ADAPTIVE JUSTICE: ANALYSING JUDICIAL CREATIVITY IN ADDRESSING TO ENVIRONMENTAL OFFENSES

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ABSTRACT

It gives an outline of the study of judicial creativity in evolving environmental crime. It investigates the dynamic interplay between legal frameworks and environmental difficulties, highlighting the courts' unique techniques to dealing with complicated environmental issues. The research investigates the significance of judicial rulings for environmental policy, legislative enforcement, and the progress of environmental justice. The study explains the role of courts in pursuing and settling environmental violations. It also explores the complexity and ambiguities in applying legal concepts to environmental violations, highlighting the importance of adaptive responses and collaborative approaches. Finally, the abstract emphasizes the necessity of understanding judicial innovation in designing environmental legislation and governance to provide sustainable and fair environmental protection.

Introduction

All life derives its sustenance and existence from the environment. Nevertheless, it metamorphoses from a provider to a force of destruction in the event of contamination or injury. Human activities are progressively disrupting the natural equilibrium, leading to imminent crises such as acid rain, climate change, pollution, biodiversity depletion, and ecosystem degradation.[1] These crises are poignant illustrations of the repercussions that can result from unchecked human intervention motivated by superfluous environmental exploitation.

Nowadays, societies are heavily impacted by environmental catastrophes ranging from acid rain and ozone layer depletion to air and water pollution, climate change, and biodiversity loss, all of which jeopardize rare plant and animal species and threaten natural ecosystems. [2] The implications go beyond environmental degradation, affecting human health through concerns including abortions, skin damage, allergies, birth deformities, migraines, and numerous cancers. These consequences are rising both internationally and nationally, posing serious dangers to economic stability, national security, and future generations' wellbeing. Human activities such as deforestation, poor waste management, CO2 emissions, agricultural waste incineration, and particle pollution worsen these problems.[3] Persistent obstacles in enforcement, regulatory tools, compliance costs, political will, expertise, and corruption all contribute to environmental crimes' persistence. [4]

Air and water pollution, noise pollution, hazardous waste, biodiversity loss, climate change, and ecosystem resilience loss are among the most significant environmental issues in India.[5] India is currently facing the most grievous environmental crisis and is ranked at the bottom of the global environmental index.[6] Nearly fourteen of the twenty most polluted cities in the world are in India, and the country ranks 177th out of 180 in terms of air quality, according to the WHO. This indicates that India's air quality is inferior to that of other nations.

[1] Singer, M. (2021). Ecosystem Crises Interactions: Human Health and the Changing Environment. John Wiley & Sons.
[2] Shrivastava, R. S. (2016). Our environment: challenges and solutions. Diamond Pocket Books Pvt Ltd.
[3] Gates, A. (2023). Polluted Earth: The Science of the Earth's Environment. John Wiley & Sons.
[4] Lynch, M. J., Long, M. A., Stretesky, P. B., & Barrett, K. L. (2017). Green criminology: Crime, justice, and the environment. Univ of California Press.
[5] Raju, K. V., Ravindra, A., Manasi, S., Smitha, K. C., & Srinivas, R. (2018). Urban Environmental Governance in India. *P. o. Springer International Publishing*.
[6] Divan, S., & Rosencranz, A. (2022). *Environmental law and policy in India: cases and materials*. Oxford University Press.

Environmental crimes have far-reaching implications, impacting not just the natural environment but also the wellbeing of human groups. They degrade ecosystems, disturb habitat, deplete natural resources such as forests and wildlife, and contaminate water supplies. This destruction jeopardizes agriculture, food safety, and ecological balance, eventually affecting human livelihoods and quality of life. [7] To prevent such catastrophe, we must improve our understanding of environmental dynamics and rules.

Environmental crimes can substantially impact society and pose significant hazards to a country's economic and security. A series of environmental laws in India handle a wide range of offenses relating to forests, water, air, wildlife, hazardous material, and environmental preservation. However, these actions are frequently viewed as minor misdemeanours rather than serious felonies.[8] Despite criminal provisions in India's environmental laws that might penalize environmental destruction, prosecutions are uncommon due to inconsistencies and inefficiencies in the construction of criminal provisions, insufficient enforcement agencies, and a lack of political will. The National Crime Records Bureau (NCRB) estimates a total of 4,732 environmental violations reported in 2016, with cases registered under a variety of environmental laws. However, these estimates may not accurately depict India's worst-ever environmental disaster, demonstrating the challenges of conceiving environmental harm as an environmental crime, including legal and regulatory complications. Environmentalists have criticized the 2016 NCRB report for inadequately recognizing such crimes and failing to recommend relevant legislative actions. Concerns are also raised about a lack of enforcement power among authorities entrusted with enforcing environmental regulations, with many missing the resources to react to complaints and some even without policing authority. A comparative analysis of environmental legislation reveals that the Forest Act of 1927 and the Wildlife Act of 1972 exhibit a greater degree of efficacy, with adequate legal provisions, judicial authorities, training, advancement opportunities, and incentives for personnel, all contributing to their enforcement effectiveness. [9]

[7] Barclay, E., & Bartel, R. (2015). Defining environmental crime: The perspective of farmers. *Journal of Rural Studies*, *39*, 188-198.
[8] Rawat, S. S.(2022). AN ANALYSIS OF ENVIRONMENT CRIMES IN INDIA AND ITS RELATED LAWS.
[9] Mehta, D. (2017). *The environmental rule of law in India* (Doctoral dissertation, University of Oxford).

In 1984, from their Bhopal facility, the Union Carbide Corporation negligently discharged methyl cyanide and hydrogen cyanide gas into the atmosphere.[10] As a consequence of the incident, the Indian government estimates that more than 3500 individuals were killed and around 20,000 were severely injured. Seven out of eight defendants charged with negligently causing death under Section 304A of the Indian Penal Code, 1860, endangering life and safety under Section 336, causing bodily harm under Section 337, and grievous bodily harm under Section 338 were convicted by the Bhopal CJM Court in 2010.[11] As an additional consequence of the deed, the release of hydrogen cyanide and methyl cyanide gases had a catastrophic effect on the environment. Despite the occurrence transpiring in 1984, the courts were unable to secure guilty pleas from the perpetrators and administer criminal justice to the victims on account of the absence of environmental-related penal provisions.[12] The conviction mentioned above was rendered by the general penal provisions (I.P.C). Vikash Bansal, in his capacity as a partner in the partnership firm, received a two-year prison sentence from the Delhi Tis Hazari Court (CBI Spl Court) for the discharge of polluting substances into a watercourse, a violation punishable under Section-24 and r/w Section-43 of the Water Act-1974.

Moreover, the court determined in this instance that the victims encompass not only individuals but also the broader society. The judgments in the two cases above demonstrate that there are complexities and uncertainties when it comes to applying the active and deterrent approach to environmental offenses. Depletion of natural resources is the result of the risks posed to them by the criminal network's illicit mining, fishing, and forestry operations, among others.

1.1 Significance of Analysing Judicial Creativity

Judicial creativity analysis is of great importance as it illuminates the inventive methods courts employ when construing and implementing preexisting legislation in diverse circumstances, such as environmental offenses.[13] The evolution of jurisprudence in this domain and the

[10] Eckerman, I., & Børsen, T. (2021). Corporate and governmental responsibilities for preventing chemical disasters: Lessons from Bhopal. In *Ethics of Chemistry: From Poison Gas to Climate Engineering* (pp. 113-140).
[11] Mac Sheoin, T., & Pearce, F. (2014). Introduction: Bhopal and after. *Social Justice*, *41*(1/2 (135-136), 1-27.
[12] Sharma, S. (2014). Indian media and the struggle for justice in Bhopal. *Social Justice*, *41*(1/2 (135-136), 146-168.
[13] Scotford, E. (2021). Legislation and the stress of environmental problems. *Current Legal Problems*, *74*(1), 299-327.

flexibility of legal frameworks in addressing complex environmental issues may be unveiled through this analysis.

An examination of judicial creativity within the realm of environmental crimes can facilitate the identification of deficiencies in current legal frameworks and draw attention to potential areas that require specialized environmental tribunals or legal reforms. This facilitates a more comprehensive examination of the judiciary's impact on environmental policy and legislation, enforcement tactics, and the advancement of environmental justice.[14] Gaining insight into how courts construe and implement legislation about environmental transgressions can offer direction for enhancing legal structures that safeguard the environment and ensure liability for offenders.

Moreover, an examination of judicial ingenuity may aid in the formulation of a comprehensive strategy to address environmental victimization, taking into account the magnitude of harm and damage inflicted, the stakeholders and entities impacted (including but not limited to indigenous peoples, local communities, and nature), the ecosystems and biodiversity, and the difficulties victims encounter in obtaining legal recourse.

In essence, the assessment of judicial ingenuity is vital to gauge the capacity of legal systems to address environmental issues, facilitate the efficient implementation of environmental legislation, and further the safeguarding and preservation of the environment for future generations.

1.2 Historical Evolution Of Environmental Laws In India

The subsequent content, organized according to time, will provide a comprehensive outline of the legislation about environmental issues in India:

1.2.1 Ancient India

The progression of environmental legislation in India spans distinct phases, with ancient Hindu scriptures laying a foundation of reverence and responsibility towards nature. The Vedic writings praised the benefits of a healthy interaction with the environment, highlighting its importance in maintaining life and wealth. Deforestation and animal abuse were rigorously

[14] Jeffrey, A. (2019). *The edge of law: Legal geographies of a war crimes court*. Cambridge University Press.

prohibited, with heavy fines imposed for environmental violations. This comprehensive commitment to environmental preservation was firmly embedded in Hindu culture, as seen by ancient civilizations like as Mohenjo-Daro and Harappa, which lived within their natural boundaries. [15]Ancient Hindu scriptures' directions emphasized the significance of conservation, advocating for actions such as reforestation and wildlife protection. Kautilya's Arthashastra further elaborated on environmental laws, imposing penalties for littering and pollution. King Asoka's edicts extended protection to various animal species, reflecting a commitment to environmental stewardship. Central to Hindu philosophy is the belief in nature's role as a provider of sustenance, to be respected and utilized with reverence and necessity. This ancient ethos aligns with the modern concept of sustainable development, emphasizing the imperative of preserving nature as a sacred trust for future generations.

1.2.2 Medieval India

The crucial authority bestowed upon them by the Mughal overlords was the duty to halt the spread of pollution. Instigated by the advent of Islamic rule under the Mughals, Islam endeavored to establish a state of balance and harmony between humanity and the natural world.[16] They bestowed prominence on infrastructure features such as opulent architectural heritage, expansive parks, orchards, and gardens encircling their locations, as well as provincial and central administrative centers and civic landmarks. During the summer, temporary headquarters, holiday resorts, and retreat areas are established along the borders of rivers and valleys. Regulations about regulated hunting gained significant attention. Humans adapted their lifestyles to prevent the disruption of the ecosystem. Forest conservation was significantly impacted by the absence of land regulation.

1.2.3 Environmental Protection in the British Regime

During three centuries of British colonial authority in India, natural resources were slowly depleted for commercial benefit, with little regard for preservation. This exploitation was purely motivated by economic concerns, resulting in what has been described as a "brutal assault" on India's forests. The growth of the country's railway network, the growing demand for teak and sandalwood for export, and the necessity for lumber for residential and naval

[15] Framarin, C. G. (2012). Hinduism and environmental ethics: an analysis and defense of a basic assumption. *Asian Philosophy*, *22*(1), 75-91.
[16] Beg, M. J., & Khan, M. S. (2022). *Environmental Jurisprudence in India*. Book Rivers.

reasons all contributed to this exploitation. [17] Although forest management methods were used as early as 1806 with the formation of a commission to supervise teak availability, these attempts were ineffective, since the designated conservator contributed to forest pillage rather than conservation.

In the nineteenth century, an organized forest management system was established, evidenced by the appointment of an Inspector General of Forests in 1864. The Forest Act of 1865, passed by the British government, sought to exert control over woods, noting its influence on temperature, precipitation, and irrigation sources. This Act formed the Forest Department (F.D.) to manage timber and produce money, thereby integrating indigenous forest management practices into a single entity. The Indian Forest Act of 1865 established British sovereignty over Indian woods, which was later enlarged by the Forest Act of 1878, which granted power over all wastelands, including forests, and defined categories such as protected, village, and reserved forests.

The British government's Forest Policy, adopted in 1894, highlighted the need of forest maintenance for revenue, landslide protection, and economic exploitation of rich wood species such as Teak, Devadharu, and Sal. Minor woods were established to provide local fuelwood and timber needs, while agricultural and pastoral lands were subject to use restrictions. These measures, while motivated by colonial economic objectives, established the foundation for contemporary forest management in India, albeit at the price of indigenous rights and environmental sustainability.

The British government enacted the subsequent environmental legislation:

- The Shore Nuisance (Bombay and Kolkata) Act, 1853
- The Orient Gas Company Act, 1857
- The Indian Fisheries Act, 1897
- The Indian Ports Act, 1901

[17] MISHRA, A., & TRIPATHI, P. ENVIRONMENTAL JUSTICE: A NEW CHALLENGE TO THE DEVELOPING INDIA.

- The Bengal Smoke Nuisance Act, 1905
- The Explosives Act, 1908
- The Indian Ports Act, 1908
- The Bombay Smoke Nuisance Act, 1912
- The Indian Steam Vessels Act, 1917
- The Indian Forest Act, 1927

1.3 Major Environmental Crimes

1.3.1 Cybercrime in Environmental Monitoring

The issue of cybercrime in environmental monitoring poses a significant obstacle that may severely compromise the precision and dependability of environmental data. Unauthorized access, data manipulation, or interference with vital environmental systems, such as those employed in water treatment facilities, are all part of this illegal activity. Cybercriminals may utilize these intrusions to thwart pollution control initiatives, falsify environmental data, and even unleash environmental catastrophes. [18] Cybercrime and environmental crime both entail intricate criminal networks, which poses significant difficulties for law enforcement. Cybercrime is expected to have an annual economic impact of $445 billion, whereas environmental crimes have an estimated worth of $91-258 billion. These actions highlight the necessity for strong cybersecurity protocols in environmental surveillance by posing a threat to economies, the environment, and global security. Understanding cyberthreats is crucial for safeguarding environmental monitoring systems, it is essential to understand cyber threats.

1.3.2 E-waste Smuggling

The unlawful transport and disposal of electronic waste over international boundaries, frequently in defiance of environmental and health regulations, is known as "e-waste smuggling." Because lead, mercury, and cadmium are among the dangerous compounds found

[18] Miró-Llinares, F., & Moneva, A. (2020). Environmental criminology and cybercrime: Shifting focus from the wine to the bottles. In The Palgrave handbook of international cybercrime and cyberdeviance (pp. 491-511). Cham: Springer International Publishing.

in electrical devices, this illegal practice poses serious threats to human health as well as the environment. A wide range of parties are involved in the smuggling of electronic waste, including recyclers, authorized and unlicensed recycling firms, and organized crime syndicates. Smugglers of electronic garbage frequently trick recipients into believing that packages are personal items or used goods in order to avoid being discovered. This allows electronic waste to be covertly transported to nations with lenient rules. The garbage is processed at unauthorized recycling facilities with insufficient safety precautions in these destination countries. The intricacy of tracing financial transactions is compounded by the fact that cash transfers are common and financial transactions are opaque. The repercussions of smuggling e-waste are severe; uncontrolled recycling in underdeveloped nations sometimes discharges harmful materials into the air, groundwater, and soil, endangering the health of local populations and employees. [19] The incorrect disposal or burning of electronic waste is a common result of many countries' poor recycling infrastructure, which exacerbates environmental damage. The smuggling of e-waste must be stopped by better international cooperation and legal measures. To solve current gaps, the Basel Convention, which governs the cross-border transportation of hazardous waste, including electronic trash, needs to be reinforced and its enforcement tightened. Enhancing the transparency of e-waste transactions and increasing education and consumer awareness about proper e-waste disposal can also help reduce the amount of electronic refuse entering the black market.

1.3.3 Illegal Wildlife Trade or Trafficking via Online Marketplaces

llicit wildlife commerce, also known as wildlife trafficking, involves any criminal activity related to fauna, fish, wildlife products, or habitats. [20] In addition to trafficking and smuggling goods like ivory, tiger bones, rhino horn, wild-caught parrots, and sturgeon eggs, this illicit activity also involves poaching animals and its products. The participation of both developed and developing nations in this practice has dire consequences for the protection of species. High prices, low danger of enforcement, growing demand, and the drive for profit have drawn a wide range of participants, including established criminal networks and armed groups. The trafficking of rhino horn and ivory is the main driver of the estimated $5–$23 billion annual value of the worldwide wildlife trade. With the introduction of contemporary technologies such

[19] Ogunseitan, O. A. (2023). The environmental justice agenda for E-waste management. Environment: Science and Policy for Sustainable Development, 65(2), 15-25.
[20] Ibanga, D. A. (2017). Patterns, trends, and issues of illicit wildlife hunting and trade: Analysis based on African environmental ethics.

as online shopping, criminal networks have become more widespread worldwide, making wildlife trafficking a major global issue. Online markets make it easier for criminal activity to occur by enabling consumers to order wildlife goods and have them delivered, which makes the exploitation of endangered animals easier.

Combating online wildlife trafficking necessitates a coordinated worldwide response. Conservation groups and industrial companies are working together to employ digital technology to reduce environmental damage and safeguard the survival of endangered species. It is feasible to increase efforts to prevent wildlife trafficking through internet marketplaces and maintain biodiversity on Earth by raising awareness, enforcing legislation, and encouraging collaboration.

1.3.4 Illegal Fishing Using Advanced Technologies

Illicit fishing practices have advanced with the use of cutting-edge technology, providing considerable obstacles to worldwide efforts to eradicate this illicit environmental breach. Law enforcement can uncover suspicious activity by following fishing vessels using key technology such as the Vessel Monitoring System (VMS) and the Automatic Identification System (AIS). However, some fishers get around these measures by unplugging transponders or using bogus aliases. To solve this, researchers are looking at remote electronic monitoring (REM) systems, environmental DNA (eDNA) analysis, and AI-powered solutions. For example, CSIRO and Microsoft created MARLIN, an AI-powered system that detects illicit fishing using underwater listening devices and high-resolution cameras. While promising, these technologies confront hurdles like as data security issues, computational mistakes, and significant disparities in acceptance among small-scale fisherman. Advanced technologies like as AIS, VMS, REM, eDNA analysis, and AI play an important role in combating illegal fishing, but overcoming technological, legislative, and socioeconomic constraints is critical for successful global application.

1.3.5 Illegal Mining

Illegal mining, classified as an environmental offense, encompasses mining operations conducted without authorization from the state, in violation of land rights, or without

appropriate licenses; exploration and transportation also fail to obtain permits.[21] The exploitation of natural resources in solid, liquid, or gaseous states results in several hazardous consequences. Numerous environmental issues have resulted from the mining process of extracting materials and geological resources from the earth, including but not limited to copper, nickel, gold, silver, iron, uranium, coal, diamonds, limestones, oil, and minerals.

These mining operations are contributing to substantial environmental hazards, health emergencies, and ecological risks. The inflated value of the currency has resulted from illicit mining activities. Diverse entities, including large corporations, organized criminal organizations, sole proprietors, and some extended public enterprises, have engaged in this activity. The circumstances have profound ramifications on the environment, security, and economy of nations, alongside the international community. Illegal mining is characterized by infringements upon designated legislation and regulatory frameworks that prohibit or oversee mining activities to safeguard the environment, natural resources, and human well-being for current and future generations. The annual value of illicit mineral exploitation and international trade, as estimated by UNEP and INTERPOL, ranges from 12 to 48 billion USD. It is regarded as constituting one-fourth of the worldwide industrial sector.[22]

1.3.6 Dumping of Hazardous Waste

The term "waste" encompasses an assortment of undesirable or unusable components found in materials, such as biomedical wastes, hazardous refuse, municipal solid waste, wastewater, radioactive waste, and electronic waste, among others.[23] Human activities, including the extraction and processing of raw materials, industrial processes, domestic and commercial procedures, and clinical procedures, generate this type of waste. As a result, waste becomes a significant concern for national and international governments in addition to local authorities.

Illicit disposal, discarding, or trafficking of hazardous waste negatively impacts human health, the environment, and sustainable resource management. Notwithstanding the implementation of international waste regulations, a substantial volume of perilous refuse is illicitly transported or exported to developing or underdeveloped nations and the high seas. In 2011, EUROPOL

[21] Arsyiprameswari, N., Utama, M. A. R., Wibowo, S. A., & Yuniar, V. S. (2021). Environmental Law and Mining Law in the Framework of State Administration Law. *Unnes Law Journal*, *7*(2), 347-370.
[22] ASSESSMENT, A. R. R. STOLEN APES.
[23] ABUBAKAR, A. (2021). *ENVIRONMENTAL AND HEALTH IMPLICATIONS OF MANAGEMENT OF MEDICAL WASTES IN SELECTED HOSPITALS IN NIGER STATE, NIGERIA* (Doctoral dissertation).

issued a warning to the citizens of Europe regarding the escalating significance of illicit waste disposal and trafficking as organized crime's most rapidly expanding enterprises. The adverse effects of its low risk and high-profit margin on the ecosystem, human health, and environment have worsened. This constitutes a substantial source of income for criminal network organizations and intermediaries. As international waste trafficking and commerce have increased in scope, the issue has become more complex and pervasive on a global scale. The establishment of the Basel Convention was a joint effort between the United Nations and other international governments to address this widespread concern on a global scale.

1.3.7 Illegal Trade in Ozone-Depleting Substances

Environmental degradation, human health risks, and socioeconomic impoverishment are all adversely affected by ozone layer depletion or injury. Ozone has been vulnerable to depletion as a result of ODS (Ozone Depletion Substances), given that it serves as a shield against the deleterious effects of ultraviolet radiation. The ODS, which includes CFCs, HCFCs, HBFCs, halos, methyl bromide, carbon tetrachloride, and methyl chloroform, reacts with the stratospheric layer. Human health is negatively impacted by ozone layer depletion (immune deficiency, eye injury, skin cancer, etc.). terrestrial ecosystem (reduces organism productivity and poses a threat to food sources) and marine ecosystem (affects the forest ecosystem).[24]

1.4 Environmental Laws In India

1.4.1 The Water (Prevention and Control of Pollution)Act, 1974

The legislative instrument known as the Water (Prevention and Control of Pollution) Act, 1974, was enacted by the Indian parliament to protect water bodies from pollution. These bodies of water comprise reservoirs, rivers, lakes, wells, pools, and industrial discharges. The decision is motivated from the Stockholm Conference of 1972, at which India played a key role. The Act specifies laws for the composition of Pollution Control Boards at both the state and national levels, as well as particular authorities and duties in the areas of water restoration, pollution prevention, control and mitigation. It gives commissioners the authority to set pollution levels and includes procedures for punishing offenders. The Water Cess Act of 1977 requires both industrial and residential water customers to pay a cess, and it includes provisions for

[24] Liu, N., Somboon, V., & Middleton, C. (2016). Illegal trade in ozone depleting substances. In *Handbook of transnational environmental crime* (pp. 212-234). Edward Elgar Publishing.

repayment of expenditures incurred in treating polluted waterways. Additionally, the government has the authority to collect fees on water usage by local governments and industrial operators. [25] The act also includes water quality oversight under the Water (Prevention and Control of Pollution) Rules-1975, which outline the duties, responsibilities, and protocols for Pollution Control Boards and other regulatory organizations created by the Water Act of 1974.

1.4.2 The Air (Prevention and Control Of Pollution) Act, 1981

The regulations for the preservation of air quality and the prevention and control of air pollution are outlined in the Air (Prevention and Control of Pollution) Act of 1981. In addition to authorizing the formation of State and Central Pollution Control Boards to prevent and manage air pollution, the Air Act of 1981 confers specific authorities and responsibilities on these boards.

This Act confers upon the government the authority to issue directives to the commissions regarding air pollution prevention and control. All industrial operators operating within an air pollution control area are required by this Act to obtain authorization from the appropriate state bodies. Furthermore, this Act confers authority upon a magistrate to compel air polluters to cease the release of emissions, as well as committees the authority to guide to industries. The regulatory framework that governs compliance with administrative and legal processes is outlined in the Air (Prevention and Control of Pollution) Rules, 1982, which have been revised by succeeding administrations. The Air Rules of 1982 mandate that the Pollution Control Boards generate annual reports, budgets, estimates, financial statements, and expenditure records. Furthermore, administrators are granted authority over the functions and procedures of committees, as stipulated in the Air Act of 1981.[26]

1.4.3 The Environment (Protection)Act, 1986

This Act, which consists of twenty-six sections and four chapters, grants the Central Government broad authority to prevent and control environmental degradation through the enactment of appropriate regulations. Penalties are also incorporated into the EPA 1986 for

[25]https://www.indiacode.nic.in/bitstream/123456789/15429/1/the_water_%28prevention_and_control_of_pollution%29_act%2C_1974.pdf
[26] https://www.indiacode.nic.in/bitstream/123456789/9462/1/air_act-1981.pdf

any violation of its provisions.[27] Numerous rules and regulations were established by the Central Government to prevent and control a variety of pollutants, utilizing authority granted by this act. The power to affirm the following notifications and regulations is vested in the Central Government under the EPA 1986:

- The Waste (Management and Handling) Rules, 1989
- The Manufacture, Storage, and Import Hazardous Rule, 1989
- The Coastal Regulation Zone Notification, 1991
- The Bio-Medical Waste (Management and Handling) Rule, 1998
- The Municipal Social Wastes (Management and Handling), 2000
- The Batteries (Management and Handling) Rule, 2001
- The Noise Pollution (Regulation and Control)(Amendment) Rule, 2002
- The Hazardous Waste (Management, Handling and Trans Boundary Movement) Rules, 2008.
- The Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.
- The Plastics Manufacture, Sale and Usage Rules, 1999.
- The Ozone Depleting Substances (Regulating and Control) Rules, 2000.

1.4.4 The Wild Life (Protection) Act, 1972

An important element of Indian legislation, the Wild Life (Protection) Act, 1972 protects and conserves flora, fauna, and wild vegetation. Except Jammu and Kashmir, the legislation was officially published on September 9, 1972, and it applies to the entire nation of India. In

[27] NEWS ANALYSIS (2022) Environment Protection Act,1986, https://www.drishtiias.com/daily-news-analysis/environment-protection-act-1986-1

addition to other pertinent, ancillary, or incidental matters, the Act's provisions for the protection of untamed species of birds, plants, animals, and flora, are intended to safeguard the ecological and environmental security of the nation.

The Act established the National Board for Wild Life, an advisory body entrusted with the responsibility of rendering judgments to the Central Government regarding wildlife conservation and the management of national parks, sanctuaries, and other protected areas.[28]

Furthermore, the Act grants the Central Government and State Governments the power to formulate regulations about the protection of wild fauna, flora, and vegetation within their respective spheres of authority. Aside from the provisions outlined in sections 11 and 12, the Act strictly prohibits the hunting of untamed animals. Permits are issued for specific purposes. Additionally, the Act forbids the act of selecting, uprooting, or otherwise dealing in specified plants, as well as conducting trade in said plants without a valid license. The Act establishes and provides for the protection of protected areas, including sanctuaries. Additionally, the Act restricts access to sanctuaries and regulates the acquisition of sanctuary privileges.

1.4.5 The Indian Forest Act, 1927

The designation of forest areas as reserve forests, village forests, or protected forests by the government and the climate settlement officer is regulated by the Indian Forest Act 1927 (Forest Act 1927). This Act prohibits a variety of activities in the forest regions and wetlands previously mentioned. Furthermore, it confers upon the government the power to institute policies and guidelines pertaining to the topics delineated in said statute. The Indian parliament enacted the Forest (Conservation) Act of 1980 with the objective of safeguarding the vast forest resources and averting their exploitation for the purpose of causing ecological imbalance within the forest region. This Act functions as a supplementary measure to the Indian Forest Act of 1927 concerning matters incidental or auxiliary to forest conservation. One section of this five-part Act establishes an advisory committee and specifies penalties and sanctions for infractions of its provisions.[29]

[28] Sikes, R. S., Gannon, W. L., & Animal Care and Use Committee of the American Society of Mammalogists. (2011). Guidelines of the American Society of Mammalogists for the use of wild mammals in research. *Journal of mammalogy*, *92*(1), 235-253.
[29] Tripathi, P. (2016). Tribes and forest: a critical appraisal of the tribal forest right in India. *Research Journal of Social Science and Management*, *6*(6), 1-8.

1.4.6 The Biological Diversity Act, 2002

The Biological Diversity Act, 2002, was enacted by the Parliament of India. Its primary objectives are to promote the conservation of biological resources, regulate their sustainable utilization, and guarantee the equitable distribution of benefits, knowledge, and traditional wisdom associated with their utilization. The Act was executed by the provisions of the United Nations Convention on Biological Diversity (CBD), to which India is a party.

The most prominent attributes of the Biological Diversity Act are as follows:

- Controlling access to the nation's biological resources
- Maintaining and preserving biological diversity
- Preserving the expertise of local communities in the field of biodiversity
- Protect the benefits shared with the local populace, who are custodians of biological resources and repositories of knowledge.
- Rehabilitation and conservation efforts for endangered species
- State government institutions' involvement in the thorough execution of the Biological Diversity Act

Any violation of this Act is punishable by a fine and not by parole.

In addition, the Act contains provisions for the formation of the National Biodiversity Authority (NBA), which is tasked with implementing the aforementioned provisions. Legally recognized and autonomous, the NBA is based in Chennai.

The Act specifically prohibits the use of Indian biological resources that are typically traded as commodities for any other purpose; this exemption applies solely to the extent that the biological resources are utilized as commodities. Additionally, the act grants exemptions to traditional uses of Indian biological resources and associated knowledge, including those employed by cultivators and breeders (e.g., farmers, livestock caretakers, and beekeepers), as

well as traditional healers (e.g., hakims and vaids).[30]

The Extraordinary Part II – Section 1 of the Gazette of India published the Biological Diversity Act, 2002 on February 5, 2003. It commenced implementation on the same day.

1.5 Landmark Cases

Several landmark cases related to environmental crime in India have played a pivotal role in shaping the legal landscape and emphasizing the importance of environmental protection. Here are some notable cases:

- **Oleum Gas Leak Case (1986):**[31]

  In the aftermath of a gas leak at the Shriram Food and Fertilizer Plant in Delhi, the Supreme Court held the company accountable for its negligence and emphasized the need for industries to follow safety measures to prevent environmental disasters.

- **Vellore Citizens Welfare Forum vs. Union of India (1996):**[32]

  This case dealt with the pollution of the Palar River by tanneries in Vellore. The Supreme Court outlined the 'Polluter Pays' principle, making industries financially responsible for the environmental damage caused.

- **M.C. Mehta vs. Union of India (Taj Trapezium Case - 1997):**[33]

  Focused on air pollution affecting the Taj Mahal in Agra, this case led to the establishment of the Taj Trapezium Zone and stringent measures to control pollution in the area surrounding the monument.

- **M.C. Mehta vs. Kamal Nath:**[34]

  Addressing the issue of illegal mining in the Sariska Tiger Reserve, the Supreme

[30] S. Kannaiyan AN OVERVIEW ON BIOLOGICAL DIVERSITY ACT – 2002*, http://nbaindia.org/uploaded/docs/biological-diversityact-ii.pdf
[31] M.C. Mehta v/ Union of India Air 1987 SC 965
[32] 1996 5 SCR 241
[33] 2 SCC 353 (Before the Supreme Court of India, Writ Petition (Civil) No. 13381 of 1984,
[34] (1997) 1 SCC 388

Court ordered the closure of mining activities and sought to protect the wildlife habitat.

- **Almitra H. Patel vs. Union of India (2000):**[35]

  Known as the 'Garbage Case,' this case dealt with the mismanagement of municipal solid waste. The Supreme Court issued directives for the proper disposal of solid waste and emphasized the need for waste management.

Conclusion

comprehending judicial creativity in the context of evolving environmental crime is crucial for several reasons. Firstly, it highlights the innovative approaches courts adopt in interpreting and applying existing laws to address complex environmental issues. By examining how jurisprudence in this area evolves, we can identify deficiencies in current legal frameworks and highlight areas that may require specialized environmental tribunals or legal reforms, thus comprehensively assessing the judiciary's impact on environmental policy, legislation enforcement, and the advancement of environmental justice. Furthermore, understanding judicial creativity aids in formulating a holistic strategy to tackle environmental victimization by considering factors such as the extent of harm inflicted, the entities affected, including indigenous peoples and local communities, and the challenges victims face in seeking legal redress. Evaluating how courts interpret and implement laws related to environmental transgressions provides valuable insights for enhancing legal structures to protect the environment and hold offenders accountable. Through these analyses, we can work towards creating a robust legal framework that effectively addresses environmental crimes and promotes sustainability.

Based on my keen observations these are some of the recommendations which may serve as a starting point towards a milestone of a sustainable future. To encourage public confidence in the legal system and provide opportunities for public involvement, it is imperative that environmental cases improve public engagement and openness. Long-term environmental preservation can be ensured by using restorative justice techniques to successfully address the underlying causes of environmental crimes. But it is unacceptable to wait until environmental

[35] 2000(2) SCC 166; AIR 2000 SC 1726; 2000 (3) SCC 575; 2000 (1) SCALE 261

crimes reach their peak before taking action. The problem is made worse by the ineffectiveness of the bodies' investigations and prosecutions. Crucial actions include raising public awareness, working with environmental specialists, and using technology to collect data. For environmental crimes to be punished consistently and appropriately, clear sentencing guidelines are also required.