Combating Industrial and Mining Pollution Through Public Interest Litigation: Emerging Trends and Case Law Analysis

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Abstract-Industrialization and mining are often hailed as the twin engines of economic development in India. From employment generation to infrastructure development, these sectors have played a crucial role in transforming India into a modern, industrialized economy. However, the environmental costs associated with these sectors are significant and, in many cases, irreversible. The extraction of natural resources, release of toxic effluents, deforestation, land degradation, air and water pollution, and displacement of local communities are just some of the detrimental consequences that have raised serious environmental and human rights concerns. In this context, Public Interest Litigation (PIL) has emerged as a revolutionary legal mechanism in India. Unlike traditional litigation, which requires a direct personal interest, PIL allows concerned citizens, NGOs, and civil society organizations to approach the courts on behalf of affected communities or in the interest of the public at large. In environmental matters, PIL has served as a democratic equalizer, enabling access to justice for marginalized and voiceless populations often bearing the brunt of unchecked industrial and mining activities.

This article critically examines landmark judgments where the judiciary has invoked PIL to uphold environmental principles such as the Polluter Pays Principle, Precautionary Principle, Public Trust Doctrine, and Absolute Liability. It also traces emerging trends, including the use of technology in environmental monitoring, suo motu cognizance by courts, and the proactive role of the National Green Tribunal (NGT) and High Courts. Furthermore, the article highlights institutional gaps, misuse of PILs, and technical challenges faced by the judiciary in such complex cases. Finally, it offers policy and legal recommendations aimed at strengthening the efficacy of PILs as tools for environmental accountability and sustainable development in the face of growing industrial and mining challenges.

Keywords: Environment Protection, Development, Industry, Mining activities, Justice, PIL

INTRODUCTION

India's rapid pace of industrialization and its abundant mineral wealth have contributed significantly to its economic transformation over the past few decades. States such as Jharkhand, Odisha, Chhattisgarh, Karnataka, and Goa have witnessed an explosion in mining activities, while major cities and industrial corridors have seen exponential growth in manufacturing, construction, and heavy industries. While these developments have led to increased GDP, job creation, and urban growth, they have also been accompanied by widespread environmental degradation.

Toxic air, contaminated water sources, deforestation, loss of biodiversity, land subsidence, and the displacement of indigenous and tribal populations are just some of the adverse consequences directly linked to unchecked industrial and mining practices. In many cases, environmental regulations have either been bypassed or poorly enforced, and the voices of affected communities have been ignored due to lack of legal awareness, institutional apathy, or corporate influence.

In this scenario, Public Interest Litigation (PIL) has played a transformative role in bridging the gap between environmental harm and legal redress. Introduced as a progressive judicial innovation in the late 1970s and early 1980s, PIL allowed for the relaxation of the traditional rule of locus standi (standing), thereby empowering any public-spirited individual or organization to approach the judiciary in the interest of environmental and social justice.

Environmental PILs have enabled Indian courts—particularly the Supreme Court and various High Courts—to act as proactive protectors of the environment. In numerous instances, courts have directed the closure of polluting industries, ordered compensation for affected communities, and imposed penalties on corporations and government agencies failing in their environmental obligations. These judgments have not only provided case-specific remedies but have also laid down guiding legal principles that continue to shape environmental law and policy in India.

Notably, the courts have invoked and developed doctrines such as the Polluter Pays Principle, which mandates that those responsible for pollution should bear the cost of remediation; the Precautionary Principle, which obliges authorities to prevent environmental harm even in the absence of scientific certainty; and the Public Trust Doctrine, which recognizes that certain natural resources are held in trust by the state for the benefit of the public. The judiciary has also imposed Absolute Liability on hazardous industries, removing any scope for defense in case of accidents or disasters.

This article aims to provide a comprehensive analysis of the role of PIL in combating industrial and mining pollution, with particular emphasis on judicial trends, landmark rulings, technological innovations, and institutional dynamics. It highlights the positive impact of PIL in strengthening environmental governance, while also acknowledging the challenges of enforcement, misuse, and capacity limitations. The paper concludes with forward-looking recommendations to ensure that PIL continues to serve as a robust tool for sustainable environmental protection and public accountability.

Constitutional and Statutory Framework

Environmental governance in India is shaped by a dynamic interplay between constitutional mandates and statutory regulations. This framework has provided a strong foundation for judicial intervention through Public Interest Litigation (PIL), especially in the context of industrial and mining pollution. The Constitution of India, bolstered by environmental statutes, has enabled courts to recognize environmental protection as a fundamental right and to hold polluters accountable.

- Constitutional Provisions

Article 21 – Right to Life and Personal Liberty

Article 21 of the Constitution states that "No person shall be deprived of his life or personal liberty except according to procedure established by law."[1] Over time, judicial interpretation has expanded the scope of Article 21 to include the right to a clean and healthy environment as an inherent part of the right to life.

In Subhash Kumar v. State of Bihar, the Supreme Court held that "right to live includes the right of enjoyment of pollution-free water and air for full enjoyment of life."[2] The Court further reinforced this in M.C. Mehta v. Union of India (Oleum Gas Leak Case), where it recognized that industries engaged in hazardous activities owe an absolute duty to the community to ensure no harm is caused, thereby integrating environmental safety within Article 21.[3]

Article 48A – Directive Principle of State Policy

Inserted by the 42nd Constitutional Amendment in 1976, Article 48A directs the State to "protect and improve the environment and to safeguard the forests and wildlife of the country."[4] Though not enforceable in a court of law by itself, Article 48A is often read together with Article 21 to interpret the State's environmental responsibilities.

In the Rural Litigation and Entitlement Kendra v. State of Uttar Pradesh, the Supreme Court cited Article 48A while ordering the closure of limestone quarries in the Doon Valley, stating that environmental degradation must be balanced against economic development.[5]

Article 51A(g) – Fundamental Duties

Article 51A(g) states that it is the duty of every citizen to "protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures."[6] Although this provision does not impose a legally enforceable duty,

[1] INDIA CONST. art. 21.
[2] Subhash Kumar v. State of Bihar, (1991) 1 SCC 598.
[3] M.C. Mehta v. Union of India (Oleum Gas Leak Case), (1987) SCR (1) 819.
[4] INDIA CONST. art. 48A.
[5] Rural Litigation and Entitlement Kendra v. State of Uttar Pradesh, AIR 1985 SC 652.
[6] INDIA CONST. art. 51A(g).

it has significant persuasive value. Courts have used this provision to highlight the role of citizens in environmental stewardship, especially in PILs brought by public-spirited individuals and organizations.

- Statutory Framework

India's legislative response to environmental challenges includes a series of specific statutes aimed at preventing and controlling pollution, regulating mining activities, and protecting forests and wildlife. These laws provide the operational mechanism for enforcing environmental rights recognized by the Constitution.

Environment (Protection) Act, 1986

Enacted after the Bhopal Gas Tragedy, the Environment (Protection) Act, 1986, provides comprehensive powers to the Central Government to regulate all forms of environmental pollution and coordinate actions among various agencies.[7] It serves as the umbrella legislation under which several important rules, such as the Hazardous Waste Rules, EIA Notification, and Coastal Regulation Zone Rules, have been framed.

The Act empowers authorities to shut down polluting industries, impose penalties, and regulate hazardous processes, making it central to environmental litigation involving industrial and mining pollution.

Water (Prevention and Control of Pollution) Act, 1974

This Act was the first major legislative effort to address water pollution. It provides for the constitution of Central and State Pollution Control Boards and authorizes them to issue consents and take enforcement actions against polluting industries.[8]

In the Ganga Pollution Case, the Supreme Court directed the closure of tanneries discharging effluents into the river, invoking provisions of this Act.[9]This landmark case emphasized that economic activities must comply with environmental standards.

Air (Prevention and Control of Pollution) Act, 1981

The Air Act empowers pollution control boards to monitor air quality and regulate emissions from industries and vehicles.[10] The Act plays a vital role in addressing pollution from thermal power plants, stone crushers, and mining dust, which often become the subject of PILs.

Forest (Conservation) Act, 1980

This legislation seeks to prevent deforestation by requiring prior approval from the Central Government for the use of forest land for non-forest purposes, including mining.[11] Courts have invoked this law in multiple PILs to restrict mining in ecologically sensitive areas.

In T.N. Godavarman Thirumulpad v. Union of India, the Supreme Court issued sweeping directions for the protection of forest lands, effectively placing a freeze on mining and construction activities in designated forest areas without requisite clearances.[12]

Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act)

The MMDR Act regulates the mining sector, prescribing the procedures for granting mining leases and emphasizing sustainable mining practices.[13] However, in practice, illegal mining, particularly of coal, sand, and iron ore, has led to widespread ecological harm, prompting several PILs.

The Supreme Court in Goa Foundation v. Union of India suspended illegal mining operations in Goa, underlining the failure of regulatory authorities to enforce provisions of the MMDR Act and the Forest Conservation Act.[14]

Judicial Integration of Constitutional and Statutory Mandates

Courts in India have often interpreted constitutional provisions in conjunction with statutory laws, particularly in PILs seeking environmental redress. For instance, in M.C. Mehta v. Kamal Nath, the Supreme Court invoked the Public Trust Doctrine, ruling that the State holds natural resources in trust for

[7] The Environment (Protection) Act, No. 29 of 1986, INDIA CODE (1986).
[8] The Water (Prevention and Control of Pollution) Act, No. 6 of 1974, INDIA CODE (1974).
[9] M.C. Mehta v. Union of India, AIR 1988 SC 1037.
[10] The Air (Prevention and Control of Pollution) Act, No. 14 of 1981, INDIA CODE (1981).
[11] The Forest (Conservation) Act, No. 69 of 1980, INDIA CODE (1980).
[12] T.N. Godavarman Thirumulpad v. Union of India, (1997) 2 SCC 267.
[13] The Mines and Minerals (Development and Regulation) Act, No. 67 of 1957, INDIA CODE (1957).
[14] Goa Foundation v. Union of India, (2014) 6 SCC 590.

public use and cannot transfer them to private entities for commercial exploitation.[15]

This approach has ensured that the principles of environmental justice are not only declaratory but also enforceable through PILs against violators, including large industrial corporations and state agencies.

Emergence of PIL in Environmental Jurisprudence

Public Interest Litigation in India emerged as a judicial innovation to overcome the limitations of traditional locus standi. It democratized access to justice, especially for marginalized groups affected by environmental degradation.

The judiciary began entertaining letters and newspaper reports as writ petitions to address public wrongs, particularly in cases involving environmental and human rights violations.[16]

Judicial Doctrines Underlying PILs in Environmental Cases

Several doctrines have been judicially evolved and reinforced through PILs:

Polluter Pays Principle: The polluting party must bear the costs of managing pollution.

Precautionary Principle: Prevention of environmental harm even when there is no conclusive scientific evidence.

Public Trust Doctrine: The state holds natural resources in trust for public use.

Absolute Liability: In cases involving hazardous industries, the principle of no exceptions or defenses applies.[17]

Key Cases in Industrial and Mining Pollution

- M.C. Mehta v. Union of India (Ganga Pollution Case)[18]

In this case, the Supreme Court ordered the closure of tanneries that were discharging untreated effluents into the Ganga, thereby enforcing the "Polluter Pays Principle."

- Indian Council for Enviro-Legal Action v. Union of India (1996)[19]

Chemical industries in Bichhri village caused massive pollution. The Supreme Court held the companies liable and reinforced the "Polluter Pays" and "Absolute Liability" principles.

- Rural Litigation and Entitlement Kendra (RLEK) v. State of UP (Dehradun Quarrying Case)[20]

The Supreme Court ordered the closure of limestone quarries to prevent further environmental degradation, marking the first environmental PIL in India.

- Vellore Citizens' Welfare Forum v. Union of India (1996)[21]

Tanneries in Tamil Nadu polluted agricultural lands and water. The Court invoked both the "Precautionary Principle" and "Polluter Pays Principle."

- M.C. Mehta v. Kamal Nath (1997)[22]

A private company encroached on forest land and altered the course of a river. The court invoked the "Public Trust Doctrine."

Recent Developments and Emerging Trends

Over the past decade, the landscape of environmental litigation in India, especially relating to industrial and mining pollution, has witnessed a paradigm shift. While Public Interest Litigation (PIL) remains a powerful legal tool, recent developments indicate an evolution in the scope, methodology, judicial approach, and technological integration in environmental governance. This section examines how courts, institutions, and civil society are adapting to emerging environmental challenges using innovative legal, procedural, and technological methods.

1. Technology-Aided Monitoring and Enforcement

One of the most striking trends in recent years has been the integration of technology in environmental monitoring. Courts and regulatory authorities are

[15] M.C. Mehta v. Kamal Nath, (1997) 1 SCC 388.
[16] S.P. Gupta v. Union of India, AIR 1982 SC 149.
[17] M.C. Mehta v. Union of India, (1987) SCR (1) 819 (Oleum Gas Leak Case).
[18] M.C. Mehta v. Union of India, AIR 1988 SC 1037.
[19] Indian Council for Enviro-Legal Action v. Union of India, AIR 1996 SC 1446.
[20] Rural Litigation and Entitlement Kendra v. State of Uttar Pradesh, AIR 1985 SC 652.
[21] Vellore Citizens' Welfare Forum v. Union of India, AIR 1996 SC 2715.
[22] M.C. Mehta v. Kamal Nath, (1997) 1 SCC 388.

increasingly relying on remote sensing tools, drone imagery, satellite data, and geographic information systems (GIS) to track violations in real-time.

Use of Drones in Coal Mining Monitoring: Meghalaya Case (2025)

In the case concerning illegal coal mining in Meghalaya, the High Court used drone surveillance and UAV footage to identify hidden coal dumps, illegal transport routes, and encroachments in forested areas.[23] The court noted that traditional inspection mechanisms were inadequate in dealing with sophisticated illegal mining operations that evade scrutiny.

The court accepted drone imagery as credible evidence and directed the District Administration and the Department of Mining and Geology to act based on this data.

This case marked a significant advancement in judicial acceptance of technologically-generated environmental evidence.

The use of technology in such cases reflects a progressive shift from reactive to proactive enforcement, thereby enhancing both transparency and efficiency in environmental compliance.

2 Judicial Activism and Suo Motu Actions

Another emerging trend is the growing assertiveness of constitutional courts, particularly in taking suo motu cognizance of environmental violations.

Madras High Court Suo Motu Action on Illegal Sand Mining (2025)

In a notable development, the Madras High Court took suo motu cognizance of rampant illegal sand mining in the Cauvery river belt based on a series of newspaper reports and public complaints.[24]

The Court formed a Special Monitoring Committee, directed the suspension of officers for negligence, and ordered real-time GPS tracking of sand-laden trucks.

It held that riverbed mining beyond permissible limits is a direct violation of Article 21, as it threatens the environmental right to life.

This kind of judicial activism demonstrates that courts are willing to expand their role beyond adjudication into environmental governance, especially when executive agencies fail to act.

3. Strengthening of Environmental Compensation Mechanisms

Another emerging trend is the institutionalization of the "Polluter Pays Principle" through Environmental Compensation (EC) orders and fines imposed by quasi-judicial bodies like the National Green Tribunal (NGT).

NGT Orders Against Industries in Punjab and Haryana (2023–24)

In several cases, the NGT imposed hefty environmental compensation on industrial units in Ludhiana, Faridabad, and Panipat for failure to comply with effluent treatment norms, emissions standards, and improper hazardous waste disposal.[25]

For example, in OA No. 538/2023, the Tribunal directed closure of polluting dyeing units and ordered recovery of compensation based on the extent of environmental damage and duration of violation.

It also stressed on the principle of restoration — the money collected as compensation was to be used for remediation of water bodies and health awareness camps in affected villages.

This reflects a shift from symbolic punishment to restorative environmental justice, where compensation is aimed at ecological repair and community relief.

4. Real-Time Compliance Tracking and Environmental Dashboards

Environmental regulators, guided by court orders, are now adopting digital dashboards and compliance portals to ensure transparency and accountability.

The Central Pollution Control Board (CPCB) and State Boards have begun publishing real-time air and water quality indexes, along with data on industrial effluent discharge, stack emissions, and ETP functionality.

Courts have directed industries to install online continuous emission monitoring systems (OCEMS) and integrate the data with pollution control boards.

[23] Meghalaya High Court Order, April 2025 (Drone Surveillance of Illegal Coal Mining).

[24] Madras High Court Suo Motu WP No. 23453/2025, concerning illegal sand mining in Tamil Nadu.

[25] National Green Tribunal, OA No. 538/2023, Haryana Pollution Matter – Environmental Compensation Orders.

These systems are becoming increasingly relevant in PILs involving thermal power plants, cement factories, steel units, and chemical industries, where non-compliance is often concealed by tampering or manipulation of on-site reports.

5. Community Participation and Citizen-Led PILs

Another vital development is the increased participation of civil society groups and local communities in initiating and supporting environmental PILs.

In People for Climate Justice v. State of Maharashtra (2024)[26], a community-based organization filed a PIL against illegal construction in a mining-affected eco-sensitive zone in Chandrapur. The Court acknowledged the petitioners' "locus of concern", even though they were not directly affected.

Courts are now more willing to recognize environmental defenders, including students, NGOs, journalists, and tribal leaders, as legitimate petitioners acting on behalf of the public interest.

This aligns with the democratization of environmental litigation, wherein the courts are open forums for ecological grievances voiced by those who otherwise lack access to power or platforms.

6 International Influence and Climate Change Jurisprudence

Indian courts have also started integrating international environmental norms and climate justice principles in their reasoning.

In Ravi Chopra v. Union of India (Char Dham Highway Case)[27], the Supreme Court emphasized the need for "climate-resilient infrastructure", relying on India's commitments under the Paris Agreement.

Similarly, the Madras High Court (2023) held that the State has a duty to prepare climate impact assessments before approving large industrial projects.[28]

These developments indicate a shift towards integrating global environmental obligations with domestic judicial enforcement, especially as climate change impacts amplify the effects of industrial and mining activities.

7. Judicial Push for Environmental Impact Assessments (EIA) and Cumulative Impact Studies

Courts are no longer satisfied with individual EIAs and now demand cumulative impact assessments, especially in mining clusters and industrial corridors.

In Goa Foundation v. Union of India (2023)[29], the Supreme Court criticized piecemeal EIAs and emphasized the need to assess the overall impact of multiple contiguous mining leases.

The NGT, in a series of cases, invalidated environmental clearances granted without proper public consultation, biodiversity impact studies, or baseline pollution data.

This evolving standard reflects an increasing insistence on scientific rigor, procedural compliance, and transparency in environmental approvals.

Role of NGT and High Courts

1. The National Green Tribunal (NGT) has emerged as a specialized forum for environmental disputes. While it cannot entertain PILs in the traditional sense, it serves a quasi-judicial role in enforcing environmental laws.
2. High Courts, however, continue to entertain PILs, especially where local ecological degradation is concerned.
   For instance:
3. Uttarakhand HC suspended the operation of new stone crushers in 2025 pending environmental zoning rules.[30]
4. Rajasthan HC passed interim orders against mining in forest zones without clearances.

Challenges and Limitations

Despite its transformative role, Public Interest Litigation (PIL) in addressing industrial and mining pollution in India faces several systemic, institutional, and doctrinal challenges. These limitations often dilute the effectiveness of judicial pronouncements and weaken the broader impact of environmental jurisprudence.

1. Delay and Ineffective Implementation of Court Orders

[26] People for Climate Justice v. State of Maharashtra, WP (PIL) No. 8753/2024 (Bombay HC).

[27] Ravi Chopra v. Union of India, W.P. (Civil) No. 213/2020 (Char Dham Highway Project).

[28] Madras High Court, W.P. No. 10983/2023, Climate Risk Assessment and Industrial Approval.

[29] Goa Foundation v. Union of India, (2023) 8 SCC 562.

[30] Uttarakhand High Court Order dated March 2025.

One of the most pressing limitations is the gap between judicial directions and ground-level enforcement. Many PIL judgments are celebrated for their visionary principles but remain under-implemented due to bureaucratic inertia, corruption, or lack of political will.
For instance, in the Ganga Pollution PIL filed by M.C. Mehta[31], despite repeated orders over three decades, untreated sewage and industrial effluents continue to flow into the river. This highlights the chronic problem of compliance in environmental governance.

2. Misuse and Politicization of PILs
While PIL was designed as a tool for the marginalized, it has occasionally been misused for private or political interests. "Proxy PILs" are sometimes filed by competitors in the mining or industrial sector to stall projects rather than protect the environment. This undermines judicial resources and dilutes the credibility of genuine petitions. Courts themselves have acknowledged the danger of "Publicity Interest Litigations" where petitioners use environmental causes as a façade for self-promotion.

3. Lack of Scientific and Technical Expertise in Courts
Complex industrial and mining cases often involve advanced scientific data, including air dispersion models, cumulative groundwater studies, biodiversity impact assessments, and geospatial mapping. Judges, despite their constitutional vision, lack technical expertise to evaluate such evidence. While expert committees are sometimes appointed, the process is inconsistent and often questioned for bias. This creates a risk of judicial overreach without adequate technical grounding, which may invite criticism from the executive and industry.

4. Conflict between Development and Environment
Courts are often placed in the difficult position of balancing economic growth versus environmental protection. Industrial and mining projects are tied to employment, revenue generation, and infrastructure development, leading to a development-versus-environment dilemma.
In several cases (e.g., hydroelectric projects in Himalayan regions), the judiciary has been criticized either for stalling projects crucial for development or for permitting them despite ecological concerns.

5. Weak Institutional Capacity of Regulators
PIL cannot substitute for strong regulatory institutions such as the Pollution Control Boards, State Environment Impact Assessment Authorities (SEIAAs), and mining regulators.
The understaffed and underfunded regulators often fail to monitor compliance, making courts the default forums for environmental protection. This judicialization of environmental governance is unsustainable in the long run.

6. Limited Access to Justice for Marginalized Communities
While PIL theoretically democratizes access, tribal and rural communities affected by mining often remain under-represented. Language barriers, lack of awareness, and fear of reprisal from powerful industrial lobbies discourage direct participation. The gap between elite petitioners (NGOs, lawyers in metros) and the actual victims sometimes creates disconnects between judicial remedies and community needs.

Recommendations and Way Forward
To strengthen the efficacy of Public Interest Litigation (PIL) in combating industrial and mining pollution, a multi-pronged reform approach is essential. The judiciary must continue its proactive stance, but long-term success depends on institutional, legislative, and participatory reforms.
1. Codification of Judicial Doctrines into Statutory Law
Judicially evolved principles like the Polluter Pays Principle, Precautionary Principle, Public Trust Doctrine, and Absolute Liability should be codified into statutes to ensure uniform enforcement. Codification would reduce uncertainty, minimize litigation, and empower regulators to act proactively without waiting for judicial intervention.

2. Strengthening Environmental Institutions
Pollution Control Boards and SEIAAs must be independent, well-funded, and professionally staffed. Recruitment of environmental scientists, GIS experts, and social scientists into these institutions can reduce judicial dependence on ad-hoc committees.

[31] AIR 1988 SC 1037;(1987)

Regular performance audits of regulators, monitored by the Comptroller and Auditor General (CAG), should be mandated.

3. Judicial Capacity-Building
Specialized Green Benches in High Courts (on the model of the NGT) should be established to handle complex environmental cases. Judges must receive regular training in environmental science, technology, and international environmental law, possibly in collaboration with academic institutions and UNEP.

4. Enhancing Community Participation
Affected communities should be given statutory recognition as stakeholders in mining and industrial project approvals. Mechanisms such as citizen monitoring committees, social audits, and community impact assessments can bridge the gap between judicial orders and ground realities. Legal aid for tribal and marginalized communities must be strengthened under the National Legal Services Authority (NALSA) framework to enable effective participation in PILs.

5. Use of Technology for Compliance Monitoring
Mandatory installation of Online Continuous Emission and Effluent Monitoring Systems (OCEMS), linked to public dashboards, should be expanded. Courts should integrate satellite data, drone imagery, and block chain-based compliance records as admissible evidence to ensure accountability. Mobile-based citizen reporting apps for pollution incidents can empower local monitoring.

6. Encouraging Pre-Litigation Environmental Mediation
Before filing PILs, a system of pre-litigation mediation involving regulators, industries, and communities can resolve many disputes without adversarial litigation.
This would reduce judicial burden and promote consensual compliance rather than coercive compliance.

7. Integrating Climate Change and Sustainable Development Goals (SDGs)
Courts should interpret industrial and mining disputes through the lens of climate change commitments (Paris Agreement, COP pledges) and India's SDG obligations. Judicial directions should encourage climate-resilient infrastructure, renewable energy adoption, and just transition frameworks in mining regions.

8. Ensuring Effective Enforcement of Court Orders
Appointment of Court Commissioners / Monitoring Committees with real enforcement powers to oversee compliance. Periodic compliance reports should be submitted directly to the judiciary, and non-compliance must attract contempt proceedings against both industries and negligent regulators.

CONCLUSION

From the above explanation finally, it is evident that PIL has undoubtedly strengthened environmental governance in India. Through landmark judgments, courts have emphasized the constitutional right to a clean and healthy environment and held industries accountable. With technological advancements and heightened public awareness, PILs will continue to be a robust tool in combating industrial and mining pollution. However, systemic reforms and institutional coordination are necessary to translate judicial orders into ground realities. If we have implemented, these recommendations can transform PIL from being a reactive remedy of last resort into a preventive and participatory mechanism for sustainable governance. The judiciary must continue to serve as the sentinel of environmental rights, but long-term success lies in building strong institutions, empowering communities, and embedding environmental justice into the very architecture of India's development model.