

Eco-Sustainable Urbanization: Evaluating the Efficacy of Environmental Governance in Mumbai's Building Sector

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"The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country, but this obligation does not end with a mere policy declaration. It must be translated into practice through vigilant governance and responsible action."¹

Abstract:

As Mumbai accelerates toward becoming a global urban hub, the environmental burdens of its construction sector have become increasingly unsustainable. This article explores the efficacy of environmental governance in regulating the real estate and infrastructure boom within the city. Anchored in the doctoral research of author, the study delves into legal, institutional, and administrative frameworks aimed at mitigating ecological harm, while questioning their practical effectiveness. Drawing on key legislative instruments such as the Environment (Protection) Act, 1986 and the Environmental Impact Assessment Notification, 2006, along with judicial interventions by the National Green Tribunal and the Bombay High Court, this article offers a holistic evaluation of the mechanisms in place. It further investigates the extent to which principles of sustainable development, the precautionary principle, and participatory governance are embedded in practice. The analysis ultimately calls for a deeper shift in governance ideology—from reactive compliance to proactive ecological stewardship.

Keywords: Sustainable Urbanization, Environmental Governance, Mumbai, Construction Sector, Environmental Law, EIA, NGT, Urban Policy, Eco-centric Planning

Introduction

Urban sustainability has emerged as a defining concern of the twenty-first century, particularly in megacities where rapid economic growth intersects with environmental degradation. Mumbai, India's commercial nerve centre, is one such city where urban expansion is unfolding at an unprecedented pace, largely fuelled by the booming construction and real estate sector. While this expansion addresses critical issues such as housing shortages, infrastructure development, and job creation, it also exerts mounting pressure on the city's fragile ecological systems.

This paradox of development is especially visible in the way environmental laws are interpreted, implemented, and enforced. Despite the existence of comprehensive statutes like the Environment (Protection) Act, 1986 and the Environmental Impact Assessment (EIA) Notification, 2006, violations remain rampant. From construction in ecologically sensitive zones to non-compliance with air and water

pollution norms, Mumbai's growth often comes at an ecological cost. The institutional apparatus responsible for environmental oversight—including the Maharashtra Pollution Control Board (MPCB), the State Environmental Impact Assessment Authority (SEIAA), and local municipal bodies—frequently falls short in curbing these infractions.

This article, based on the in-depth research undertaken by author, seeks to evaluate the strengths and shortcomings of environmental governance in Mumbai's construction sector. Through legal analysis, policy critique, and evaluation of institutional practices, it aims to assess whether current frameworks sufficiently align with the principles of sustainable development and ecological justice. The inquiry is not just legal—it is also normative, probing whether the governing ideology has evolved from mere compliance to a proactive ethic of environmental responsibility.

Framing the Inquiry: Analytical Perspective

The present inquiry is grounded in the recognition that legal frameworks alone are insufficient to guarantee environmentally sustainable urbanization. In the case of Mumbai, despite a plethora of statutory instruments and institutional mechanisms intended to safeguard ecological interests, the implementation gap remains wide. The author approaches this article with the concern that environmental governance in the city is largely reactive, often intervening only after ecological damage has occurred. This pattern raises serious questions about the ethos driving urban development—whether it is rooted in environmental stewardship or merely oriented toward regulatory compliance.

Drawing from field observations, document analysis, and case law reviews, the author seeks to interrogate whether Mumbai's environmental regulatory apparatus embodies the operative principles of environmental law such as intergenerational equity, sustainable development, the precautionary principle, and the polluter-pays doctrine. Particular emphasis is placed on evaluating whether judicial interventions by bodies like the National Green Tribunal (NGT) and Bombay High Court have catalysed administrative reforms or remained isolated episodes of legal activism.

The underlying premise guiding this study is that without a paradigm shift in the ideational foundations of governance—from rule-bound enforcement to ecological consciousness—Mumbai's construction sector will continue to grow in a manner that is legally shielded but ecologically unsound. The objective of this analysis, therefore, is not simply to assess compliance but to question the sustainability of the very model of urbanization being pursued.

Evaluating Environmental Governance Mechanisms in Mumbai

The environmental governance of urban construction in Mumbai is regulated through a multi-layered legal and institutional framework. At the national level, the Environment (Protection) Act, 1986 serves as the umbrella legislation that empowers the Ministry of Environment, Forest and Climate Change (MoEFCC) to prescribe environmental standards, issue notifications such as the EIA Notification of 2006, and take action against violators.² Complementing this are state-level regulatory bodies like the Maharashtra Pollution Control Board (MPCB), which implements pollution control measures and monitors compliance in the building sector.³

Despite the presence of these statutory instruments, actual enforcement has been uneven and often influenced by political and economic pressures. Reports from the Comptroller and Auditor General (CAG) and expert environmental panels have consistently highlighted procedural lapses in granting environmental clearances,⁴ poor inter-agency coordination,⁵ and the lack of timely inspections.⁶ For

example, Mumbai's Development Control and Promotion Regulations (DCPR) 2034 include provisions for mandatory green buffers, setback norms, and zoning compliance, yet there have been frequent violations in the name of 'public interest' or expedited infrastructure needs.⁷

Moreover, the Environmental Impact Assessment (EIA) process—central to construction project approvals—has been criticized for being reduced to a box-ticking exercise. Scholars have noted that EIA reports are often based on poor data, lack scientific rigour, and are rarely subjected to rigorous public scrutiny.⁸ Even when conditions are imposed during project approval, the monitoring of their implementation remains minimal. The recent Office Memorandum issued by MoEFCC on July 7, 2021, attempted to introduce a Standard Operating Procedure for handling violations of EIA norms, but it faced backlash for potentially regularizing illegal constructions retroactively.⁹

Judicial interventions have occasionally served as a corrective mechanism. The Bombay High Court, in cases such as **Vanashakti v. Union of India**, has stayed approvals granted in ecologically sensitive zones, underscoring the need for procedural integrity.¹⁰ The National Green Tribunal has similarly imposed penalties on developers who began construction without mandatory clearances.¹¹ However, these judicial actions remain sporadic and are often diluted during appeals or administrative reviews.

Institutionally, Mumbai's environmental governance suffers from jurisdictional overlaps among the BMC, SEIAA, MCZMA, and MPCB. These entities often operate in silos, leading to policy contradictions and delays. Without a centralized, transparent platform for environmental data and compliance tracking, accountability is significantly weakened.¹²

At the heart of modern environmental governance lie foundational principles such as sustainable development, intergenerational equity, the precautionary principle, and participatory decision-making. These principles have been repeatedly affirmed by the Indian judiciary in landmark cases such as *Vellore Citizens' Welfare Forum v. Union of India*¹³ and *M.C. Mehta v. Union of India*.¹⁴ While these doctrines have constitutional and international resonance, their assimilation into Mumbai's urban development policy remains sporadic.

The principle of sustainable development, though embedded in Mumbai's Development Plan 2034, is often overridden by political expediency and commercial interests. For instance, amendments to zoning laws and Floor Space Index (FSI) relaxations are frequently made to accommodate high-rise development without robust ecological evaluation.¹⁵ Even when mitigation measures are proposed—such as green belts or waste-water treatment infrastructure—the implementation is rarely monitored with transparency.¹⁶

The precautionary principle, which demands anticipatory action to prevent environmental harm, is arguably the most neglected. Construction projects often commence before clearances are obtained or while litigation is pending. A notable example is the Mumbai Metro Line 3 project, which witnessed felling of thousands of trees in the Aarey forest area despite public protests and ecological concerns.¹⁷ Judicial interventions came late and were unable to reverse the loss.

Participatory governance—a vital component of environmental justice—remains underdeveloped in the city's planning discourse. Public hearings under the EIA process are often rushed, inadequately advertised, or conducted in inaccessible venues. Marginalized communities, including slum dwellers affected by mega-projects, rarely have meaningful input.¹⁸ This is despite the Supreme Court's recognition of environmental information and public consultation as essential components of the right to life under Article 21.¹⁹

Institutional challenges persist in the form of weak capacity, limited expertise, and lack of digitized enforcement tools. While policies advocate for Integrated Environmental Management Systems and green

urban infrastructure, their execution remains confined to pilot projects or elite developments. Municipal agencies like the BMC lack trained environmental planners, and decision-making is often influenced more by bureaucratic hierarchy than scientific merit.²⁰ This disconnect between policy ambition and institutional readiness continues to undermine Mumbai's aspirations for eco-sustainable urbanism.

To address these systemic weaknesses, governance reforms must move beyond rhetorical commitment to environmental values and embrace institutional innovation and legal enforceability. One critical reform is the digitization and centralization of environmental clearance and monitoring systems. The Ministry of Environment, Forest and Climate Change's PARIVESH portal was introduced to streamline project approval and compliance, yet its usage by state-level agencies like SEIAA Maharashtra remains inconsistent.²¹

Another area demanding urgent reform is the transparency and accessibility of compliance data. Making Environmental Clearance conditions, impact assessments, and compliance reports publicly searchable and machine-readable would significantly empower civil society watchdogs, environmental researchers, and judicial institutions. Globally, cities like Singapore and Stockholm provide model frameworks of open-access environmental governance that could be emulated in Mumbai's context.²²

There is also a pressing need to strengthen inter-agency coordination through dedicated urban ecological task forces. These task forces should include urban planners, ecologists, environmental lawyers, and community representatives. Regular joint audits of sensitive development zones—such as CRZ areas, wetlands, and mangrove belts—must be institutionalized.²³ The institutional structure should further empower local bodies like ward committees and citizen councils to participate in early planning stages rather than reacting to finalized blueprints.

Judicial directions, though instrumental in correcting regulatory lapses, cannot substitute for continuous and scientifically-informed policy execution. Environmental courts and tribunals need to be complemented by administrative capacity-building, environmental literacy programs for municipal officials, and independent monitoring bodies.²⁴ Ultimately, governance must evolve from reactive compliance to anticipatory planning rooted in the ethics of ecological responsibility.

As Mumbai stands on the threshold of a climate-uncertain future, the choices made today in its construction sector will shape not just skylines but the livability, resilience, and inclusiveness of the city for decades to come. It is in this context that this article proposes a re-evaluation of urban governance priorities, urging policymakers to align the tempo of development with the integrity of the environment.

Toward Resilient Cities: Conclusion and Policy Recommendations

This article has traced the regulatory, judicial, and institutional pathways that shape environmental governance in Mumbai's construction sector. Through a critical examination of legislative instruments, enforcement practices, and sustainability principles, it is evident that while India possesses a sound legal architecture for environmental regulation, its operational execution is often fragmented, reactive, and vulnerable to dilution.

The study, rooted in the doctoral work of author, underscores that ecological concerns remain subordinated to economic and infrastructural imperatives. The absence of integrated planning, limited capacity within municipal and state agencies, and weak enforcement of EIA norms are key impediments that undermine environmental sustainability in Mumbai's real estate growth.

In light of the analysis, the following recommendations are proposed:

1. Institutionalize a city-wide environmental governance framework with defined roles, digital transparency, and inter-agency coordination.
2. Mandate the use of scientifically validated and publicly accessible Environmental Impact Assessments.
3. Strengthen citizen participation by decentralizing planning and enabling ward-level consultations on large-scale development.
4. Establish regular environmental audits of ecologically sensitive zones and green certification requirements for developers.
5. Promote climate-responsive urban design through financial incentives and regulatory mandates for green buildings.
6. Create a robust grievance redressal mechanism, linking environmental non-compliance with judicial follow-up.

Urban resilience cannot be legislated alone—it must be designed into the governance culture. Mumbai's journey toward sustainable urbanization requires not just legal reform, but a reorientation in how development itself is envisioned. The challenge is no longer whether the law exists, but whether it breathes where the city builds.

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