



Green Crimes and Environmental Accountability: The Need for Stronger Legal Mechanisms

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ARTICLE DETAILS	ABSTRACT
Research Paper	
Keywords :	
Green Crimes, Environmental Accountability, Environmental Justice, Sustainable Development, Legal Enforcement	<i>The rapid pace of industrialization and urbanization in the twenty-first century has intensified environmental degradation and given rise to what are now recognized as “green crimes.” These offenses, encompassing pollution, illegal mining, deforestation, wildlife trafficking, and waste dumping, undermine ecological sustainability and public health. Despite the existence of numerous environmental laws, weak enforcement mechanisms, institutional inertia, and inadequate penalties continue to embolden violators. This paper examines the concept of green crimes, evaluates the current legal framework in India, and analyzes the global developments in environmental accountability. Through a critical study of statutes, judicial precedents, and international obligations, the paper identifies key gaps in enforcement and advocates for a robust, multidisciplinary, and technology-driven environmental justice system. It argues that environmental accountability must extend beyond punitive measures to encompass preventive, participatory, and restorative approaches. A legally empowered and socially conscious framework is essential to address green crimes effectively and ensure intergenerational equity.</i>

1. Introduction

The concept of environmental protection has evolved from being a moral concern to a fundamental legal and constitutional mandate. Over the past few decades, environmental degradation has reached alarming levels due to unchecked industrialization, population growth, and resource exploitation. The manifestation of these activities has resulted in a new category of offenses, often referred to as “green crimes.” These



crimes represent deliberate or negligent acts that cause ecological harm, violate environmental laws, and threaten biodiversity and public welfare.

Green crimes are inherently transnational in nature. Illegal wildlife trade, hazardous waste dumping, and air and water pollution often transcend national boundaries, making environmental protection a matter of global governance. According to the **United Nations Environment Programme (UNEP)**, environmental crimes are among the **fourth largest criminal enterprises in the world**, generating annual revenues exceeding USD 250 billion. Despite this, enforcement mechanisms remain weak, and environmental offenses are rarely prioritized within the criminal justice system.

In India, environmental protection has deep constitutional roots. **Article 48A** of the Directive Principles of State Policy obligates the State to protect and improve the environment, while **Article 51A(g)** imposes a fundamental duty on citizens to safeguard natural resources. The judiciary has expanded the scope of **Article 21 (Right to Life)** to include the right to a clean and healthy environment, as affirmed in **Subhash Kumar v. State of Bihar (1991)** and **M.C. Mehta v. Union of India (1987)**. Yet, despite a strong constitutional and legislative foundation, enforcement gaps continue to undermine environmental justice.

The objective of this research paper is threefold. First, it seeks to conceptualize the notion of green crimes and their legal recognition in India. Second, it evaluates the effectiveness of existing legal frameworks and institutions in ensuring accountability. Third, it examines global best practices and proposes reforms to strengthen India's environmental governance system.

The discussion is structured around key dimensions: the evolution of environmental legislation, the role of judiciary and enforcement agencies, challenges in legal implementation, comparative international frameworks, and recommendations for reform. By bridging doctrinal analysis with policy perspectives, the paper seeks to contribute to the growing discourse on environmental accountability and sustainable governance.

2. Conceptualizing Green Crimes

2.1 Definition and Scope

The term “green crime” encompasses illegal acts that directly harm the environment. These crimes include activities such as illegal logging, poaching, wildlife trafficking, pollution, deforestation, and unauthorized industrial emissions. Scholars have expanded this concept to include “eco-crime,” emphasizing not only statutory violations but also morally wrongful acts causing ecological harm.



According to the **Interpol–UNEP Environmental Crime Programme**, green crimes involve five major categories: (a) illegal trade in wildlife; (b) illegal logging and timber trade; (c) illegal fishing; (d) illegal waste dumping and pollution; and (e) illegal mining and resource extraction. Each of these categories has profound ecological and economic implications.

In India, the term does not find explicit mention in statutory law, but a broad range of activities classified under environmental statutes effectively fall within this definition. These include violations of the **Environment (Protection) Act, 1986**, **Air (Prevention and Control of Pollution) Act, 1981**, **Water (Prevention and Control of Pollution) Act, 1974**, and the **Wildlife (Protection) Act, 1972**.

2.2 Characteristics of Green Crimes

Green crimes exhibit distinctive characteristics that differentiate them from traditional crimes. First, they often have **diffused victims**—the harm is collective, affecting ecosystems and communities rather than identifiable individuals. Second, the **perpetrators are frequently corporate or state entities**, rather than private individuals, complicating accountability. Third, the harm is **long-term and cumulative**, with consequences that may not be immediately visible. Finally, these crimes often involve **complex scientific evidence**, making investigation and prosecution challenging.

The invisibility of victims and the technical complexity of evidence contribute to the low conviction rates in environmental crime cases. Additionally, the perception of environmental offenses as “regulatory” rather than “criminal” has historically resulted in lenient treatment by courts and enforcement agencies.

2.3 Green Criminology: A Theoretical Perspective

Green criminology, an emerging field within critical criminology, studies environmental harms from a socio-legal perspective. It challenges traditional legal frameworks that prioritize human-centered approaches, arguing for **ecocentric justice** that recognizes the intrinsic rights of nature. Green criminologists advocate for the criminalization of acts that cause significant environmental damage, even when such acts are not explicitly illegal under existing laws.

This theoretical approach resonates with India’s **jurisprudence of environmental rights**, where courts have adopted a broad interpretation of constitutional provisions to protect nature. The recognition of “**environmental personhood**” by Indian courts in cases such as **Mohd. Salim v. State of Uttarakhand (2017)**, declaring rivers Ganga and Yamuna as legal entities, reflects the influence of ecocentric thought in Indian jurisprudence.



2.4 Types of Green Crimes in India

Green crimes in India manifest in multiple forms. Illegal mining, particularly in states like Jharkhand, Goa, and Karnataka, has caused extensive deforestation and water contamination. The **illegal sand mining industry**, estimated at billions of rupees annually, destroys river ecosystems and leads to severe erosion. Wildlife poaching and trafficking, particularly of tigers, elephants, and pangolins, persist despite stringent laws.

Industrial pollution remains a critical challenge. The **Bhopal Gas Tragedy (1984)** stands as the most devastating example of corporate environmental crime in India, where thousands lost their lives due to the leakage of toxic gas from the Union Carbide plant. Decades later, victims continue to seek full compensation and remediation, illustrating the enduring consequences of inadequate accountability mechanisms.

The **Ganga and Yamuna pollution cases**, addressed through multiple *M.C. Mehta* judgments, also reveal the systemic failures in implementing environmental norms. Despite decades of judicial intervention, the rivers remain heavily polluted, reflecting the limitations of judicial directives in the absence of robust enforcement.

3. Evolution of Environmental Law and Accountability Mechanisms in India

3.1 Constitutional Foundations

The constitutional framework for environmental protection in India evolved through judicial interpretation and legislative action. The **42nd Constitutional Amendment (1976)** incorporated **Articles 48A and 51A(g)**, marking a turning point in environmental jurisprudence. These provisions impose reciprocal duties—on the State to protect the environment and on citizens to preserve it.

The judiciary, through **judicial creativity**, integrated environmental protection within the ambit of **Article 21**, making it enforceable as a fundamental right. Landmark cases such as **Rural Litigation and Entitlement Kendra v. State of Uttar Pradesh (1985)** and **Subhash Kumar v. State of Bihar (1991)** established that environmental degradation directly infringes upon the right to life and health.

3.2 Legislative Framework for Environmental Protection in India

India's environmental legal framework has evolved progressively, responding to ecological crises and global environmental movements. It comprises both general and sector-specific statutes aimed at preventing, controlling, and remedying environmental harm.

The **Environment (Protection) Act, 1986** is the umbrella legislation empowering the Central Government to coordinate and implement national environmental policies. Enacted in the aftermath of the Bhopal Gas Disaster, the Act grants the Union broad authority to issue notifications, establish standards, and enforce compliance across industrial sectors. Under this Act, numerous subordinate regulations—such as the **Environmental Impact Assessment (EIA) Notification, 2006**, and the **Hazardous Waste Management Rules, 2016**—have been introduced to regulate industrial operations.

The **Water (Prevention and Control of Pollution) Act, 1974**, and the **Air (Prevention and Control of Pollution) Act, 1981**, focus on specific environmental media, establishing Central and State Pollution Control Boards (CPCB and SPCBs) as enforcement agencies. However, these Boards often suffer from limited financial and technical resources, leading to weak monitoring and inconsistent enforcement.

The **Wildlife (Protection) Act, 1972**, and the **Forest (Conservation) Act, 1980**, address biodiversity conservation and forest protection. India's ratification of the **Convention on Biological Diversity (CBD, 1992)** led to the enactment of the **Biological Diversity Act, 2002**, promoting sustainable use and equitable benefit-sharing of biological resources.

Despite this robust statutory framework, the implementation remains inadequate. Weak coordination between the Centre and States, corruption, bureaucratic inertia, and the absence of deterrent penalties contribute to the persistence of green crimes.

3.3 Institutional Framework and Enforcement Agencies

The enforcement of environmental laws in India involves multiple institutions operating at central, state, and local levels. The **Ministry of Environment, Forest and Climate Change (MoEFCC)** serves as the apex policymaking body, supported by agencies such as the **Central Pollution Control Board (CPCB)**, **State Pollution Control Boards (SPCBs)**, and specialized authorities under the **National Green Tribunal Act, 2010**.

The **National Green Tribunal (NGT)** represents a significant advancement in India's environmental accountability framework. Established to provide speedy and specialized adjudication, the NGT exercises jurisdiction over civil cases involving substantial environmental questions. Its judgments, such as **Almitra Patel v. Union of India (2015)** on waste management and **Sterlite Industries v. Tamil Nadu Pollution Control Board (2019)** on industrial emissions, reflect the judiciary's growing emphasis on the "polluter pays" and "precautionary" principles.



However, despite its effectiveness, the NGT faces institutional constraints—limited benches, enforcement challenges, and occasional jurisdictional conflicts with High Courts. Strengthening the NGT’s operational capacity is essential to ensuring a coherent and consistent enforcement regime.

3.4 The Judiciary and the Evolution of Environmental Jurisprudence

The Indian judiciary has played a pioneering role in developing environmental jurisprudence through Public Interest Litigation (PIL). From the 1980s onward, the Supreme Court and High Courts have expanded constitutional interpretation to include environmental rights.

In **M.C. Mehta v. Union of India (Oleum Gas Leak Case, 1987)**, the Court formulated the doctrine of **absolute liability**, holding enterprises engaged in hazardous activities strictly liable for environmental damage. This doctrine transcended the English rule of strict liability, reinforcing India’s commitment to protecting the environment.

In **Indian Council for Enviro-Legal Action v. Union of India (1996)**, the Court recognized the **polluter pays principle** as part of national law, ensuring that polluters bear the cost of environmental restoration. Similarly, in **Vellore Citizens Welfare Forum v. Union of India (1996)**, the Court incorporated the **precautionary principle** and **sustainable development** into Indian jurisprudence, aligning domestic law with international environmental norms.

The judiciary has also extended environmental rights to the realm of intergenerational equity. In **State of Himachal Pradesh v. Ganesh Wood Products (1995)**, the Court stressed the obligation to preserve resources for future generations, reflecting the constitutional mandate of sustainability.

Nevertheless, judicial activism has sometimes been criticized for exceeding legislative competence. While courts have filled governance gaps, overreliance on judicial directives without administrative follow-up has limited long-term effectiveness.

4. Global Developments in Environmental Accountability

4.1 International Legal Frameworks

Environmental crimes are increasingly recognized as serious transnational offenses under international law. The **United Nations Environment Programme (UNEP)** and the **United Nations Office on Drugs and Crime (UNODC)** have identified environmental crime as a core area of global criminal justice cooperation.



Key international instruments include the **Stockholm Declaration (1972)**, which introduced the principle of human responsibility towards the environment, and the **Rio Declaration on Environment and Development (1992)**, which established principles of precaution, participation, and sustainable development. The **Paris Agreement (2015)** under the United Nations Framework Convention on Climate Change (UNFCCC) represents a global commitment to reducing greenhouse gas emissions and promoting environmental accountability.

At the regional level, the **European Union (EU)** has adopted the **Environmental Crime Directive (2008/99/EC)**, mandating Member States to criminalize serious environmental offenses. The **EU Green Deal (2020)** further integrates climate goals with legal accountability, emphasizing corporate responsibility and circular economy practices.

The United States, through the **Environmental Protection Agency (EPA)**, enforces stringent standards under statutes like the **Clean Air Act (1970)** and the **Clean Water Act (1972)**. These laws impose both civil and criminal penalties for environmental violations, demonstrating the efficacy of strict liability and robust enforcement.

India's environmental framework, while constitutionally advanced, lacks such comprehensive enforcement mechanisms and inter-agency coordination, making comparative lessons from these jurisdictions vital.

4.2 Global Trends in Green Crime Enforcement

Several countries have established specialized enforcement bodies to address environmental crimes. For example, the **Netherlands Environmental Crime Unit**, the **Italian Carabinieri for Environmental Protection**, and the **Interpol Environmental Security Programme** have significantly improved detection and prosecution rates.

The global community is now moving towards **ecological criminal law**, integrating environmental protection within criminal jurisprudence. The proposal to include “ecocide” as a crime under the **Rome Statute of the International Criminal Court (ICC)** exemplifies this shift, recognizing severe environmental destruction as a crime against humanity.

These international developments underline the need for India to strengthen its criminal justice approach toward green crimes, aligning domestic laws with global norms.

5. Challenges in Addressing Green Crimes in India

5.1 Weak Enforcement and Institutional Overlap

Despite comprehensive laws, enforcement remains India's weakest link. Pollution Control Boards often lack technical capacity and suffer from political interference. Coordination between central and state authorities is fragmented, resulting in inconsistent implementation of environmental standards.

The multiplicity of agencies—MoEFCC, CPCB, NGT, and State Departments—creates jurisdictional confusion, delaying decision-making. Furthermore, environmental clearance processes are often compromised by bureaucratic discretion and industrial lobbying, weakening the integrity of the regulatory system.

5.2 Inadequate Penalties and Deterrence

Most environmental statutes prescribe nominal penalties, insufficient to deter large corporations. For example, under the Environment (Protection) Act, the maximum fine is only ₹1 lakh, which is negligible compared to the profits derived from violations. The absence of criminal liability for corporate executives further dilutes deterrence.

5.3 Lack of Environmental Awareness and Public Participation

Environmental accountability depends on active citizen participation. However, limited public awareness, bureaucratic opacity, and inadequate access to environmental information hinder effective participation. The **Right to Information Act, 2005**, though instrumental in promoting transparency, has not been fully utilized for environmental monitoring.

5.4 Delayed Adjudication and Procedural Complexities

Judicial delays undermine the efficacy of environmental justice. Despite the establishment of the NGT, many cases remain pending for years. Procedural complexities and scientific uncertainties further prolong litigation.

5.5 Corporate Influence and Policy Dilution

Corporate lobbying often influences environmental policymaking. The dilution of the **EIA Notification (2020 draft)**, which proposes post-facto clearances, reflects a regressive trend prioritizing industrial growth over ecological balance.



6. Recommendations for Strengthening Legal Mechanisms

6.1 Criminalization of Serious Environmental Offenses

India must adopt a clear distinction between regulatory and criminal environmental violations. Acts causing significant ecological harm—such as illegal mining, industrial pollution, and hazardous waste dumping—should be criminalized with stringent penalties, including imprisonment and corporate liability.

6.2 Strengthening Institutional Coordination

A **National Environmental Enforcement Authority** should be established to coordinate inter-agency efforts and monitor compliance. This body should integrate the functions of the CPCB, SPCBs, and NGT, ensuring centralized oversight with decentralized implementation.

6.3 Enhancing the Role of the NGT

The National Green Tribunal's jurisdiction should be expanded to include criminal prosecution powers for severe environmental offenses. It should also establish special benches for climate-related litigation and cross-border environmental issues.

6.4 Adoption of Environmental Courts at the State Level

Dedicated **State Environmental Courts** can ensure localized and speedy adjudication. Such courts should integrate legal, scientific, and technical expertise to handle complex evidence and emerging challenges.

6.5 Incorporation of Environmental Education and Public Participation

Promoting environmental literacy through education, community engagement, and awareness campaigns is essential. Legal mechanisms should institutionalize public participation in decision-making processes, including EIAs and policy reviews.

6.6 Integration of Technology and Data-Driven Governance

Use of satellite monitoring, blockchain-based emission tracking, and digital compliance dashboards can revolutionize environmental governance. Technology can enhance transparency, detect violations in real time, and ensure accountability.

6.7 Strengthening Corporate Accountability and ESG Regulations

Environmental, Social, and Governance (ESG) frameworks should be legally mandated for corporations, requiring disclosure of environmental performance. Non-compliance should attract penalties under both company and environmental laws.

6.8 International Cooperation and Capacity Building

India should strengthen cooperation with global institutions such as UNEP, Interpol, and the World Bank to share intelligence, resources, and best practices. Capacity-building initiatives for enforcement agencies must be prioritized.

7. Conclusion

Green crimes represent the most pressing threat to ecological security and human survival in the 21st century. They undermine sustainable development, public health, and intergenerational equity. While India possesses a comprehensive set of environmental laws, the persistent gap between law and enforcement weakens environmental accountability.

Strengthening legal mechanisms requires a holistic approach that combines criminalization, institutional reform, public participation, and technological innovation. Environmental accountability should not be confined to punitive measures but must include preventive, restorative, and participatory dimensions. The recognition of nature's rights, along with stricter corporate and governmental responsibility, will ensure the realization of true ecological justice.

India stands at a crucial crossroads: whether to continue treating environmental protection as a policy aspiration or to transform it into an enforceable constitutional and criminal mandate. By embracing stronger legal mechanisms and a culture of ecological stewardship, India can redefine its development trajectory toward a just, sustainable, and resilient future.

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