CHAPTER-V

PROTECTION AGAINST HAZARDOUS SUBSTANCES

5.1. Introduction

Human activities create waste and the ways that waste is handled, stored, collected and disposed off can pose risks to the environment and public health.¹ The hazardous substances may cause irremediable harm to nature, cyclical phenomena such as the life cycle, the water cycle and the carbon cycle. The amount of waste produced by human society is increasing commercial and domestic solid waste, which is a great practical problem for many local governments. Industrial wastes are usually much smaller in volume, but are more likely to contain hazardous materials such as toxic chemicals, flammable liquids, radioactive substances, etc. The radioactive substances are most toxic, the magnitude of their injurious effects is tremendously high as compared to ordinary organic poison.² Hazardous wastes are wastes that pose substantial or potential threats to public health or environment. Hazardous wastes can be identified by the characteristics that they exhibit, viz., ignitability, corrosivity, reactivity, or toxicity.³ As a country develops and gains economic resources, more attention is directed to health concerns related to hazardous chemical wastes. Even if a country has little industry of its own that generates hazardous wastes, the import of hazardous wastes for recycling or disposal can cause health hazards.⁴ Although the total amount is less, the disposal of

hazardous industrial waste has been a greater concern than of domestic waste because of the perceived hazard to health and the risk of environmental contamination.

The United Nations Environmental Programme (UNEP) estimated that more than 400 million tons of hazardous wastes are produced universally each year, mostly by industrialized countries.\(^5\) It is predicted that the daily municipal solid waste generation rate in Asia would be 1.8 million tons per day, in 2025. Low-income countries continue to spend most of their solid waste management budgets on waste collection. But only a small portion of solid waste management budget is used disposal of solid waste.\(^6\) The plastic was in use since 60 years, but now the use of plastic take major part in facilities required to human life. It was estimated that there is 500 million to 1 billion plastic bags are used by the world's population, in the year. That means about 1 million plastic bags are used per minute.\(^7\)

Lead is one of the essential and most widely used metals in the world. Waste lead compounds or materials contaminated with lead can cause serious injury to the brain, nervous system, red blood cells, and kidneys.\(^8\) The risk of lead poisoning through the food chain increases as the soil lead level rises above normal concentration, even at soil levels above 300 ppm, most of the risk is from lead contaminated soil or dust deposits on the plants rather than from uptake of lead by the plant.\(^9\)

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Solid-waste management in Asian countries has given alarming signals because of their improper waste management. Solid-waste management practices in developing countries including India, are far from satisfactory, and the associated problems are due to a lack of technical expertise, financial constraints, and legal provisions. Various studies reveal that about 90% of Solid Waste is disposed of unscientifically in open dumps and landfills, creating problems to public health and the environment. The industry driven economy of India has resulted in hazardous waste problems, which are difficult to manage in an environment friendly manner. Industrial growth has resulted in generation of huge volume of hazardous wastes in the country. Scientific disposal of hazardous wastes has become a major environmental issue in India, as haphazard dumping of hazardous wastes results in severe environmental impairment. The adverse effects of hazardous wastes as well as the significant potential risks posed by them to the life and its supporting systems are increasingly recognized. Today, more than 13,000 licensed industries generate about 4.4 million metric tons of hazardous waste every year. Indian cities alone generate more than 100 million tons of solid waste in each year.

Coal-based power generation is a principal source of electricity in India. About 15-30% of the total amount of residue generated during coal combustion are fly ash (FA).

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FA is generally alkaline in nature and contains many toxic metals like Chromium, lead, Mercury, Arsenic and Cadmium along with many essential elements like Sulphur, Boron, Calcium, Sodium, Iron, Zinc, Manganese and Phosphorus.16

Till 2006, the world's production of E-waste was estimated at 20 to 50 million tons per year. Production of e-waste in India is likely to increase by nearly three times, from the existing 18 lakh metric tons to 52 lakh metric tons per annum, in 2020.17 E-waste contains many hazardous substances which are extremely dangerous to human health and the environment, and therefore disposal requires special treatment to prevent the leakage and dissipation of toxics into the environment.18 As per the information provided by the Central Pollution Control Board (CPCB), the amount of hazardous waste generated in the country is about 7.90 million tons per annum.19 Many industries dump sludge and effluents laden with heavy metals and persistent organic compounds in open areas, in rivers, and around residential areas, in gross violation of national laws. Every metal and metallurgical industry is associated with the generation of waste, which may be solid, liquid or gaseous in nature. Their impacts on the ecological bodies are noticeable due to their complex and hazardous nature, affecting the living and non-living environment, which is an alarming issue to the environmentalist.20 At some places, toxic dumps have contaminated soil and groundwater for decades, making communities around

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them sick. The industry’s disregard for laws relating to hazardous waste, coupled with apathy and inaction by state agencies, has made the situation grim.

Effective control of the generation, storage, treatment, recycling and reuse, transport, recovery and disposal of hazardous wastes is of paramount importance for proper health, environmental protection, natural resource management, and sustainable development. Hazardous wastes belong to the category of special wastes having constituents of chemicals, metals and compounds which can exhibit hazardous characteristics and damage environment. Hazardous wastes are considered highly toxic and therefore disposal of such wastes needs proper attention so as to reduce possible environmental hazards. Industrial growth has resulted in generation of huge volume of hazardous wastes in the country.\textsuperscript{21} Lack of treatment and disposal facilities cause hazardous wastes to ravage municipal landfills and open spaces, raising serious environmental problems.\textsuperscript{22} A large number of hazardous compounds can be expected to be present in landfill leachates, many of which have not yet been identified.\textsuperscript{23} Hospital wastes are often extremely hazardous and may well be responsible for the spread of any number of infections. Yet hardly any effort is made to segregate hospital waste at source, store it hygienically or treat it before disposal.\textsuperscript{24}

Some Indian industries are churning out tons of solid toxic waste and callously offloading them in the nearest open space, with not a thought spared for people and the


environment. The main culprit of the uninhibited toxic generation is the Indian chemical industry, which has boomed in the past 30 years.\textsuperscript{25} The growth in the amount of solid-waste generation in India poses many threats to the environment and to occupational health. The improper and manual handling of solid waste and the transfer of waste in open vehicles create unhygienic conditions. Disposal of waste in low-lying areas without proper liners, leachate collection, and treatment systems creates groundwater pollution, and the disposal of solid waste into streams and rivers creates water pollution. Air pollution is created by odour nuisances and the generation of greenhouse gases from most of the landfill sites. Currently in India even though hazardous wastes, emanations and effluents are regulated, solid wastes often are disposed of indiscriminately posing health and environmental risk.\textsuperscript{26} People come into contact with toxic substances in many ways. Exposure to a toxic substance may occur at several points in the use cycle of the substance. People work in a plant where the substances arise as waste from an industrial process and do not change clothes or wash before coming home. They may reside near hazardous waste disposal sites which are illegal or poorly designed or managed, with opportunities for exposure as a result of accidents or careless handling or lack of containment of the substance. Lack of fencing to keep children off the site or exposure may occur in the home as the result of consumer products that are mislabeled, poorly stored and not childproof.

An illegal dumping of hazardous wastes by the industries may pose a severe environmental hazard to the human health and to various components of the environment;

(a) Solid waste pollutants serve as an external force affecting the physico-chemical characteristics of soil, ultimately contributing towards the poor production of vegetation.\textsuperscript{27}

(b) Emission of Volatile Organic Compounds (VOCs) is one of the problems from uncontrolled dumpsite. VOCs are well known to be hazardous to human health and many of them are potential carcinogens. They also contribute to create Ozone at ground level and climate change as well.\textsuperscript{28}

(c) Inhalation of particulate matter in industrial environments has been associated with respiratory symptoms and lung diseases, which continues to lead to long- and short-term hazardous health effects in exposed subjects.\textsuperscript{29}

(d) Impacts of Hazardous wastes on human health;

1. Lead can damage various systems of the body, including the nervous and reproductive systems and the kidneys, and it can cause high blood pressure and anemia.\textsuperscript{30}

2. Manganese exposure can cause neurotoxicity and a neurologic syndrome that resembles Parkinson’s disease (PD).\textsuperscript{31}

3. Short-term exposure of humans to high levels of dioxins may result in skin lesion, such as chlorine and patchy darkening of the skin, and altered liver

\textsuperscript{27} Syeda Maria Ali, Aroma Pervaz,” Open dumping of municipal solid waste and its hazardous impacts on soil and vegetation diversity at waste dumping sites of Islamabad City”, Journal of King Saud University-Science, Vol.26,Issue 1, 2014, p.59
function. Chronic exposure of animals to dioxins has resulted in several types of cancer.\(^\text{32}\)

4. Arsenic can cause cancers of the skin, bladder and lungs, and there is limited evidence that it may also cause cancer of the kidney, liver and prostate.\(^\text{33}\)

5. The long-term exposure to Cadmium affect the kidney. One of the initial signs of renal dysfunction is an increased urinary excretion of proteins.\(^\text{34}\)

6. Some chemicals like corrosive acids can damage the skin by a single contact, while others like organic solvent, may cause damage by repeated exposure.\(^\text{35}\)

5.2. The Law

There are several legislations that directly or indirectly deal with hazardous waste. The primary goal of waste regulations is to protect human health and the environment.\(^\text{36}\)

The relevant legislations are, the Environment (Protection) Act, 1986,\(^\text{37}\) the Factories Act, 1948,\(^\text{38}\) the Public Liability Insurance Act, 1991,\(^\text{39}\) the National Environment Tribunal Act, 1995,\(^\text{40}\) and the Environment Protection Act of 1986,\(^\text{41}\) and notifications under this Act.

**The Environment (Protection) Act, 1986.**\(^\text{42}\)

The Parliament of India enacted the Environment (Protection) Act, in 1986, to protect and improve the environment, and to regulate the management and handling of hazardous substances and chemicals. According to the Act "‘hazardous substance’


\(^\text{36}\) AIR 1987 SC 965.

\(^\text{37}\) Act No. 29 of 1986.

\(^\text{38}\) Act No. 63 of Year 1948.

\(^\text{39}\) AIR 1988 Raj.2

\(^\text{40}\) AIR 1992 Ori 225.

\(^\text{41}\) AIR 1996 SC 2969.

\(^\text{42}\) Act No. 29 of 1986.
means any substance or preparation which, by reason of its chemical or physico-chemical properties or handling, is liable to cause harm to human beings, other living creatures, plant, micro-organism, property or the environment. The Act sets out mandatory procedural safeguards for handling hazardous substances. The Act empowers Ministry of Environment and Forest (MoEF) to make rules on matters such as standards for ensuring environmental soundness, allowable limits for emission of pollutants, manner of dealing with hazardous substances, location of industries and their functioning, and measures for prevention of environmental accidents and hazards. Various sub-ordinate legislations for regulating the manner of disposal and handling of hazardous wastes have made by MoEF under the Environment Protection Act.

1. The Hazardous Wastes (Management and Handling) Rules, 1989

The Ministry of Environment and Forests, Government of India, has notified rules, in 1989, to deal with various environmental aspects related to hazardous wastes. These rules brought out a guide for manufacture, storage and import of hazardous chemicals and for the management of hazardous wastes. Under the rules the occupier generating hazardous wastes shall take all practical steps to ensure that such wastes are properly handled and disposed off without any adverse effects which may result from such wastes. Hazardous wastes shall be collected, treated, stored and disposed of only in such facilities as may be authorised. Import of hazardous wastes from any country to India shall not be permitted for dumping and disposal of such wastes. However, import of such wastes may be allowed for processing or re-use as raw material, after examining

43 Section 2(e) of the Environment (Protection) Act, 1986.
44 Section 3(2)(vii) of the Environment (Protection) Act, 1986.
each case on merit by the State Pollution Control Board or by an officer authorised in this behalf.\textsuperscript{49}

\textbf{2. The Municipal Solid Wastes (Management and Handling) Rules, 2000.}\textsuperscript{50}

The Municipal Solid Wastes (Management and Handling) Rules, 2000 were framed with an object of proper collection, segregation, transportation, processing and disposal of solid waste so as to protect the environment and health of the public. Which is also aimed at optimizing the management of municipal solid waste from all the waste generators. It gives importance to upgrade existing facilities to arrest contamination of soil and ground water. Solid Waste Management is essentially a Municipal function and it is mandatory for all Municipal authorities to keep the cities and towns clean, process the waste and dispose of the residual municipal solid waste in an environmentally acceptable manner. Municipal Solid Wastes include commercial and residential wastes generated in a municipal or notified areas in either solid or semi-solid form, excluding industrial hazardous wastes, but including treated bio-medical wastes.\textsuperscript{51} All Municipal authorities, within their territorial jurisdiction, require to implement the provisions of these rules and to collect, store, segregate, transport, process and dispose municipal solid wastes and also impose obligation to develop infrastructure.\textsuperscript{52}

\textit{The Solid Waste Management Rules, 2016.}\textsuperscript{53}

The Ministry of Environment and Forests has notified the new \textit{Solid Waste Management Rules, 2016} with clear responsibilities assigned to producers, dealers and

\textsuperscript{49} Rule 11(1) of \textit{the Hazardous Wastes (Management and Handling) Rules 1989.}
\textsuperscript{50} The Gazette of India, Extraordinary, Part II, Section 3 (ii), 25\textsuperscript{th} September, 2000.
\textsuperscript{51} Rule 3(15) of \textit{the Municipal Solid Wastes (Management and Handling) Rules, 2000.}
\textsuperscript{52} Rule 4(1) of \textit{the Municipal Solid Wastes (Management and Handling) Rules, 2000.}
\textsuperscript{53} The Gazette of India, Extraordinary, Part II, Section 3 (ii), No.861, 8\textsuperscript{th} April, 2016.
consumers. According to the these rules, local bodies with a population of one lakh or more were required to set up solid waste processing facilities within two years, census towns below a lakh would be given three years and old and abandoned dump sites would have to be closed or bio-remedied within five years.\(^{54}\) The rules provide that every waste generator shall segregate and store the waste generated by them in three separate streams, namely bio-degradable, non biodegradable and domestic hazardous wastes in suitable bins and handover segregated wastes to authorised waste pickers or waste collectors as per the direction or notification by the local authorities from time to time.\(^{55}\) No waste generator shall throw or burn the solid waste generated by him, on streets, open public spaces outside his premises or in the drain or water bodies.\(^{56}\) The local authorities have the responsibility to prepare a solid waste management plan as per state policy.\(^{57}\)

3. **The Bio-Medical Waste (Management and Handling) Rules, 1998.**\(^{58}\)

The Bio-Medical Waste (Management and Handling) Rules (BMW Rules) regulate the manner of disposal of bio-medical wastes and provide a detailed framework for the processes and mechanisms to be followed for their effective disposal. The BMW Rules are applicable to a wide array of institutions such as hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories, and blood banks.\(^{59}\) The rules require every occupier of an establishment generating, or dealing in bio-medical wastes in any other manner, and of a treatment facility to take permission from the State Pollution Control Board.\(^{60}\) And every occupier must take all

\(^{55}\) Section 4(1)(a) of the Solid Waste Management Rules, 2016.
\(^{56}\) Section 4(2) of the Solid Waste Management Rules, 2016.
\(^{57}\) Section 15(1)(a) of the Solid Waste Management Rules, 2016.
\(^{58}\) The Gazette of India, Extraordinary, Part II, Section 3 (ii), 20th July, 1998.
necessary steps to ensure that bio-medical waste is (i) handled in a manner not causing any adverse effect to human health and the environment, (ii) segregated in containers at a point of generation, (iii) handled and disposed of in accordance with prescribed standards.\(^6\)

To implement the *Bio-Medical Waste (Management and Handling) Rules* rules more effectively and to improve the collection, segregation, processing, treatment and disposal of the bio-medical wastes in an environmentally sound management, thereby, reducing the bio-medical waste generation and its impact on the environment, the Central Government reviewed the existing rules. The Central Government made new rules, the *Bio-Medical Waste Management Rules, 2016*.\(^6\) The rules ensure occupational safety to all its health care workers and others involved in handling of biomedical waste.\(^6\) And impose the duty on every operator to take all necessary steps to ensure that the bio-medical waste collected from the occupier is transported, handled, stored, treated and disposed of, without any adverse effect to the human health and the environment, in accordance with these rules and guidelines issued by the Central Government or, as the case may be, the Central Pollution Bontrol Board from time to time,\(^6\) and not to mix untreated bio-medical waste with other wastes.\(^6\)

### 4. The Batteries (Management and Handling) Rules, 2001.\(^6\)

The *Batteries (Management and Handling) Rules, 2001*, (Batteries Rules) were framed to adopt a regulatory mechanism for dealing with and dispose of used lead acid batteries and their components. The Batteries Rules apply to every manufacturer,

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61 Section 6 of the *Bio-Medical Waste (Management and Handling) Rules, 1998*.
62 The Gazette of India,Extraordinary, Part II, Section 3 (i), 28\(^{\text{th}}\) March, 2016.
63 Section 4(1)of the *Bio-Medical Waste Management Rules, 2016*.
64 Section 5 of the *Bio-Medical Waste Management Rules, 2016*.
65 Section 8 of the *Bio-Medical Waste Management Rules, 2016*.
66 The Gazette of India,Extraordinary, Part II, Section 3 (ii), 16 may, 2001.
importer, reconditioner, assembler, dealer, recycler, auctioneer, bulk consumer (like departments, organisations purchasing more than 100 batteries) and consumer. Under the rules, it shall be the responsibility of a manufacturer, importer, assembler and reconditioner to ensure that the used batteries are collected back as per the Schedule against new batteries sold excluding those sold to original equipment manufacturer and bulk consumers and set up collection centres either individually or jointly at various places for collection of used batteries from consumers or dealers. Rule 6 requires that for importing batteries from foreign countries for recycling in India, prior customs clearance must be obtained. Additionally, import of batteries will be allowed only upon producing valid registration with Reserve Bank of India and Ministry of Environment and Forest and providing an undertaking in prescribed format.


The Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008, (HWM Rules), were framed for regulate generation, storage, reuse, recycling, import, transportation and treatment of hazardous wastes. The restrictions on cross-border transportation of hazardous waste for purposes of recycling, as provided in the Basel Convention, are incorporated in the HWM rules. Under the rules, hazardous waste means any waste which by virtue of its physical or other characteristics (described as chemical, toxic, inflammable, reactive, explosive, etc.) causes or can cause danger to health or the environment, either stand alone or in combination with other substances.

69 The Gazette of India, Extraordinary, Part II, Section 3 (ii), 24th September, 2008.
The rules provide that every occupier of a factory has the duty to handle hazardous wastes, generated in the establishment, in safe and environmentally sound manner.\textsuperscript{71}

6. *The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.*\textsuperscript{72}

The *Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016* \textsuperscript{73} were notified by the Union Ministry of Environment, Forest and Climate Change. The rules distinguish hazardous waste from others, such as waste tyre, paper waste, metal scrap and used electronic items. The rules recognise these wastes as a resource for recycling and reuse supplementing industrial processes, thereby reducing the load on the country’s resources.\textsuperscript{74} Under the rules, the occupier shall be responsible for safe and environmentally sound management of hazardous and other wastes.\textsuperscript{75} And the hazardous and other wastes generated in the establishment of an occupier shall be sent or sold to an authorised actual user or shall be disposed of in an authorised disposal facility.\textsuperscript{76} The rules state that any occupier handling hazardous or other wastes and operator of the treatment, storage and disposal facility shall ensure the hazardous and other wastes are packaged in a manner suitable for safe handling, storage and transport as per the guidelines issued by the Central Pollution Control Board from time to time.\textsuperscript{77} The rules impose liability on the occupier, importer or exporter, and operator of the disposal

\textsuperscript{71} Rule 4 of *the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.*

\textsuperscript{72} The Gazette Of India, Extraordinary, Part II, Section 3 (I), 04th April, 2016.

\textsuperscript{73} The Gazette of India, Extraordinary Part II, section 3, sub-section (ii), dt. 24th July, 2015.

\textsuperscript{74} “Government notifies new hazardous waste management rules” [www.livemint.com/Politics](http://www.livemint.com/Politics), (accessed 16 October,2016).

\textsuperscript{75} Rule 4(2) of *the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.*

\textsuperscript{76} Rule 4(3) of *the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.*

\textsuperscript{77} Rule 17 of *the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.*
facility that they are liable for all damages caused to the environment or third party due to improper handling and management of the hazardous and other waste.\textsuperscript{78}

7. \textit{The E-waste (Management and Handling) Rules, 2011} \textsuperscript{79}

The \textit{E-waste (Management and Handling) Rules, 2011} (E-waste Rules) were framed to regulate e-waste handling and protect the health of people and environment against any adverse effects which may result from hazardous substance contained in such e-wastes. E-waste means, waste electrical and electronic equipment, in whole or part or as rejects in the manufacturing and repair process which are discarded.\textsuperscript{80} The E-waste Rules apply to every producer, consumer or bulk of consumer (including factories) involved in the manufacture, sale, purchase, and processing of electrical and electronic equipment or components, along with all collection centres, and recyclers of e-waste.\textsuperscript{81} The rules impose the duty on Consumers or bulk consumers of electrical and electronic equipment that e-waste generated by them is channelized to authorized collection centers or registered dismantlers or recyclers or is returned to the pick up or take back services provided by the producers.\textsuperscript{82} And impose the duty on producer to collect e-waste generated during the manufacture of electrical and electronic equipment and channelizing the same for recycling or disposal.\textsuperscript{83}

In 2016, the Central Government reviewed the \textit{E-waste (Management and Handling) Rules, 2011}, and framed the \textit{E-Waste (Management) Rules, 2016},\textsuperscript{84} to provide regulations for the reuse of useful material from Waste Electrical and Electronic

\textsuperscript{78} Rule 23 of the \textit{Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.}

\textsuperscript{79} The Gazette of India, Extraordinary, Part II, Section 3 (ii), 12\textsuperscript{th} May, 2011.

\textsuperscript{80} Rule 3(k) of the \textit{E-waste (Management and Handling) Rules, 2011}

\textsuperscript{81} Rule 2 of the \textit{E-waste (Management and Handling) Rules, 2011.}

\textsuperscript{82} Rule 6 of the \textit{E-waste (Management and Handling) Rules, 2011.}

\textsuperscript{83} Rule 4 of the \textit{E-waste (Management and Handling) Rules, 2011.}

\textsuperscript{84} The Gazette of India, Extraordinary, Part II, Section 3 (ii), 23\textsuperscript{rd} March , 2016.
Equipment (WEEE), thereby reducing the hazardous wastes destined for disposal and to ensure environmentally sound management of all types of WEEE, and to adopt collection mechanism based approach, to include collection centre, collection point, take back system etc., for collection of e-waste by Producers under Extended Producer Responsibility (EPR).\(^ {85}\)

The rules apply to every manufacturer, producer, consumer, bulk consumer, collection centres, dealers, e-retailer, refurbisher, dismantler and recycler involved in manufacture, sale, transfer, purchase, collection, storage and processing of e-waste or electrical and electronic equipment, including their components, consumables, parts and spares which make the product operational.\(^ {86}\) The rules provide that every waste generator and the service providers shall be responsible for the collection, segregation of concrete, soil and others and storage construction and demolition of waste generated, as directed or notified by the concerned local authority in consonance with these rules.\(^ {87}\)

Consumers or bulk consumers of electrical and electronic equipment, listed in Schedule I of the rules, shall ensure that e-waste generated by them is channelised through a collection centre or dealer of authorised producer or dismantler or recycler or through the designated take back service provider of the producer of authorised dismantler or recycler.\(^ {88}\)

8. **The Plastic Waste (Management and Handling) Rules, 2011.**\(^ {89}\)

The **Plastic Waste (Management and Handling) Rules, 2011** (PWM Rules) set up a regulatory framework for manufacturing, usage and recycling of plastic bags to ensure

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\(^{86}\) Rule 2 of *the E-Waste (Management) Rules, 2016*.

\(^{87}\) Rules 5&6 of *the E-Waste (Management) Rules, 2016*.

\(^{88}\) Rules 9 of *the E-Waste (Management) Rules, 2016*.

\(^{89}\) The Gazette of India, Extraordinary, Part II, Section 3 (ii), 4\(^{th}\) February, 2011.
management of plastic waste. Plastic waste means any plastic product such as carry bags, pouches, etc., which has been discarded after use or end-of-life.\(^90\) The rules are applicable to all manufacturers, stockists, distributors, retailers and users of plastic products. Rule 9 mandates every manufacturer and recycler of plastic carry bags, multilayered pouches or sachets, to make registration with the State Pollution Control Board.

In 2016, the Central Government reviewed the *Plastic Waste (Management and Handling) Rules, 2011,* and has notified the *Plastic Waste Management Rules, 2016,*\(^91\) to promote use of plastic waste for road construction as per Indian Road Congress guidelines or energy recovery, or waste to oil etc. for gainful utilization of waste and also address the waste disposal issue, and to entrust more responsibility on waste generators.\(^92\) The rules apply to every waste generator, local body, Gram Panchayat, manufacturer, importer and producer. The rules provide that carry bags made of recycled plastic or products made of recycled plastic shall not be used for storing, carrying, dispensing or packaging ready to eat or drink food stuff,\(^93\) and no producer shall on and after the expiry of a period of Six Months, from the date of final publication of these rules in the Official Gazette, use any plastic for packaging of commodities without registration from the concerned State Pollution Control Board or the Pollution Control Committees.\(^94\) According to the rules, retailers or street vendors shall not sell or provide commodities to consumer in carry bags or plastic sheet or multilayered packaging, which are not manufactured and labelled or marked, as per prescribed standard under these rules.\(^95\)

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\(^90\) Rule 3(m) of the *Plastic Waste (Management and Handling) Rules, 2011.*

\(^91\) The Gazette of India, Extraordinary, Part II, Section 3 (ii), March 18, 2016.


\(^93\) Rule 4(b) of the *Plastic Waste Management Rules, 2016.*

\(^94\) Rule 9(5) of the *Plastic Waste Management Rules, 2016.*

\(^95\) Rule 14 of the *Plastic Waste Management Rules, 2016.*
Only the registered shopkeepers or street vendors shall be eligible to provide plastic carry bags for dispensing the commodities.\(^{96}\)

*Factories (Amendment) Act 1987.*\(^{97}\)

The Factories Act, 1948\(^{98}\) is a post-independence statute that explicitly showed concern for the environment. The primary aim of the Act is to ensure the welfare of workers not only in their working conditions in the factories, but also their employment benefits. While ensuring the safety and health of the workers, the Act contributes to environmental protection. The Act contains a comprehensive list of 29 categories of industries involving hazardous processes, which are defined as a process or activity where unless special care is taken, raw materials used therein or the intermediate or the finished products, by-products, wastes or effluents would cause material impairment to health of the persons engaged, result in the pollution of the general environment. The Act impose obligation on owner of factory to make effective arrangements for the treatment of wastes and effluents due to the manufacturing process\(^{99}\) and take necessary step to control dust and fume.\(^{100}\) While ensuring the safety and health of the workers, the Act contributes to environmental protection.

*The Public Liability Insurance Act (PLIA), 1991.*\(^{101}\)

The Act covers accidents involving hazardous substances and insurance coverage for these. Where death or injury results from an accident, the Act makes the owner liable to provide relief as is specified in the Schedule of the Act. The PLIA was amended in

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\(^{97}\) Act No. 20 of 1987.
\(^{98}\) Act No. 63 of Year 1948.
\(^{100}\) Ibid. Section 14.
\(^{101}\) Act No.6 of 1991.
1992, and the Central Government was authorized to establish the Environmental Relief Fund, for making relief payments.

National Environment Tribunal Act, 1995

The Act provides strict liability for damages arising out of any accident occurring while handling any hazardous substance and for the establishment of a National Environment Tribunal for effective and expeditious disposal of cases arising from such accident, with a view to give relief and compensation for damages to persons, property and the environment and for the matters connected therewith or incidental thereto.

5. 3. Judicial Decisions

In M.C. Mehta v. Union of India, the petitioner, M.C. Mehta filed the writ petition in the year 1985, under Article 32 of the Constitution of India, and sought a direction for closure of the various units of Shriram Foods & Fertilizers, on the ground that they were hazardous to the community. During the pendency of the petition, there was an escape of oleum gas from one of the units of Shriram Foods & Fertilizers. The Delhi Legal Aid and Advise Board and the Delhi Bar Association filed applications for award of compensation to the persons who had suffered harm, because of escape of oleum gas. The issue raised before the Division bench of the Supreme Court involved substantial question of Laws relating to the interpretation of Article 21 and Article 32 of the Constitution.

The Court observed that an enterprise, which is engaged in a hazardous or inherently dangerous industry which poses a potential threat to the health and safety of the persons working in the factory and residing in the surrounding areas, liable for the

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102 Act No.27 of 1995.
103 AIR 1987 SC 965.
damage caused by hazardous substances. The enterprise owes an absolute and non-delegable duty to the community, to ensure that no harm caused to anyone on account of hazardous or inherently dangerous nature of the activity, which it had undertaken. The enterprise, engaged in the hazardous or inherently dangerous activity, must be under an obligation to provide the highest standards of safety, and if any harm results on account of such activity, the enterprise must be absolutely liable to compensate for such harm.

The Court pointed out that Section 3 of the Environment (Protection) Act, 1986 expressly empowers the Central Government to take all such measures as it deems necessary or expedient for the purpose of protecting and improving the quality of the environment. Section 5 of the Act clothes the Central Government (or its delegate) with the power to issue directions for achieving the objects of the Act. The said powers include giving directions for the removal of sludge, for undertaking remedial measures and also the power to impose the cost of remedial measures on the offending industry and utilise the amount so recovered for carrying out remedial measures. The Constitution Bench directed the Central Government and other concerned organisations to take actions on the basis of the judgement of this case.

The Government of India framed Hazardous Waste Rules, 1989, under the Environment (Protection) Act to regulate hazardous wastes, generated within the country, as well as the import and export of such wastes, with the exception of importing material to be reused, as raw material. Hazardous Waste Rules ban the import of waste to the country for dumping and disposal.
The judgment given in this case included several suggestions, made therein, by the Supreme Court to enable the Central Government to frame a national policy regarding such industries.

In the case of *Research Foundation for Science, Technology and Natural Resource Policy v. Union of India and others*,¹⁰⁴ writ petition was filed by the petitioner as a public interest petition, seeking the following reliefs:

(a) to impose ban on the import of toxic wastes from the industrialized countries into India,

(b) to direct amendment of rules in conformity with the Basel Convention and Article 21, 47 and 48A of the Constitution as interpreted by the Court,

(c) to declare that without adequate protection to the workers and the public and without any provision of sound environment management of disposal of hazardous wastes, the Hazardous Wastes (Management & Handling) Rules, 1989, are violative of the Fundamental Rights and, therefore, unconstitutional.

Various orders have been passed by the Court, as response to affidavits that have been filed on behalf of the MOEF, Central Pollution Control Board (CPCB) and others. The authorities substantially admit the lack of various basics facilities to handle the hazardous substances.

In the writ petition, various instances were provided of the type of toxic wastes imported into the country under the garb of recycling. The Writ Petitioner has also drawn the attention of the Court to the provisions of the Hazardous Wastes (Management & Handling) Rules, 1989. The judiciary through its decision tried to strengthen the import barriers. On 5th May 1997 the Supreme Court banned import of hazardous wastes as an

¹⁰⁴ 1995 (3) SCC 42.
interim measure in a writ petition filed by petitioner. The Court noted that despite the lapse of several years the authorities had not taken effective steps for implementing *Hazardous Waste Rules*. Spurred by the judicial initiative, the Central Government introduced the *Hazardous Wastes (Management and Handling) Amendment Rules, 2000*, whereby some new matrixes brought to the fold of hazardous waste regulations and re-defined categories of Hazardous Wastes and harmonizing them with international environmental law.

Pursuant to the directions of the Court dated 4th February, 2002, the Central Government notified *the Hazardous Waste (Management & Handling) Rules, 2003*. The rules prescribed environmentally sound technologies and standards for re-refining or recycling of hazardous wastes.

Considering the alarming situation created by dumping of hazardous waste, the Supreme Court constituted a High Powered Committee (HPC) headed by Prof. M.G.K. Menon. The HPC has to investigate about the damage to the environment caused by dumping of hazardous waste, and the magnitude of the problem of failure of the authorities to take proper steps to prevent serious and adverse consequences by dumping of hazardous wastes.

The Supreme Court, after considering the detailed reports submitted by the HPC, issued various directions. Under the direction of the Court, the Central Pollution Control Board submitted report to the Court. The Supreme Court further directed the Central Government to constitute a Monitoring Committee to oversee timely compliance of the directions given by the Court in this writ petition.

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107 2003 (9) SCC 303.
The list of directions, issued by the Supreme Court, is as follows:

3. Direction to Central Pollution Control Board to prepare guidelines for transportation of hazardous wastes within 3 weeks.
4. Direction to make amendment in the Rules to incorporation of the principles of Article 9 of the Basel Convention.
5. Direction to the Central Government and MOEF to consider the strengthening of Hazardous Substance Management Division but not at the cost of weakening the other divisions.
6. The authorities are directed to ensure that hazardous wastes are not allowed to be discharged in open dumps and on violation thereof prompt action be taken as per law.
7. The MoEF was directed to either itself or through the CPCB or any other agency draft a policy document on hazardous waste generation and its handling within the country.

The Court constituted the Monitoring Committee on Hazardous Wastes in November 2003.

The HPC noted that there was lack of policy and vision at the top level, which has resulted in a poor waste management system. The situation cannot be allowed to continue. Another aspect, that has been brought to HPC notice, was the malpractice
arising out of purported import of some permitted items. From the submissions of Mr. Parikh and Mr. Joshi, appearing for Container Corporation of India, it appeared that unscrupulous traders in the garb of importing used oil or furnace oil, in fact, import waste oil which is a banned item. They also illegally import zinc wastes, despite it being not permissible except in cases where more than 65% of zinc can be recovered from the wastes.

Having regard to above fact, the Court directed that besides other action, when illegal imports of hazardous waste takes place due to non-fulfilment of the requisite conditions required under the Rules, an inquiry should be conducted and appropriate action taken against the concerned officer or officers of the department responsible therein and, if necessary, a specific provision to that effect can be incorporated in the Rules, wherever needed.

After consideration of the detailed reports submitted by the HPC various directions have been issued by the Court from time to time.

The Court reasserted the interim directions given with regard to the handling of hazardous wastes in ship breaking and in the various orders passed on the writ petition from time to time and, in particular, the orders dated 13th October, 1997 and 14th October, 2003. The Central Government was also directed to ban import of all hazardous and toxic wastes, which had been identified and declared to be hazardous or toxic under the Basel Convention. The Central Government was also directed to bring the *Hazardous Wastes (Management & Handling) Rules, 1989*, in line with the Basel Convention and Articles 21, 47 and 48A of the Constitution of India. Under the direction

Finally, on July 6, 2012 the Supreme Court disposed the petition, directed the Government to amend Hazardous Waste Rules and ban the import of hazardous waste. While hearing a 17-year-old case, the Court also asked the Government to amend the existing laws pertaining to toxic waste so that they comply with the Basel Convention.

In L K Koolwal v. State of Rajasthan and ors., a writ petition was filed by the petitioner, asking the court to issue directions to the State to perform its obligatory duties. The petitioner alleged that the sanitation problem is acute in Jaipur which is hazardous to the life of the citizens of Jaipur. Insanitation leads to a slow poisoning and adversely affects the life of the citizen and invites the death at an earlier date than the natural death. The Court observed that maintenance of health, preservation of sanitation and environment falls within the purview of Art. 21 of the Constitution as it adversely affects the life of the citizen and it amounts to slow poisoning and reducing the life of the citizen because of the hazards created is not checked.

The Court held that the Municipality had a statutory duty to remove the dirt, filth, etc. from the city. The Court ordered the Municipality to clean the city of Jaipur, within the period of six months from the date of judgment of this case. A committee was constituted to inspect the implementation of the judgment. The Court said that if the Legislature or the State Government feels that the law enacted by them cannot be implemented, then the Legislature has the liberty to scrap it, but the law which remains on the statute books will have to be implemented.

108 2012 (6) SCALE 253.
In *M. C Mehta v. State of Orissa*, a practicing advocate of the Supreme Court, has filed the writ petition before the High Court of Orissa, requesting to issue writ of mandamus, to protect the health of thousands of innocent people living in Cuttack and adjacent areas, who are suffering from pollution caused by the action of Municipal Committee, Cuttack and the S.C.B. Medical College Hospital, Cuttack. The main contention of the petitioner was that the dumping of untreated waste water of the hospital and some other parts of the city in the Taladanda canal was creating health problems in the city. The State of Orissa and other Authorities violated Article 21 of the Constitution of India, the National Health Policy, the *Environment (Protection) Act, 1986*, and the *Water (Prevention and Control of Pollution) Act, 1974*.

The State, on the other hand, contended that the central sewerage system was constructed in the hospital and that there was no sewage flow into the Taladanda canal as alleged. Further, it was asserted that the State had not received any information relating to either pollution or of epidemic of water borne diseases caused by contamination of the canal. Also, the health department shrugged off the responsibility for supply of drinking water and passed the buck to the Municipality which refuted the contentions of carelessness and callousness.

The Court reprimanded the authorities and directed the Government to immediately act on the matter. Also, the court recommended setting up of a committee to take steps to prevent and control water pollution and to maintain wholesomeness of water meant for human consumption amongst other things. A responsible Municipal Council is constituted for the precise purpose of preserving public health. Provision of proper drainage system in working conditions cannot be avoided by pleading financial inability.

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110 AIR 1992 Ori 225.
In Dr. B. L Wadhera v Union of India,\textsuperscript{111} a writ petition was filed, by an advocate of the Supreme Court, under Article 32, seeking directions to the Municipal Corporation of Delhi (MCD) and the New Delhi Municipal Corporation (NDMC) to perform their statutory duties, in the collection, removal and disposal of garbage and other wastes from the city. The Court issued a couple of interim orders, wherein directions were issued to the Delhi Administration to perform their duties.

The Court held that the authorities entrusted with the work of pollution control have been wholly remiss in the discharge of their duties under the law and that they cannot absolve themselves of their duties on the pretext of financial and other limitations like the inefficiency of staff etc. The garbage or waste shall be lifted from collection centres every day and transported to the designated place for disposal. The Government of India through its Secretary, the Ministry of Health, Government of National Capital Territory of Delhi, MCD through its Commissioner and NDMC through its Administrator were to construct and install incinerators in all the Hospitals and Nursing Homes with 50 beds and above under their administrative control. This was to be done within 9 months from the date of order.

In Ajeet Mehta v. State of Rajasthan,\textsuperscript{112} a complaint was filed by the petitioner against the non-petitioners to the effect that stocking of various kinds of fodder, their loading and unloading by the non-petitioners caused pollution in the whole locality where they reside and inhalation of such particles causes a health hazard. The City Magistrate, Jodhpur held that the non-petitioner's business in fodder was causing a health hazard to the neighbours and ordered removal of their business.

\textsuperscript{111} AIR 1996 SC 2715.
\textsuperscript{112} 1990 CriLJ 1596.
The non-petitioners filed revision petition before the Additional Sessions Judge. Additional Sessions Judge reversed the order of City Magistrate. The petitioner filed revision petition before the High Court against the order of the Additional Sessions Judge.

The Court held that stocking of fodder caused pollution of the atmosphere. The Court also held that the liberty and freedom of any individual cannot be compromised by another person by causing nuisance. The Court observed that work for personal gain, causing discomfort to others should not be permitted. Thus the public health cannot be allowed to suffer on account of the personal business of any individual. Hence, the decision of the Additional Sessions Judge was quashed and the revision petition allowed. The court ordered removal of stock of fodder and stoppage of the business of fodder in that locality.

In *Rajiv Ranjan Singh v. State of Bihar*, the application under Articles 226 and 227 of the Constitution of India, was filed by the petitioner, alleging that Shiv Shankar Chemical Industries Private Limited, situated within Jagdishpur discharged untreated effluents, chemical wastes and sewage beyond its premises. And also the obnoxious fumes and odours emanating from the distillery is contaminating the water resources and polluting the environment and thereby seriously affecting not only crops and cattle, but also the health and well being of the people inhabiting the villages in its vicinity, particularly that of Raipura village, which was only at a short distance from this distillery.

The Court ordered an enquiry into the nature of the effluents and to determine their effect. They also ordered the firm not to release any more effluents out of the premises of the firm. When the Expert Committee’s report was placed before the Court, it

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*AIR 1992 Pat 86.*
was held that there was sufficient evidence to show the respondents had not stopped discharging the effluents into the water bodies and thus ordered a stay on all further manufacturing activities by the firm. It also ordered for the constitution of a Committee to inspect the distillery to verify, if the various safety measures were being followed.

In the meantime, the Pollution Control Board refused to extend its consent to the Company under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, beyond September 30, 1989 as it had failed to comply with the conditions of the earlier consent order. The Company filed a writ in Court challenging this refusal as being arbitrary and discriminatory. The two writs were heard together.

The report of the Committee revealed that the effluents had a large quantity of Biochemical Oxygen Demand (B.O.D.) which is fatal to marine life as on coming in contact with water, it absorbed all the oxygen. It also contained the detail about the treatment of effluents followed at the distillery, and concluded that adequate pollution control measures were not available at the factory.

The Court held that this was more in the nature of an irritating nuisance rather than a health hazard. The distillery cannot be absolved of its responsibility of setting up the modern treatment plant, but this was already under construction.

The Court held that there was a need to balance between the necessity to protect the environment and the pressing need for industrialization of the State. It agreed with the scheme suggested by the second Committee to restart manufacturing processes with adequate safeguards. It felt that this would be in accordance with the dicta laid down in M.C.Mehta v. Union of India. The Court not only allowed the continuation of the

\[^{114}\text{AIR 1988SC 1037.}\]
manufacturing process, but it has also imposed certain conditions on the polluting industry which are of great importance. The conditions have been imposed:

a. The distillery must set up properly designed lagoons with double lined cover, by polythene shutts to avoid any risk of ground water pollution having their retaining and holding capacity equivalent to 100 days effluent discharge. This must be to the complete satisfaction of the Board.

b. The entire area of lagoons, used as storage for the effluent should be effectively fenced to a height of five feet by a pucca wall or stand barbed wire fence to check the entry of cattle or the human beings to storage area.

c. The Unit should provide for centrifugal separation for the fermented sludge.

d. The factory should be separated by a 5 metre high and 150 metre long earth in the dyke with close plantation at the top along the slopes. This should be able to limit the odour reaching the villagers to some extent.

e. Two deep tube wells may be provided for the villagers at the cost of the industry.

In *Buffalo Traders Association v. Maneka Gandhi*, 115 the appeal was filed before the Supreme Court, by the Buffalo Traders Association against the order of the Delhi High Court. In this case, the Idgah slaughter House discharged untreated blood to the amount of 13,000 litres into the Municipal sewer. The slaughter house was also alleged to have unhygienic conditions for slaughter and sale and health of the animals brought into the slaughter house were not properly checked. The High Court ordered to close the Idgah slaughter House on the ground that it was a hazardous and noxious industry. 116

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115 1994 Supp (3) SCC 448.
The Supreme Court pointed out that the High Court dealt with only part of the problem, it did not consider the interest of workers and consumers of the trade. Adoption of appropriate modern technology in the slaughter house minimizes the environment pollution.

The slaughter house was permitted to function, provided it complied with certain conditions laid down by the Court. A certain limit was placed on the number of animals that could be slaughtered. Also buffaloes, cows, and bulls were prohibited from being slaughtered. The slaughter houses had to comply with certain environmental standards. Municipal Council of Delhi was directed to stop illegal slaughtering and construct modern slaughter houses.

In *Almitra H. Patel v. Union of India & Ors.*, the writ petition was filed by Ms. Almitra H. Patel. The petitioner alleged that the practices, adopted by the Municipalities for disposal of garbage in urban areas, were faulty and deficient. The management of solid waste by the Municipalities had direct impact on the health of the people in the country. The petitioner had appreciated the guidelines and recommendations made by the Central Pollution Control Board for the management of municipal waste. The Central Pollution Control Board submitted that the responsibilities of the management of solid waste are vested with the Municipalities, which are under the administrative control of the respective States or Union Territories. At the Central level, the Ministry of Urban Affairs is the nodal Ministry to deal with the matters relating to municipal solid wastes. The Central Pollution Control Board itself has taken several initiatives for improvement, collection, transportation, disposal and utilization of municipal solid wastes. On the basis of the replies of the various departments, Central or State Pollution Control Boards and

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117 2000(2) SCC 166.
concerned State Government, the Supreme Court on 16.1.1998 directed to constitute a committee to look into all aspects of solid waste management in Class-I cities of India. The committee submitted its report to the Supreme Court for its consideration, in 1999. The Committee made several recommendations, including technical aspects also for the management of solid waste in Class-I cities. Further, the recommendations were categorized into three heads,

(i) Mandatory recommendations for citizens or associations,
(ii) Mandatory recommendations for Local Bodies or State Governments, and
(iii) Discretionary recommendations for Urban Local Bodies.

On the basis of the report of the Committee, draft rules known as the Management of Municipal Solid Wastes (Management and Handling) Rules, 1999 were framed and circulated to all the State Governments for their suggestions. And brought into effect, in 2000.

The Supreme Court emphasized the necessity for formulating an action plan for management of Municipal Solid Wastes (MSW) in respect of Metro cities in the country and State Capitals by the Ministry of Urban Development in consultation with all concerned.\(^{118}\)

In *Indian Council for Enviro Legal Action & Others v. UOI & Others*,\(^{119}\) the writ petition was filed, in 1990 before the Supreme Court, by the Indian Council for Enviro Legal Action against the industries and the Patancheru Effluent Tech Limited (PETL) at Pathancheru and Bolaram, the Common Effluent Treatment Plant (CETP) of industries, for the pollution of the ground water and surface water, caused by the discharge of the


\(^{119}\) Writ Petition (Civil) No.1056/1990 AIR.
effluents from these CETPs. Among others, the Pollution Control Board of A.P. and the Central Pollution Control Board were made respondents. The Patancheru Industrial Estate was established in the year 1975 at Patancheru in Medak district of Andhra Pradesh and is about 15 Kilometres from Hyderabad. Bulk drugs, chemicals, textile, leather finishing industries etc. are located in this industrial estate and to take care of the effluents, a common effluent treatment plant is set up and operated by M/s. Patancheru Envirotech Limited. The total effluent handled by the PETL is about 2860 cubic metres per day, and discharges the treated effluent into the Isakawagu drain which falls into Nakkawagu drain which finally discharges into Manjira River. The River, Manjira, is the major source of drinking water supply for the city of Hyderabad.

The Bolaram Industrial Estate is located in the Bolaram village in the district of Rangareddy in Andhra Pradesh and is about 35 km from Hyderabad city. The main water polluting industries in this industrial estate are the bulk drug industries. The CETP was established in this industrial estate and there was 25 member industries contributing to this CETP. The CETP is handling around 340 cubic metres per day of effluent. The treated effluents are discharged on land for plantations.

The Supreme Court directed the Central Pollution Control Board (CPCB) in 1997, to investigate and to make report on the functioning of Common Effluent Treatment Plants.

In compliance of the directions of the Court, a joint action plan was submitted to the Supreme Court. The Court finally directed that further proceedings in the matter would be monitored by the Andhra Pradesh High Court. The High Court would ensure the
implementation of the orders passed by the Supreme Court and would deal the writ petition as well as applications filed therein in accordance with the law.

In *Imtiaz Ahmad v. UOI & Ors.*, the petition was filed in 1998, regarding pollution caused by several industries, a distillery, two single super phosphate industries, a silica washing industry, a tyre & tube manufacturing unit etc. located in the Gajraula (Jyotiba Phule Nagar) District, U.P. It was alleged that those industries were discharging untreated effluent and letting out emission beyond the prescribed limit, as a result of which the health of the people and agricultural crops in the region severally got affected. The discharge from the industries carrying industrial and chemical waste entered in the Bagad nullah, which ultimately pollutes the river Ganga. The Court issued various directions to control the pollution in the area. The Central Pollution Control Board submitted inspection reports in compliance of Court orders.

The Central Board submitted its inspection report on 20.3.2001 after conducting an inspection of M/s Insilco. In compliance of Court order dated 31.10.2001, the Central Board submitted comments on the report of the NEERI in respect of the Sodium Absorption Ratio (SAR) issue concerning silica washing industry.

The Supreme Court on 28.2.2002 after considering the report of the NEERI and subsequent comments of the Central Board, observed that the concerned industry M/s Insilco had complied with required norms and measures in accordance with the recommendations of the Central Board. Therefore, M/s Insilco was permitted to continue with the industry in its premises. The Court referred the recommendations of the Central Board and further directed that the recommendations of the Central Board should be

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120 Writ Petition (Civil) No.418/1998.
considered as a part of the order of the Court and all industries including M/s Insilco should abide by the said recommendations.

In *Vineet Kumar Mathur v. UOI and Others*,\(^\text{121}\) the writ petition was filed against the industries located in the cities of Lucknow, Sitapur and Lakhimpur Khiri, alleging that these industries were polluting the river Gomati. The Central Pollution Control Board submitted various inspection reports in respect of the status of pollution in the river Gomti. The Nagarpalikas and Municipalities were directly discharging the polluted water into the river Gomti without any treatment. The Court held that running of the industry amounts to violation of order of the Court, dated 15-1-1993. The Court also pointed out that the member secretary is liable to act of Industry.

In *Indian Council for Enviro-Legal Action v Union of India*,\(^\text{122}\) the petitioner, the Indian Council for Enviro-Legal Action, filed a writ petition, to take action to stop and remedy the pollution caused by several chemical industrial plants in Bichhri village, Udaipur District, Rajasthan. The Respondents operated heavy industry plants there, producing chemicals such as oleum (a concentrate form of sulphuric acid), single super phosphate and the highly toxic "H" acid (the manufacture of which is banned in western countries). Respondents operated these plants without permits, which caused serious pollution of the environment. Toxic untreated waste water was discharged into open land and which is absorbed into the earth causing pollution of aquifers and the subterranean supply of water. The soil also became polluted and unfit for cultivation. Several people in nearby villages are alleged to have contracted diseases due to the pollution, some of whom had died. The Supreme Court applied doctrine of absolute liability. The

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\(^{122}\) AIR 1996 SC 1446.
enterprises engaged in inherently dangerous activities which cause harm to others, is liable to compensate all persons who are affected by accident. Sections 3 and 5 of the *Environment (Protection) Act, 1986* empower the Central Government to take necessary measures to protect the environment. Accordingly, the Central Government will determine the amount of money needed to carry out remedial measures in this case. Respondents are liable to pay to improve and restore the environment in this area.

The Court held that the Polluter Pays Principle means that absolute liability of harm to the environment extends not only to compensate the victims of pollution, but also to the cost of restoring environmental degradation. Consequently, the polluting industries were held to be absolutely liable for the harm caused by them to villagers in the affected area. Industries were ordered to take all necessary measures to remove sludge and other pollutants lying in the affected areas.

In the case of *Shrishti Digital Solution v. The Additional Commissioner of Customs,* a writ petition filed before the High Court of Madras, seeking a writ of mandamus against the order of the respondent. The petitioner, engaged in the business of importing and trading in second hand digital multifunction printers and copying machines as well as second hand photocopier machines and trading in accessories parts and consumables for the said machines. The respondent issued the order imposing penalty on the importer, under section 112(a) of the Customs Act, 1962 on the ground that the goods had been imported without prior permission, from Ministry of Environment and Forest. And also ordered that the imported goods to be re-exported within 30 days at the

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cost of the importer in terms of Rule 17(2) of the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008.

The Court held that it is erroneous on the part of the respondent to come to the conclusion that the goods imported are hazardous wastes, without any inspection, by merely interpreting the provisions of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008. There is no material evidence before the respondent to come to the conclusion that the goods in question are hazardous wastes. If the goods imported are found to be hazardous wastes by any competent authority on inspection, then appropriate action can be taken. To declare certain goods imported as hazardous wastes per se, based on the officer's interpretation of the Rules would be preposterous and untenable in law.

In Vellore Citizens’ Welfare Forum v. Union of India,\textsuperscript{124} the Vellore Citizens Welfare Forum, filed a writ petition under Article 32 of the Constitution of India against large-scale pollution of the soil and water caused by a number of tanneries and other industries in the State of Tamil Nadu. According to the petitioner, the entire surface and sub-soil water of the river Palar has been polluted, resulting in non-availability of potable water to the residents of the areas.

The Court directed the Central Government to take immediate action under Section 3(3) of the Environment Protection Act, 1986, to control pollution and protect the environment. The Supreme Court noted that although the leather industry is a major foreign exchange earner for India and provided employment, it does not mean that this industry has the right to destroy the ecology, degrade the environment or create health hazards.

\textsuperscript{124} AIR 1996 SC 2715.
In case of *Deepak Nitrile Ltd. v. State of Gujarat*, a petition was filed before the High Court of Gujarat, in the public interest, alleging large-scale pollution caused by industries located in Gujarat Industrial Development Corporation (GIDC), industrial estate at Nandesari. It was alleged that effluents discharged by the said industries into the effluent-treatment project had exceeded certain parameters fixed by the Gujarat Pollution Control Board (GPCB), thereby causing damage to the environment. On 9-5-1997, the High Court passed an order directing industries to pay 1% of the maximum annual turnover of the preceding three years towards compensation and betterment of the environment within a stipulated time. On appeal, the Supreme Court held that the industrial units, in question have not conformed to the standards prescribed by GPCB, therefore industries liable to pay compensation.

In *Suo Motu v. Vatva Industries Association*, the Gujarat Pollution Control Board had received a number of complaints from the nearby villagers/farmers and the President of the Ramol Nagar Palika, alleging that due to the pollution by some units, their well-water was contaminated with colour. The Board visited the site, during the visit and inspection, Board officials observed huge quantity of hazardous waste dumped near Ramol village. The Gujarat Pollution Control Board wrote a letter to High Court, against violation rules by Industrial units and request the High Court to take action. This letter was registered as a petition.

The Gujarat High Court observed that it is the basic duty of the concerned officers of the Board, under the Environment (Protection) Act, 1986 and other relevant Pollution Control Laws, to ensure that immediate action is taken against any such units who dump

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126 AIR 2000 Guj 33.
hazardous waste or release untreated effluents in violation of the standards and norms laid down for the purpose. And it is not appropriate either for the Gujarat Pollution Control Board, or its officers just to point out those defaults and wrong doings and wait for the High Court's directions in a matter which is entirely within their domain under the statutory provisions. The Court reprimanded officers of the State Pollution Control Board for neglecting their duties.

In the case of *Law Society of India v. Fertilizers and Chemicals*,\(^{127}\) the petitioner, is a Society registered under the Travancore-Cochin Charitable, Literary and Scientific Societies Act. The petitioner wanted a direction from the Court for the removal of Ammonia storage tank forthwith from Willingdon Island and further wanted a direction to the Kerala State Pollution Control Board to discharge the statutory obligations to keep the air clean in Cochin under Section 17 of *the Air (Pollution and Control) Act, 1981*. The petitioner wants to highlight the massive environmental pollution caused by the existence of the tank, and also the devastating catastrophe of exterminating the entire population in Willingdon Island and the City of Cochin and nearby places in the event of a major leak of the Ammonia tank.

The High Court of Kerala held that the environmental imperative is ultimately a matter of public rights and duties. That effective environmental protection is a duty of everyone. The Court ordered to remove Ammonia stock.

### 5.4. Development in law

1. **In *M.C. Mehta v. Union of India*,\(^ {128}\)** the Supreme Court held that any enterprise that is engaged in an inherently dangerous activity is absolutely liable to compensate all

\(^{127}\) AIR 1994 Ker 308.

\(^{128}\) AIR 1987 SC 1086.
those affected by an accident. The key feature of the judgment was the principle of absolute liability. The Court observed that, Under Sections 3 and 5 of the Environment (Protection) Act, 1986, the Central Government is empowered to take all measures and issue all such directions for the removal of sludge, for undertaking remedial measures and also the power to impose the cost of remedial measures on the offending industry and utilise the amount so recovered for carrying out remedial measures. And the Court gave directions to the Central Government to take all such measures. The judgment given in the case can be said to be of historical value as it not only decided several controversial issues relating to chemical and hazardous industry, but also included several suggestions, made therein, by the Supreme Court, enable the Central Government to frame a national policy regarding such industries. After considering the judgment of the Court, the Central Government notified the Hazardous Wastes (Management and Handling) Rules 1989,129 under Sections 6, 8, and 25 of the Environment (Protection) Act of 1986,130 to provide effective regulation for control of generation, collection, treatment, transport, import, storage and disposal of hazardous wastes.


130 Act No.29 of 1986.
131 1999(1) SCC 223.
As a response to Court directions\textsuperscript{133} these rules have been amended as \textit{Hazardous Wastes (Management and Handling) Amendment Rules, 2003},\textsuperscript{134} in the year 2003, to include Environmentally Sound Technologies for recycle of Hazardous Wastes. A new list of 29 categories of hazardous waste completely banned for import and export has been added.

Supreme Court of India directed the MoEF that either itself or through the CPCB or any other agency draft a policy document on hazardous waste generation and its handling within the country. The policy document should emphasise a commitment to the recycling of wastes as a raw material, and propose incentives for encouraging and supporting recycling. The Government notified \textit{The Batteries (Management and Handling) Rules, 2001}.\textsuperscript{135}

3. In \textit{Dr. B. L Wadhera v Union of India},\textsuperscript{136} the Supreme Court ordered for inclusion of alternative and safer technologies in the draft rules and authorised the Central Pollution Control Board to set standards for the same. After an extended procrastination, the Government of India, issued the \textit{Bio-Medical Waste (Management and Handling) Rules, 1998}.\textsuperscript{137}

4. In \textit{Research Foundation for Science, Technology and National Resource Policy v. Union of India and Another},\textsuperscript{138} the Supreme Court of India, in its judgment directed the Central Government to bring the \textit{Hazardous Wastes (Management & Handling) Rules, 1989},\textsuperscript{139} in line with the Basel Convention and Articles 21, 47 and 48A of the Constitution.

\textsuperscript{133} 2003 (9) SCALE 303.
\textsuperscript{134} The Gazette of India, Part-II, Section 3 (ii), 23 May, 2003.
\textsuperscript{135} The Gazette of India, Extraordinary, Part II, Section 3 (ii), 16 May, 2001.
\textsuperscript{136} Supra note, 105.
\textsuperscript{137} The Gazette of India, Extraordinary, Part II, Section 3 (ii), 20th July, 1998.
\textsuperscript{138} (2005) 10 SCC 510.
\textsuperscript{139} The Gazette of India, Extraordinary, Part II, Section 3(ii), 28\textsuperscript{th} July, 1989.
The Court observed that the principle of good governance is an accepted principle of international and domestic laws. Reference has also been made to Article 7 of the Draft approved by the Working Group of the International Law Commission, in 1996, on "Prevention of Transboundary Damage from Hazardous Activities" to include the need for the State to take necessary "legislative, administrative and other actions" to implement the duty of prevention of environmental harm. Environmental concerns have been placed on the same pedestal as human rights concerns, both being traced to Article 21 of the Constitution. Since 2003 the court has repeatedly ordered the Centre and State Governments to comply with the Basel Convention. The Central Government on 24 September 2008, notified the *Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008*.\(^{140}\)

5. In *Research Foundation for Science, Technology and National Resource Policy v. Union of India and Another*, \(^{141}\) on the basis of report of the Court Monitoring Committee the Court directed the MOEF to ban plastic carry bags from 20 to 40 microns as was already banned in the States of Goa and West Bengal.

In order to bring greater clarity and to comply with the directions of the Supreme Court, MoEF has published the *Plastic Waste (Management and Handling) (Amendment) Rules, 2011* on 2\(^{nd}\) July, 2011.\(^{142}\)

6. In *Research Foundation for Science, Technology and National Resource Policy V. Union of India and Another*,\(^ {143}\) the Supreme Court delivered the judgment on July 6, 2012, directed the Central Government to ban import of all hazardous or toxic wastes,

\(^{140}\) The Gazette of India, Extraordinary, Part II, Section 3 (ii), 24\(^{th}\) September, 2008.

\(^{141}\) 2003 (9) SCC 303.

\(^{142}\) The Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii), 4\(^{th}\) February, 2011.

\(^{143}\) 2012 (6) SCALE 253.
identified and declared to be so under the *UN Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*.

The Central Government is also directed to bring the Hazardous Wastes (Management & Handling) Rules, 1989,\textsuperscript{144} in line with the Basel Convention and Articles 21, 47 and 48A of the Constitution.

Union Ministry of Finance will have to issue notification under Section 11 of the Customs Act, 1962 to prohibit the import of hazardous wastes.\textsuperscript{145}

The Central Government framed *the E-Waste (Management) Rules, 2016*,\textsuperscript{146} to provide regulations for the reuse of useful material from Waste Electrical and Electronic Equipment (WEEE), thereby reducing the hazardous wastes destined for disposal and to ensure environmentally sound management.

7. *The Municipal Solid Wastes (Management and Handling) Rules, 2000*,\textsuperscript{147} were framed in pursuance of the judgment in *Dr. B.L.Wadhera v. Union of India & Others*,\textsuperscript{148} and *Almitra H. Patel v. Union of India & Ors.*,\textsuperscript{149}

5.5. Conclusion

In the case of environmental governance, necessary rules and regulations have gradually been put in place for the import, handling, transport, and safe disposal of hazardous waste, but central and state pollution control boards tasked with implementing

\textsuperscript{144} The Gazette of India, Extraordinary, Part II, Section 3(ii), 28th July, 1989.
\textsuperscript{146} The Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii), 23rd March , 2016.
\textsuperscript{147} The Gazette of India,Extraordinary, Part II, Section 3(ii), 25th September, 2000.
\textsuperscript{148} AIR 1996 SC 2969.
\textsuperscript{149} 2000(2) SCC 166.
them remain weak.\textsuperscript{150} The judiciary also has the difficult role of considering not only environmental instruments, but also economic, developmental and political as well as social instruments. The judicial response to almost all environmental litigations has been very positive in India. The Supreme Court of India has referred to the Stockholm Declaration to be the ‘Magna Carta’ of our environment.\textsuperscript{151} Throughout the \textit{M.C. Mehta Vs. Union of India},\textsuperscript{152} (Oleum gas Leak case) the Supreme Court assumed legislative and executive functions to adduce evidence and to provide relief.\textsuperscript{153} The High Court of Kerala held that the environmental imperative is ultimately a matter of public rights and duties.\textsuperscript{154} The Supreme Court directed the Central Government to ban import of all hazardous and toxic wastes, which had been identified and declared to be hazardous or toxic under the Basel Convention. The Central Government was also directed to bring the \textit{Hazardous Wastes (Management & Handling) Rules, 1989}, in line with the Basel Convention and Articles 21, 47 and 48A of the Constitution of India.\textsuperscript{155} And also the Supreme Court directed the authorities to re-export or destroy these waste material consignments lying at various ports at the cost of importers.\textsuperscript{156} Mixing of hospital wastes with general waste which makes whole waste stream hazardous.\textsuperscript{157} Therefore the Court motivated the Government of India to enact a law governing health-care waste management.

\textsuperscript{150} Dinesh C Sharma, “By the Order of the Court: Environmental Cleanup in India”, \textit{Environ Health Perspect.} Vol.113, No. 6, June 2005, p.394.
\textsuperscript{152} 1987 SCR (1) 819.
\textsuperscript{154} \textit{Law Society of India v. Fertilizers and Chemicals}, AIR 1994 Ker 308.
\textsuperscript{155} \textit{Research Foundation for Science, Technology and Natural Resource Policy v. Union of India and others}, 1995 (3) SCC 42.
\textsuperscript{156} “Re-export or destroy hazardous waste at importers' cost:SC”, \textit{the Economic Times}, October 15, 2003.
The judiciary of India through the judgments interpret the provisions of Constitution and extend the scope of right to life to include right to peaceful life, pollution free environment. The Courts issued various directions, orders to Governments and its authorities to check the pollution from hazardous substances and also directed the appropriate Government to change the law to protect rights of the people against the pollution by hazardous substances.