

NOTES AND COMMENTS

Municipal Solid Waste Management: An Analysis of Current State of Affairs in India

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Abstract

It's not the insufficiency but the underlying competency that must be questioned. This article endeavors to align the roles of the Legislature, Judiciary and Executive in ensuring effective management of solid wastes. It dives into the ineffectiveness of existing legal provisions and adherence to unscientific norms for waste disposal.

The lacunae of Solid Waste Management Rules, 2016 becomes traceable by indiscriminate storage and collection of wastes by waste generator and waste collector discussed intermittently throughout this article, besides exhibiting their ignorance by inviting mismanagement at the stake of healthy environment and life.

Keywords: *Solid Waste Management Rules, 2016, Wadhera Case, Almitra Case, Ratlam Case, Ministry of Housing & Urban Affairs, integrated solid waste management, waste segregation, open drains.*

I. INTRODUCTION

Utility of a thing lies in one's eyes meaning a thing isn't a waste until it's fully disposed of. With surging needs to cope up with developing society accompanied with population growth, urbanization and technological advancement, further growth in per capita consumption and ignorance of waste segregation at source

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exacerbating waste management at present in a developing country i.e., India. Consequently, strict adherence to regulation of waste generation becomes an immediate reaction to resolve this mushrooming problem.

II. WASTE: MUNICIPAL SOLID WASTE

According to the 'Solid Waste (Management & Municipal Handling) Rules, 2016, under sub-rule (46) of rule 3, “‘solid waste’ means and includes: solid or semi-solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non-residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture and dairy waste, treated bio-medical waste.

Further, *it excludes industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste generated in the area under the local authorities and other such entities*”³.

A. Municipal Solid Waste Management

It is a process which begins at pace of waste generation by ensuring waste segregation into typically dry and wet wastes, further collection of segregated wastes by authorized waste collectors, thereafter its transportation from storage facilities through adequate vehicle for its final disposal. Aftermath of disposal, real concerns of release of greenhouse gases (CH₄, CO and H₂S) adversely contribute to the climate change which nowadays lurking in the shadows of sustainable environment.

III. SOLID WASTES AND LEGISLATIONS

A. International Approach

Stockholm Declaration on Human Environment, 1972

By these major concerns of environmental rights and sustainable environment by concrete waste management are addressed under Principle 1 and Principle 2 respectively. Further resort to prohibition of waste disposal in sea (Principle 7) and no resort to ill impacting activity to environment to be made (Principle 17).⁴

³. Solid Waste (Management & Municipal Handling) Rules, 2016, Government of India, 2016 (India).

⁴. Declaration of the United Nations Conference on the Human Environment (1972), (Mar. 15, 2022), https://www.soas.ac.uk/cedep-demos/000_P514_IEL_K3736

The aforesaid conference later called as Magna Carta on human environment as was highlighted in *K. Guruprasad Rao v. State of Karnataka*⁵.

United Nations Environment Programme (UNEP)

To fulfill its commitment to implementation of 17 Sustainable Development Goals in the 2030 Agenda including Goal 3 which intends to secure healthy lives to every human by reducing waste and pollution. To deal with solid waste management, primarily minimization of waste generation to be promoted. However, where waste generation cannot be stopped, recycling of wastes to be resorted to. Consequently, aiding in the economic growth of a country along with providing employment opportunities.⁶

Our Common Future

The report titled 'Our Common Future' as to solid waste, it addressed rapid increase in solid waste pollution problems and anticipated its unhealthy impacts on human lives, downplaying economic development and resulting unemployment in the Third World city(s). Furthermore, issue of unattended dumped wastes called for suggestions for the methods of reclamation.⁷

World Charter for Nature, 1982

The states of managing and maintaining land, not adversely impacting the resources co-existing thereof (Principle 4). Further activities causing irreversible risks to environment must be restraint through technological advancement (Principle 11). Furthermore, stressed in addition to the enactment of such

Demo/treaties/media/1972%20Stockholm%201972%20Declaration%20of%20the%20United%20Nations%20Conference%20on%20the%20Human%20Environment%20-%20UNEP.pdf.

⁵ (2013) 8 SCC 418, 471.

⁶ UN Environment Programme, Solid Waste Management, (Mar. 15, 2022, 03:30 PM), <https://www.unep.org/explore-topics/resource-efficiency/what-we-do/cities/solid-waste-management>.

⁷ UNGA, Report of the World Commission on Environment and Development: Our Common Future, 1987 (Mar. 15, 2022, 03:30 PM), https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf.

environment conservation programmes relating thereto at domestic levels in the Charter.⁸

Earth Summit, 1992 (AGENDA 21)

“Earth Summit” was the Conference held at Rio de Janeiro in 1992, from June 3rd to June 14th. It laid down 27 principles reasserting the Stockholm Declaration, 1972.⁹ Among various documents, AGENDA 21 was adopted which as to solid waste, provided for formulation of national programmes in every signatory(s) to the Conference as to solid waste disposal with international aid, sustainable human settlement development to be promoted by integrated approach, well planning of urbanization particularly in developing countries. The industrialized countries were obliged to invest 1% of their expenditure on waste management and disposal of sewage. In addition to, it expected by 2025, disposal of all wastes in accordance with national and international guidelines.¹⁰

World Summit on Sustainable Development, 2002 (Johannesburg Declaration on Sustainable Development, 2002)

Also, known as “Earth Summit”, provided for ten-year framework to be formulated to encourage and promote sustainable consumption and production resulting in reduction of wastes among others, the 3Rs for wastes minimization, emphasis on public-private partnership in sanitation and waste management and also pollution containment initiatives by 2004.¹¹

B. NATIONAL APPROACH

The Constitution of India

Provisions under the Constitution of India which strictly stresses the environment protection turn out to be lightly when it comes to implementation as directed to

⁸ World Charter on Nature, 1982 (Mar. 15, 2022, 06:30 PM) https://www.soas.ac.uk/cedep-demos/000_P514_IEL_K3736-Demo/treaties/media/1982%20UN%20World%20Charter%20Nature%201982.Pdf.

⁹ S. C. SHASTRI, ENVIRONMENTAL LAW 473 (6th edn. 2018).

¹⁰ United Nations Conference on Environment & Development, *AGENDA 21*, (Mar. 15, 2022, 04:15 PM) <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>.

¹¹. Report of the World Summit on Sustainable Development, Johannesburg (Mar. 15, 2022, 04:30 PM) <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N02/636/93/PDF/N0263693.pdf?OpenElement>.

the states for its policy formulation. The *provisions shall not be enforceable by any court* as per Article 37¹². When Article 47 directs the state to safeguard the public health it also includes healthy environment of its people along with it shall endeavor to protect and improve environment under article 48A, incorporated by the 42nd Constitutional (Amendment) Act 1976. In addition to, it is our duty too (clause (g) of Article 51A), to protect and improve our natural environment by virtue of being a human and acting rational. Admittedly, article 21 includes right to healthy environment for one's right to life and if violated can be remedied under article 32.¹³

When clause (c) of Article 51 provides the state to foster respect for international treaty and agreements it also implicitly urges its subjects to cooperate with the state. Therefore, Article 253 bolsters the Parliament to enact laws for implementation of any treaty, agreement or convention with foreign country at any organized or constituted international conference, association or other body (Schedule VII Entries 12 & 13).

Criminal Laws

- Indian Penal Code (IPC), 1860¹⁴

Chapter XIV of the Code of 1860 penalizes acts or omissions affecting the public health, safety, convenience, decency and morals. As per section 268 of the Chapter, when municipal authorities adequately providing services or we, people, contributing in causing nuisance, are said to be penalized as per this section.

Section 269, applies when a waste collector or a waste-picker collects the waste without safeguards, results in several infectious diseases which amounts to a negligible act on concerned authorities' ends. Moreover, when a malignant act contributes to the likelihood of spread of infectious disease dangerous to life is said to punishable for imprisonment extending to two years or fine, or both. (Section 270)

When any person makes the atmosphere noxious to the health of persons in its vicinity is punishable with fine extending to five hundred rupees. (Section 278)

¹² INDIA CONST. Article 37.

¹³ Subhash Kumar v. State of Bihar, AIR 1991 SC 424.

¹⁴ Indian Penal Code, 1860, & 268, 269, 270, 278, 290, No. 45, Acts of Parliament, 1860 (India).

To broaden the ambit and to punish an accused escaping his liability arising from public nuisance, section 290 provides for punishment of fine of two hundred rupees for acts, not otherwise punishable.

- Section 133 of Code of Criminal Procedure, 1973¹⁵

It provides for conditional order to be issued by specially empowered appropriate Magistrate(s) by the State Government for removal of public nuisances. The said Magistrate may order to remove or desist or stop or fence or confine the nuisance the directed manner.

In *Municipal Council, Ratlam v. Vardichand*¹⁶, the Supreme Court underscored the duties of municipal authorities to curb public nuisance and should adhere to the executive order passed thereof. It widened the power of a Magistrate as a whole.

Environmental Laws

- The Environment (Protection) Act, 1986¹⁷

In furtherance to the Stockholm Conference in June, 1972, being a signatory India enacted this Act. The Act states measure-taking power of the Central Government which includes planning of nation-wide programme & its implementation for safeguarding environment (Section 3), to curb environment pollution matters pertaining to ensure quality of water and air along with measures for containment of hazardous substances (Section 6) and for effecting the provision of the aforesaid Act relating to limiting standards for environmental pollutants' emission, processual mechanism thereof inter alia (Section 25).

- The Municipal Solid Wastes (Management and Handling) Rules, 2000¹⁸

As empowered under the aforesaid Sections of the Environment Act of 1986, the Central Government laid down the Rules of 2000 to manage the solid wastes generated in a municipality region. It laid down duties of administrative authorities. It failed to apply in rural areas, lacked attention towards significant

¹⁵ Code of Criminal Procedure, 1973, & 133, Acts of Parliament, 1973 (India).

¹⁶ AIR 1980 SC 1622.

¹⁷ The Environment (Protection) Act, 1986, & 3, 6, 25 No. 29, Acts of Parliament, 1986 (India).

¹⁸ The Municipal Solid Waste (Management and Handling) Rules, 2000, Government of India (India).

duties of waste generators and absence of penal provisions for its non-implementation. Therefore, the Rules of 2016 were introduced.

- The Solid Waste (Management & Municipal Handling) Rules, 2016¹⁹

In furtherance to exercising its powers laid down under aforesaid sections of the Environment Act of 1986, and to fill up the gaps created by the Rules of 2000, the Solid Waste Management (SWM) Rules 2016 were formulated. Some of the crucial aspects of Rules of 2016 are as follow:

The duties of a waste generator (Rule 4) are as follows:

- (i) Duty to segregate into bio-degradable wastes (wet wastes), non-bio-degradable wastes (dry wastes) and domestic wastes of hazardous nature (such as treated bio-medical wastes) in suitable bins (that is green, blue and black bins respectively) and hand over to authorized waste collector or rag-pickers.
- (ii) Intimation to local authority three days prior ensuring segregation of wastes at source and collection by authorized waste collectors (people >100).
- (iii) Resident Associations, all hotels & restaurants etc. required to ensure waste segregation at source facilitating waste collection and handing over of recyclables to permitted waste-pickers or waste recyclers.
- (iv) Duty to resort to bio-methanation/composting for bio-degradable waste disposal.
- (v) Duty to specify minimum 5% of the total plot extent for recycle facility by the developers of the SEZs, or industrial units.

Collection and disposal of sanitary wastes:

- (vi) Duty of the manufacturer or brand proprietors of sanitary pads or diapers to avail a pouch for its disposal along with the packet. Also, to educate its consumer of its disposal and wrapping accompanied with co-operation at waste generators' ends.

¹⁹ The Solid Waste (Management & Municipal Handling) Rules, 2016, Government of India (India).

- (vii) Duty of manufacturer or brand proprietor launching products containing glass, plastics, tin etc. required to make monetary contribution to local stakeholders authorized for efficient waste management system.

Duty of Urban Development Ministry:

- (i) To draft National Policy and Strategy on SWM.
- (ii) To review steps taken by the State Government and its local authorities.
- (iii) To organize skill programmes for the local bodies.

Promotion of Waste to Energy Plant:

- (i) Duty of Power Ministry to limit tariff on power produced from Waste to Energy Plant and its compulsory purchase by DISCOMs.
- (ii) Duty of New and Renewable Energy Sources Ministry to grant certain incentive for laying foundation of waste to energy plant.
- (iii) Wastes possessing calorific value (of $1500 \text{ K/cal/kg} \leq$) to be put into use for waste to energy plant generation either by refused derived fuel or through releasing feed stock for refused derived fuel (RDF) preparation. Further, for co-processing it provides use of high calorific wastes in cement or thermal power plants.

Duties of the Secretary and Commissioner of State Urban Development Department and Municipal Administration respectively, Local Bodies' Director, local authorities and village Panchayat:

- (i) Duty to draft state policy and SWM strategies in consultation with interested stakeholders (including waste pickers' representative, SHGs).
- (ii) Duty to introduce 'user fee' to be paid by waste generator to the waste collector.

In *M. C. Mehta v. Union of India*²⁰, the Supreme Court directed the concerned waste generating authorities including the local bodies to ensure no part of waste to be burnt and ample safeguards taken for its disposal through scientific means that is environment friendly.

IV. SOLID WASTES AND JUDICIARY

The unavailability of proper legislation led to judicial activism and judicial orders directing concerned authorities to take adequate actions to prevent the environment pollution. In *Gobind Singh v. Shanti Sarup*²¹, the apex court held consideration of viewpoint of Magistrate in case of health, security and convenience of largely public concerned to be the secure route as he himself observed the nature of hazard. Furthermore, Magistrate can compel municipal authorities to construct drains and enhance sewerage system for the well-being of residents. Moreover, financial stringency is no ground to justify inaction on the part of municipal body. (*Municipal Council, Ratlam v. Shri Vardichand and Others*²²).

In *Dr. B. L. Wadhera v. Union of India and others*²³, a public interest litigation under Articles 21, 32, 48A and 51A of Constitution of India was filed bringing non-performance of mandatory duties of municipal bodies in light. The apex court observed collection and disposal of wastes are mandatory duties of the municipal authorities. Simultaneously, the residents of locality have constitutionally guaranteed right to live in a clean city which is to be ensured by municipal authorities. Yet again, defense of unavailability of funds, inefficiency of staffs and required machinery was dismissed, by the court, for non-performance on authorities' part. The court directed the involved Government, municipal and other concerned authorities:

1. The Court supported the experimental move of poly bags distribution and its door-to-door collection. It directed waste collection and transportation to disposal site on everyday basis.
2. It directed the construction of incinerators in hospitals with 50 or more beds.

²⁰ (2016) 4 SCC 269.

²¹ (1979) 2 SCC 267.

²² (1980) 4 SCC 162.

²³ (1996) 2 SCC 594.

3. As to disposal of hospital wastes in AIIMS, New Delhi, it was directed to install ample number of incinerators.
4. In case of private hospitals, the authorities were directed to arrange for waste disposal and held liable for negligence.
5. Regular inspection by the central authorities.
6. Appointment of the Municipal Magistrates to try the guilty of offences. Further awareness through aids of Doordarshan and public announcements.
7. To educate the Delhi residents of their duties under relevant legal provisions.
8. To address the non-handing over of the Sanitary Landfill Sites (SLF), it disallowed the disposal of solid wastes at that place for then. Nonetheless, it directed the government to hand over two required sites placed at Badarpur and Mandi Village to municipal authorities.
9. As to compost plants, the court directed to restart the Okhla plant.
10. The court directed municipal authorities to use filled up SLFs for only forestry purposes and development of gardens and forests.
11. The local authorities were asked for the construction of some additional collection centers.
12. The governments were directed to grant required financial aid to the municipal authorities in judicious manner.
13. Anticipating future concern relating to non-availability of SLFs for waste disposal purposes, involved authorities to act jointly and engage expertise of bodies such to figure out the alternate method(s) for waste disposal.

Failure in implementing the fourteen points laid down in *Wadhera Case*²⁴, the court showed disappointment in *Almitra H. Patel v. Union of India*,²⁵ it compelled to levy charges for waste-littering and scientific wastes disposal to be implemented. Identification of landfill sites and compost sites of free of cost and unauthorized lands encroachment to be prevented. The slum problems relating to sanitation must be improved and Magistrate²⁶ to be appointed. Besides, until the

²⁴ Dr. B. L. Wadhera v. Union of India and others, (1996) 2 SCC 594.

²⁵ (2000) 2 SCC 679.

²⁶ Code of Criminal Procedure, 1973, & 20, 21, Acts of Parliament, 1973 (India).

proper enactment, fine of fifty rupees to be imposed for the said nuisance causing acts. The Supreme Court further clarified under a public interest litigation filed under Article 32 of the Constitution that it not for the court to tell the authorities their acts and duties to resolve the issues but can only remind the authorities to take actions and ensure cleanliness of city.

V. SOLID WASTE AND EXECUTIVE

Swachh Bharat Mission (SBM): The increase from 95,00,000 tonnes per annum (TPA) of waste treatment capacity, at the time of its launch (Oct 02, 2014), to nearly 238,00,000 TPA encompassing decentralized facility indicate applaudable achievement made by the Mission. Thereafter, on October, 01, 2021, with an allocation of Rs 1, 41,600 crores (for Urban SBM) its second phase was relaunched as SBM 2.0.²⁷ As per the latest finding of the Parliamentary Standing Committee Report, the execution of solid waste management in rural areas remained behind as merely 22% of total villages under the said Mission could be targeted while 2021-22 up to February 07.²⁸

Programmes such as *Star Rating of Garbage-Free Cities*, *Swachhta He Sewa Campaign*, and *Compost Banao*, *Compost Apnao Campaign* initiated to meet the vision of Urban SBM by public engagement and awareness as solid waste management also continue to function under the aegis of MoH&UA.²⁹

Swachh Survekshan Toolkit, 2022: It suggests the following interventions required to be made to ensure the waste segregation at source:

- Facilities of waste segregation, collection and its storage thereof ensured to be followed, that is fulfilment of Solid Waste Management Rules 2016;
- Organization of awareness initiatives to educate household residents;
- Resort to two-bin issuance cannot be a pre-requisite for any waste segregation at source drive, in any city;
- Training of all waste-pickers as to segregation of waste to be ensured;
- Allotment of separate days for wet and dry wastes to be made;

²⁷ Government of India, *Swachh Bharat Mission- Urban 2.0* (Ministry of Housing & Urban Affairs, 2021).

²⁸ Jebaraj, Priscilla, “Few villages received waste disposal infrastructure: panel”, THE HINDU, Mar. 24, 2022.

²⁹ Swachh Bharat Mission Urban 2.0, India, (Apr. 01, 2022, 11: 00) <https://sbmurban.org/>

- Maintenance of records quantum of segregated waste (collected & transported);
- Waste management chain must remain segregated throughout;
- Penalization of contracted agencies in case of un-segregated waste via door-to-door waste collection, by ULB;
- Incentivizing waste composting by residents at their ends;³⁰

Informal Waste pickers' Integration³¹: The suggested interventions to be made under the toolkit of Swachhta Survekshan Programme are as follow:

- Identification of waste pickers or Self-Help Groups (SHGs) to be conducted;
- Integration of informal waste pickers to be initiated via enrolment drive;
- Formation of organization of integrated informal waste pickers to warrant transparency;
- Maintenance of ward list record mentioning ID numbers of waste pickers;
- Adequate training of identified waste pickers to be integrated;

Hybrid Annuity Model (HAM), NITI AYOOG – Solid Waste HAM & Liquid Waste HAM: NITI Ayog launched Hybrid Annuity Model to encourage Public-Private-Partnerships and formulated Model Concession Agreements to furnish guidance to the Urban Local Bodies (ULBs) in managing waste generated thereof. As per the Model, the expenditure was divided into capital (ULBs) and operational (civic bodies). For Solid Waste HAM, the concessionaire required to ensure bio-remediation waste disposal method, establishment of waste treatment plants; primary waste collection accompanied with secondary stage waste collection efficiently carried out; thereafter, its appropriate waste management. Moreover, revenue generated by selling of recycled wastes to be shared between the concessionaire and civic bodies. The user fees must be collected by the concessionaire. It promotes bankable approach, fund raising facilities from multilateral companies, no need of engaging multiple contractors, the concessioner exercising his power to select any of the state's technology

³⁰ Swachh Survekshan Toolkit, 2022, India (Mar. 29, 2022, 10:45 AM) <https://www.mygov.in/mygov-survey/swachh-survekshan-2022/>

³¹ *Id.*

consistent with environment laws and promotion of integrated solid waste management by involved concessionaire.³²

Other initiative such as AMRUT (Atal Mission for Rejuvenation and Urban Transformation) Programme intends to promote the efficient drainage system by its construction and enhancement to lessen and do away with flooding of drains.

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VI. CONCLUSION

Waste segregation in waste management has a pivotal role to offer as it is observed to lessen more than half of the workload at disposal facilities. Indeed, awareness among waste generator is a major hurdle and awareness drives and such similar initiatives might be one of the solutions. In addition, the other answer is the engagement and drawing of attention of people through relating their major day-to-day interests with this concern i.e., the active involvements of public figures in stressing its importance through various platforms; engagement of our tomorrow that is children in schools and their parents during 'parents teacher meeting' must be attempted. Also, provision of different colored bins to the waste generators, as backed by the apex court itself, must be promoted. It's the extra efforts on the part of the ones who are well off to be made, to protect our environment well.

Priority must be given to the health and security of the waste workers as they are exposed to vicious gases and contact incurable/untraceable diseases. Enough safety facilities and measure should be provided to the waste workers along with identification aids. However, physical security must be accompanied with financial security too. Therefore, one of the human capitals i.e., 'education' that is to be assured to the waste workers besides mandatory health insurance(s). Therefore, waste pickers must be trained, as well as, made aware first about the nature of wastes and significance of their role being played. Moreover, to prevent child waste labor, their parents must be made aware of free education provision. The engagement of middle role played by waste seller/keeper(s) in awareness

³² Avinash Mishra and Priyanka Anand, "Sustainable Solid and Liquid Waste Management", *Kurukshetra* 43 (Oct. 2021).

³³ MoH&UA, Atal Mission for Rejuvenation and Urban Transformation Programme, India, (Mar. 31, 2022, 05:00 PM) <http://amrut.gov.in/content/innerpage/the-mission.php>

initiative, by incentivizing them by the appropriate government, could offer a great aid in lessening the burden.

Unquestionably, there are ways which are being implemented and attempted to curb the problem of waste mismanagement but still India is lagging way behind in coping with the set environmental targets. The municipal wastes must be our primary concern because they form the nucleus of waste generated every day in our country. The sustainable environment is crucial for our impending future, either we could just rely on them and act recklessly or we could just wary on our endeavors and act sparingly. Moreover, it's everyone's effort that counts, whether waste generator(s), waste collector(s) or waste disposal facilities to ensure the adequate implementation of existing rules, schemes and judicial pronouncements. Hence, well managed environment ultimately leads to the formation of the 'welfare state'.