

Solid Waste Management in India with a case study from a National Human Rights Institution

Dr Mafiul Hussain

Secretary(Retired), Maharashtra State Human Rights Commission, Government of Maharashtra

ABSTRACT

Solid Waste Management is one of the most critical aspects of sanitation and public health, especially in developing countries with high urban populations. It contributes to multifarious pollution, which if not managed carefully, will have deleterious health consequences for life and the environment. This paper is a recapitulation of pollution in India, especially with reference to solid waste management, and is highlighted by a case study from a National Human Rights Institution.

Pollution violates human rights. It is also incorporated in the Constitution of India and the higher judiciary has identified environmental pollution as a violation of Article 21 of the Constitution, a Fundamental Right, and placed the responsibility of protection on the authorities. The Government of India and the States have made various regulations and enunciated procedures for solid waste management as well as other pollution. The government efforts have shown progress in many urban areas and there has been improvement in international ranking in solid waste management. However, challenges like rising urban population and resource allocations are some immediate concerns which require quick responses.

Keywords: Pollution Solid Waste Management Human Rights National Human Rights Institution

Background of the Case :

The Complaint numbers 234/2005-06 and 1487/2007-08 were filed in the **Maharashtra State Human Rights Commission (MSHRC)** by the Sarpanch (village head) of the affected villages, along with a human rights defender. The complaints were against the pollution created by a garbage depot situated in a hilly area within the limits of the villages of Fursungi and Urali Devachi in Pune district. The grievances cited were:

1. The garbage / solid waste generated in Pune City was transported in open trucks to the garbage depot which emitted foul smell and created unhygienic conditions within the limits of the villages. The garbage was placed in the open and even carcasses were thrown on the garbage.
2. conditions within the limits of the villages. The garbage was placed in the open and even carcasses were thrown on the garbage.
3. Hundreds of dogs and pigs moved in the open garbage and components of garbage, like bones, were scattered all over the place.
4. The solid waste was not properly segregated and items like bones and glass were found here and there.
5. No scientific composting, vermin-composting or aerobic digestion for stabilization of waste had been followed at the site.
6. Landfill sites chosen in the site were in contravention of Rules framed under the Municipal Solid Waste (Management and Handling) Rules.

7. A number of wells for drinking water were situated within the limits of the villages at a short distance from the depot, resulting in contamination of the water.
8. The garbage site was near the Katraj Bypass and no proper internal roads, fencing of gates and buffer zone had been put in place.
9. The dumping of garbage was leading to auto-combustion and resultant emission of smoke in the area.
10. No regular sprinkling of water, insecticides, and pesticides were done on the garbage, resulting in spread of flies and mosquitoes.
11. The lack of proper action by the Pune Municipal Corporation (PMC) had resulted in the villagers living in unhygienic conditions and being prone to diseases.

The complainants prayed that the garbage depot should be removed from its present location and shifted away from their villages as it had caused health problems for the inhabitants of the two villages.

Response of the Pune Municipal Corporation:

A senior official of the Health Department, Pune Municipal Corporation (PMC), replied by coming in person and by a written submission, that:

1. The PMC had stopped open dumping of solid waste from June, 2010.
2. 100% waste was processed at the processing plant. The PMC was the first Municipal Corporation in India to stop open dumping of solid waste.
3. The PMC had installed 11 biogas plants in different parts of the city. In addition, 1 mechanical composting plant of 2 metric ton capacity had been installed and was in operation. The manure from biogas plants was used as fertilizer in the municipal gardens.
4. A compound wall of 1.5 to 2 ft height was being constructed around the garbage depot; out of 6 km, 2 km had been completed.
5. A proposal to do capping had been made and this would protect the villages from the leachate. However, till such time, 4 RCC tanks of 2 lakh capacity have been constructed to collect the leachate which would then be transported in sullage vans to the sewage treatment plants of the PMC.
6. Pesticides were being sprayed daily on the garbage depot to control pests and odour.
7. In case of fire at the depot, a water tank of capacity 2 lakh litres facilitated dousing of fires. Two fire engines were also stationed at the depot for larger fires.
8. There was an old abandoned quarry in the vicinity of the garbage depot. This 50 ft deep quarry had been filled up by rubble from construction debris of about 50,000 to 60000 cubic metres.
9. Tree plantation had been taken up around the garbage depot as a buffer and watering of plants was being done during the dry season.
10. On the issue raised by the complainants for capping of the dumped garbage, the PMC had appointed a consultant who submitted a 'Detailed Project Report' (DPR). Accordingly, tender process was to be done for the work. PMC had allocated a budget of Rs.21.25 Crores for this work during 2010-2011

Matter in High Court

The complainants had submitted a similar case to the High Court of Bombay in PIL No. 2746/2000, and the following directions were issued by the High Court in the matter:

1. Only non- biodegradable inert waste was to be dumped along with other waste that was unsuitable for recycling and biological processing.

2. The dumping depot was to be used only after the PMC obtained authorization from the Maharashtra Pollution Control Board under Rule 6. As per Rule 6 of the Municipal Solid Wastes Rule, 2000, the State Pollution Control Board was required to monitor the compliance of standards regarding groundwater, ambient air, leachates quality and compost quality including incineration standards provided in Schedule I, II & III.
3. As per Rule 7, the municipal solid waste generated in a city or town was to be managed and handled as per compliance criteria and procedure in Schedule II. It also stated that the waste processing / disposal facilities should meet specifications/standards of Schedule III and IV.
4. The Secretary, Urban Development Department, Government of Maharashtra or any official deputed by him was to supervise strict implementation of the High Court directions and faithfully comply with earlier orders as expeditiously as possible.
5. The Maharashtra Pollution Control Board was also directed to monitor the compliance standards as laid down in Rule 6 of the above Rules.
6. The authorities were to consider and decide regarding alternate land site as per provisions of Schedule III and Rule 6 of the above Rules.

The case file records indicated that the directives of the High Court of Bombay had not been followed by the Maharashtra Pollution Control Board till the time of hearing in the MSHRC. The records also showed that the Maharashtra Pollution Control Board had issued show cause notices to the PMC. However, beyond that no action had been taken by the Maharashtra Pollution Control Board to implement the aforementioned rules.

Thereafter, the Maharashtra State Human Rights Commission (MSHRC) surmised that since the matter had been already decided by the High Court of Bombay, it would not be proper for the Commission to hear and decide the matter as barred by Clauses 8(h) and 8(i) of the Maharashtra State Human Rights Commission (Procedure) Regulations, 2001, referred with section 10 of the Protection of Human Rights Act, 1993.

Accordingly, the Commission had said that the Pune Municipal Corporation, Maharashtra Pollution Control Board and the Secretary, Urban Development Department, Government of Maharashtra should act as per the High Court directives to solve the problems faced by the people of Fursungi and Urali Devachi.

Compliance by the defendants:

As per the recommendations of MSHRC, the Pune Municipal Corporation vide their letter dated 14/02/2011 and the Maharashtra Pollution Control Board vide their letter dated 25/02/2011 had informed that action was being taken as per the directives of the Commission. (From the case files of MSHRC)

A Note on the Main Types of Pollution in India

There are various types of pollution prevalent in India and some important types are mentioned below:

1. **Water Pollution:** It has different sources. However, two main and dangerous sources are the urban sewage and industrial waste discharge into rivers and streams. Agriculture run-off or water from crop fields which drain into streams/rivers are also a major concern of pollution.
2. **Air Pollution:** The major sources for air pollution are fuel wood and biomass burning, adulteration of fuel, emission from vehicles, and traffic jams/congestion. India is the largest consumer of fuelwood, agricultural waste and biomass cake for energy; these three account for 165 million tons of combustion products that move into the air every year.

3. Solid Waste Pollution: The rising consumption by people has increased waste. Over 100 million tons of solid waste is generated per year in India. (UGC, 2004). This has been taken up in detail in this paper.
4. Noise Pollution: Noise pollution is caused by traffic, aeroplanes, construction sites, catering and night life, festivals, and open meetings. The World Health Organization defines noise above 65 decibels as noise pollution.

The Supreme Court of India had given guidelines on noise pollution in 2005 with reference to the Noise Pollution (Regulation and Control) Rules, 2000. The Apex Court banned the use of loudspeakers and music systems between 10.00 p.m. and 06.00 a.m. except in case of closed premises for communication and for emergencies. It ruled that **“freedom from noise pollution is a part of the right to life under Article 21 of the Constitution.”** The Supreme Court had made it clear that nobody, whatever be the religion or purpose “can claim a right to create noise even in his own premises which would travel beyond his precincts and cause nuisance to neighbours or others.”

The Supreme Court directed that a loudspeaker shall not be used without written permission from the authority. However, it allowed the State Government to ‘permit use of loudspeakers during night hours (10.00 p.m. to 12 midnight) on or during cultural or religious festive occasions of a limited duration, not exceeding fifteen days in all during a ‘calendar year’. (SC case no. Appeal (Civil) 3735 of 28/10/2005)

5. Land Pollution: The main factors leading to land pollution in India are high state of soil erosion, excessive use of chemical fertilizers, biocides (pesticides and insecticides), polluted liquids and solids from urban & industrial areas, forest fires, water- logging and capillary processes, and leaching. (UGC,2004)

In addition, other significant pollutions are:

1. Marine Pollution: A form of water pollution but affecting estuaries and the sea.(ibid)
2. E-Waste- discarded electronic or electrical devices: India generates about 3 million tons of e-waste annually which is next to only China and USA. There is a tendency to sell e-waste to unauthorized waste collectors, which transfers the items to the unregulated chain of markets, enhancing pollution. Hence these materials should be sold to the authorized recycling shops. The E-waste Management Rules, 2016 has details on the procedures for regulated disposal. India has over 300 authorized recyclers of e-waste (Mehta, Sejal. 2020)
3. Radioactive Waste (Nuclear waste): Any activity related to nuclear material or which produces/uses radioactive material, is likely to be generating radio-active waste. The safe management of such radioactive waste needs to be provided highest priority.

In India the recovery of valuable radionuclide from the waste along with safety, has been followed (BARC,2025). The various operations of the nuclear cycle, production as well as the use of radionuclide for society , leads to generation of waste. Two types of such wastes are:

A) Low & Intermediate Level Waste (LILW)

- Primary waste like contaminated equipment, (metallic hardware)
- Secondary wastes from different operations, rubber/plastic wears, cellulosic & fibrous material, organic ion exchange resins filter cartridges, etc.

Low & Intermediate Level Waste is of high volume and low levels of radioactivity.

- B) High Level Waste (HLW): This contains about 90% of the radioactivity in the fuel cycle, “and is provided in the reprocessing of spent fuel.” Much of this waste is from the watery waste of the first

cycle of spent fuel processing. High level waste is solid waste with preponderance of long-lived radionuclides or high decay heat. Waste isolation in multiple barriers and continuous observation/monitoring is done to prevent return of the radionuclides to the human environment. In India, nuclear waste is managed by the following processes:

- Delay and Delay
- Dilute and disperse
- Concentrate and Contain
- Recycle and Reuse.

In India the process of Vitrification (where the liquid waste is immobilized into inert vitrified borosilicate glass) is done for safeguarding from nuclear waste. India's radioactive waste management is regarded as at par with the best in the world (ibid).

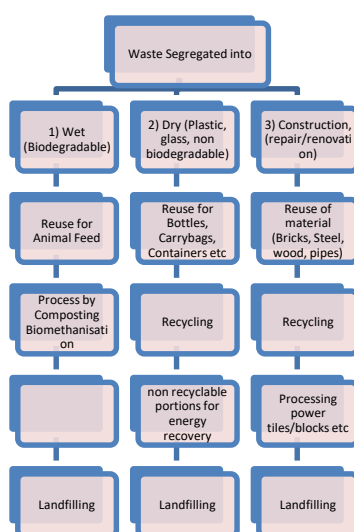
Solid Waste Management in India – Some Facts

The waste generation in India has increased over time. The Ministry of Housing and Urban Affairs, Government of India informed that over 147,000 metric tons (MT) from 84475 wards is generated per day (January 2020 figures) in urban areas of the country (Swachhata Sandesh Newsletter, January, 2020).

Niti Aayog reported that urban India generated from 130000 to 150000 metric tons (MT) per day, which worked out from 330 to 550 gm per person per day. This was extrapolated to 50 million metric tons per year, and expected to touch 125 million metric tons per year by 2031. (Narain S, 2021 with Niti Aayog.)

The Swachh Bharat Mission SBM 2.0, one of the flagship programmes of Government of India's waste management (the others being the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Smart Cities programmes) have created an enabling environment for Solid Waste Management. SBM 2.0 launched in September, 2021 is about source segregation processing [bio or non-bio degradable] and minimizing waste for land fill. Only the inert waste and rejects from processes, not to be in excess of 20% of total waste, were to go to land fill sites.

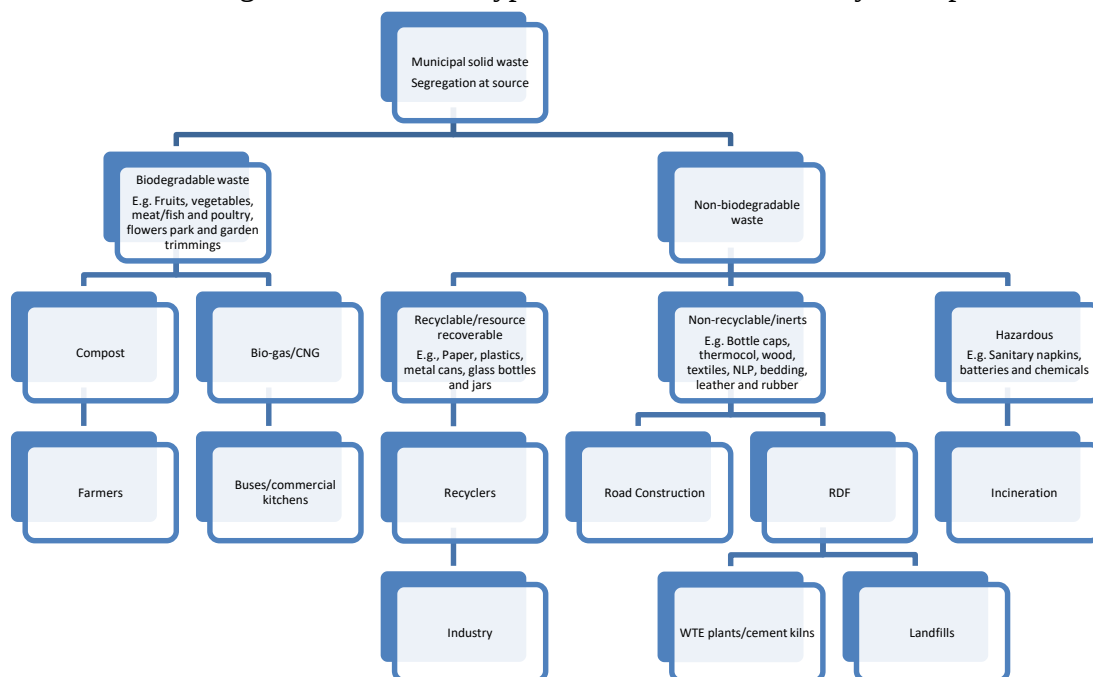
Components of MSW management – the hierarchy



Hierarchy of Municipal Waste Management (Note: Only the inert material and rejects from processes are to be sent to the landfills.)

(Adopted from 'Guidelines for Swachh Bharat Mission (Urban) 2.0.2021.' of the Government of India.)

Components of MSW management – different types of waste and where they end up :



Note: Construction & demolition and street and household sweeping waste are to be managed separately. (Source: Guidelines for Swachh Bharat Mission (Urban) 2.0.2021, of the Government of India.)

The strategic change from dumping waste to a model of material recovery and reuse has become the evolved norm in waste management. However, it brings a lot of challenges in proper implementation. In this cycle the institutionalization of the role of the ‘ragpicker’ could ease out some of the challenges; this would require their skill development and training by the municipal authorities. It would also improve remuneration for this poverty-stricken group, as they are an informal workforce that largely remain out of the welfare net.

In order to identify best practices, the Centre for Science & Environment (CSE) in partnership with Niti Aayog had taken up 10 priority/thematic areas for gathering real field experiences, as under:

Thematic areas

Priorities/thrust areas for practice and innovation	Cities
Source segregation	Indore, Alappuzha, Panaji
Biodegradable waste management	Mysuru, Vengurla, Babbill
Material processing	Bhopal, Surat, Jamshedpur, Dhenkanal
Plastic waste management	Gangtok, Bicholim, Kumbakonam
Construction & Demolition Waste management	North Delhi, Gurugram
Sanitary waste management	Pune, Karad
Landfill	Taliparamb, Chandrapur, Ambikapur
Technological innovation	Bengaluru, Leh, Vijaywada, Keonjhar, Kakinada
Innovative model	Paradeep, Thiruvananthapuram, Panchgani
E-waste	Jamshedpur

However, despite the policy changes, Niti Aayog reported that the *actual implementation requires much streamlining*. One of the main challenges reported was *source segregation, whereby there were impediments in separating the waste at the point where it was generated*. (Narain S, 2021, with Niti Ayog). This focuses on the critical process of initial segregation of waste at the generation point, whether in the home or the office or shops. In buildings and communities, it would need voluntary efforts of housing society office bearers as well as the people themselves to be diligently involved in this most critical stage of solid waste management.

Challenges and Some Suggestions on the Solid Waste Management in India

As per the 10th Schedule of the 74th Constitutional Amendment Act, 1992, the Urban Local Bodies (ULB) are mandated with keeping the urban areas clean.

In their paper, Joshi and Ahmed (2016) reported lack of technical knowledge, inadequate finances and poor implementation of laws that have led to failure in solid waste management in India. Satpal Singh (2020) had deciphered that most urban bodies did not have the infrastructure, and lacked both financial resources and institutional capacity to properly manage solid waste management in their areas.

Gopal, K. (2017) while criticizing the Solid Waste Management Rules of 2016, suggested that there should be provisions against the NIMBY syndrome (Not in My Backyard) or there should be provision to bring in mechanism for Extended Producer Responsibility (EPR). In EPR, the producer is held responsible for the post-consumer stages of a product, that is, for defined tasks, or for recycling.

Annepu (2012) discussed the need to reduce the total quantity of solid waste in India. He highlighted that open burning of solid waste and landfill fires emit about 20000 tons of air pollutants per year. He suggested different ways to utilize the waste e.g. by making fly ash bricks. He also recommended training and employing rag / waste pickers for door-to-door collection of waste, permitting them to own the useful or recycled products from waste.

As mentioned above, these studies suggest that a lot of improvement in governance was required for the improved solid waste management in India. However there have been indications of improved solid waste management, although in selected urban conglomerates. A number of municipal corporations have been taking steps at improved segregation of waste and recycling of dry waste, mainly through vendors e.g. Indore, Surat, Navi Mumbai, Ambikapur and Pune. The Municipal Corporation of Delhi recently took steps to process about 5900 metric tonnes of fresh waste daily at 5 landfills by awarding contracts to separate vendors. Such increase in resource allocation and refinement would bring in the necessary amelioration in solid waste management and associated pollution levels. (Anon.MCD.2026)

United Nations Norms / Conventions

The Universal Declaration of Human Rights (UDHR): This case of pollution from a garbage depot affecting two villages in its proximity, is a case of human rights violation pertaining to the UDHR Article 25 : ‘Everyone has the right to a standard of living’.

The UDHR Article 25 affirms that, Human Rights and Environmental Protection were interdependent, and that Human Rights could not be enjoyed without a safe, clean environment. Moreover, there could not be sustainable environmental governance without Human Rights (Anon. UDHR, 1948).

The United Nations Environment Programme (UNEP) affirms that Environmental Rights encompasses both **substantial rights** (a right to the substance of being human i.e. life, liberty and happiness; the ‘**What**’), as well as **procedural rights** (tools that allow to achieve the substantial rights; the ‘**How**.’)

Substantial Rights are regarded as rights possessed by the individual, for example:

- a) Civil & Political Rights: The Right to Life, Freedom of Association, and Freedom from discrimination.
- b) Economic & Social Rights: The Right to Health, Right to Food and adequate standard of living.
- c) Cultural Rights: these are also closely linked to environmental rights. (they are a part of the economic and social rights).
- d) Collective Rights: Rights affected by environmental degradation are a type of collective rights.

Procedural rights focus on how the human rights cases are handled, the due processes like issuance of notice, opportunity to be heard, the right to a counsel and impartial adjudicators (Anon. UNEP. 2022).

The United Nations has appointed a **Special Rapporteur on Human Rights and the Environment**. This was established by the Human Rights Council in 2012 vide resolution A/HRC/RES/19/10.(OHCHR,2026). The ‘Special Procedures’ of the Human Rights Council enables appointment of such independent human rights experts. These experts are mandated to act on complaints, visit countries, facilitate advocacy to public, and provide technical cooperations. The experts are elected for 3 years at a time and for a maximum of 6 years; they are not paid salary. Overall, there are 46 thematic mandates (e.g. food, education, disability, torture, environment, human rights defenders, migrants, terrorism etc.) and 14 country mandates (this focuses on specific conditions in identified countries, e.g. Afghanistan, DPR Korea, Iran, Myanmar, Palestine, Cambodia, etc.). (U N Special Procedures of the Human Rights Council,2022)

National Laws in India:

The Constitution of India did not have a direct mention of environment protection. The Stockholm Declaration of 1972, which contained 26 Principles, placed environmental issues under focus. India was a signatory to the declaration, and to fulfill the promise, Parliament included matters of the environment in the 42nd Amendment Act of 1976 (this Amendment included some other matters / subjects, too) as under:

1. Three new Directive Principles of State Policy (DSP) were added and one was amended. The DSP that dealt with environment was Article 48A which was ‘to protect and improve the environment and to safeguard forests and wildlife.’
2. Fundamental Duties for the citizens were added under Article 51A. Out of the 10 Fundamental Duties, 51A(g) pertains to the environment, and states that, “it shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures.”

The 7th Schedule of the Constitution, which deals with allocation of subjects/powers between the Union and the States, was modified, whereby five subjects were transferred from the State list to the concurrent list. This included Forest, Protection of Wild Animals and Birds. (Anon. Election Commission for UTs.2020)

The list of laws dealing with Environment related matters in India

The Ministry of Environment, Forest and Climate Change of the Government of India, is in charge of issues pertaining to the environment of the country. A number of laws / rules have been enacted for the same and as per their website (see <http://moef.gov.in>). Some the prominent ones are mentioned below:

1. Water (Prevention and Control of Pollution) Act, 1974. This Act set up the Central / State Pollution Control Boards that looks into issues of water pollution. Further the Water (Prevention and Control

of Pollution) Cess Act, 1977 along with its Rules were promulgated to levy and collect cess on water used by industries and local authorities.

2. Air (Prevention and Control of Pollution) Act, 1981 is for regulating air quality standards. Rules thereof were formulated in 1982 for procedural and powers of Chairperson/Members of the Boards.
3. Atomic Energy Act, 1982 was formulated to deal with radioactive waste. Thereafter the Motor Vehicle Act, 1988 was introduced to regulate vehicular traffic as well as proper packaging and transporting of hazardous waste. Emission norms for vehicular emissions were issued culminating in Euro I and Euro II norms by 1999 and 2000 respectively for vehicles sold in Delhi.
4. Environment (Protection) Act, 1986. The Environment (Protection) Act helps in setting up co-ordination between Centre and States and spelling out standards / norms. It was last amended in 1991.

Accordingly, the following notifications have been issued under the Environment (Protection) Act:

- Coastal Regulation Zone Notification 1991, which regulates activities along the coastal areas.
- The Environmental Impact Assessment of Development Projects Notification (1994, amended in 1997)
- Ash Content Notification (1997) for regulating thermal plants.
- Disposal of Fly Ash Notification (1999) on norms on how to utilize fly ash.

Hazardous Wastes: Under the Environment (Protection) Act the following were some rules to regulate such wastes:

- Hazardous Wastes (Management and Handling) Rules, 1989
- Biomedical Waste (Management and Handling) Rules, 1998
- Municipal Wastes (Management and Handling) Rules, 2000
- Hazardous Wastes (Management and Handling) Amendment Rules, 2000 – mainly guidelines for import and export of such waste in the country.
- The Factories Act, 1948 was amended in 1987 to introduce safety of workers and environmental concerns. The earlier Act of 1948 was primarily aimed at welfare of the workers.
- The Public Liability Insurance Act (PLIA), 1991 for insurance against hazardous substances and payment or relief as specified in the Schedule. The 1992 amendment allowed the Central Government to establish the Environmental Relief Fund.
- The National Environment Tribunal Act, 1995 deals with liability for damages from accidents while handling hazardous substances and for establishment of the National Environment Tribunal, for providing relief and compensation for damages to people, property and the environment.

India is also a signatory to multilateral environmental agreements and conventions which involve environmental, including climate matters, e.g. Montreal Protocol on Substances that Deplete the Ozone Layer (1987), Basel Convention (1989) on transboundary movement of hazardous wastes, and the UN Framework Convention on Climate Change (1992). (Anon.PIB.2026. Key Laws, Rules and Regulations for Environmental Protection, Government of India, and Dari S. S. and Sharma R. 2014)

Solid Waste Management Rules

The first comprehensive waste management rules in India were notified in 2000, where the municipal authorities were made responsible for collection, segregation, storage, transportation, processing, and safe dispose of municipal waste (The Municipal Waste Rules, 2000). These rules were revised as the Solid Waste Management Rules of 2016, bringing in updated scientific norms. The Ministry of Housing and Urban Affairs developed the Manual for Municipal Solid Waste Management in collaboration with GIZ

(Deutsche Gesellschaft für Internationale Zusammenarbeit), which had been working in India on ecological, sustainable economic and social issues. It advocated a 7-step planning & management approach (Anon. Solid Waste Management Rules, 2016).

The Government of India had recently notified the **Solid Waste Management (SWM) Rules, 2026**, which superseded the aforementioned 2016 Rules. These new Rules, which have come into force from 1st April 2026, has brought simple collection to an evolved scientific and circular management. It envisages waste segregation into 4 types, viz. wet, dry, sanitary and special care. Where over 100 kg per day waste was generated or there was a large campus, the organization would be required to manage their waste or do on-site processing. Improper waste disposal would attract fines based on the ‘polluter principle’. Landfills would be only for storing non-recyclable waste. Provisions for online tracking of waste disposal by the central government has been proposed. Specific rules have also been spelt out for industries like cement plants, and for areas with tourist pressure like hills and islands. The overall accountability of proper SWM would continue to rest with the urban and local bodies. (Anon.2026.Solid Waste Management Rules,2026).

Important Case Laws pertaining to the Environment in India (references have been provided with each case)

1. High Court of Andhra Pradesh Case - Deodar Rao Vs. S. O. Municipal Corporation (AIR 1987, AP 171) –
Environment Pollution amounted to violation of Article 21 of the Constitution i.e. it violated the Right to Life and Personal Liberty.
2. Supreme Court – M C Mehta and another Vs. Union of India and others etc. (1986 SCR (1) 312) –
The principle of ‘**Public Liability**’ of 1868 was replaced by ‘**Absolute Liability**’ – a dangerous industry should not be close to human habitation; it should be relocated.
This case developed the ‘**Deep Pocket Principle**’, where liability of payment of damages was assigned to the party which was best able to pay. As a consequence, Parliament added a new Chapter to the Factory Act, 1948. The Public Liability Insurance Act, 1991 was enacted for providing immediate relief to persons affected by handling of hazardous substance. It also led to the policy of ‘**Abatement of Pollution**,’ i.e. measures for reducing pollution e.g. scrubbers, filters, noise mufflers, water-water treatment facilities.
3. Supreme Court in Municipal Corporation Ratlam Vs Vardhichand (AIR 1980 SC 1622).
The office bearers could not hide behind lack of resources when they infringe on the constitutional and statutory directives. This case established responsibility on the municipal authorities for safeguarding society from pollution.
4. Supreme Court in Rural Litigation and Entitlement Kendra, Dehradun Vs State of Uttar Pradesh (AIR 1987 SC 2187)
The Supreme Court mentioned that sustainable development was to be followed - natural resources should be utilized with consideration so that the environment and climate may not be affected in a severe way.
5. Indian Council for Enviro-Legal Action Vs Union of India (AIR 1997 SC 1502).
The financial cost of mitigating pollution related damage is to be borne by the polluter. This is called the **Polluter Pays Principle**.
6. Supreme Court, M C Mehta Vs. Union of India (AIR 1988 SCR (2) 538) –

The Ganga River was being polluted by tanneries in Kanpur. The Supreme Court held that treatment plants were to be set up by each tannery in order to prevent pollution of the river; till that time, the tanneries were to be closed down.

7. Supreme Court, M C Mehta Vs. Union of India [Taj Trapezium Case] (AIR 1997 SC 734) – Pollution from the Mathura refinery, Iron Foundries and other chemical industries was producing acid rain and could harm the national monument, the Taj Mahal. The Apex Court directed the use of various regulatory processes and replacement of coal and coke with CNG.
8. Supreme Court, M C Mehta Vs Kamal Nath & Others (AIR 1997 1 SCC 388) – This case involved lease and construction of a resort on forest land which was located in a fragile ecosystem, on the banks of the river Beas. The Supreme Court held that the ‘Doctrine of Public Trust,’ an ancient Roman era doctrine, propounded by Roman Emperor Justin 1 (Byzantine Emperor) about 1500 years ago, was applicable to India. This doctrine emphasized that certain common properties like rivers, seashores, forests, air, etc. were held by the government in trusteeship for the free and unimpeded use of the public. These were not to be converted to private ownership. Various measures were directed to prevent harm to the common properties by the resort.
9. Supreme Court, M C Mehta Vs Union of India (SCR (1) 866, 1991 SCC (2) 353) This was the landmark vehicular pollution case in Delhi which resulted in introducing regulatory steps to decrease vehicular pollution.
10. National Green Tribunal, Samir Mehta Vs. Union of India and others- August, 2016 This was a case of a merchant ship sinking off Mumbai in 2011 and causing damage to the marine ecosystem. This led to an oil slick which affected mangroves and other organisms in the sea. The National Green Tribunal reaffirmed the Polluter Pays Principle as well as the Precautionary Principle. The National Green Tribunal equated sinking of the unseaworthy ship to dumping of pollutants. An environmental compensation of Rs.100 crores was imposed on the ship owner, Delta Group (Delta Shipping Marine Services S.A. and 2 others), and Rs.5 Crores on the Adani Group who were to be the recipient of the cargo (coal). (Samir Mehta vs Union of India.2016)
11. Almitra H Patel & Others Vs Union of India and others, NGT, Principal Bench, New Delhi (February, 2018). This was **the** defining case on solid waste in India. The petitioners had sought urgent improvement in the practices adopted for treatment of municipal solid waste. The National Green Tribunal found the gigantic magnitude of the matter as over a lakh tons of raw garbage were being dumped daily without proper treatment, outside the city limits on land, along the highways, lakes, etc. The National Green Tribunal noted that there should be conversion of the waste into a source of power and fuel as per the principles of circular economy. The National Green Tribunal issued 25 directions. It asked all States and Union Territories to strictly follow the Solid Waste Management Rules, 2016. Absolute segregation was made compulsory in waste to energy plants, and landfills were to be used to deposit inert material only. Bio-stabilization was to be completed within 6 months. The National Green Tribunal completely banned open burning of waste on lands or at landfills. (Almitra Patel Vs Union of India.2018. India Kanoon)

Environmental Performance Index

Despite a number of judgements, the environmental issues, especially of solid waste and urban garbage

have provided challenges to the municipal corporations in India. The Environmental Performance Index (EPI) is a biennial summarized measurement of environmental sustainability, based on data sets that are reportedly available. It ranks countries on different categories, which in turn are based on performance indicators. This exercise has been carried out since 2002 by the World Economic Forum and the assessment and quantification of data and ranking has been done by Yale and Columbia Universities of the United States, with funding by McCall MacBain Foundation of Canada. India's ranks were 118 (out of 133 countries) in 2006, 123(163) in 2011, 155(178) in 2014, 177(180), 168(180) in 2020, 180(180) in 2022, 176(180) in 2024, and 176(177) in 2026.

The scorecard of India for some selected indicators are shown below:

Indicators (selected)	2006	2010	2018	2020	2022	2024	2026
EPI rank	118/133	123/163	177/180	168/180	180/180	176/180	176/177
Waste Management	NA	NA	145	103(solid waste)	151	86	141
Environment health(air quality)	NA	NA	180	179	179	177	175
Sanitation& drinking water	NA	NA	145	139	139	143	141
Ecosystem Vitality	NA	NA	140	150	178	171	171
Climate change	NA	NA		106	165	133	130

(Adapted from Yale Center for Environmental Law & Policy, Yale University. The indicators and other criteria may have changed in different years)

The Government of India has rejected the EPI ranking 2022, citing objections, some of which were:

1. Some indicators used in the report are based not based on scientific methods and without logical justifications
2. New indicators in climate policy have been ignored
3. Essential carbon sinks of forests and wetlands have not been factored while working out the projected GHG emissions for 2050.
4. Ecosystem extent was taken into account, but productivity was not considered.
5. The historical information on the lowest trajectory of emissions was not considered.
6. The per capita waste generation, water use efficiency and water quality have not been taken into account. (Anon. Dheyasias, 2022)

The **EPI 2022** report mentioned that 'Waste Management' was based on 3 indicators: Controlled Solid Wastes, Recycling Rates and Ocean Plastic Pollution (As cited above). Controlled Solid Waste was the percentage of household and commercial waste generated which was collected and treated in a manner that resulted in controlling environmental risks. The waste was counted as 'controlled' if it was treated by the process of recycling, composting, anaerobic digestion, incineration or disposed of in sanitary

landfills. 100 indicated that the country controlled 100% of its waste through sustainable means; 0 indicated that the country had failed to control any of its solid waste or to collect/report data on its solid waste. This indicator was computed using data from the World Bank.

For India the **EPI 2022** scores on Waste Management and related matters were:

Component	Rank	EPI Score	10 year Change
Waste Management	151	12.90	0.60
Solid Waste	121	17.00	N.A.
Recycling	79	17.80	2.80
Ocean Plastics	135	N.A.	N.A.
Waste Water Treatment	112	2.20	N.A.
Sanitation	138	21.40	11.20
Drinking Water	141	18.30	8.60

(Adapted from Yale Center for Environmental Law & Policy, Yale University)

The **EPI 2024** was a score of sustainability, using 58 indicators in 11 issue- categories, covering 3 policy objectives of climate change performance, ecosystem vitality and environmental health. India's overall **EPI 2024** rank was 176 out of 180 but in waste management it was 86, controlled solid waste rank was 113 and waste recovery rate was 61. The waste generated per capita rank was 36. The waste management pertained to threats of solid waste to human and environmental health. A rank of 86 was a remarkable improvement from the 2022 rank of 151 (Block S, et al, 2024).

India raised various issues challenging the **EPI 2024 rankings** (Anon, Dristi. 2024):

1. GHG emissions had not factored carbon sinks like forests and wetlands.
2. The conditions and productivity of ecosystems were inadequately computed.
3. Important indicators like agro-biodiversity, waste, food loss and soil health were not included in the index.
4. The biodiversity loss impinging on ecosystem health were known to be more challenging to compute than envisaged in the report.
5. A developing country like India required balancing of environmental matters so that end results of development were achievable.
6. Developing countries have resource constraints which require mitigation funds from developed countries.

The **EPI Ranking 2026** was released very recently. The 2026 EPI ranked 177 countries on 47 environmental indicators which covered 12 issue categories, involving policy areas of public (environment) health, ecosystem vitality, and climate change mitigation. India was ranked overall at 176; 174 in public health, 171 in ecosystem vitality, and 130 in climate change mitigation. The report emphasized a development versus pollution stress on the backdrop of a large number of people gaining access to energy services at the cost of urban air pollution and emission of GHGs. The response from the Government of India is yet to be made.

India has a lead role: India has an important lead role in the international climate change negotiations, and will be required to steer the path to a more just and sustainable world order. However, India will also need to demonstrate improved balance between development and conservation at home. This would require a new developmental approach that focuses on ecologically sustainable wealth creation through regeneration of natural wealth. Mahajan and Singh (2022) estimated that India needed to invest 2.5 % of its GDP in this regeneration. Mahajan (2024) further estimated that India needed to annually invest Rs.

38.1 lakh crore over five years in nature regeneration, and thereafter 5.54 crore people could be employed annually from the sixth year onwards, creating natural wealth and easing out unemployment in the rural sector. It is a way forward for employment potential as well as significantly contributing to the nation's economy. The RBI had also reported that India needed to invest about 2.5% of its GDP every year in green financing and ecological regeneration, in order to bridge gaps in infrastructure and meet climate goals by 2030 (Business Standard, 2026).

Comments on the Maharashtra State Human Rights Commission Case

This case of Maharashtra State Human Rights Commission (MSHRC) pertains to solid waste management issues of Pune, whereby untreated waste had affected two villages near the municipal garbage depot. The villagers complained of land, water and air pollution, affecting their services from the environment (ecosystem services), deteriorating air from smell of decomposing matter and burning waste, and endangering of their health.

The MSHRC took up the case and called the two public authorities involved, the Pune Municipal Corporation (PMC) and the Maharashtra Pollution Control Board (MPCB) for their responses. The PMC authorities informed that they had initiated measures to contain the pollution and also envisaged other measures to contain the harmful effects from the garbage depot to the people of the two villages. The PMC also informed that open dumping of garbage had been discontinued from June 2010 (the complaints were filed in 2005 and 2007), and the process of capping the garbage depot was being done. The PMC informed about the future steps to ameliorate the condition that were affecting the human rights of the people of the two villages, Fursungi and Urali Devachi.

Thereafter, MSHRC mentioned that a similar case had been filed by the complainants in the High Court of Bombay as per PIL No. 2746/2000 and the High Court had directions that only non-biodegradable inert waste was to be dumped along with other waste that were unsuitable for recycling and biological processing. This was as per the law / rules in force and the PMC was to get proper certification from the MPCB. The Secretary, Urban Development Department, Government of Maharashtra was to supervise the matter directly or through another officer deputed/authorized by him. The MSHRC went on to say that since the case had already been decided by the High Court, it would not be proper for the MSHRC to move further in the case. It cited Clauses 8(h) and 8(i) of the Maharashtra State Human Rights Commission (Procedure) Regulations, 2001 read along with Sec. 10 of the Protection of Human Rights Act, 1993. The Section 10 of Protection of Human Rights Act, 1993 allows to make regulations. However, the Maharashtra State Human Rights Commission (Procedure) Regulations, 2001 had been superseded by the revised regulations notified in July, 2011. In the latter, the clauses mentioned in the above case are 12(i) which says that the 'matter is sub-judice before a Court or Tribunal', and 12 (j) which says that the 'matter is covered by a judicial verdict or decision of the State Commission'.

The MSHRC had called remarks from the concerned public authorities, and thereafter hearing was held. But abruptly MSHRC decided to close the case on the admission of section 8 (h) and (i) of the Maharashtra State Human Rights Commission (Procedure) Regulations 2001, which dealt with 'Complaints not ordinarily entertainable'. This was done citing a similar case that had been decided by the High Court of Bombay in PIL 2746/2000 and the High Court had given directions in the matter. The MSHRC then recommended that the High Court order should be followed and refrained from any other recommendations.

Now let us go to the clauses as per the scenarios cited above:

(A) Maharashtra State Human Rights Commission (Procedure) Regulations, 2001, Clause **8(h)** says that, **‘the matter is sub-judice before a court or tribunal.’** As already informed above, the subject matter was a PIL in the High Court of Bombay and the directions from the High Court had already been given. Hence the matter was not sub-judice at the time when MSHRC made recommendations on the matter.

(B) The Maharashtra State Human Rights Commission (Procedure) Regulations, 2001, Clause **8 (i)** mentions, **‘matter is covered by a judicial verdict or decision of the Commission.’** **The case falls in this clause, 8(i),** as the matter in question is covered by a **judicial verdict of the High Court of Bombay.** However, the High Court directives were more towards following the procedures laid down in the Municipal Solid Wastes (Management & Handling) Rules, 2000 (MSW Rules), whereby the PMC was to get authorization from Maharashtra Pollution Control Board for waste processing and disposal facility. Thereafter Maharashtra Pollution Control Board was to monitor the standards regarding the groundwater, ambient air, leachate quality and compost quality, including incineration standards as specified under Schedules II, III, and IV of the Municipal Solid Wastes (Management & Handling) Rules, 2000.

Unfortunately, as deciphered from the case files, neither the Pune Municipal Corporation approached the Maharashtra Pollution Control Board, nor the Maharashtra Pollution Control Board presented their say in the matter, even though there were directives from the High Court of Bombay.

In fact, in hindsight the procedure for approval of the Garbage Depot near Fursungi and Urali Devachi, was not properly followed from the initial stages. As reported in the case files, no authorization from Maharashtra Pollution Control Board was received, undecomposed waste was dumped resulting in percolation of leachate into the soil and groundwater regimes, affecting well water in the two villages. Animal carcasses were also dumped in the garbage depot. Burning of waste was reported and movement of animals /birds like pigs and vultures on the un-decomposed organic waste was mentioned. It was quite evident that the unregulated garbage dumping had affected the air, land and water in the vicinity of the two affected villages, and then, as alleged by the victims, pollution affected both the villages. As noted above, more was desirable on the part of the PMC for protection of human rights of the people in the two villages; the unhealthy situation attracted **Sec. 12(a)(ii)** of the Protection of Human Rights Act, 1993 (i.e. negligence in the prevention of human rights violation by public servant.) Further, as elucidated in the case law above, there was violation of **Article 21** of the Constitution (right to life and personal liberty), which also attracted the principles of **‘Absolute Liability’**, and **‘Polluter Pays’**. It was also a case of failure on the part of the state to protect the human rights of the people, despite requests by them. (Note: The Maharashtra State Human Rights Commission (Procedure) Regulations, 2001 has been replaced by the revised regulations of 2011)

Conclusion on the case study

In such a clear case of human rights violations by a public authority, it was necessary for the MSHRC to look beyond the technicalities of the Maharashtra State Human Rights Commission (Procedure) Regulations, 2001 of clause 8 (i) that says: Complaints not ordinarily entertainable, **matter is covered by a judicial verdict or decision of the Commission.** As violation of human rights is all too clear in the present case, it is a case which is extraordinary and goes beyond ‘not ordinarily entertainable’. MSHRC could have focused on the human rights violation of ordinary citizens who were running from pillar to post, seeking justice. This was a strong case for the ‘Right Holders’ (the villagers) to be **monetarily compensated** as per provisions of **Sec. 18(a)(ii)** of the Protection of Human Rights Act, 1993, due to the negligence of the ‘Duty Bearers’(the PMC).

The action of the MSHRC to close the case as there had been a judicial verdict in the matter 6 to 7 years earlier, appears to be a case of taking the rules too far, resulting in MSHRC being a mute spectator to gross negligence by Duty-bearers (the PMC), leading to human rights violations of the villagers (Rights-holders). Such non action of regulatory bodies severely compromises governance matters, adversely affecting the lives of ordinary citizens. As is evident from the case details, the MSHRC was deficient in its primary job of addressing human rights violations of the people by a public authority.

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