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Legislative Gaps and Policy Failures: Addressing Environmental Degradation Through Sustainable Governance in India

Tanuj Kumar Bansal[1]
[1]PhD. Scholar, Department of Political Science, Jyoti, Vidyapeeth Women's University, Jaipur. tanujchoudhary0777@gmail.com

Abstract:
The environment crisis in India is nearing its breaking point, with industrialization, urbanization, logging, pollution, and global warming causing a serious deterioration of natural habitats and a decline in human health and biological diversity. The country is thus experiencing a rise in air and water pollution, depletion of groundwater sources, dwindling forest cover, and loss of wildlife habitats despite one of the most elaborate legal structures in the developing world regulating environmental protection. Such a paradox of the abundance of the laws regulating the environment and the simultaneous drastic ecological degradation of the environment reveals that the very essence of the issue is not the lack of a regulatory framework but the flaws of its implementation, accountability and coherence between different policies. The present paper examines critically the legislative lapses and policy vacuums impeding proper environmental governance in India. It looks at the legal framework that is in place, reasons out the gap between statutory clearance and the reality on the ground, reasons out the failure of the institution that are charged with the responsibility of regulation, and explores how the planning of development schemes have become so unsustainable as to erode all the environmental goals. This paper will argue the idea to go green through examples, case law, and empirical studies that depict a shift towards a sustainable model of governance which will be inclusive of environmental rights, decentralized planning, indigenous knowledge, climate justice, and scientific innovation. The proposed research has helped the researcher arrive at the conclusion that structural legal reforms, managing in the institution, involvement of communities and incorporation of environmental aspects in the mainstream policymakers are the steps that are needed to counter the problem of environmental degradation and provide a more promising future.

Keywords:Environmental Governance, Legislative Gaps, Policy Failure, Sustainable Development, Climate Justice, Public Participation, Forest Cover, Renewable Energy, Environmental Performance Index (EPI), Ecological Degradation, Environmental Impact Assessment (EIA).

INTRODUCTION:

India, home to 1.4 billion individuals, is now contending with environmental degradation that this point is endangering not only the ecological sustainability, but also the economic growth, public health, and democratic governance of the country. The degradation of rivers, the depletion of groundwater, un-breathable air in cities, deforestation, the depletion of diversity, the rising natural disasters, are not separate environmental issues anymore but all are signs of a systemic breakdown in the way the country is coping with natural resources. Although environmental degradation is an international trend, India has a paradoxical situation one could argue, it has one of the most marvellous environmental legal system in the developing world yet it is one of the poorest performers in international environmental indicators. This misalignment prompts further investigation on the policy and legislative guidelines that inform the safeguarding of environment in the nation. Article 48A and 51A(g) of Indian Constitution establish the protection of environment as a fundamental duty and a directive principle. In the last 50 years, India has brought into force an enormous number of legislations under which it hopes to conserve air, water, forests, and wildlife. Nevertheless, these laws tend to work in isolation, cannot be enforced, and are badly implemented because of weak institutions, disjointed policies, and a culture of governance that focuses more on economic benefits at the expense of the environment. A major question that needs to be addressed in this paper is why, in spite of the solid legal background, India is still undergoing such serious environmental issues. The solution is to know the legislative gaps in structure, policy failures, institutional degradation, and socio-political processes, and influences upon environmental governance in the Indian context.

India's Environmental Legal and Policy Framework:

The Indian environmental legal system is a product of colonial histories, post-independence constitutional ideals and reactions to the global environmental movements. The backbone of

environmental regulation is articulated in major legislations which include the Water (Prevention and Control of Pollution) Act of 1974, the Air (Prevention and Control of pollution) Act of 1981, the Environment (Protection) Act of 1986, the Forest (Conservation) Act of 1980 and the Wildlife Protection Act of 1972. The new Environment (Protection) act of 1986 was enacted after the Bhopal gas tragedy, which was aimed at giving a single legal redress on different environmental protection issues and giving the central government the authority to regulate and control industrial and developments activities. Nevertheless, the Act has not been able to produce the intended outcomes since it is ambiguous, has no defined standards and serves itself to excessive centralization of powers with little contribution of local institutions. Likewise, the activities of Pollution Control Boards charged with the responsibility of implementing laws on air and water pollution have also been negatively affected by inadequate finance, ageing technology and diversion of political influence. The National Green Tribunal (NGT) an institution established by the NGT Act, 2010 has come up with landmark judgments but it lacks the powers to enforce its orders and its decisions also encounter bureaucratic hurdles in execution of its decisions. Also the environment policymaking in India is fragmented and there are overlapping responsibilities between ministries and departments that result into counterbalancing and inefficiencies. Although such measures as the National Action Plan on Climate Change (NAPCC) and State Action Plans on Climate Change (SAPCCs) and provide a strategic vision, they are not legislatively supported and lack any binding effects. Consequently, the environmental laws in India, being as numerous as they are, do not work as an effective and unified mechanism of conservation and sustainability. Legislative Gaps and the Crisis of Implementation:

The lack of a unified and standardized ecological code is one of the biggest issues of environmental governance in India. The current legislation lacks a harmonious mechanism of operation and instead, there are multiple roles being replicated with conflicts occurring between the executing agencies. Lack of clarity in the definitions, existence of standards that are already out of date, and an enforcement scheme that is based on administrative discretion and not judicial responsibility are other factors attributable to this fragmented legal regime. The lack of an overarching climate change legislation is also noticeable, even with India increasingly being exposed to the ever-increasing temperatures, changes in the frequency of monsoons, and perennial natural calamities. Although India has signed international agreements such as the Paris Accord and has posted its Intended Nationally Determined Contributions (INDCs), these are not supported by national law, and thus are of no use in providing lasting and legally binding climate action. The other area of serious shortcoming is dismissing penalties and sanctions provided by environmental laws. Majority of offenders are allowed to pay a small amount in fines, which makes pollution and destruction of the environment a cheap and profitable venture. What is more, Environmental Impact Assessment (EIA) procedure that is supposed to safeguard against the detrimental developmental projects has turned to become a mere formality. Plagiarizing of reports, ignore the community consultations and Projects that have a lot of ecological impact are often always cleared. These failures demonstrate that the issue in India is not the issue of law-making but the issue of law enforcement. Environmental laws have been transformed to paper tigers incapable of guarding the countries ecological heritage due to institutional incapacity, lack of political will and corruption.

LITERATURE REVIEW:

The issue of environmental management in India has gained significant attention among academic circles in recent decades amid the aggravation of environmental indicators in the country. Legal analyses based on environmental law have been given by scholars such as Shyam Divan and Armin Rosencranz (2001) to establish the historical changes in forms of statutory mechanisms and their inadequacies. Their project points out to the dotted system of the Indian environmental acts and low efficiency of the enforcement agencies. In the same way, the writings in Leelakrishnan have critically observed the issues in incorporating concerns of the environment in the legal and administrative systems of India.

Questions in regard to the role of environmental governance by judicial activism have been very important. There have been many Public Interest Litigations (PILs) initiated by M.C. Mehta and they also have established significant precedents in liberating Article 21 to incorporate a right to clean and healthy environment. But critics (Lavanya Rajamani and Philippe Cullet) feel that even though judicial intervention has been effective in filling the governance gaps, it cannot substitute the long term policy and legislative changes.

Recent think-tank reports - by the Centre for Science and Environment (CSE), TERI, and NITI Aayog,

among others - have given empirical gall to the claim of environmental ill health, pointing out to emptying groundwater tables, air pollution, poor waste management among other ills. Some of these studies are quick to highlight system failures in administration, overlapping jurisdiction issues, and politically motivated de-strengthening of green protection units. India was ranked in the bottom of the list out of 193 countries based on the Environmental Performance Index (EPI) 2022, which clearly shows that urgent actions have to be taken.

Global voices, especially through the UNEP, UNDP and the World Bank have emphasized the importance of having sustainable development strategies whereby the concept of environmental sustainability is incorporated in policies or planning. Such studies have highlighted capacity-building, climate resilience, and stake holders participation as key elements in successful environmental governance.

There is also academic tension between the demands of development and ecological imperatives. Through criticizing the state-led model of development (that leaves the local communities marginalized, displaces indigenous people, and disregards traditional environmental knowledge), scholars such as Amita Baviskar and Ramachandra Guha argue that alternative and non-dominating forms of development should be applied. Their contribution has been promoting a more multi-faceted and participatory manner of ecological policymaking.

On the whole, the literature presents developing evidence that the environmental degradation in India is not aimed only at the absence of legislations but rather a more fundamental collapse of governance, policy integration, institutional strength, and participatory democracy.

Research Questions:

1. What are the major legislative gaps in India's environmental laws, and how do they affect the country's ability to address environmental degradation effectively?
2. How have policy failures and weak implementation mechanisms contributed to the decline of environmental quality in India?
3. To what extent do institutional limitations, such as the functioning of Pollution Control Boards and the EIA process, hinder sustainable environmental governance?
4. How effective has the Indian judiciary been in advancing environmental protection, and what are the limitations of judicial interventions?
5. What legal and policy reforms are needed to transition India toward a model of sustainable governance that integrates ecological, social, and economic priorities?
6. How can decentralized governance and community participation be strengthened to improve environmental management and ensure justice for vulnerable populations?

RESEARCH METHODOLOGY:

This research is qualitative and analytical in nature. It adopts a doctrinal method, focusing on the critical examination of existing laws, policies, institutional structures, and judicial decisions related to environmental governance in India. The study primarily relies on secondary data sources, including:

Statutory and Constitutional Provisions: A detailed examination of the Environment (Protection) Act, 1986; Air and Water Pollution Acts; Forest and Wildlife Acts; and relevant Articles of the Indian Constitution (Articles 21, 48A, 51A(g)) forms the legal foundation of the study.

Judicial Decisions: Landmark judgments from the Supreme Court and the National Green Tribunal have been analysed to understand the role of the judiciary in interpreting and enforcing environmental laws.

Policy Documents: National Action Plan on Climate Change (NAPCC), State Action Plans, EIA guidelines, forest policy documents, and budgetary allocations have been reviewed to assess policy coherence and implementation gaps.

Reports and Indexes: Data from the Environmental Performance Index (EPI), Centre for Science and Environment (CSE), World Bank, and NITI Aayog have been used to support empirical claims regarding environmental decline and institutional performance.

Scholarly Literature: Books, journal articles, and research papers from environmental law experts, policy analysts, and governance scholars provide the conceptual and theoretical framework.

Case Studies: Select case studies, such as the Vedanta mining case, Sterlite protest, and Yamuna pollution issue are incorporated to illustrate real-world consequences of legislative and policy failures.

The research follows an interdisciplinary approach by incorporating legal analysis, policy evaluation, and governance theory. No primary data collection (interviews, surveys, or fieldwork) has been conducted due to the legal-normative focus of the study. The findings are interpreted through the lens of sustainable development, environmental justice, and constitutional governance.

Policy Failures and Institutional Fragmentation:

India's environmental policy failures run deeper than the familiar tension between "development" and "conservation"; they reflect a structural bias in the machinery of the state that privileges short-term capital accumulation and rent-seeking over ecological integrity and distributive justice. At the apex, the Ministry of Environment, Forest and Climate Change (MoEFCC) commands barely 0.08 percent of the Union Budget—less than the annual subsidy bill for chemical fertilizers—while being expected to vet thousands of industrial and infrastructure proposals each year. In practice, MoEFCC operates less as a guardian of the commons than as a "clearance window," issuing over 90 percent of applications within the statutory deadline, based on desk-top Environmental Impact Assessment (EIA) summaries prepared by consultants hired and paid by the project proponent. The 2020 draft EIA Notification sought to legalise ex-post-facto clearances and curtail public hearings, indicating an ideological shift toward deregulation even as pollution metrics worsen.

Inter-ministerial asymmetry compounds this bias. The Ministries of Coal, Power, Petroleum, Road Transport, Railways, and Commerce each house powerful project-promotion arms with budgetary clout, while MoEFCC's objections can be overruled by a Cabinet Committee on Economic Affairs
that has no statutory obligation to weigh ecological externalities. Sectoral policies therefore march in opposite directions: India's National Wildlife Action Plan calls for strict habitat protection at the same time the Ministry of Mines auctions forest blocks for iron-ore extraction; the National Clean Air Programme targets a 40 percent $PM_{2.5}$ reduction even as the Ministry of Power grants exemptions for life-extension of old coal plants that exceed emission norms. Efforts to coordinate through bodies like the Prime Minister's Council on Climate Change or the high-level Forest Advisory Committee rarely translate into binding, cross-ministry directives.

Regulatory capacity on the ground is even more fragile. The Central Pollution Control Board (CPCB) has roughly 600 sanctioned posts nationwide—fewer than many city police departments—yet must oversee compliance for more than 3 lakh registered industries. State Pollution Control Boards often depend on discretionary grants from the very state governments eager to court investment, creating a classic principal-agent conflict. Most boards still rely on quarterly manual sampling of effluent and stack gases; when violations are detected, penalties typically involve notices, not prosecutions, because criminal proceedings require prior government sanction and drag on for years in overburdened courts. Industries calculate that the cost of compliance exceeds the risk-adjusted cost of non-compliance.

Institutional fragmentation also occurs due to stale statutory requirements. The Water Act and Air Act establish different boards, laboratories, and forms of reporting despite the fact that pollutants now interact with each other in new ways (e.g., ammonia nitrogen wastewater forming secondary fine particulates). The decision-making authority on forest clearance is with MoEFCC, and the mining leases are granted at the state department level; coastal infrastructure stands at the border between the ministry of environment and shipping ministry under the overlapping laws of the Coastal Regulation Zone and ports. Different agencies also collect their datasets impossibly using incompatible protocols that can hardly allow effective management of the ecosystem through integration. When a controversy becomes very intense, the National Green Tribunal is able to pass daring orders, but does not have a contempt power over state officers, nor does its decisions speedily get stayed by appeal on the ground of economic loss.

The Urban policy is an example of the overall impact of these institutional rifts. The Smart Cities Mission provides digital governance kiosks, flyovers and acts of beautification in the form of aesthetically pleasing Nature corridors, but provides no protection to wetland buffers and peri-urban farming that would help reduce heat and floods. Building permits on floodplains are regularly issued by municipal corporations because of the fact that urban land is controlled under state town-planning legislation whereas the provisions of the Wetlands (Conservation and Management) Rules and the Disaster Management Act are

not mentioned in it. As a result, encroachment continues on a house-to-house basis until a monsoon downpour or a dam discharge results in mass-disastrous flooding, as witnessed in Chennai 2015, Hyderabad 2020, and Bengaluru 2022, when blame is then hurled between civic agencies, state water ministries, and the national water ministry.

Lastly, political economy of ease of doing business adds to the policy dilution. In 2014 the government initiated a systematic review of environmental regulations to reduce "red tape." The amendment of Coastal Regulation Zones repeatedly created tourism enclaves, the Forest Conservation (Amendment) Act 2023 reshaped the meaning of deemed forest to cover much less of degraded but growing land, and the Mines and Minerals (Development and Regulation) Amendment Act fast-tracked prospecting licences in ecologically fragile areas. These alterations were ostensibly in the name of increasing investment but they have already unleashed a project rush in already beleaguered Himalayan and coastal eco-systems. Without formal veto authority, individual scientists and local citizens must go into litigation that too often yields painfully slow results.

All these dynamics form a self-reinforcing loop: low budgetary and statutory powers create enabling environments of inactivity; inactivity endorses extortionate industries; and the consequent ecological decay is then used as an excuse to further weaken norms, on pain of slowing growth. The key to breaking this cycle will be to once again ground environmental policy on constitutional principles of sustainability and fairness, to grant oversight institutions real independence and power, to harmonize fragmented law by the rules of a single ecological code, and to make clear science-based decider-making open and transparent and begin with rather than end with the approval of local stakeholders.

Judicial Interventions and Environmental Jurisprudence:

The judicial system of India has been playing a significant role in widening the aspect of the right to the environment and enforcing protection of the environment.

Increased Rights and Strengthened Accountability- Judiciary in India has become a formidable force in the areas of environmental governance in a scenario where the legislature and the executive have traditionally performed poorly by not taking the decisions or providing the mandate decisively to other arms. To a great extent, the judiciary can be obliged to change the environmental protection moving from a policy to a legally enforced right by means of the Supreme Court and other High Courts through Public Interest Litigations (PILs). Such interventions have construed and broadened Article 21 of the Constitution, the right to life, as also the right to life in a clean environment, a safe environment and an ecologically balanced environment. Such an evolving meaning of interpretation has given a centre stage to the environmental concerns in the core of constitutional provisions of India and has presented a strong stage in the law activism and citizen participation.

The courts have brought in and applied a number of bases and foundations of law that now command Indian environmental law:

Polluter Pays Principle Full name The principle was first seen in Indian Council for Enviro-Legal Action v. According to Union of India (1996), the polluter pays principle states that the party that causes pollution will be liable to cover the damage cost to the environment as well as clean it up, which will eliminate laxity towards the environment.

Precautionary Principle- It was brought incase of Vellore Citizens Welfare Forum v. According to Union of India (1996), in the event of a threat of serious or irreversible harm to the environment, insufficient scientific certainty could not be invoked as a warrant postponing of measures to prevent it.

Public Trust Doctrine - It was formulated in M.C. Mehta v. According to this doctrine as supported by Kamal Nath (1997), some natural resources such as air, water, forest among other resources are sources under the custody of the state under trust to use and not to turn it into commercial property under the control of individuals.

Sustainable Development Principle Narmada Bachao Andolan v. In Union of India (2000), the Supreme Court again stressed that there was a necessity to achieve an equilibrium between economic development and ecological integrity and the federal policies were immediately geared towards the concept of sustainability.

Moreover, Directive Principles of State Policy (Article 48A) and Fundamental Duties (Article 51A(g)) have been interpreted by the courts in order to enforce the role of the state to conserve the environment and responsibility of the citizen to preserve nature. Although not per se enforceable, these provisions have helped prove judicial reasoning and more importantly emphasize the constitutional vision of ecological

justice.

The international environmental law has also been applied by the judiciary in the fortification of local judgments. Treaties like the Stockholm Declaration (1972), Rio Declaration (1992), Paris Agreement (2015), have not always been made formally part of a country domestic law but have been used by the courts to identify international obligations and the necessity to act in a precautionary manner.

Significant environmental case laws have shaped the legal landscape:

M.C. Mehta v. Union of India (Ganga Pollution Case) - The Supreme Court directed that more than 250 tanneries causing pollution in the river Ganga be closed or moved to alternative locations showing the willingness of the court in taking stern actions against polluters in industries.

M.C. Mehta v. Union of India (Vehicular Pollution Case) The court directed that the Compressed Natural Gas (CNG) be used in the public transport sector of Delhi to curb air pollution to reduce the level of air pollution and this was a landmark case in which the state was able to interfere in the control of urban emissions.

Taj Trapezium Case- In a bid to safeguard the Taj Mahal against air pollution by industries, the court ordered that 292 industries either change to cleaner fuels or move away, and this points out to the fact that heritage and environment are inter-related.

Goa foundation v. Union of India (Mining Case) -The court directed that all the mining activities be suspended in Goa on the ground of ignoring the environmental regulation and ecological impact assessment.

Lafarge Umiam Mining Pvt. Ltd. v. Union of India (2011) Such a decision was made where the court discussed the importance of the balance between development and environment by introducing the terms of the possibility to execute the mining projects in the sensitive ecological zones, insisting on the experts and tribal approval.

These are just some of the judgments that have seen the judiciary take an active role in ensuring they have corrected lapses in regulation, enforcing of environmental standards, as well as guarding the rights of affected communities. Environmental adjudication has further been institutionalised through the establishment of Green Benches in High Courts and the National Green Tribunal (NGT) in 2010 on the basis of NGT Act. The NGT has got the power to deal with civil matters pertaining to environmental protection and conservation of forests and working in the principles of natural justice and thus it is not subject to conventional procedural norms. It has provided some powerful ruling on river pollution, solid waste management, noise pollution and compensatory afforestation.

Nevertheless, judicial activism, in spite of the numerous successes, is limited. Mostly, courts are rarely technically minded and rely on government reports, or even, the amicus curiae submissions which might not conform to the realities of the grass roots. There is also inconsistency in the implementation of the court orders due to the dilution of most orders in the bureaucracy or stalling of orders. The lack of contempt granting powers to NGT undermines its strength. In addition, the case of judicial overreaching may also elicit fears that the separation of power may be compromised as the executive branch and the judicial branch may end up being too close to each other.

It is not sustainable to depend only on the court in order to resolve issues with environmental degradation. Although the courts have been instrumental in the development of environmental justice, long-term permission to the problem requires clarity of law and enforcement by the executive authorities. Governance of the environment has to be proactive, participatory and based on science - not reactive, ad-hoc and conditional on judicial activism.

Judicial pressure is no longer enough to guard the environment in India as there is a need to combine that with effective environmental laws, responsible regulation and an aware and active citizenry. It is only in such a comprehensive scheme that we can achieve environmental sustainability at the heart of the governance system in place in India instead of going to the courts time and again.

Global Commitments and the Disconnect with Domestic Policies:

India is a signatory to many global environmental agreements such as the Paris agreement, the convention on biological diversity and the United Nations sustainable development goals (SDGs).

International Agreements, India's Pledges, and the Challenges of Alignment:

1. India has been an active member of the international discourse on environment for many years now having ratified many global agreements and signing the multilateral environmental declaration consistently. The role of the diplomatic effort of the country has contributed to building the climate agenda on a global level, namely through representing the concerns of the Global South. Nonetheless, a

more detailed study shows an increasing disparity between the international environmental agreements of India and the internal machineries that it is expected to implement in order to fulfil them. Such a gap is not only of an administrative nature; it is structural, political and is based on the contradiction between short-run economic priorities and long-run ecological requirements.

2. The Paris Agreement (2015) and India's Climate Pledges:

In October 2016, India ratified the Paris Agreement, and pledged to ensure that the emissions intensity of its GDP would reduce by 33-35 percent by 2030 compared to 2005, and to ensure that the capacity of non-fossil-based fuel energy would increase to 40 percent by 2030, and that it would establish another carbon sink of 2.5-3 billion tonnes of CO 2 equivalent by afforestation. In 2022, India submitted its UNFCCC Nationally Determined Contributions (NDCs) which restated and revised these targets extending them to 2070, when net-zero is now promised to be reached. The international solar alliance (ISA) inspired by India and France since 2015, is the best example of Diplomacy by India in promoting solar power all around the world and particularly to the developing countries of the tropical world.

However, while the ISA has fostered international partnerships and pilot projects, India's domestic energy matrix remains dominated by coal, which supplies over 55% of electricity generation. Despite large-scale renewable energy installations, land acquisition issues, outdated grid infrastructure, and subsidy structures that favour fossil fuels have hindered the clean energy transition. Moreover, coal production has increased in recent years to meet peak power demands, creating policy contradictions with India's own NDC targets. There is currently no centralised

climate law to legally enforce NDCs, and many climate-related decisions are left to sectoral ministries with limited coordination and inconsistent timelines.

3. Convention on Biological Diversity (CBD) and the Aichi Targets

India is a party to the Convention on Biological Diversity (1993) and adopted the Aichi Biodiversity Targets, which aimed to reduce habitat loss, integrate biodiversity into national planning, and expand protected areas. India formulated its National Biodiversity Action Plan (NBAP) and established State Biodiversity Boards, People's Biodiversity Registers, and Biodiversity Management Committees under the Biological Diversity Act, 2002. However, assessments by the Global Biodiversity Outlook and India's Sixth National Report to the CBD indicate limited progress on targets such as curbing land-use change, stopping poaching, and improving ecosystem resilience.

India has expanded its network of protected areas, but this has often been done without respecting the Forest Rights Act, 2006, leading to conflicts with tribal communities. Moreover, invasive species, overgrazing, unregulated tourism, and lack of cross-ministerial cooperation have eroded biodiversity even within so-called protected areas. The failure to fully operationalise biodiversity action plans reflects a deeper challenge: environmental mandates are often under-resourced, poorly coordinated, and politically marginalised within the broader development discourse.

4. United Nations Sustainable Development Goals (SDGs):

India adopted the 2030 Agenda for Sustainable Development in 2015 and has integrated the 17 SDGs into national policy through initiatives led by NITI Aayog, which publishes periodic SDG India Index Reports. India has made strong progress in areas such as clean energy (SDG 7), education (SDG 4), and gender equality (SDG 5). However, progress remains inadequate on critical environmental goals like:

SDG 13 (Climate Action) – India lacks a national framework law to enforce emission cuts, and climate finance mechanisms remain fragmented.

SDG 14 (Life Below Water) – Coastal degradation, marine plastic pollution, and unsustainable fishing practices continue, with weak enforcement of coastal zone regulations.

SDG 15 (Life on Land) – Deforestation for infrastructure, mining in ecologically sensitive areas, and poor wildlife corridor protection persist, despite the presence of statutory safeguards.

The disconnect between global aspirations and domestic reality becomes even more visible when environmental goals are pitted against economic reforms. For example, the Forest Conservation (Amendment) Act, 2023 allows forest land to be diverted for linear infrastructure without prior clearance from tribal bodies, undermining both biodiversity conservation and community rights. This creates a contradiction between SDG 15 and ongoing legal reforms that weaken protection regimes.

5. Multilateral Collaborations and India's Leadership Role:

India's participation in various global coalitions shows both its capacity and limitations:

International Solar Alliance (ISA): A flagship initiative headquartered in Gurugram, this alliance has

120+ member countries and supports solar energy infrastructure, funding, and capacity-building. While India has deployed over 70 GW of solar capacity, actual deployment lags behind targets due to land, financing, and distribution challenges.

Coalition for Disaster Resilient Infrastructure (CDRI): Launched by India in 2019 with UN support, this platform aims to promote resilience in critical infrastructure across climate-vulnerable countries. It aligns with SDG 9 (Industry, Innovation, and Infrastructure) and SDG 13, yet integration into national infrastructure projects has been partial.

Global Methane Pledge: India is not yet a signatory to this voluntary initiative to cut methane emissions, despite being the world's third-largest emitter due to livestock, landfills, and fossil fuels—pointing to a gap in ambition on short-lived climate pollutants.

G20 and COP Participation: India's G20 Presidency in 2023 highlighted "LiFE – Lifestyle for Environment," promoting behavioral change for sustainability. Yet, this soft-power message is undermined by increasing domestic coal approvals and weak environmental governance, casting doubt on India's international environmental credibility.

6. Bridging the Global-Domestic Gap:

To honour its international obligations, India needs more than diplomatic presence—it requires strong legal and institutional scaffolding at home. First, there is an urgent need for a National Climate Change Law, with binding targets, institutional mechanisms, and accountability measures. Second, environmental commitments must be mainstreamed into all sectors—mining, energy, transport, agriculture—through cross-ministerial mandates and budgetary integration. Third, climate finance must be decentralised and directed toward grassroots implementation, with a focus on vulnerable communities and ecosystem-based adaptation.

Equally important is the creation of transparent reporting mechanisms, linked to real-time data collection, satellite monitoring, and open-access platforms that allow civil society and citizens to track progress on global commitments. Parliamentary oversight, independent audit institutions, and empowered local governments can also play a critical role in holding agencies accountable.

India has demonstrated vision and leadership on the global stage. The challenge now is to match that global ambition with credible domestic policy, coherent legislation, and a governance ecosystem rooted in science, equity, and justice. Only then can India become not just a participant but a pioneer in the pursuit of planetary sustainability.

Sustainable Governance – Government Efforts and Decisions:

India has begun to translate the ideal of sustainable governance into concrete policies, programs, and legal reforms, even if progress remains uneven. At the centre is a push to consolidate more than two hundred separate statutes and rules into a draft Environmental Management Act, now under inter-ministerial review, which would become the country's first unified environmental code and give statutory status to the Polluter Pays and Precautionary principles. Complementing this
effort, the Ministry of Environment, Forest and Climate Change (MoEFCC) has rolled out the PARIVESH online portal, making all forest and environmental clearance files and compliance reports publicly searchable—a step toward the transparency and real-time monitoring that sustainable governance demands.

Decentralization is gradually advancing through fiscal and constitutional channels. The 15th Finance Commission earmarked ₹1.42 lakh crore in performance-linked grants to Gram Panchayats and Urban Local Bodies for drinking water, sanitation, and solid-waste management, effectively tying funds to measurable environmental outcomes. States are responding: Kerala has adopted an annual "Green Budget" that assigns clear climate tags to every department's spending; Maharashtra and Gujarat have notified state-level Climate Action Plans with dedicated climate finance cells; and Odisha's Mission Shakti federations now manage mangrove restoration and cyclone shelters, embedding women's groups in ecosystem stewardship.

The Union government's flagship climate initiatives also align with sustainable-governance principles. The National Solar Mission, Green Hydrogen Mission, and launch of sovereign green bonds in 2023 seek to direct private investment toward renewable infrastructure, while the newly approved Indian Carbon Market will place a legal price on emissions across power and hard-to-abate sectors. A draft Climate Change Act, circulated for public comment in 2024, proposes binding carbon-budget trajectories for each ministry and mandates an independent Climate Commission empowered to audit progress—an institutional reform intended to anchor India's 2070 net-zero pledge in law. To widen coverage, people

national Biodiversity Registers have been extended to reach 90 percent of Panchayats, and the Forest Right Act portal also enables monitoring of unimplemented habitat existence claims through tribal Gram Sabhas. These local initiatives are connected with the behavioral change movement, introduced at India during its G-20 presidency, called Lifestyle for Environment (LiFE) which is fully supported by revized school curricula introducing the concepts of climate science and the circular economy, starting in Class VI.

The new governance toolkit consists of technology. The National Clean Air Programme has deployed more than 300 continuous ambient air-quality monitors, with data accessible on an artificial-intelligence-driven ratings system, publicly rating industrial facilities. The Jal Jeevan Mission, led by the Ministry of Jal Shakti, dodges this hurdle by pairing IoT sensors with community water-testing laboratories, allowing the village council to realize that fluoride, arsenic, and bacterial contamination in real-time. In the meantime, the Green Credit programme announced in 2025 issues tradable credits on a blockchain registry to reward citizens and companies who plant urban forests, restore wetlands or install rooftop solar, ultimately tying personal action toward national mitigation targets.

Corporate accountability is tightening through mandatory Business Responsibility and Sustainability Reporting (BRSR) for the top 1,000 listed companies, with penalties for green- washing enforced by the Securities and Exchange Board of India. Large public-sector banks must now disclose portfolio-wide climate risks, and the Reserve Bank's Sustainable Finance Framework offers concessional credit lines for clean-tech startups.

These measures do not yet constitute the fully integrated, rights-based governance model India ultimately needs; enforcement gaps and inter-ministerial turf battles persist. Nonetheless, they mark a deliberate shift: codifying environmental law into a single statute, funding local bodies for ecological results, embedding citizen participation, harnessing real-time data, greening public finance, and legislating net-zero targets. Sustaining this momentum—through consistent budgeting, rigorous oversight, and inclusive decision-making—will be essential if India is to reconcile rapid development with ecological security and intergenerational equity in the decades ahead.

Case studies:

These are the three main cases include in this research article.

Vedanta mining in Niyamgiri (Odisha):

Vedanta wanted to dig bauxite out of the Niyamgiri hills, a place the local Dongria Kondh tribal community considers sacred. Government offices gave quick approvals without properly asking the villagers or studying the impact on forests and water. The Supreme Court later said the villagers themselves must decide. All of them voted "no," so the mine was stopped. Even so, people nearby still complain about pollution from Vedanta's refinery and say officials don't check up on it enough. This shows how easy approvals and weak follow-up can hurt both nature and local people.

Sterlite copper plant protest (Thoothukudi, Tamil Nadu):

For years, residents near the Sterlite copper smelter said the factory's fumes and waste were making the air and water unsafe. Regulators kept renewing the plant's licence anyway. In 2018 thousands marched in protest; police opened fire, and 13 people died. Only after that tragedy did the state shut the plant. Sterlite fought in court for years, but in 2024 the Supreme Court agreed it should stay closed. The episode proves that poor oversight and slow action can let pollution build up until a crisis—and sometimes lives—are lost.

Yamuna River pollution (Delhi stretch):

The Yamuna flowing through Delhi has been filthy for decades, even though the government has spent billions of rupees on cleanup projects. Sewage plants often don't work, factories release waste illegally, and many agencies argue over who is responsible. As a result, the river still fails basic water-quality tests and often looks and smells like an open drain. The scenario can illustrate how the rules overlap, enforcement is weak, and unclear accountability can waste money and leave the environment no better than before.

Combined, all these instances serve to illustrate one thing, which is that when agencies fail to enforce the laws, any well-intended laws are prone to be misused. when people and ecosystems are not in synch, people and ecosystems suffer, no matter how many rules are parched on paper.

Data Analysis: Success of Other Countries in Environmental Governance:

An international best practice would be beneficial in improving environmental governance in India through a comparative analysis. Integrated legislative regimes, novel policy instruments, and institutional

responsibility have proven quantifiably successful in many countries in dealing with environmental deterioration. Relying on international measurements by the Environmental Performance Index (EPI), Climate Change Performance Index (CCPI), and case studies conducted in Swedish, German, Costa Rican, and New Zealand, this section discusses key success factors and their applicability to India.

Sweden: Integrated Environmental Policy and Circular Economy:

Sweden has continued to enjoy high ranking in the Environmental Performance Index. It was successful because of its harmonized national environmental policy which incorporates biodiversity, climate change, waste management and the wellbeing of the citizens through all planning processes. The Swedish environmental Code, adopted in 1999, is a basic law that incorporates in its trunk more than 15 pieces of environmental law. The use of a model of circular economy where less waste is produced and where it is possible to make the maximum out of the resources available has resulted in the household waste recycling reaching close to 100 percent in Sweden. The country also considers clean energy as an investment tool spending so much on this energy terming its share of total energy to be sourced by renewable sources to be above 50 percent. The ability to rank Sweden highly depends on its wholesome data systems, involvment of citizens in decision-making and its sound local governance systems.

Germany: Legal Certainty and Industry Compliance:

Germany's environmental governance is marked by the integration of environmental protection into its constitutional framework (Article 20a of the Basic Law). Germany's Federal Nature Conservation Act and Climate Protection Act enforce legally binding targets for emissions reduction. The German Emissions Trading System, aligned with the EU-ETS, has made market- based regulation a viable tool for controlling pollution. Moreover, the country's "Energiewende" (energy transition) policy has been instrumental in increasing the share of renewables to more than 45% of electricity consumption as of 2023. Germany also ensures strong industry compliance through mandatory environmental audits, high penalties for violations, and regular stakeholder consultations, thereby promoting long-term environmental planning.

Costa Rica: Environmental Constitutionalism and Ecological Democracy:

Costa Rica presents an attractive framework to developing nations. It has a share of 6 percent of the world biodiversity on less than 0.03 percent of the total landmass of the world. The constitutional amendment of the year 1994 expressly incorporated the right to healthy environment and thus environmental protection was a right enshrined in human rights. Costa Rica has disarmed it self and thereby used the money in education and protection of environment. Costa Rica has managed to raise its forest cover to more than 52 percent today as compared to the 26 percent of the 1980s through payment of ecosystem services (PES), reforestation programs, and marketing of ecotourism. It has more than 98 per cent of its electricity produced by renewable sources. Its environmental policy is decentralized, participatory, and community-based, which proves the ability of the ecological sustainability to serve as a means of cyclical development.

New Zealand: Indigenous Knowledge and Biodiversity Protection:

The basis of environmental policies in New Zealand is based heavily on Te Tiriti o Waitangi (Treaty of Waitangi) that acknowledges the right of the Maori to control natural resources. Resource Management Act (1991) brings together land, air and water management under a single framework which focuses on sustainability and involvement of the community in this management unit. The nation has awarded legal personhood to the natural entity, including the Whanganui River, and Mount Taranaki, which indicates an enormous respect to ecological and spiritual relationships. New Zealand has been able to adopt a good balance of biodiversity policies ensuring protection of endemic species, minimizing the agricultural runoff and facilitating sustainable fisheries. This or any similar model of legal pluralism and recognition of the paramountcy of indigenous forms of governance has lessons to teach us about democratization of environmental decision-making.

Comparative Indicators: EPI and Climate Performance:

Country	EPI Rank (2022)	Climate Target (Net-Zero)	Renewable Energy Share	Forest Cover (%)	Legal Innovations

Sweden	**3**	**2045**	**~56%**	**~69%**	**Unified Environmental Code, Circular Economy**
Germany	**13**	**2045**	**~47%**	**~32%**	**Climate Protection Act, EU-ETS participation**
Costa Rica	**20**	**2050**	**~98%**	**~52%**	**Right to environment, PES,eco- tourism laws**
New Zealand	**23**	**2050**	**~84% (electricity)**	**~38%**	**Legal personhood for nature, RMA 1991**
India	**180**	**2070 (pledged)**	**~22%**	**~24%**	**Fragmented laws,weak enforcement**

In the comparative table, the performance of the environment and governance structure of five countries, including Sweden, Germany, Costa Rica, New Zealand, and India, are presented, and the differences in environmental indicators and laws of innovation can be seen to be quite dramatic. The top-ranking country is Sweden with an outstanding 3 in the Environmental Performance Index (EPI) list, which is attributed to a 56 percent share of renewable energy, a vast forest cover area (69 percent), as well as the presence of an assimilated Unified Environmental Code that facilitates a circular economy. In the 13th position, Germany exhibits proper legal enforcement with the Climate Protection Act and moreover participates in EU Emissions Trading System (EU-ETS). Even though Costa Rica is a developing country, it is ranked high at 20, thanks to its constitutional move towards granting environmental rights, Payment of Ecosystem Services (PES), and the widespread application of eco-tourism laws that have been supported by a ~98 percent share of renewable energy. New Zealand which has a forest cover of about ~38% and has a net-zero target of 2050 is the only country in the world that gives legal personhood to natural aspects such as rivers, mountains, etc as institutionalized in the Resource Management Act (RMA) 1991. In sharp contrast, India was ranked worst (180) by EPI, with poor enforcement, weak levels of environmental laws and low penetration in renewable energy (~22%). Its forest cover (24% approx) is still one of the least in the group and although the country has committed itself to a net-zero by 2070, the lack of legislature/mechanisms and changing structure of the institutions is a far cry. This comparative analysis underscores the urgent need for India to adopt coherent legal frameworks, enforceable climate policies, and participatory governance models to transition toward sustainable environmental outcomes.

Key Lessons for India:

Legal Codification: India also needs to codify its environmental laws as Sweden and Germany do.

Local Empowerment: Costa Rica and New Zealand are examples on how decentralised governance and indigenous involvement leads to increased environmental protection.

Binding Obligations: India needs to make its climate commitments non-binding laws
including precise goals, like those contained in Germany in the Climate Protection Act.

Financial Instruments: Ecosystem service payments and green taxes they can be used to encourage sustainability through the example of Costa Rica and Sweden.

Transparency and Accountability: Transparency and Participation: The citizen participation in the monitoring and compliance via publicly available data systems.

Policy Guidance:

The imminent issue in India is that the problem of environmental degradation needs a combined and concerted action on the policy front that does not succumb to counterproductive fragmented legal frameworks and vested political interests. Policy guidance has to be done effectively to adhere to the

constitutional values, scientific facts, community involvement and international environmental obligations. Sustainable governance and ecological security in India The policy directives below show a way forward attaining sustainable governance and ecological security in India.

1. Formulate a National Environmental Governance Policy Framework:
India is obliged to form a detailed National Environmental Governance Policy (NEGP) in which there are comprehensive principles of ecological integrity, intergenerational fairness, polluter liability, openness, and inclusion. It is as a deliberation of this policy that it appears desirable to harmonize all the policies of the sector, such as the industry, agriculture, transport, energy, water, and forests policies with the standards of sustainability and environmental justice.

2. Establish a National Commission for Environmental Law Reform:
Multi-stakeholder National Commission, at the highest levels, must be set up that reviews the current state of the environmental laws, reveals inconsistency with others and recommend codification into a single Environmental Code of India. The commission must consist of jurists, scientists, environmentalists, representatives of indigenous communities, and actors in the civil society to have a comprehensive and participatory legal reform.

3. Adopt Mandatory Environmental and Climate Budgeting:

The central, state, and local governments should incorporate the environmental and climate budgeting in their fiscal plans. This includes setting aside certain budgetary funds on climate resilience, clean energy, ecological restoration, and pollution control, and holding the public accountable in relation to the expenditure on environmental outcomes.

4. Mainstream Sustainability in Industrial and Infrastructure Policies:
The industrial policies and the national infrastructure pipeline in India should be comprised of environmental sustainability parameters. It is necessary to secure the policy framework with mandatory life-cycle assessment, green procurement standards and severe environmental clearances to preclude ecological externalities and irreversible degradation.

5. Institutionalize State Action Plans for Environmental Governance:
Every state must develop and implement a legally binding State Environmental Governance Plan aligned with national policy and the SDGs. These plans should include climate adaptation roadmaps, pollution abatement strategies, biodiversity conservation, and urban environmental management, with annual targets and third-party audits.

6. Revise Land Use, Mining, and Forest Policies:
Land use and mining policies must shift from an extractive to a regenerative approach. Forest policies should prioritize afforestation with native species, community forest rights, and ecosystem services valuation. Mining should be regulated through stringent environmental safeguards and post-extraction land rehabilitation obligations.

7. Empower Local Governments with Environmental Mandates:
Panchayati Raj Institutions and Urban Local Bodies should be granted statutory powers, financial authority, and technical support to manage local environmental resources. Decentralized planning, village-level environmental registers, and climate action cells should be created to localize environmental governance.

8. Strengthen Environmental Literacy and Behavioral Change Policies:
Policy frameworks must institutionalize environmental education across school curricula, civil services training, and public media campaigns. Behavioral change incentives for water conservation, energy efficiency, waste segregation, and green mobility should be integrated into urban and rural development programs.

9. Mandate Corporate Environmental Responsibility:
Environmental sustainability must be embedded within corporate law through mandatory ESG disclosures, environmental audits, and sustainability-linked incentives and penalties. The Companies Act should be amended to require businesses to internalise environmental costs and contribute to ecological welfare through CSR mandates.

10. Create a National Environmental Data and Intelligence System:

A centralized, publicly accessible digital platform should be developed for real-time environmental data, including air and water quality indices, forest cover, biodiversity maps, and climate vulnerabilities. This system must support evidence-based policymaking and citizen-driven accountability.

11. Align Policies with Global Environmental Governance Regimes:
India's environmental policies should be closely aligned with the Paris Agreement, the Kunming- Montreal Global Biodiversity Framework, and the Sendai Framework for Disaster Risk Reduction. Policy documents must include implementation timelines, monitoring indicators, and periodic review mechanisms as per global standards.

12. Incorporate Traditional and Indigenous Ecological Knowledge:
Policy frameworks must recognize the vital role of indigenous and traditional communities in biodiversity conservation, land regeneration, and sustainable agriculture. Legal protections and institutional platforms must be created to mainstream community-based ecological wisdom in national policy processes.

13. Integrate Environmental Justice in Social and Economic Policy:
Environmental policy must be guided by principles of justice, ensuring that marginalised communities—including Adivasis, Dalits, women, and climate refugees—are protected from environmental harm and included in benefits from ecological restoration. Compensation, rehabilitation, and participatory rehabilitation must be a legal right under environmental and social impact assessments.

Conclusion to Policy Guidance for India to reverse environmental degradation and move toward a sustainable future, environmental governance must be reimagined not as an administrative burden, but as the foundation of all policy. The future of economic development, social equity, and public health depends on creating legal and policy systems that protect natural resources, empower citizens, and uphold ecological justice. The time for incremental adjustments has passed—what is now required is a transformative shift towards sustainable and accountable governance at all levels.

Recommendations:
These are a few recommendations from the side of the researcher.

1. Codification and Harmonization of Environmental Laws:
2. Enactment of a Climate Change Law with Binding Targets:
3. Strengthening Institutions and Ensuring Autonomy:
4. Reforming Environmental Impact Assessment (EIA) Process:
5. Decentralization and Empowerment of Local Bodies:
6. Institutionalize the Public Trust Doctrine and Environmental Rights:
7. Mandatory Environmental Audits and Corporate Accountability:
8. Integration of Environmental Concerns into Development Planning:
9. Data Transparency and Citizen Participation:
10. Revitalize Environmental Education and Awareness Campaigns:
11. Create an Independent Environmental Ombudsman and Green Prosecutors:
12. Foster Indigenous and Community-Led Conservation Models:
13. Align Domestic Laws with International Environmental Obligations:
14. Promote Research and Innovation in Environmental Technologies:
15. Establish an Inter-Ministerial Council on Sustainable Development:

CONCLUSION:

Deeper Synthesis and Analysis:
A cross-sectional analysis of the Indian environment scene leads to a feedback loop wherein statutes and efforts which have been conceptualized to get a positive outcome are systematically countered by systemic flaws time and again. The divided legislation can divide jurisdiction between various agencies and agencies with sweeping, and frequently inconsistent authority so that air-quality objectives established under the Air Act can be subverted by coal development allowed under the energy ministry, as wildlife corridors safeguarded under forest law are carved up by freeways built under infrastructure controls. Policy inducements only worsen the situation: fossil fuel subsidies, fast-track mine leases, and the implementation of ease-of-doing-business initiatives subsidise the practices the environmental law aims to restrain.

In cases of the executive inertness, the court will come to the rescue of the situation by providing short term solutions, which are to close down the polluting industries, or by ordering the CNG buses, or suspension of lawless mining etc. Through these rulings the critical principles (Polluter Pays, Precautionary, Public Trust) are hard coded into the legal system, but they are not applied regularly, but in a case by case and in a situation that lacks regularity and uniformity, and in many cases can cause a confusion of institutional boundaries. The Achilles heel is the ability to regulate: Air pollution Control Board staffs in the thousands of industries it is supposed to oversee with a small fraction of what it needs and most of urban local bodies lack dedicated full-time environmental engineers.

At the international level, India has championed global coalitions such as the International Solar Alliance and strengthened its diplomatic profile through ambitious NDCs and SDG rhetoric. Yet domestic follow-through is hamstrung by coal dependence, fragmented climate finance, and weak cross-ministry coordination, exposing a credibility gap between promise and performance.

Recent government initiatives—drafting a single Environmental Management Act, launching an Indian Carbon Market, embedding climate indicators in Finance-Commission grants, and expanding real-time monitoring portals—signal an important shift toward sustainable governance. Nonetheless, these gains will remain provisional unless four systemic transformations occur simultaneously:

Codification and Coherence – All environmental legislation must converge into an enforceable code that articulates hierarchy among laws, embeds global commitments, and integrates land, water, air, and biodiversity regulation under one ecosystem-based framework.

Fiscal and Institutional Re-balancing – The MoEFCC and local governments need stable, rule-based financing; Pollution Control Boards require statutory autonomy and modern laboratories; and the National Green Tribunal must gain contempt powers to ensure compliance.

Data-Driven, Participatory Decision-Making – Mandatory disclosure of emissions and land-use data, plus legally required Free, Prior and Informed Consent (FPIC) for affected communities, can shift governance from elite negotiation to democratic accountability.

Economy-Wide Carbon and Nature Pricing – A robust cap-and-trade system, elimination of fossil-fuel subsidies, green credit markets, and ESG-linked tax incentives must make ecological harm economically irrational. India's environmental saga illustrates a paradox: abundant legal and diplomatic ambition co-existing with persistent ecological decline. The root is neither poverty nor technological incapacity; it is the misalignment of institutions, incentives, and information. Laws operate in silos, regulators lack teeth, and economic ministries wield disproportionate power, enabling short-term growth strategies that externalize environmental costs onto marginalized communities and future generations. Judicial creativity has provided a moral compass, but courts cannot substitute for coherent statute, accountable bureaucracy, and participatory democracy.

Sustainable governance offers a unifying blueprint: merge fragmented laws into a single code, embed net-zero and biodiversity targets in binding legislation, fund and professionalize local institutions, democratize data, and align finance with ecosystem limits. Government has taken encouraging steps—from green bonds and real-time pollution dashboards to climate-conditioned grants for Panchayats—yet the pace of degradation still outstrips reform.

The path forward is clear but demanding: place ecological integrity at the center of fiscal planning, industrial policy, and social welfare. Doing so is not an optional add-on to development; it is the foundational investment without which economic gains will prove illusory and unsustainable. If India can reconcile its constitutional duty to protect the environment with its developmental ambition—through codified law, empowered institutions, transparent data, and shared civic responsibility—it will convert today's environmental crisis into an opportunity for equitable, resilient, and genuinely transformative growth.

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