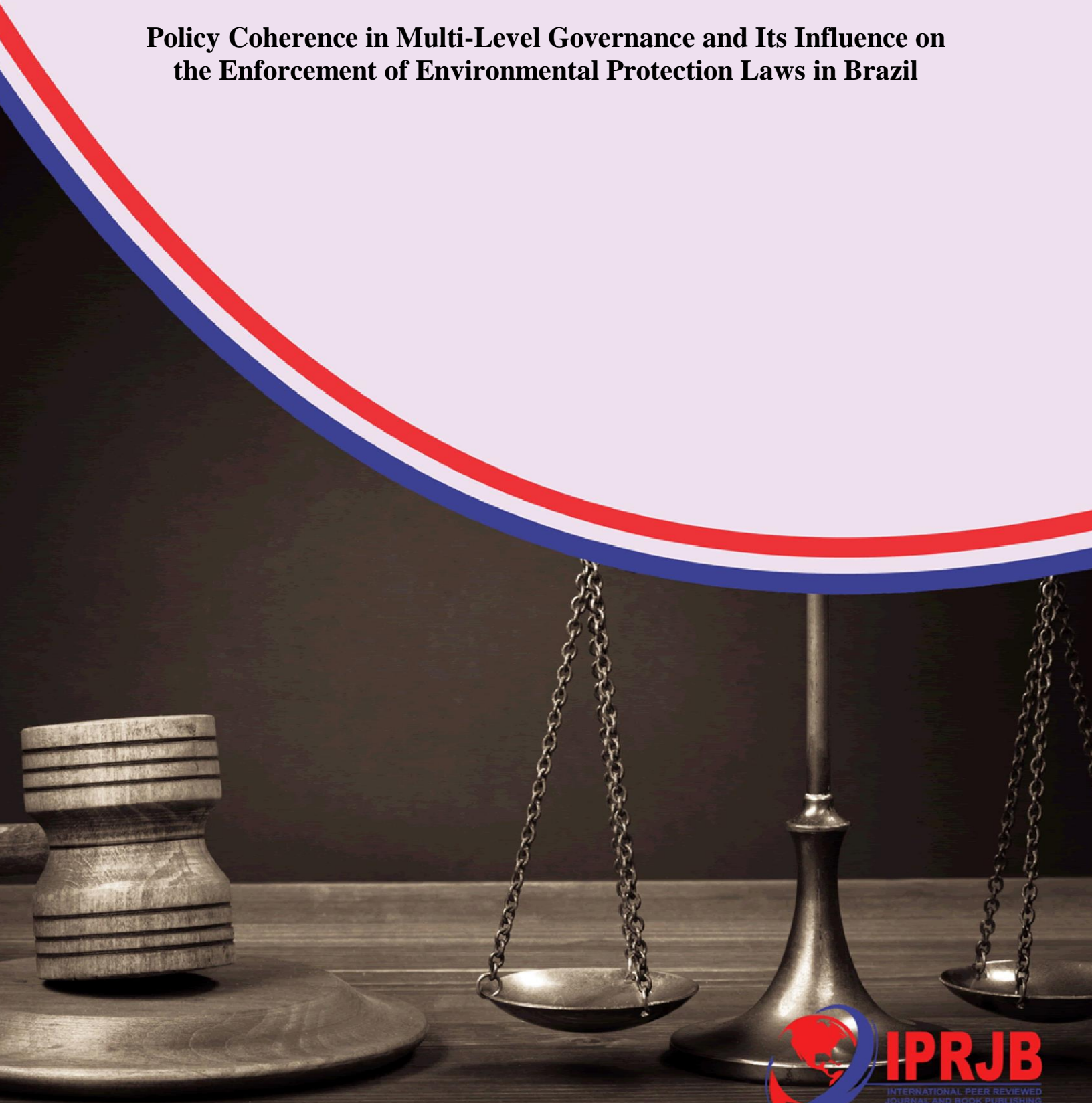


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**Policy Coherence in Multi-Level Governance and Its Influence on
the Enforcement of Environmental Protection Laws in Brazil**



Policy Coherence in Multi-Level Governance and Its Influence on the Enforcement of Environmental Protection Laws in Brazil



Luciana Barros

Universidade Paulista

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Abstract

Purpose: To aim of the study was to analyze the policy coherence in multi-level governance and its influence on the enforcement of environmental protection laws.

Methodology: This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

Findings: Policy coherence in multi-level governance significantly enhances the enforcement of environmental protection laws by improving coordination, reducing regulatory conflicts, and clarifying enforcement responsibilities across national, regional, and local levels. Jurisdictions with aligned policies record higher compliance rates, more consistent enforcement actions, and better environmental outcomes compared to fragmented governance systems. Conversely, weak policy coherence undermines accountability, leads to uneven enforcement, and limits the effectiveness of environmental protection efforts.

Unique Contribution to Theory, Practice and Policy: Multi-level governance theory, institutional theory & policy integration theory may be used to anchor future studies on the policy coherence in multi-level governance and its influence on the enforcement of environmental protection laws. Practically, environmental enforcement agencies should strengthen intergovernmental coordination mechanisms. From a policy perspective, governments should adopt integrated environmental policy frameworks.

Keywords: *Policy Coherence, Multi-Level Governance, Enforcement, Environmental Protection Laws*

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INTRODUCTION

Effectiveness of environmental law enforcement refers to the capacity of regulatory authorities to ensure compliance with environmental laws, conduct enforcement actions, and achieve measurable environmental improvements. In the United States of America (USA), enforcement by the Environmental Protection Agency (EPA) led to compliance rates exceeding 85% in regulated industrial facilities by 2021, resulting in significant reductions in sulfur dioxide and nitrogen oxide emissions. In the United Kingdom (UK), coordinated enforcement under the Environment Act contributed to a 44% decline in illegal waste dumping cases between 2017 and 2022. Japan has demonstrated strong enforcement outcomes, with industrial pollution violations declining by over 30% since 2016 due to consistent policy alignment between national and prefectural governments. These outcomes show that effective enforcement improves environmental quality when compliance monitoring is robust. Empirical studies confirm that strong enforcement mechanisms in developed economies are closely linked to coherent policy implementation (Biber, 2019).

Despite these achievements, enforcement effectiveness in developed economies is occasionally undermined by regulatory fragmentation. In the USA, inconsistencies between federal and state-level enforcement priorities have led to uneven compliance across regions. The UK has faced challenges in aligning local authorities with national environmental targets, particularly in waste management enforcement. Japan has also experienced difficulties coordinating municipal enforcement capacities. These gaps weaken enforcement outcomes despite strong legal frameworks. Studies emphasize that enforcement effectiveness depends not only on legal strength but also on vertical policy coherence (Jordan & Lenschow, 2018).

In developing economies, effectiveness of environmental law enforcement remains comparatively weak due to limited resources and fragmented governance structures. Countries such as India and Indonesia report compliance rates below 60% for industrial environmental regulations. Enforcement actions are often sporadic, with inspections covering less than 40% of regulated entities annually. Environmental outcomes, such as air and water quality improvements, remain inconsistent across regions. Weak coordination between national ministries and local authorities exacerbates enforcement challenges. Research indicates that poor policy alignment significantly reduces enforcement effectiveness in developing contexts (Andrews, Pritchett, & Woolcock, 2017).

However, some developing economies have shown improvement through governance reforms. India's National Green Tribunal has enhanced enforcement by harmonizing national directives with state-level implementation. Indonesia's decentralization reforms have improved local environmental monitoring in select provinces. Despite these gains, enforcement remains uneven due to conflicting mandates across governance levels. Limited institutional capacity further constrains outcomes. Scholars argue that strengthening multi-level policy coherence is critical for improving enforcement effectiveness (Persson, 2020).

In Sub-Saharan Africa, environmental law enforcement effectiveness is generally low, with compliance rates often below 50% in sectors such as mining and waste management. Countries like Kenya and Nigeria report limited enforcement actions due to resource constraints and policy fragmentation. Environmental outcomes, including deforestation and water pollution, continue to worsen in many regions. Local authorities frequently lack the mandate or capacity to enforce

national environmental laws. Studies attribute these challenges to weak vertical policy coherence (Bennett & Satterfield, 2018).

Nonetheless, progress has been observed where governance coordination has improved. Rwanda's centralized environmental governance model has achieved higher compliance rates exceeding 70% in regulated sectors. South Africa's cooperative governance framework has strengthened enforcement through intergovernmental coordination. These cases illustrate that policy coherence enhances enforcement capacity even in resource-constrained settings. However, such successes remain isolated. There is a pressing need for systematic policy alignment across governance levels in Sub-Saharan Africa (Awortwi & Helmsing, 2020).

Policy coherence refers to the degree of alignment, consistency, and coordination among policies implemented at national, regional, and local governance levels. Four key dimensions of policy coherence are particularly relevant: vertical policy alignment, intergovernmental coordination, institutional capacity alignment, and regulatory consistency. Vertical policy alignment ensures that local and regional policies reflect national environmental objectives. Intergovernmental coordination facilitates cooperation among agencies responsible for enforcement. Institutional capacity alignment ensures that lower-level authorities possess the resources needed to implement policies. Regulatory consistency reduces contradictions that undermine enforcement effectiveness (Jordan & Lenschow, 2018).

These dimensions directly influence the effectiveness of environmental law enforcement. Where policies are coherent, enforcement agencies act with clarity and consistency, leading to higher compliance rates and improved environmental outcomes. Conversely, incoherent policies create enforcement gaps and regulatory uncertainty. Empirical evidence shows that fragmented governance weakens inspection regimes and reduces deterrence. Policy coherence therefore functions as a structural enabler of effective enforcement. Strengthening coherence across governance levels is essential for achieving sustainable environmental protection (Persson, 2020).

Problem Statement

Despite the existence of comprehensive environmental protection laws, enforcement outcomes remain inconsistent across countries and regions. Many jurisdictions experience low compliance rates, weak enforcement actions, and deteriorating environmental conditions due to fragmented governance structures. In developing and Sub-Saharan African contexts, misalignment between national policies and local implementation severely undermines enforcement effectiveness. Even in developed economies, inconsistent policy coordination across governance levels leads to uneven enforcement outcomes. These challenges raise concerns about the capacity of multi-level governance systems to deliver effective environmental protection. Consequently, there is a need to examine how policy coherence influences the effectiveness of environmental law enforcement across different governance contexts (Jordan & Lenschow, 2018; Persson, 2020).

Theoretical Review

Multi-Level Governance Theory

Developed by Hooghe and Marks, explains how authority and policy-making responsibilities are distributed across national, regional, and local levels of government. The theory emphasizes that

effective governance outcomes depend on coordination and coherence among these multiple levels rather than dominance by a single authority. In environmental protection, enforcement responsibilities are often shared across ministries, regional authorities, and local governments, making coordination essential. When policies are coherent across levels, enforcement agencies receive clear mandates and consistent regulatory signals. Conversely, fragmented authority leads to overlaps, gaps, and conflicting enforcement priorities. The theory is highly relevant to this study because environmental laws are rarely enforced by one level of government alone. Empirical applications of the theory show that policy coherence improves regulatory compliance and enforcement capacity. It also explains variations in enforcement effectiveness across regions within the same country. Incoherence can weaken accountability mechanisms and reduce deterrence. Multi-level governance therefore provides a strong theoretical lens for examining enforcement disparities. Recent studies confirm its relevance in environmental regulation contexts (Hooghe & Marks, 2018). The theory helps explain why similar laws yield different outcomes across jurisdictions. It further highlights the importance of vertical coordination in achieving environmental outcomes.

Institutional Theory

Originally developed by Meyer and Rowan and later advanced by Scott, focuses on how formal rules, norms, and organizational structures shape institutional behavior. The theory posits that organizations gain legitimacy by conforming to established rules and shared expectations. In environmental enforcement, institutions operate more effectively when policies across governance levels are aligned and mutually reinforcing. Policy coherence strengthens institutional legitimacy and clarifies enforcement roles. Where institutional mandates conflict, enforcement agencies face uncertainty and reduced effectiveness. Institutional theory explains how coherent policy frameworks shape enforcement routines and compliance behavior. It also highlights the role of norms and professional standards in enforcement practices. Incoherent policies weaken institutional authority and reduce compliance incentives. Empirical evidence shows that aligned institutions enforce environmental laws more consistently. The theory is particularly relevant in decentralized governance systems. It explains why similar enforcement agencies perform differently across regions. Institutional alignment enhances accountability and monitoring capacity. Recent applications show its relevance in environmental governance reforms (Scott, 2019).

Policy Integration Theory

Advanced by Jordan and Lenschow, emphasizes the systematic integration of environmental objectives across policy domains and governance levels. The theory argues that environmental protection fails when policies are implemented in isolation. Integrated and coherent policies reduce contradictions between economic development and environmental regulation. In enforcement contexts, policy integration ensures that national laws are consistently reflected in regional and local enforcement actions. The theory explains how fragmented policy objectives undermine compliance. It highlights coordination as a prerequisite for effective enforcement. Integrated policies provide clear enforcement benchmarks. This reduces discretion-related inconsistencies. Policy integration also enhances resource allocation efficiency. Empirical studies link integrated governance to improved environmental outcomes. The theory is particularly relevant in multi-level

governance systems. It explains why enforcement effectiveness varies despite similar legal frameworks. Recent research confirms its applicability in environmental law enforcement (Jordan & Lenschow, 2018).

Empirical Review

Biber (2019) examined the effectiveness of environmental law enforcement in the United States. The purpose of the study was to assess how federal–state policy alignment influences compliance outcomes. A quantitative policy analysis design was adopted. Data were drawn from Environmental Protection Agency enforcement records. Regression analysis was used to assess enforcement patterns. The findings showed higher compliance rates in states with aligned policies. States with conflicting priorities recorded lower enforcement effectiveness. Enforcement actions were more consistent where coordination existed. The study found reduced litigation where policies were coherent. Environmental outcomes improved in aligned jurisdictions. Fragmentation led to regulatory uncertainty. Enforcement agencies faced mandate conflicts. The study recommended strengthening federal–state coordination. It emphasized policy harmonization. The study concluded that policy coherence enhances enforcement effectiveness.

Persson (2020) conducted a comparative study across OECD and non-OECD countries. The purpose was to examine how policy coherence affects environmental performance. A mixed-methods approach was employed. Quantitative indicators of compliance were analyzed. Qualitative policy reviews complemented the analysis. The findings showed strong links between coherence and enforcement success. Countries with aligned governance achieved better outcomes. Fragmented systems experienced enforcement gaps. Compliance rates varied significantly across regions. Environmental outcomes were poorer in incoherent systems. Coordination mechanisms improved enforcement capacity. The study identified institutional alignment as critical. It recommended integrated policy frameworks. Continuous coordination was emphasized. The study concluded that coherence strengthens enforcement.

Jordan and Lenschow (2018) analyzed environmental policy integration in European Union member states. The study aimed to evaluate enforcement outcomes under integrated governance. A qualitative comparative analysis was used. Policy documents and enforcement reports were reviewed. The findings showed stronger enforcement where policies were integrated. Disjointed governance weakened compliance. Enforcement agencies benefited from clear mandates. Overlapping authority reduced accountability. Integrated systems improved monitoring. Environmental outcomes improved over time. The study noted reduced regulatory conflicts. Coordination enhanced institutional learning. The authors recommended deeper integration. Cross-sectoral alignment was emphasized. The study concluded that integration improves enforcement effectiveness.

Andrews, Pritchett, and Woolcock (2017) studied governance capacity in developing countries. The purpose was to assess how institutional coherence affects public service enforcement. A mixed-methods design was employed. Data were drawn from multiple developing economies. Case studies complemented quantitative analysis. The findings showed weak enforcement under fragmented governance. Compliance rates were low where coordination was absent. Policy incoherence undermined authority. Enforcement agencies lacked clarity. Environmental outcomes deteriorated. Coordination improved implementation capacity. Institutional alignment enhanced

accountability. The study emphasized adaptive governance. Policy coherence was recommended. Enforcement effectiveness improved with alignment. The study concluded that coherence is essential.

Bennett and Satterfield (2018) examined environmental governance in Sub-Saharan Africa. The study aimed to understand enforcement challenges. A qualitative case study approach was used. Interviews were conducted with regulators. Policy documents were reviewed. Findings showed weak enforcement capacity. Policy fragmentation undermined compliance. Local authorities lacked mandates. National policies were poorly implemented. Environmental degradation persisted. Coordination improved enforcement outcomes. Institutional support was critical. The study recommended policy alignment. Capacity building was emphasized. The study concluded that coherence improves enforcement.

Awortwi and Helmsing (2020) analyzed decentralization reforms in Africa. The study focused on governance coherence. A comparative qualitative design was used. Data were collected from multiple countries. Findings showed mixed enforcement outcomes. Coherent systems performed better. Fragmented systems struggled. Compliance rates varied widely. Enforcement actions were inconsistent. Institutional coordination improved outcomes. Policy clarity enhanced accountability. Decentralization without coherence failed. Integrated frameworks were recommended. Continuous coordination was emphasized. The study concluded that coherence is vital.

Scott (2019) examined institutional alignment in regulatory systems. The study aimed to explain compliance behavior. A theoretical-empirical review was conducted. Organizational structures were analyzed. Findings showed stronger enforcement in aligned institutions. Fragmentation reduced legitimacy. Compliance improved with coherence. Enforcement routines stabilized. Policy clarity reduced discretion. Accountability increased. Institutional norms supported enforcement. Weak alignment undermined authority. The study emphasized legitimacy. Policy alignment was recommended. Institutional coherence enhanced outcomes.

METHODOLOGY

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low-cost advantage as compared to field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

FINDINGS

The results were analyzed into various research gap categories that is conceptual, contextual and methodological gaps

Conceptual Gap

Existing studies on environmental law enforcement largely focus on compliance outcomes without explicitly conceptualizing policy coherence as a multidimensional construct encompassing vertical alignment, coordination, and consistency. Many studies treat governance fragmentation as a contextual issue rather than a core explanatory variable. As a result, the causal mechanisms linking

policy coherence to enforcement effectiveness remain underdeveloped. Few studies empirically operationalize policy coherence across governance levels. This limits theoretical clarity and measurement precision. Addressing this gap allows for a more structured understanding of how coherence shapes enforcement effectiveness (Jordan & Lenschow, 2018; Persson, 2020).

Contextual Gap

Most empirical research is concentrated in developed economies with relatively strong institutional capacity. Findings from these contexts may not be applicable to developing countries where governance constraints differ significantly. Studies in developing economies often emphasize capacity deficits while underplaying governance coherence. This limits understanding of how policy alignment can mitigate institutional weaknesses. There is insufficient examination of how contextual factors moderate the coherence–enforcement relationship. Addressing this gap enhances contextual relevance (Andrews et al., 2017).

Geographical Gap

Sub-Saharan Africa remains underrepresented in empirical environmental enforcement research. Existing studies focus more on awareness and capacity than policy coherence. Cross-country comparative analyses are rare. Regional diversity in governance structures is insufficiently examined. This limits evidence-based policymaking. There is a need for focused studies on African governance systems. Addressing this gap strengthens regional relevance (Bennett & Satterfield, 2018; Awortwi & Helmsing, 2020).

CONCLUSION AND RECOMMENDATIONS

Conclusions

This study concludes that policy coherence in multi-level governance is a decisive factor in the effective enforcement of environmental protection laws. Evidence across developed, developing, and Sub-Saharan African contexts demonstrates that aligned policies enhance compliance rates, strengthen enforcement actions, and improve environmental outcomes. Fragmented governance structures undermine enforcement regardless of legal strength. Policy incoherence creates mandate conflicts, reduces accountability, and weakens deterrence. The study highlights that enforcement effectiveness depends not only on legal provisions but also on governance coordination. Multi-level alignment ensures clarity, consistency, and institutional legitimacy. The findings reinforce the importance of integrated governance in environmental protection. Strengthening policy coherence is therefore essential for sustainable environmental outcomes. Without coherence, enforcement remains uneven and ineffective.

Recommendations

Theoretical

This study recommends extending environmental governance theories by explicitly incorporating policy coherence as a central explanatory construct. Future research should model coherence as a dynamic, multi-dimensional variable. Integrating coherence into multi-level governance and institutional theory will enhance explanatory power. This contributes to theory by linking governance structure directly to enforcement outcomes. It advances understanding of governance–enforcement dynamics.

Practical

Practically, environmental enforcement agencies should strengthen intergovernmental coordination mechanisms. Clear communication channels between governance levels should be institutionalized. Capacity alignment across levels should be prioritized. Enforcement mandates must be harmonized. Training programs should emphasize coordinated enforcement. These measures will improve consistency and compliance outcomes.

Policy

From a policy perspective, governments should adopt integrated environmental policy frameworks. Legislative processes should promote alignment across governance levels. Continuous coordination mechanisms should be embedded in policy design. Monitoring systems should assess coherence impacts. Regional harmonization should be encouraged. These reforms will enhance enforcement effectiveness and environmental sustainability.

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