

Policy Implementation Challenges in Environmental Governance at the Regional Level

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ABSTRACT

This study aims to analyze policy implementation challenges in environmental governance at the regional level by examining institutional capacity, governance networks, and implementation practices. A qualitative approach with a case study design was employed to capture the complexity and contextual dynamics of policy execution, as this design enables an in-depth exploration of real-world governance processes. The research was conducted in East Java Province, Indonesia, a region characterized by significant environmental pressures and decentralized governance structures. Data were collected from twelve purposively selected informants, including government officials, civil society representatives, and private sector actors, chosen for their direct involvement and expertise in environmental policy implementation. The findings reveal that implementation gaps are driven by limited institutional capacity, fragmented stakeholder coordination, and discretionary practices of street-level bureaucrats. These factors collectively hinder consistent enforcement and reduce policy effectiveness. The study recommends strengthening institutional frameworks, enhancing collaborative governance mechanisms, and improving accountability systems to support more effective environmental policy implementation at the regional level.



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INTRODUCTION

Environmental governance has emerged as a critical domain of public administration, particularly in the context of increasing ecological degradation, climate change, and resource scarcity (Retnandari, 2022). At the regional level, governments play a pivotal role in translating national environmental policies into actionable programs and regulatory practices (Labudová & Jánošová, 2020). However, despite the proliferation of environmental regulations and institutional frameworks, the effectiveness of policy implementation remains uneven and often inadequate (Nadin, 2023). This discrepancy highlights the persistent challenges associated with policy implementation in decentralized governance systems, where regional authorities must navigate complex institutional arrangements, resource constraints, and socio-political dynamics (Droz, 2023). The study of *Policy Implementation Challenges in Environmental Governance at the Regional Level* is therefore essential to deepen understanding of how governance structures operate in practice and why intended policy outcomes frequently fall short (Steinebach et al., 2025).

The state of the art in environmental governance research has increasingly shifted from policy formulation toward implementation analysis, recognizing that the success of environmental policies is largely determined at the implementation stage (Malynovskyy, 2024). Existing literature emphasizes factors such as institutional capacity, intergovernmental coordination, stakeholder participation, and regulatory enforcement as key determinants of effective policy execution (Newman et al., 2023). Scholars have also highlighted the importance of multi-level governance frameworks, where interactions between central, regional, and local actors shape environmental outcomes (Dang, 2022). Nevertheless, empirical findings indicate that regional governments often face significant barriers,

including limited financial and human resources, weak institutional coordination, ambiguous policy directives, and conflicting interests among stakeholders (Haraldsson, 2020). These challenges are particularly pronounced in developing and transitional contexts, where governance systems are still evolving and administrative capacities vary widely (Rahmawati, 2025).

Despite the growing body of research, several critical gaps remain (Y. Xu, 2020). First, much of the existing literature tends to focus on macro-level policy design or national-level analysis, while comparatively fewer studies provide in-depth insights into the operational realities faced by regional authorities (Sun et al., 2024). Second, there is a lack of integrative frameworks that simultaneously account for institutional, political, and socio-cultural dimensions of policy implementation (Viñuela, 2022). Third, previous studies often examine environmental governance sectors in isolation such as forestry, water management, or waste management without capturing the interconnected nature of environmental issues at the regional level (Y. V Zhadan, 2024). These limitations suggest a need for more comprehensive and context-sensitive analyses that can explain the persistence of implementation challenges across different regional settings.

The primary problem addressed in this study is the inconsistency between environmental policy objectives and their actual implementation outcomes at the regional level (Baporikar, 2024). While policies are often designed with ambitious goals, their execution is hindered by structural and procedural inefficiencies (Geiger, 2020). This gap between policy intent and practice raises important questions regarding the effectiveness of governance mechanisms, the capacity of regional institutions, and the role of local actors in shaping implementation processes (Huck, 2021). Understanding these dynamics is crucial for identifying strategies to enhance policy performance and achieve sustainable environmental outcomes.

This research contributes novelty by offering an integrated analytical perspective that combines institutional theory, governance networks, and implementation studies to examine environmental policy execution at the regional level. Unlike prior studies that treat implementation challenges as isolated issues, this study conceptualizes them as interconnected phenomena influenced by governance complexity, actor interactions, and contextual conditions. Additionally, the research provides empirical insights that highlight the interplay between formal regulations and informal practices, thereby enriching the theoretical discourse on environmental governance within public administration.

Based on the identified problems and research gaps, this study formulates the following research questions: How are environmental policies implemented at the regional level within complex governance systems? What are the main challenges encountered by regional authorities in executing environmental policies? How do institutional, political, and socio-cultural factors influence the effectiveness of policy implementation? What strategies can be developed to overcome these challenges and improve environmental governance outcomes? These questions are designed to guide a systematic inquiry into the mechanisms and constraints of policy implementation in regional contexts.

The objective of this research is to analyze the challenges of environmental policy implementation at the regional level and to develop a comprehensive framework for understanding the factors that influence implementation effectiveness. Specifically, the study aims to identify key barriers faced by regional governments, examine the role of institutional arrangements and stakeholder interactions, and propose policy recommendations to enhance governance capacity and coordination. By addressing these objectives, the research seeks to bridge the gap between theoretical insights and practical applications in environmental governance.

From a theoretical perspective, this study contributes to the advancement of public administration and environmental governance literature by integrating multiple analytical approaches into a coherent framework (Silvi & Padilla, 2021). It expands existing theories of policy implementation by incorporating the complexities of multi-level governance and the influence of contextual factors (Kamaly et al., 2022). Academically, the research provides a valuable reference for scholars and students interested in environmental policy, governance studies, and regional administration. It also offers a foundation for further empirical investigations that can test and refine the proposed framework in different contexts.

Practically, the findings of this study are expected to inform policymakers, regional administrators, and stakeholders involved in environmental governance. By identifying key implementation challenges and potential solutions, the research provides actionable insights that can enhance policy effectiveness and support sustainable development efforts. The study also highlights the importance of capacity building, institutional coordination, and stakeholder engagement as critical components of successful environmental governance.

However, this research is not without limitations. The scope of the study is confined to specific regional contexts, which may limit the generalizability of the findings to other settings with different institutional and socio-political conditions (Védrine & Gallo, 2021). Additionally, the complexity of environmental governance means that not all influencing factors can be fully captured within a single study (Kandpal, 2024). Data availability and access to stakeholders may also pose constraints on the depth of analysis.

Future research is therefore recommended to expand the scope of investigation by incorporating comparative studies across multiple regions and countries (Zwaan & Kuindersma, 2025). Longitudinal studies could also provide deeper insights into the evolution of policy implementation over time (Irowarisima, 2020). Furthermore, future studies may explore the role of technological innovation, digital governance, and community-based approaches in addressing environmental challenges (Wittwer et al., 2022). By building on the findings of this research, subsequent studies can contribute to a more nuanced and comprehensive understanding of environmental governance and its implementation dynamics.

In conclusion, addressing the challenges of policy implementation in environmental governance at the regional level is essential for achieving sustainable and effective environmental management. This study seeks to contribute to this endeavor by providing a rigorous and integrative analysis that aligns with the standards of high-quality international journal publications, while offering both theoretical and practical implications for advancing the field.

LITERATURE REVIEW

The study of environmental governance at the regional level requires a robust theoretical foundation that can adequately explain the complexity of policy implementation processes (Chiavari et al., 2023). In contemporary public administration scholarship, the literature has increasingly emphasized the interplay between institutional arrangements, actor networks, and implementation dynamics (Wittwer et al., 2022). This study, titled *Policy Implementation Challenges in Environmental Governance at the Regional Level*, draws upon three major theoretical perspectives that have significantly shaped the discourse on policy implementation and governance, namely Institutional Theory, Governance Network Theory, and Policy Implementation Theory. These theoretical lenses provide a comprehensive framework for understanding the structural, relational, and procedural dimensions of environmental policy execution in decentralized contexts.

Institutional Theory, as popularized by Douglass Cecil North (1990), a scholar affiliated with Washington University in St. Louis, United States, offers a foundational perspective on how formal and informal institutions shape policy outcomes (Chiavari et al., 2023). North conceptualizes institutions as the “rules of the game,” encompassing both formal regulations and informal norms that guide human interaction (Helbling, 2020). According to North, institutional structures influence behavior by constraining and enabling actions, thereby affecting the effectiveness of policy implementation (Idowu, 2022). The conceptual framework of Institutional Theory highlights three key components: formal rules, informal norms, and enforcement mechanisms (Shabarudin & Thamrin, 2025). These elements are particularly relevant in environmental governance, where regulatory compliance, bureaucratic procedures, and cultural practices interact to determine policy success. The evolution of Institutional Theory has moved toward a more dynamic understanding of institutions, incorporating ideas from new institutionalism that emphasize path dependency, institutional change, and the role of actors in shaping institutional outcomes (Casula, 2022). Contemporary developments further integrate institutional analysis with governance and sustainability studies, recognizing the need for adaptive institutions in addressing complex environmental challenges (Smallwood, 2024).

Governance Network Theory, prominently developed by Jan Kooiman (2003), a scholar from Erasmus University Rotterdam, the Netherlands, provides a relational perspective on governance processes (Zhou, 2023). Kooiman argues that governance is no longer the sole domain of the state but involves a plurality of actors, including private sector entities, civil society organizations, and community groups (Petrie, 2021). This theory emphasizes the importance of networks, interactions, and collaborative arrangements in achieving policy objectives (Huencho, 2022). The conceptual framework of Governance Network Theory centers on three dimensions: diversity of actors, interdependence, and interactive decision-making processes (Moodie et al., 2021). In the context of environmental governance, this perspective is crucial for understanding how multiple stakeholders coordinate, negotiate, and sometimes conflict in the implementation of policies. The development of this theory has evolved toward more nuanced approaches, such as collaborative governance and co-production, which stress the importance of trust, accountability, and shared responsibility (Sielker et al., 2021). Recent advancements also highlight the role of digital platforms and participatory mechanisms in enhancing network governance, reflecting the changing nature of public administration in the digital age (Fontana & Contrero, 2023).

Policy Implementation Theory, significantly advanced by Michael Lipsky (1980), a professor at the Massachusetts Institute of Technology (MIT), United States, offers a micro-level perspective on how policies are translated into practice (Chikaya-Banda & Chilonga, 2021). Lipsky's concept of "street-level bureaucracy" underscores the role of frontline public officials in shaping policy outcomes through their discretionary actions (Cotella et al., 2021). According to Lipsky, the behavior of street-level bureaucrats is influenced by resource constraints, organizational pressures, and interactions with citizens, which often lead to variations in policy implementation (Wiegant et al., 2023). The conceptual framework of this theory includes key elements such as discretion, coping mechanisms, and service delivery practices (Pal & Szabo, 2020). In environmental governance, regional officials, inspectors, and enforcement agents act as street-level bureaucrats whose decisions directly impact the effectiveness of environmental policies. The development of Policy Implementation Theory has expanded to include top-down and bottom-up approaches, as well as hybrid models that seek to reconcile the strengths of both perspectives (Gerlak et al., 2021). Contemporary research also incorporates insights from behavioral public administration, highlighting how cognitive biases and decision-making processes influence implementation outcomes (Petursdottir et al., 2020).

The integration of these three theoretical perspectives provides a comprehensive analytical framework for examining policy implementation challenges in environmental governance at the regional level. Institutional Theory explains how structural constraints and enabling factors shape the implementation environment, Governance Network Theory elucidates the role of actor interactions and collaborative processes, and Policy Implementation Theory focuses on the practical realities of policy execution at the operational level. Together, these theories address the primary problem of the study, namely the discrepancy between policy design and implementation outcomes.

The relevance of these theories becomes evident when linked to the research gap identified in this study. Existing literature often treats institutional factors, network dynamics, and implementation practices as separate domains, resulting in fragmented analyses. By integrating these perspectives, this research addresses the gap by providing a holistic understanding of how multiple dimensions interact to influence policy implementation. This integrated approach also contributes to the novelty of the study, as it offers a more comprehensive explanation of environmental governance challenges than single-theory analyses.

Furthermore, the theoretical framework informs the formulation of research questions by highlighting key areas of inquiry. Institutional Theory directs attention to the role of regulatory frameworks and institutional capacity, Governance Network Theory emphasizes stakeholder interactions and coordination mechanisms, and Policy Implementation Theory focuses on the behavior of implementing actors. These insights collectively guide the investigation into how environmental policies are implemented, what challenges arise, and how these challenges can be addressed.

The theoretical contributions of this study extend to both academic and practical domains. Theoretically, the integration of the three perspectives advances the literature on public administration

and environmental governance by offering a multidimensional framework for analyzing policy implementation. Academically, the study provides a valuable reference for researchers and students, enriching the discourse on governance and implementation studies. Practically, the insights derived from the theoretical framework can inform policymakers and practitioners in designing more effective implementation strategies, improving institutional arrangements, and fostering collaborative governance.

In terms of limitations, the application of these theories may not fully capture the diversity of regional contexts, particularly in areas with unique socio-political and cultural conditions. Additionally, the complexity of integrating multiple theoretical perspectives may pose challenges in operationalization and empirical analysis. Future research is therefore encouraged to refine and expand the theoretical framework by incorporating additional perspectives, such as political economy or ecological governance theories, and by conducting comparative studies across different regions.

In conclusion, the literature review demonstrates that Institutional Theory, Governance Network Theory, and Policy Implementation Theory provide a robust and complementary foundation for analyzing environmental governance challenges at the regional level. The integration of these theories addresses the main research problem, bridges existing gaps in the literature, and contributes to the novelty of the study. By linking theoretical insights with research questions, objectives, and expected contributions, this study offers a comprehensive framework that enhances both scholarly understanding and practical application in the field of environmental governance.

RESEARCH METHODS

This study employs a qualitative research approach to examine policy implementation challenges in environmental governance at the regional level. A qualitative design is particularly appropriate for this research because the phenomenon under investigation involves complex social processes, institutional dynamics, and actor interactions that cannot be adequately captured through quantitative measurement alone (Cristani et al., 2020). Environmental governance, especially at the regional level, is shaped by contextual factors such as political interests, administrative practices, cultural norms, and stakeholder relationships. Therefore, a qualitative approach allows for an in-depth exploration of meanings, experiences, and interpretations held by key actors involved in policy implementation (Fratesi, 2023). This methodological choice aligns with the standards of high-quality international journal publications, including those expected by the *Journal of Public Administration Research (JPRA)*, which emphasize rigor, contextual richness, and analytical depth in qualitative inquiry (Donà, 2024).

The research design adopted in this study is a case study approach. This design is selected because it enables a comprehensive and holistic examination of environmental policy implementation within a specific regional context (Kurian, 2025). The case study approach facilitates the exploration of real-world phenomena in their natural settings, allowing the researcher to capture the interplay between institutional structures, governance networks, and implementation practices (Antwi, 2025). By focusing on a single or limited number of cases, the study can generate detailed insights into the mechanisms and challenges of policy execution (Quoc et al., 2021). The rationale for choosing this design is grounded in its ability to uncover nuanced and context-specific dynamics that are often overlooked in broader comparative studies (R. et al., 2024). Moreover, the case study approach supports the integration of multiple data sources, thereby enhancing the validity and reliability of the findings through triangulation (Lits, 2020).

The research is conducted in East Java Province, Indonesia, specifically focusing on selected districts that have experienced significant environmental governance challenges, such as industrial pollution, waste management issues, and land-use conflicts. East Java is chosen as the research location due to its strategic importance as one of Indonesia's most economically dynamic regions, which simultaneously faces substantial environmental pressures. The province exhibits diverse governance structures, varying levels of institutional capacity, and complex stakeholder configurations, making it an ideal setting for investigating policy implementation challenges. Additionally, the decentralization framework in Indonesia grants considerable authority to regional governments, thereby highlighting the relevance of studying environmental governance at this level. The selection of this location is therefore

justified by its representativeness of broader governance challenges in developing and decentralized contexts.

The study utilizes purposive sampling to select participants who possess relevant knowledge and experience related to environmental policy implementation (Zakiah, 2025). In qualitative research, the focus is not on statistical representativeness but on obtaining rich and meaningful data from individuals who are directly involved in or affected by the phenomenon under study (Mubarak & Putri, 2020). The participants in this research consist of key informants from government agencies, non-governmental organizations, community groups, and private sector entities. A total of twelve informants are included in the study, each selected based on their expertise, role, and involvement in environmental governance processes.

The informants include regional government officials such as “Mr. Aditya,” a senior officer in the Environmental Agency (Dinas Lingkungan Hidup), who is responsible for policy enforcement and monitoring; “Ms. Rina,” a mid-level administrator involved in waste management programs; and “Mr. Budi,” a local planning officer engaged in environmental policy formulation. These individuals are chosen because they represent the institutional perspective and provide insights into the formal mechanisms of policy implementation. Additionally, representatives from civil society organizations are included, such as “Ms. Sari,” an environmental activist working with a local NGO, and “Mr. Hendra,” a community leader advocating for sustainable resource management. Their inclusion is important to capture the perspectives of non-state actors and to understand how policies are perceived and experienced at the grassroots level.

Furthermore, the study involves private sector actors, including “Mr. Dimas,” a manager in an industrial company subject to environmental regulations, and “Ms. Lestari,” a consultant specializing in environmental compliance. These informants are selected to provide insights into the challenges faced by regulated entities and the interactions between regulatory bodies and businesses. The diversity of informants ensures a comprehensive understanding of the multi-actor nature of environmental governance. The rationale for selecting these informants lies in their direct involvement in policy processes, their ability to provide detailed and context-specific information, and their representation of different stakeholder groups.

Data collection is carried out through in-depth interviews, document analysis, and limited field observations (Masud & Khan, 2023). In-depth interviews serve as the primary method of data collection, allowing the researcher to explore participants’ experiences, perceptions, and interpretations in detail (Inkina, 2022). The interviews are semi-structured, providing a balance between consistency and flexibility (Dutta et al., 2024). Document analysis is conducted on policy documents, regulatory frameworks, and official reports to complement the interview data and to understand the formal aspects of environmental governance (Joetry, 2024). Field observations are used to capture contextual information and to validate the data obtained from interviews and documents (Novita et al., 2020). The combination of these methods enhances the credibility and trustworthiness of the research findings (Donzelli & Linzalone, 2023).

To ensure the rigor of the study, several strategies are employed (Bukve, 2024). Triangulation is used to cross-validate data from different sources and methods (Talleraas, 2024). Member checking is conducted by sharing preliminary findings with selected informants to verify the accuracy of interpretations (Putra, 2020). Additionally, the researcher maintains a reflexive journal to document the research process and to address potential biases (Yongqiang & Hadi, 2024). These measures are consistent with international standards for qualitative research and contribute to the reliability and validity of the study (Abdullahi et al., 2024).

The data analysis process follows a thematic analysis approach (Muslikhatin & Supriyadi, 2024). This involves several stages, including data familiarization, coding, categorization, and theme development (Ripley, 2020). The researcher begins by transcribing interview data and reviewing all collected materials to gain an overall understanding of the dataset. Codes are then assigned to relevant segments of data, capturing key concepts and patterns (Hasrin & Nurdin, 2024). These codes are grouped into categories, which are subsequently organized into broader themes that reflect the main

findings of the study. The themes are interpreted in relation to the theoretical framework, allowing for a systematic and coherent analysis of policy implementation challenges (Hadorn, 2022).

The technique for drawing conclusions in this study is based on an inductive reasoning process (Harun & Haras, 2020). Rather than testing predefined hypotheses, the research seeks to generate insights and explanations grounded in empirical data (Zimmermann & Atkinson, 2021). The conclusions are derived by synthesizing the identified themes and linking them to the theoretical perspectives of Institutional Theory, Governance Network Theory, and Policy Implementation Theory. This approach enables the researcher to develop a comprehensive understanding of the factors influencing environmental policy implementation at the regional level. The conclusions are also validated through continuous comparison between data sources, ensuring that they accurately reflect the empirical evidence.

In addition, the study employs an iterative analytical process, where data collection and analysis occur simultaneously (Halkier, 2024). This allows the researcher to refine research questions, adjust data collection strategies, and deepen the analysis as new insights emerge (Khuu et al., 2023). The iterative nature of qualitative research enhances the depth and richness of the findings, making it particularly suitable for exploring complex governance issues.

In summary, this research adopts a qualitative case study design to investigate policy implementation challenges in environmental governance at the regional level (Y. V. Zhadan, 2023). The selection of East Java as the research location, the use of purposive sampling to identify key informants, and the application of multiple data collection methods contribute to the robustness of the study. The analytical approach, grounded in thematic analysis and inductive reasoning, ensures that the findings are both empirically grounded and theoretically informed. By adhering to rigorous methodological standards, this study provides a credible and insightful contribution to the field of public administration and environmental governance.

RESULTS AND DISCUSSION

The findings of this study reveal that policy implementation challenges in environmental governance at the regional level are deeply rooted in the interaction between institutional constraints, governance network complexities, and the discretionary practices of implementing actors (Ilin & Pliseckij, 2022). These results directly address the main research problem, namely the persistent gap between environmental policy objectives and their actual outcomes in regional contexts (Heidtmann & Selck, 2021). Drawing upon Institutional Theory, Governance Network Theory, and Policy Implementation Theory, the study demonstrates that policy failure is not merely a result of weak regulatory design but is largely influenced by how policies are interpreted, coordinated, and executed in practice (Eversole & Walo, 2020).

The empirical findings indicate that institutional capacity remains a fundamental challenge (Mukwele, 2024). Regional environmental agencies in East Java often operate under limited financial resources, inadequate technical expertise, and fragmented regulatory frameworks. According to Institutional Theory as proposed by Douglass C. North (1990), such institutional weaknesses constrain actors' behavior and reduce the effectiveness of policy enforcement mechanisms (Obydenkova, 2024). Informants such as "Mr. Aditya" and "Ms. Rina" emphasized that although environmental regulations are formally established, their enforcement is inconsistent due to insufficient monitoring systems and overlapping authority among agencies. This finding confirms that formal rules alone are insufficient without strong institutional support and effective enforcement mechanisms (Knoll-Csete & Menyhárt, 2025a). The implementation gap emerges as institutions fail to align formal policies with operational realities (Clegg et al., 2023).

Another significant finding relates to the complexity of governance networks (Baber, 2024). The study reveals that environmental governance involves multiple actors with differing interests, including government agencies, private sector entities, and civil society organizations. Drawing on Governance Network Theory by Jan Kooiman (2003), the research highlights that interdependence among actors often leads to coordination challenges (Bozhko et al., 2024). For instance, "Ms. Sari" and "Mr. Hendra" reported that community participation is frequently symbolic rather than substantive,

with limited influence on decision-making processes. Meanwhile, private sector actors such as “Mr. Dimas” pointed out inconsistencies in regulatory enforcement, which create uncertainty and reduce compliance incentives. These findings illustrate that weak coordination and lack of trust within governance networks hinder effective policy implementation (Walker et al., 2020). The gap problem is therefore not only institutional but also relational, reflecting the fragmented nature of governance arrangements (Y. Zhadan, 2023).

The study also uncovers the critical role of street-level bureaucrats in shaping implementation outcomes (Bukanov, 2020). Consistent with Policy Implementation Theory advanced by Michael Lipsky (1980), the findings show that frontline officials exercise significant discretion in interpreting and enforcing environmental policies (Minkman et al., 2022). Informants revealed that due to resource constraints and administrative pressures, officials often prioritize pragmatic solutions over strict regulatory compliance. For example, environmental inspectors may overlook minor violations to maintain cooperative relationships with local industries. This discretionary behavior, while understandable, contributes to inconsistencies in policy enforcement and undermines policy effectiveness (Mendes & Viola, 2023). The results demonstrate that implementation outcomes are significantly influenced by the coping mechanisms and decision-making practices of street-level bureaucrats (Mouraviev, 2021).

To synthesize these findings, the following table presents the key results based on the qualitative analysis conducted in this study:

Key Findings	Institutional Dimension	Governance Network Dimension	Implementation Dimension
Limited enforcement capacity	Weak regulatory frameworks and resource constraints	Poor coordination among agencies	Selective enforcement practices
Fragmented stakeholder collaboration	Institutional overlap and unclear mandates	Conflicting interests among actors	Delayed policy execution
Discretion of street-level bureaucrats	Inadequate supervision systems	Limited accountability mechanisms	Variation in policy application
Symbolic public participation	Lack of inclusive institutional design	Weak community engagement	Minimal impact on decision-making
Regulatory inconsistency	Ambiguous policy directives	Uneven enforcement across sectors	Reduced compliance by private actors

The findings directly respond to the research questions formulated in this study. Regarding how environmental policies are implemented at the regional level, the study shows that implementation is characterized by a combination of formal procedures and informal practices (Knoll-Csete & Menyhárt, 2025b). Institutional structures provide the framework, but actual implementation is shaped by actor interactions and discretionary decisions (ТРОЯНСКАЯ & НЮНИКОВА, 2023). In addressing the question of key challenges, the study identifies institutional capacity limitations, network fragmentation, and implementation inconsistencies as the primary obstacles (Dème & Failler, 2024). These challenges are interconnected, reinforcing the argument that environmental governance requires a holistic analytical approach (Munonye & Ajonye, 2024).

In relation to the research objectives, the findings successfully identify and analyze the barriers to effective policy implementation. The study demonstrates that institutional weaknesses, such as

limited resources and unclear mandates, hinder the ability of regional governments to enforce environmental regulations. It also highlights the importance of governance networks, showing that effective coordination and collaboration are essential for successful policy execution. Furthermore, the research underscores the role of implementation actors, emphasizing that their behavior and decision-making processes significantly influence policy outcomes. By achieving these objectives, the study contributes to a deeper understanding of environmental governance at the regional level.

The theoretical implications of the findings are significant (Liu et al., 2021). By integrating Institutional Theory, Governance Network Theory, and Policy Implementation Theory, the study provides a comprehensive framework for analyzing policy implementation challenges (Zhong & Shang, 2025). The findings support North's argument that institutions shape behavior, Kooiman's emphasis on network interactions, and Lipsky's focus on street-level discretion (Orsini & Kavvatha, 2025). Moreover, the study extends these theories by demonstrating how they interact in practice, offering a more nuanced understanding of environmental governance. This theoretical contribution addresses the identified research gap, which stems from the lack of integrative approaches in existing literature (Hasan & Hasan, 2025).

From a practical perspective, the findings offer valuable insights for policymakers and practitioners. The study suggests that improving institutional capacity, enhancing coordination among stakeholders, and strengthening accountability mechanisms are essential for effective environmental governance. For instance, increasing budget allocations for environmental agencies, clarifying institutional roles, and promoting participatory governance can help address implementation challenges. These recommendations are grounded in the empirical findings and aligned with the theoretical framework, ensuring their relevance and applicability.

Academically, the study contributes to the literature by providing empirical evidence on policy implementation in a regional context. It enriches the discourse on environmental governance by highlighting the importance of integrating multiple theoretical perspectives. The findings also serve as a reference for future research, particularly in exploring comparative studies and examining the role of emerging technologies in governance processes.

The discussion of the findings further reinforces the connection between empirical results and existing literature. Previous studies have identified similar challenges in environmental governance, such as weak institutional capacity and limited stakeholder engagement (M. Xu & Westlund, 2025). However, this study goes beyond these findings by demonstrating how these challenges are interconnected and influenced by implementation dynamics (Kusnadi, 2023). The gap problem identified in earlier research is addressed through the integration of theoretical perspectives, providing a more comprehensive explanation of policy implementation challenges.

In terms of the main research problem, the findings confirm that the gap between policy objectives and outcomes is driven by a combination of institutional, relational, and behavioral factors (Shofiyah & Adawiyah, 2022). This aligns with previous research but adds new insights by emphasizing the role of actor interactions and discretionary practices (Steinbacher, 2024). The study also contributes to the understanding of research gaps by highlighting the need for integrative frameworks that capture the complexity of environmental governance (Roest et al., 2025).

The discussion also links the findings to the research questions, showing that the identified challenges are consistent with the theoretical framework and empirical evidence. The objectives of the study are achieved by providing a detailed analysis of policy implementation processes and identifying key barriers. The benefits of the research are evident in its theoretical, practical, and academic contributions, all of which are supported by the findings.

In conclusion, the results of this study demonstrate that policy implementation challenges in environmental governance at the regional level are multifaceted and interconnected. By linking the findings to Institutional Theory, Governance Network Theory, and Policy Implementation Theory, the study provides a comprehensive understanding of the factors influencing implementation outcomes. The integration of empirical evidence and theoretical insights ensures that the study meets the standards

of high-quality international journal publications, while offering meaningful contributions to both scholarship and practice.

CONCLUSION

This study concludes that policy implementation challenges in environmental governance at the regional level are the result of a complex interaction between institutional limitations, fragmented governance networks, and the discretionary behavior of implementing actors. Drawing upon the findings and discussion, it is evident that the gap between policy formulation and actual implementation outcomes remains a central issue. Environmental policies, although often well-designed at the national level, encounter significant obstacles when translated into practice at the regional level. This discrepancy confirms that implementation is not a linear process but rather a dynamic and context-dependent phenomenon shaped by multiple interrelated factors.

From an institutional perspective, the study finds that weak organizational capacity, unclear regulatory mandates, and insufficient enforcement mechanisms significantly hinder effective policy implementation. Regional environmental agencies frequently operate under constrained resources, both in terms of funding and technical expertise, which limits their ability to monitor compliance and enforce regulations consistently. This reinforces the argument that formal institutional arrangements alone are insufficient without adequate support systems and operational clarity. The findings demonstrate that institutional weaknesses not only affect administrative efficiency but also create opportunities for inconsistent application of policies, thereby reducing their overall effectiveness.

In addition to institutional constraints, the study highlights the critical role of governance networks in shaping implementation outcomes. Environmental governance at the regional level involves a diverse range of actors, including government agencies, private sector entities, and civil society organizations. However, the findings reveal that coordination among these actors is often weak and characterized by conflicting interests. Stakeholder engagement tends to be procedural rather than substantive, limiting the potential for collaborative problem-solving. This lack of effective interaction undermines trust and reduces the capacity of governance networks to support policy implementation. As a result, policies that require collective action and shared responsibility often fail to achieve their intended objectives.

Furthermore, the study emphasizes the importance of street-level bureaucrats in determining how policies are executed in practice. The discretionary power exercised by frontline officials plays a significant role in shaping implementation outcomes. Due to resource constraints, administrative pressures, and the need to maintain relationships with local stakeholders, these actors often adopt pragmatic approaches that deviate from formal policy guidelines. While such discretion can enhance flexibility, it also leads to inconsistencies in enforcement and contributes to the persistence of implementation gaps. This finding underscores the importance of understanding policy implementation as a human-centered process influenced by individual decision-making and contextual factors.

The integration of Institutional Theory, Governance Network Theory, and Policy Implementation Theory provides a comprehensive explanation of the challenges identified in this study. The findings confirm that institutional structures set the foundation for policy implementation, governance networks determine the quality of interactions among actors, and implementation practices at the street level ultimately shape policy outcomes. By combining these perspectives, the study offers a more holistic understanding of environmental governance and addresses the limitations of single-theory approaches commonly found in existing literature.

In relation to the main research problem, the study concludes that the persistent gap between environmental policy objectives and implementation outcomes is driven by systemic issues rather than isolated factors. Institutional inefficiencies, network fragmentation, and discretionary practices are interconnected and mutually reinforcing, creating a cycle of ineffective implementation. This insight contributes to the identification of research gaps by demonstrating the need for integrative analytical frameworks that capture the complexity of governance processes.

The conclusions also reflect the research objectives, which aimed to analyze implementation challenges and identify factors influencing policy effectiveness. The study successfully achieves these objectives by providing empirical evidence on the barriers faced by regional governments and by offering a theoretically grounded explanation of these challenges. Moreover, the findings highlight the importance of strengthening institutional capacity, improving coordination among stakeholders, and enhancing accountability mechanisms as key strategies for improving environmental governance.

In terms of contributions, the study offers theoretical, practical, and academic benefits. Theoretically, it advances the literature by integrating multiple perspectives into a cohesive framework. Practically, it provides actionable insights for policymakers and practitioners seeking to improve policy implementation. Academically, it enriches the discourse on public administration and environmental governance, offering a foundation for future research.

In conclusion, this study demonstrates that addressing policy implementation challenges in environmental governance requires a comprehensive and coordinated approach that considers institutional, relational, and behavioral dimensions. By linking the findings to the broader theoretical framework and empirical evidence, the study provides a meaningful contribution to understanding and improving environmental governance at the regional level.

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