, New Delhi, 2014), at p. 121

¹² *Ibid*

¹³ *Inter alia* to ensure that a judgement-debtor complies with the court order, a litigant has to follow up that

requires: financial capacity, knowledge, rapport with political powers, capacity to negotiate.

¹⁴ *Supra* note 12, at p. 131

¹⁵ AIR 1980 SC1622, AIR 1996 SC 2969, AIR 1997 [6] SCALE 10 [SP]), AIR 1997 [5] SCALE 495

duty said that lack of resources couldn't be used as a justification for failing to perform the primary task for which such statutory bodies were constituted.

B. National Green Tribunal (NGT)

Come 2010, the National Green Tribunal was established. It was expected to offer effective remedy as a specialised fast track body capable of addressing the nuances involved in deciding environmental disputes¹⁶.

On a qualitative evaluation of NGT orders, for the period 2018-2020, concerning municipal solid waste management and sewerage system: It was found that though the volume of waste had continued to increase, several municipalities didn't have an action plan chalked out to manage the same.

The NGT in its orders, emphasised that it was important to conduct annual performance audit to assess how much of waste was being carelessly managed; and to explore global models of waste management that could be adopted in India.

However, the most important contribution of NGT was in exploring a narrative beyond punishments. It highlighted the importance

of—setting up a technology based online control room (where citizen could report violations of law by uploading photographic evidence); using a functional CCTV camera to identify violators; to using video conferencing facility so that understaffed offices and officers burdened with many portfolios could avoid absenteeism and regularly virtually meet to discuss the ground reality and to decide further actions.

IV. Reality of Waste Management in India

Even with a decent set of enacted laws and an active judiciary in place, something is definitely not right, since our landfills have continued to grow larger by the day. The researcher believes that this is because our existing structure is detached from the unique reality of a diverse and populated country like India¹⁷. Our existing system is incorrectly based on the assumption that India has a functional monitoring system in place that will be able to identify the violators and efficiently prosecute the violators. Unfortunately, the reality is otherwise as has been noticed in various cases.

¹⁶ "A Tribunal in Trouble", Dr. Sairam Bhat & Lianne D' Souza, September, 2020 as available at http://nlspub.ac.in/a-tribunal-in-trouble/?fbclid=IwAR2phYNxnTACeT5Ff7RKby1s8RBB6xfoO3aQ9xw_-WNFrZwRjzA8HwQquC4 [Last visited: 06.05.2021]

¹⁷ For example, when Common Effluent Treatment were set up, the capacity of those involved in collection, segregation, treatment of waste was not

correctly assessed. Many treatment plants that were meant to manage a minimum bulk amount, became dysfunctional because these did not have the minimum amount of waste to process. It appears that finance and technology were not pragmatically or judiciously used and perfunctory municipal bodies continued to always defend their lack of work on the lack of funds and manpower *inter alia*.

V. Bengal and Waste Management

Following from the above section, the author would like elucidate how Waste Management has fared in Bengal.

West Bengal has 125¹⁸ cities; but all these cities are not of the same size or with the same population or generating the same volume of waste per day. The lowest volume of waste generated is in rural areas, anywhere between 30-50MT waste per day while the highest amount could go up to 3000-4000MT per day that generally happens in the larger municipal corporations in the state¹⁹. But one thing is more or less uniform; i.e., the composition of municipal solid waste (MSW). Waste is not identified as MSW based on who generates it. Therefore both residential and commercial establishments could be generating MSW. It is categorised so based on its composition. Therefore, excluding excreta and waste water, waste that is generated of the types of: food waste, glass and metal bottles, construction and demolition waste, clothing, e waste and medicines—will be considered as part of Municipal Solid Waste.

Such waste that is being generated in such quantities across West Bengal is definitely not being managed well, since our rivers and

ponds are flooded with plastics and our landmasses are burdened with inorganic waste like metal scraps and our ground water is loaded with arsenic and leachate²⁰. By its own admission, the government of West Bengal has recognised that the cause of various environmental degradation and threat to health and life of persons, especially the growing urban poor populace is because of the careless manner in which waste is dumped randomly in low lying areas²¹

The other problem is that we don't have an equal volume of waste being generated all year round. Picturesque places or places of historical and religious significance have a floating population and hence they need a slightly different plan to manage their waste. Particularly the four municipalities in the hills fall in this category. Therefore distributing one Urban Local Body per city would not be considered an efficient way of handling the varying volume of waste being generated in the state. West Bengal has a total number of 125 Urban Local Bodies²². Seven of which are large ULBs notified as municipal corporations, while the remaining are notified as municipalities²³. These ULBs have been clustered together to ensure that resources

¹⁸ "Annual Report (2018-2019) of Central Pollution Control Board", MoEFF, 2019 at p. 12 as available at [MSW_AnnualReport_2018-19.pdf](#) (cpcb.nic.in) [Last visited: 03.08.2021]

¹⁹ "State Policy and Strategy on Solid Waste Management for Urban Areas of West Bengal", Urban Development & Municipal Affairs Department,

Government of West Bengal, as available at [swm_guideline.pdf](#) (wurbanservices.gov.in) [Last visited: 3rd August, 2021], p. 6

²⁰ *Ibid*, at p. 4

²¹ *Ibid*

²² *Ibid*

²³ *Ibid*

required to collect, transport and treat waste is optimally managed²⁴. Such clustering though dependent on various other factors, is primarily dependent on the geographical location of municipalities.

It is quite evident that the government has been aware of the need to modify their previous ways of managing waste, and to especially use better machines and technology to reduce the woes relating to solid waste management. As has been previously stated that there are four major steps involved: segregated storage of waste, collection of waste by municipal bodies, transportation of waste to either the landfill or waste processing facilities. Ensuring that residents stored and segregated their waste within their household until such time as the municipal authorities collected it from their doorstep was a matter of increasing awareness among the common populace. The government had taken up massive awareness campaigns that had made use of information and communication technology to educate the populace²⁵.

The next step was to ensure collection of waste in a regular and proper manner. This collection usually happens²⁶ by waste collectors in smaller wheelbarrows/tricycles and push carts that collected the waste and

disposed it to a nearby community vat until it could be carried to the next destination. Now, there are various towns and cities in the state of West Bengal that did not have broad streets that could accommodate movements of big vehicles on them. So, the government provided two types of vehicles to ensure regular and unhindered waste collection: movable compactors and hydraulic tipper.²⁷ The latter can move on narrow streets and collect waste. But in spite of this collection of waste is erratic. We have some well performing cities and some poor performing cities. For instance, very few cities, like Bhatpara, Barasat and Titagarh municipalities reported that at least 75% of the waste got collected²⁸ by ULBs; while there were many cities where not even 20% of the waste got collected. It is interesting to note that the erratic collection is because of the poor state of door-to-door collection that was mandated under the Solid Waste Management Rules. Only around 30% of the waste is collected from a door-to-door manner.²⁹ And even when this door-to-door collection happens it does not happen in a two-bin system that separates the biodegradable from the nonbiodegradable/dry waste³⁰.

²⁴ *Ibid*, at p. 3

²⁵ *Ibid*, p.1

²⁶ *Ibid*, at p.9

²⁷ *Ibid* at p. 2

²⁸ *Ibid*, p.9

²⁹ *Ibid*

³⁰ *Ibid*, at p.11

Such waste that is collected from household is stored in masonry enclosures till such time as larger compactors/trucks come by to clear them. Very few trucks have an inbuilt scooping up mechanism. Most of the other times, workers use a shovel to transfer unsegregated dumped waste from these masonry enclosure onto these trucks.³¹

These trucks can carry waste upto 5T if the waste loaded onto them are adequately compacted to ensure better space utilisation. But the problems in various cities of the state related to movement of waste from these masonry enclosures to the dumping sites or waste treatment facility include: a) not compacting waste to ensure optimum carrying of waste in one trip, b) to not having designated routes for these trucks to travel on which leads them to skip collection points, c) to not loading 'complete' accumulated waste from the masonry sites to the trucks, leading to some remainder mixed waste being left behind etc³².

Once waste is loaded onto the trucks, it has two primary destinations to head out for: landfills or treatment facilities. Waste can be treated to recover useful materials from them that could be channelled back into the economic market, or it could be treated to generate energy or compost. For either of

these to happen, it has to be carefully managed. Only when nothing can be recovered from these discarded materials or when it cannot be treated to generate energy/fuel/compost should it be disposed of in landfills. And even when it has to be disposed of in landfills, it should not be done in landfills that have not been converted into sanitary landfills and that which may still pose a threat for soil and water contamination.

One, Material recovery facilities have been set up in Diamond Harbour; four Vermicomposting plants have been set up in Mahestala, Baruipur, Chandannagore, Khirpai; four Windrow composting facility has been set up in Haldia, Konnagar, DumDum, howrah (Bally), and one plastic recovery facility is set up in Rajpur-Sonarpur³³. Of these various facilities, only the windrow composting facility in Haldia is functional. All the remaining facility are lying in a non-operational state. The causes vary from lack of waste to process, to lack of trained manpower, lack of market for organic fertilizers (compost), lack of segregation of waste at source³⁴ and hence the high cost in treating different waste differently, lack of

³¹ *Ibid*, at p.11

³² *Ibid*, at p.12

³³ *Ibid*, at p.17

³⁴ "Solid Waste Management Activities in Kolkata City", KMC, p. 12 as available at [Public_domain_Status_report_SWM_28_10_2019.pdf](https://www.kmccol.org.in/public_domain/Status_report_SWM_28_10_2019.pdf) (kmcgov.in) [Last visited: 04.08.2021]

willingness on part of households to shoulder the waste collection fee *inter alia*³⁵.

In the absence of functional waste treatment facilities, the huge volume of waste is usually dumped in landfills. Some of the landfills in the state are at Bhatpara, Rajpur-Sonarpur, Titagarh, Baruipur, Dinhata, New Barrackpore, Krishnnagar etc. Most of the landfills in West Bengal are not engineered to be sanitary landfills as required under the law. There is two such landfill set up in the Siliguri-Jalpaiguri region and the Haldia Region.³⁶ Most of the landfills designated as dumping sites are low-lying areas that don't seem to have a long life. Even if we don't increase the rate at which we generate waste in the coming years and continue to generate waste at the present rate, most the landfills will reach their respective tipping point anywhere between 5-10 years³⁷. The problem for the hilly regions is graver. Since it is difficult to designate a levelled area as dumping site, waste in hilly regions is found along slopes which eventually join water streams during monsoons.³⁸ To summarise the problems related to the last resort for managing waste (in landfills) range from: a) huge volume of waste landing in the landfills after failing to be processed in waste

treatment facilities; b) short life of the existing designated landfills; c) inability to locate newer areas for setting up landfills in the face of public resistance; d) inability to find areas to set up landfills that are distant from human settlement or water bodies etc³⁹

VI. Recommendation

It is interesting to note that majority of the structured waste collection and treatment that has happened in the last decade, has been attributed to the work of several waste management startups (like Saahas, Hasiru Dala etc) that have been operating successfully as business establishments. In the year 2017 all the startups, managed approximately 100-150 tonnes of waste of the 3,500-5,000 tonnes of waste that a city generates daily.⁴⁰

So, why can't we scale this up? Why is it that private waste management startups are able to successfully make a business out of managing waste; while municipal bodies struggle to fulfil their primary statutory duty?

There are several answers to the above question; but a primary reason according to the author is that, the waste management startups were able to see incentives in the task of managing waste; while the municipal

³⁵ *Supra* note 20

³⁶ *Ibid*, at p.18

³⁷ *Ibid*

³⁸ *Ibid*, at p.19

³⁹ *Ibid*, p.19

⁴⁰ "The Climate Solution (India's Climate-Change Crisis and What We Can Do about it)" by Mridula Ramesh, (Hachette India, Gurugram, 2019), at p. 191-192

bodies saw none. Since the possibility of generating profit from managing trash was evident to such startups they started chalking out appropriate plans to earn profit. They identified the flaws in the existing waste management structure and went about fixing them⁴¹. Therefore, if we can overhaul our existing system reliant on a top-down government structure to a bottom-up governance structure and combine it with an incentive-system, we could achieve better results.

A. Fiscal Incentives

- a. Fiscal benefits should include taxing larger waste generators more, or offering tax relaxations to those who manage their waste well; or offering subsidies to those bulk waste generators who treat their waste at the source of its generation.

B. Non-Fiscal Incentives

- a. Supporting a circular economic structure by setting up a local waste treatment facility at the site of waste generation is desirable. This would ensure adequate quantity and regular supply of waste to a treatment facility that is closer home; which in turn

would prevent a facility from becoming dysfunctional due to nonuse.

- b. Making the problem personal by conducting various awareness campaigns to educate citizenry of the perils of towering landfills etc.
- c. Reducing the burden and complications of meeting various regulatory compliances, on waste management entities. E.g., With the establishment of a digital single-window system.
- d. Offering administrative help in setting up waste management startups (land acquisition, licenses etc). Especially offer support to small waste generators who do not have the capacity to manage their everyday waste on their own.
- e. Promoting the development of affordable technology (E.g., sorting machines) that could aid in the actual work of segregating waste.

In conclusion the author would like to emphasise that it is necessary that we rethink our ways if that is what it takes to achieve better results. An incentive system can ensure

⁴¹ They started with spreading awareness about the ills of poorly managed waste and also approached various private bulk waste generators (like IT hubs) offering them an opportunity to have a clean environment at a price. Then these startups identified their workforce from amongst the already existing (but invisible) informal sector players (like ragpickers, kabadiwalas),

paid them a decent salary, and made use of technology and various administrative tools to set up a seamless structure of waste segregation, collection, treatment and disposal.

an immediate desirable behaviour by the populace, till such time as the general populace can be educated about the inherent values of managing their waste well and treating the environment right.