



# Environmental Ethics for Beating Plastic Pollution under Environmental Law of India

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## Abstract

Plastic pollution has emerged as one of the most pressing environmental challenges of the twenty-first century, posing serious threats to ecosystems, human health, and sustainable development. In India, the issue of plastic pollution cannot be addressed solely through regulatory mechanisms; it requires a strong foundation of environmental ethics embedded within environmental law. This research paper examines the role of environmental ethics in combating plastic pollution under the Indian environmental legal framework. The study analyses constitutional provisions such as Articles 21, 48A, and 51A(g), which reflect ethical duties of both the State and citizens towards environmental protection. It further explores judicial principles developed by India. Environmental ethics considers plastic pollution a serious moral concern arising from irresponsible human behaviour and unsustainable consumption patterns. Plastics persist in the environment, degrade into microplastics, and contaminate air, water, soil, and food chains, posing risks to ecosystems and human health. Ethical principles such as ecological balance, intergenerational equity, and respect for biodiversity demand a reduction in plastic use. The concept of polluter responsibility further emphasizes moral accountability of producers and consumers for plastic waste. Beating plastic pollution therefore requires ethical awareness, responsible production, sustainable alternatives, and collective societal participation to ensure long-term environmental protection and human well-being.

**Keywords:** Environmental Ethics; Plastic Pollution; Indian Environmental Law; Sustainable Development; Plastic Waste Management Rules; Extended Producer Responsibility (EPR); Constitutional Provisions; Environmental Justice; Ethical Consumerism; Public Trust Doctrine

## Introduction

Environmental ethics is examined from a normative philosophical perspective that explores the moral relationship between human beings and the natural environment. This approach challenges the traditional anthropocentric view that regards nature merely as a resource for human exploitation and instead recognizes the intrinsic moral value of non-human beings, ecosystems, and future generations. Environmental problems are presented not only as scientific or economic concerns but as ethical issues arising from human values, choices, and responsibilities. The discussion applies established ethical theories to contemporary environmental challenges such as climate change, biodiversity loss, and resource depletion, emphasizing the importance of sustainability and ecological balance. A strong focus is placed on intergenerational justice, highlighting the moral obligation of present generations to protect the environment for the benefit of future generations and to promote responsible stewardship of natural resources. Plastic pollution has emerged as one of the most serious environmental challenges globally, and India is increasingly affected by this crisis. Rapid urbanization, population growth, and the widespread use of plastic products have resulted in significant environmental degradation and public health concerns. In response to the growing burden of plastic waste, the Indian government has introduced several regulatory measures, with particular emphasis on the Extended Producer Responsibility (EPR) framework.

EPR is a policy mechanism that places responsibility on producers for the entire life cycle of plastic products, including the management of post-consumer waste, need to analyse the legal and regulatory dimensions of plastic pollution in India, with a specific focus on the implementation and enforcement of the EPR regime. It examines the existing legal framework governing plastic waste management, the role of key stakeholders, and selected case studies that reflect both the achievements and limitations of EPR enforcement. The study also highlights the role of judicial intervention in shaping India's approach to plastic

waste governance. Plastic pollution in India has reached critical levels, with the country generating nearly 3.5 million tonnes of plastic waste annually, a substantial portion of which remains uncollected or improperly disposed of. The resulting environmental and health impacts raise serious legal concerns. Recognizing these consequences, the Indian judiciary has consistently interpreted Article 21 of the Constitution to include the right to a clean and healthy environment. In India, plastic pollution is addressed not only through statutory regulations but also through ethical principles deeply rooted in constitutional and judicial interpretations of environmental law. India produces nearly four million tonnes of plastic waste every year, yet only a small portion of it is effectively recycled or scientifically managed. To tackle this growing problem, the government introduced the Extended Producer Responsibility (EPR) framework, which places the responsibility of plastic waste collection and recycling on producers and users of plastic.

Under this mechanism, an online EPR portal facilitates compliance by allowing certified recyclers to generate recycling certificates. These certificates can be purchased by companies that are unable to meet their prescribed recycling obligations, thereby promoting accountability and strengthening plastic waste management.

### **Major Issues Arising from Mismanaged Plastic Waste in India**

Mismanaged plastic waste has emerged as a serious threat to India's environment, public health, and economy. One of the most visible impacts is environmental degradation. Plastic waste blocks drains, rivers, and waterways, particularly in urban areas, leading to severe flooding during the monsoon season. A well-known example is the Mumbai floods of 2005, where plastic-choked drainage systems significantly worsened the disaster. Large quantities of plastic also enter marine ecosystems, with an estimated 0.6 million tonnes reaching Indian oceans every year. This contributes to problems such as eutrophication and bioaccumulation, harming marine biodiversity. Studies indicate that nearly 88 percent of examined marine species are affected by plastic pollution, while up to 90 percent of seabirds and over half of sea turtles ingest plastic waste.

Plastic pollution also poses serious public health risks. Microplastics have been detected in drinking water sources and food items, raising concerns about long-term health impacts that are still under scientific investigation. Accumulated plastic waste creates stagnant water zones, which serve as breeding grounds for disease-carrying mosquitoes, increasing the spread of dengue and malaria. In many parts of India, plastic waste is openly burned, releasing toxic substances such as dioxins and furans into the air. Prolonged exposure to these pollutants has been linked to respiratory disorders, cancers, and other health complications, particularly among communities living near dumping or burning sites.

The economic consequences of plastic mismanagement are equally alarming. According to estimates by industry bodies such as FICCI,<sup>2</sup> India may lose material value worth over USD 133 billion by 2030 due to inefficient use and disposal of plastic packaging. A significant portion of this loss—around USD 68 billion—results from uncollected plastic waste, reflecting missed opportunities for recycling and resource recovery. The rapid expansion of e-commerce has further intensified the plastic waste problem. Accelerated by the COVID-19 pandemic, India's e-commerce market is projected to grow from USD 38.5 billion in 2017 to nearly USD 200 billion by 2026. This growth has led to increased use of plastic packaging materials such as bubble wrap, air pillows, and polybags. Many of these materials are difficult to recycle and frequently end up in landfills or as litter in the environment. Despite the existence of regulatory frameworks, enforcement remains a major challenge. The Plastic Waste Management Rules, 2016, amended in 2022, prohibit certain single-use plastics and promote Extended Producer Responsibility. However, implementation varies widely across states, and weak monitoring has led to issues such as fraudulent recycling certificates under the EPR system. These enforcement gaps significantly undermine efforts to control plastic pollution in India.

### **Current Framework Related to Plastic Waste Management in India**

India's plastic waste management framework has evolved through a series of rules and amendments aimed at reducing plastic pollution and promoting sustainable waste practices. The Plastic Waste Management Rules, 2016 laid the foundation by focusing on waste minimization, segregation at source, and prevention of littering. These rules significantly expanded accountability by introducing Extended Producer Responsibility (EPR), making producers, importers, and brand owners responsible for both pre-consumer and post-consumer plastic waste. The rules also increased the thickness of plastic carry bags, extended their applicability to rural areas, and assigned implementation responsibilities to Gram Panchayats. Subsequent amendments strengthened this framework.

The 2018 amendment restricted non-recyclable multilayered plastics and introduced centralized registration through the Central Pollution Control Board (CPCB). The 2021 amendment marked a major shift by banning identified single-use plastic items from July 2022 and further increasing carry bag thickness. The 2022 amendment operationalized EPR through mandatory recycling and reuse targets, environmental compensation, and a circular economy approach. The 2024 amendment refined definitions, compliance procedures, certification, labeling

requirements, and regulation of compostable and biodegradable plastics, while complementary legislation like the Jute Packaging Act promotes alternatives to plastic packaging.

### **Measures for Better Management of Plastic Waste in India**

Improving plastic waste management in India requires a comprehensive and forward-looking approach that combines technology, policy reform, and public participation. A circular economy model can transform plastic waste from a liability into a valuable resource by promoting reduction, reuse, recycling, and recovery. Encouraging manufacturers to design products that are recyclable and incentivizing the use of recycled plastic through tax benefits can help close the loop in plastic consumption. Establishing material recovery facilities in major urban centers would further strengthen the efficient sorting and processing of waste.

Smart technologies can significantly improve waste management in cities. The use of IoT-enabled bins, artificial intelligence-based sorting systems, and mobile applications for citizen reporting can optimize waste collection and recycling processes. Strengthening the Extended Producer Responsibility framework through graded fees and plastic credit trading can ensure greater accountability while also integrating the informal waste sector and improving the working conditions of waste pickers. Public awareness and education are equally important. Nationwide campaigns, inclusion of waste management in educational curricula, and community engagement can foster responsible consumer behaviour. Advanced waste-to-energy technologies, plastic footprint audits, green public procurement policies, and support for waste-management startups can further enhance sustainability. Sector-specific solutions, such as plastic-free farming practices and the use of plastic waste in road construction, demonstrate how innovation can turn environmental challenges into opportunities for green growth.

### **Role of Judiciary in Addressing Plastic Pollution in India.**

The Indian judiciary has made a significant contribution to the development of environmental ethics by actively enforcing laws related to plastic waste through progressive constitutional interpretation. Over the years, courts have broadened the meaning of Article 21 of the Constitution and have clearly recognized that the right to life also includes the right to live in a clean, healthy, and pollution-free environment. As a result, environmental protection has been elevated to the status of a fundamental human right. In *Subhash Kumar v. State of Bihar*,<sup>3</sup> the Supreme Court categorically held that the right to life under Article 21 encompasses the right to clean air and water. The Court observed that any act leading to environmental pollution directly infringes this fundamental right.<sup>1</sup> This decision became a cornerstone of Indian environmental jurisprudence, as it firmly linked environmental protection with human dignity and quality of life.

The concept of sustainable development was further strengthened in *Vellore Citizens' Welfare Forum v. Union of India*.<sup>4</sup> In this case, the Supreme Court emphasized that developmental activities must be balanced with environmental conservation and cannot be pursued at the cost of ecological damage.<sup>2</sup> The Court also incorporated the precautionary principle and the polluter pays principle into Indian law. These principles are highly relevant in the context of plastic pollution, as they place moral as well as legal responsibility on producers and users of plastic to manage the waste generated by them. Another landmark judgment is *M.C. Mehta v. Union of India (Oleum Gas Leak case)*,<sup>5</sup> where the Supreme Court evolved the doctrine of absolute liability for industries involved in hazardous or dangerous activities.<sup>3</sup> Although the case dealt with industrial pollution, the underlying principle applies equally to plastic manufacturing units that cause environmental harm. The judgment clearly emphasized that industries have an ethical duty to prevent environmental damage and to compensate those affected by such harm.

High Courts have also played an active role in addressing issues related to plastic waste. The Bombay High Court, in *Vanashakti. Union of India*, issued directions for the effective implementation of the Plastic Waste Management Rules and highlighted the responsibility of municipal bodies and producers in regulating plastic waste.<sup>4</sup> The Court observed that failure to control plastic pollution amounts to a violation of constitutional obligations under Articles 48A and 51A(g), which impose duties on both the State and citizens to protect the environment.

In addition, the National Green Tribunal (NGT) has passed several important orders aimed at restricting single-use plastics and imposing environmental compensation on defaulters. In *Hindustan Unilever Ltd. v. Union of India*, the NGT stressed the significance of Extended Producer Responsibility (EPR) and clarified that producers cannot avoid their obligations by merely outsourcing waste management activities.<sup>5</sup> The Tribunal emphasized that EPR serves not only as a regulatory framework but also as an ethical tool to ensure accountability for environmental damage.

These judicial decisions clearly reflect that Indian environmental law is deeply grounded in ethical principles such as intergenerational equity, ecological balance, and the public trust doctrine. Through proactive judicial intervention and constitutional interpretation, courts have reinforced the collective moral responsibility of the State, industries, and citizens to address plastic pollution and protect the environment.

## Conclusion

The Indian judiciary has emerged as a key protector of environmental ethics by converting moral responsibilities into binding legal duties. Through its recognition of principles such as sustainable development, polluter pays, and Extended Producer Responsibility, the courts have significantly strengthened the legal framework governing plastic waste management. Nevertheless, effective enforcement, administrative commitment, and active public participation remain essential to ensure that judicial directions bring about meaningful and lasting environmental protection. But it is not merely a scientific or technical issue but a moral and social responsibility of individuals and society as a whole. However, the lack of effective enforcement mechanisms and inadequate infrastructure for management has hindered the proper disposal and recycling of plastic waste. Indian courts have played a vital role in shaping plastic waste management policies, issuing directions and judgments to curb plastic pollution. Notably, the Supreme Court and High Courts have been active in interpreting the laws related to plastic pollution and enforcing stronger regulatory measures.

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<sup>2</sup> Federation of Indian Chambers of Commerce & Industry.

<sup>3</sup> *Subhash Kumar v. State of Bihar*, (1991) 1 SCC 598.

<sup>4</sup> *Vellore Citizens' Welfare Forum v. Union of India*, (1996) 5 SCC 647

<sup>5</sup> *M.C. Mehta v. Union of India*, (1987) 1 SCC 395.

## Author Contributions

SR conceived the concept, wrote and approved the manuscript.

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