

Integrating Environmental, Economic, and Health Governance: A Conceptual Analysis of Policy Pathways Toward Societal Transformation in the Philippines

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Abstract

Modern forms of governance are under pressure in responding to interconnected issues in society, especially to achieve coherence across the environmental, economic, and health fields. The operations of vital policy frameworks in the Philippines, such as RA 9003, RA 7394, and RA 11223, are confined to overlapping but mostly disconnected systems, which limit their synergistic effects on societal change. This study employed a qualitative, theory-based design, with analysis of PRISMA-based documents and narrative literature, policy documents, and institutional reports (2018-2026). It focuses on the interactions among institutional actors and governance mechanisms within sectors, guided by systems and institutional theory. Results indicate that there are governance mechanisms, which are, however, deployed in an uneven manner based on the limitations of institutional capacity and poor integration. The analysis demonstrates that changes in society are products of dynamic processes of governance enabled by institutional alignment and adaptive processes. A comprehensive conceptual framework is put forward to enhance policy coherence and strengthen sustainable development impacts.

Keywords: Adaptive governance, Consumer protection, Environmental governance, Governance integration, Health governance, Policy coherence, Societal transformation

1. Introduction

The existing problems of global development outline the need for integrated governance approaches. Although there is significant progress under the United Nations Sustainable Development Goals (SDGs), recent evaluations revealed that many nations still struggle to attain policy coherence within various sectors. This is particularly critical in areas concerning environmental sustainability, public health, and socio-economic equity (Nilsson et al., 2018; Biermann et al., 2022). These issues highlight why broken systems of governance have been ineffective in solving complex, and interdependent societal problems.

The Philippine policy frameworks to regulate environmental sustainability, consumer protection, and public health include the Ecological Solid Waste Management Act (RA 9003), the Consumer Act (RA 7394), and the Universal Health Care Act (RA 11223). Although these policies represent sector-specific priorities, their results are interconnected, shaping broader aspects of societal well-being, equity, and sustainable development. Nevertheless, despite these comprehensive frameworks, governance challenges persist. These are fragmented institutional set-ups, weak inter-agency coordination, and inconsistent implementation across LGUs.

Recent research also highlights that governance performance is not only influenced by institutional design but also by the level of coordination, integration, and adaptability across systems. For instance, the Organization for Economic Cooperation and Development (2020) indicates the importance of policy coherence and cross-sectoral alignment in achieving sustainable outcomes, while the World Bank (2025) underscores persistent disparities in governance capacity across institutional contexts. Moreover, emerging studies in governance and sustainability show that complex societal issues require multi-level governance frameworks that transcend sectoral boundaries and allow for adaptive and systemic responses (Janssen and van der Voort, 2020; Beck et al., 2021).

Despite these developments, studies in the Philippine context examine environmental, economic, and health governance independently, limiting understanding of cross-system interactions. Such disintegration reflects the fragmentation observed in practice, thus restraining both theoretical development and policy innovation. Consequently, there remains a critical need for a systems-oriented and theory-driven analysis that captures the dynamic interactions among governance domains.

This paper addresses the gap by discussing governance processes across environmental, economic, and health sectors through an integrated systems and institutional lens. It develops a multi-sectoral conceptual framework that explains how governance mechanisms, institutional actors, and capacity conditions interact to shape societal outcomes and drive transformation. The study contributes by (1) advancing an integrated governance framework, (2) offering systems-oriented analysis of cross-sector interactions, and (3) conceptualizing societal change as a product of coordinated and adaptive governance, emphasizing institutional alignment and policy coherence.

Aim of the Study

This study aimed to theoretically and conceptually examine how governance mechanisms embedded in environmental, consumer protection, and health policies interact to shape pathways toward societal transformation in the Philippines. It sought to develop an integrated conceptual framework that explains cross-sector governance dynamics and identifies strategies for enhancing coherence, effectiveness, and inclusiveness.

Research Questions

1. What governance mechanisms are embedded within environmental, consumer protection, and health policies in the Philippines?
2. How are these mechanisms implemented across institutional levels?
3. How do governance processes interact across environmental, economic, and health systems?
4. What roles do institutions and stakeholders play in shaping governance outcomes?
5. How do governance mechanisms contribute to societal transformation?
6. What conceptual pathways can enhance governance integration and policy effectiveness?



Theoretical Lens

This study is based on three complementary theoretical perspectives. First, systems theory views society as an interconnected and adaptive system composed of environmental, economic, and health subsystems. Changes in one domain influence others, necessitating coordinated governance strategies and feedback (Biermann et al., 2022).

Next, institutional theory emphasizes the role of formal structures, rules, and actor interactions in shaping governance outcomes. Policies are translated into practice through institutions. Governance effectiveness depends on institutional coordination, capacity, and alignment (Peters, 2019).

Lastly, a needs-and rights-based lens positions governance as a means of securing fundamental human rights and promoting societal well-being. Environmental governance supports the right to a sustainable ecosystem, consumer protection ensures fair market participation, and health policies guarantee equitable access to healthcare (WHO, 2025). Collectively, these perspectives advocate an integrated governance approach, where cross-sector coordination, institutional alignment, and adaptive mechanisms are essential for achieving societal transformation.

The paper advances a set of propositions that synthesize the relationships among governance mechanisms, institutional dynamics, and societal outcomes. These conceptualize how cross-sector interactions, capacity conditions, and stakeholder engagement shape governance effectiveness and pathways toward societal transformation. Rather than testing causal relationships empirically, these serve as analytically derived statements that extend existing theory and provide a foundation for future empirical research.

- P1. Greater cross-sectoral integration enhances governance effectiveness and societal outcomes.
- P2. Higher institutional capacity improves the consistency and effectiveness of policy implementation.
- P3. Meaningful stakeholder participation strengthens governance effectiveness and responsiveness.
- P4. Institutional fragmentation weakens the effectiveness of governance mechanisms and outcomes.
- P5. Adaptive governance mechanisms enhance the capacity to achieve sustained societal transformation.

Conceptual Framework

The conceptual framework developed illustrates how societal transformation emerges from the interaction of governance systems across environmental, economic, and health domains. At the input level, sectoral governance systems provide the foundational policy structures. These systems operate through shared governance mechanisms, including regulation, coordination, service delivery, participation, accountability, and access.

These mechanisms are mediated by institutional actors like national agencies, LGUs, private sector entities, civil society, and communities. The effectiveness of governance processes depends on how these actors interact and align their roles (Peters, 2019). However, governance processes are influenced by moderating factors, including institutional fragmentation, weak coordination, inequality in access, limited awareness, and capacity constraints. These challenges shape the extent to which governance mechanisms translate into societal outcomes.

The interaction of these elements produces societal outcomes, including environmental sustainability, consumer protection, improved public health, and social equity. These outcomes contribute to broader societal transformation, characterized by inclusive development, improved quality of life, and sustainable systems. Importantly, the framework incorporates a feedback loop, where outcomes inform policy learning, adaptation, and refinement, enabling continuous improvement in governance systems (Janssen & van der Voort, 2020).

The integrated conceptual framework proves how governance mechanisms across environmental, economic, and health sectors interact through institutional actors and moderating factors to produce societal outcomes and drive societal transformation, with adaptive feedback mechanisms enabling continuous policy improvement.

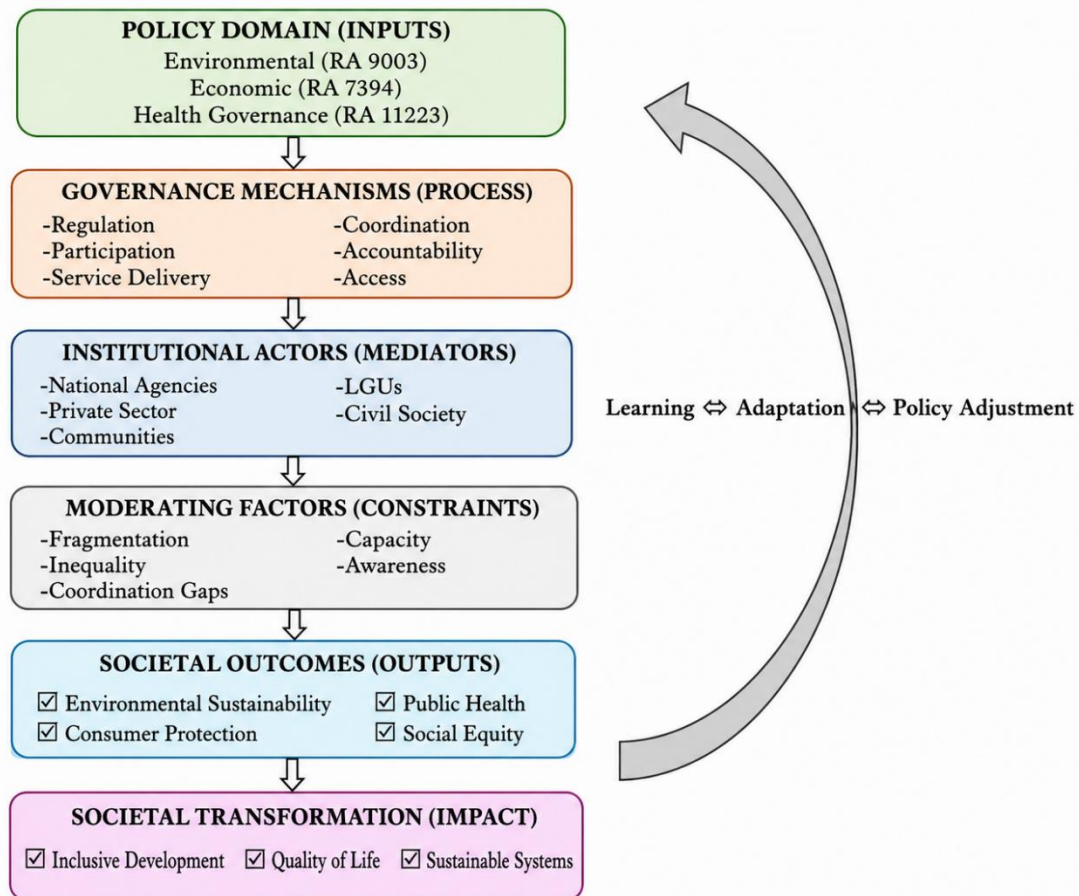


Figure 1. Integrated governance system illustrating the interaction of policy inputs, governance processes, and societal outcomes

The figure 1 model begins with three policy inputs: environmental policy, economic policy, and health governance. These inputs are processed through governance mechanisms such as regulation, participation, coordination, accountability, access, and service delivery. These mechanisms do not operate alone because they are implemented through institutional actors, including national agencies, LGUs, the private sector, civil society, and communities.

The framework also shows that governance outcomes may be affected by constraints such as fragmentation, inequality, coordination gaps, limited capacity, and low awareness. When these constraints are properly addressed, governance mechanisms can produce better societal outcomes, including environmental sustainability, consumer protection, public health, and social equity.

These outcomes are expected to contribute to broader societal transformation, particularly inclusive development, improved quality of life, and sustainable systems. The curved arrow on the right indicates that the process is not linear only. It includes continuous learning, adaptation, and policy adjustment, meaning that policy implementation should be reviewed and improved based on actual outcomes and emerging needs.

2. Review of Related Literature

Governance Systems and Societal Transformation

Societal transformation is shaped by the effectiveness of governance systems operating across environmental, economic, and health sectors. In the Philippines, key policy frameworks such as RA 9003, RA 7394, and RA 11223 establish institutional structures to promote sustainability, consumer welfare, and equitable access to health services. However, the persistence of governance challenges suggests that policy alone is insufficient to achieve transformative outcomes.

Evidence consistently shows that governance effectiveness depends on institutional alignment and coordination. Studies point to coordination gaps between national and local governments, regional disparities in performance, and inefficiencies in regulatory implementation, indicating that governance challenges are both structural and operational (Rebullida & Taguibao, 2023; Campaner et al., 2026; Dumael et al., 2023). Global literature reinforces these findings, emphasizing the importance of policy coherence and cross-sectoral alignment in achieving sustainable outcomes (OECD, 2020; World Bank, 2025; Nilsson et al., 2018).

Collectively, societal transformation depends on the ability of governance systems to function cohesively across sectors and levels, rather than through isolated policy interventions.

Environmental Governance and Waste Management

Environmental governance in the Philippines, particularly RA 9003, illustrates the gap between policy design and implementation. While the legal framework is comprehensive, studies reveal challenges related to weak coordination, limited local capacity, and uneven enforcement (Rebullida & Taguibao, 2023; Maria & Lee, 2021; Campaner et al., 2026).

Operational constraints further complicate implementation. Inefficiencies in waste collection, gaps in awareness programs, and issues with program sustainability underscore logistical and institutional limitations (Yazawa et al., 2025; Andaya et al., 2025). At the community level, awareness does not consistently translate into practice, with evidence showing underutilization of facilities and generally passive participation (Molina & Catan, 2021; Cando III, 2022; Saguban & General, 2024).

These findings suggest that environmental governance challenges are multi-dimensional, involving institutional capacity, operational systems, and behavioral factors. Effective implementation, therefore, requires not only regulatory frameworks but also sustained engagement, enforcement, and capacity development.

Consumer Protection and Economic Governance

Consumer protection, anchored in RA 7394, represents a key component of economic governance in the Philippines. However, recent studies indicate that regulatory frameworks alone are insufficient to ensure effective consumer welfare.

Governance challenges arise from both institutional inefficiencies and informational gaps. On the supply side, regulatory systems face difficulties in responding to increasingly complex and digitalized markets (Dumael et al., 2023). On the demand side, consumers often lack awareness of enforcement mechanisms and redress systems, limiting their ability to exercise rights effectively (Asas, 2024).

Consistent with global literature, effective economic governance requires a combination of regulatory enforcement, transparency, and informed citizen participation (OECD, 2020; World Bank, 2025). Thus, strengthening consumer protection necessitates integrated approaches that combine institutional capacity with public awareness and engagement.

Health Governance and Universal Health Care

The Universal Health Care Act (RA 11223) represents a significant effort to institutionalize equitable health access in the Philippines. Despite this, studies reveal systemic challenges related to disparities in access, resource limitations, and coordination across governance levels (Domingo et al., 2023; Nisperos & Ornos, 2022; Capeding et al., 2025).

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These challenges reflect both structural and resource constraints, including financing gaps, administrative limitations, and uneven service delivery across regions. Global health governance literature similarly emphasizes the importance of integrated systems, equitable resource allocation, and multi-level coordination in achieving universal health coverage (WHO, 2025).

Overall, while the policy framework is comprehensive, its effectiveness is constrained by institutional fragmentation and uneven implementation capacity.

Cross-Sectoral Governance and Integration

A central insight across the literature is the interconnected nature of environmental, economic, and health systems. However, governance approaches remain largely sector-specific, limiting coordination and integration.

Studies reliably demonstrate misalignment across sectors, including weak coordination between environmental and local governance systems and gaps between economic policies and social outcomes (Rebullida & Taguibao, 2023; Dumael et al., 2023; Ertis, 2025). Global evidence further shows that interactions among policy domains can generate both synergies and trade-offs, underscoring the need for integrated governance approaches (Nilsson et al., 2018; OECD, 2020; EC, 2024).

These findings indicate that governance effectiveness depends on moving beyond sectoral silos toward coordinated, multi-level systems capable of addressing complex and interdependent challenges.

Research Gap

Despite the growing body of literature on governance in the Philippines, existing studies remain largely sector-specific, focusing independently on environmental, economic, or health systems. While these studies provide valuable insights, they do not adequately capture the interconnected and systemic nature of governance processes.

Moreover, although international research emphasizes policy coherence and cross-sectoral integration, these perspectives remain underexplored in the Philippines. There is a limited understanding of how governance mechanisms interact across sectors and how these interactions shape societal transformation.

This study addresses this gap by adopting a systems-oriented and theory-driven approach that examines governance dynamics across environmental, economic, and health domains, with a focus on integration, institutional interaction, and adaptive processes.

3. Methodology

This study adopted a qualitative, theory-driven design to develop an integrated conceptual understanding of governance systems across environmental, economic, and health sectors in the Philippines. It relies on systematic document and narrative analysis of scholarly literature, policy documents, and institutional reports. Using a conceptual synthesis approach, the study focuses on integrating governance interactions rather than aggregating empirical findings. PRISMA-informed procedures ensure transparent literature selection without constituting a full systematic review (Clamo et al., 2026).

Document analysis examined key policy frameworks, including RA 9003, RA 7394, and RA 11223, alongside relevant government reports and institutional publications. Narrative analysis complemented this approach by



exploring how governance issues, societal challenges, and policy responses are framed within academic discourse and institutional communications (Marfil, 2026).

Data Sources and Search Strategy

To ensure methodological rigor and transparency, the study followed a PRISMA-informed approach to literature selection. A systematic search was conducted using major academic databases, including Scopus, Web of Science, and Google Scholar. Search strings combined key terms such as “environmental governance,” “consumer protection,” “health governance,” “Philippines,” “policy implementation,” and “societal transformation.”

The search focused on literature published between 2018 and 2026 to capture contemporary governance dynamics. Additional relevant sources were identified through backward and forward citation tracking to enhance coverage and completeness.

Inclusion and Exclusion Criteria

Clear inclusion and exclusion criteria were established to ensure relevance and quality. Included sources comprised: (1) peer-reviewed journal articles, (2) policy documents and institutional reports, and (3) studies explicitly addressing governance mechanisms, institutional dynamics, or policy implementation within the Philippine context.

Excluded sources included non-scholarly materials, studies lacking conceptual or governance relevance, and publications outside the specified timeframe. These criteria ensured that the selected literature aligned with the study’s theoretical and analytical objectives.

PRISMA-Informed Screening Process

The literature selection followed a structured PRISMA-informed workflow comprising identification, screening, eligibility, and inclusion stages. An initial pool of approximately 100 records was identified through database searches. After removing duplicates, 65 records remained and were screened based on titles and abstracts.

Of these, 32 records were excluded due to irrelevance or insufficient alignment with governance and conceptual criteria. The remaining 33 full-text sources were assessed for eligibility and retained for inclusion in the final analysis. These sources included peer-reviewed studies, policy documents, and institutional reports, ensuring a balanced representation of theoretical and applied perspectives.

This systematic filtering process enhances the transparency, replicability, and credibility.

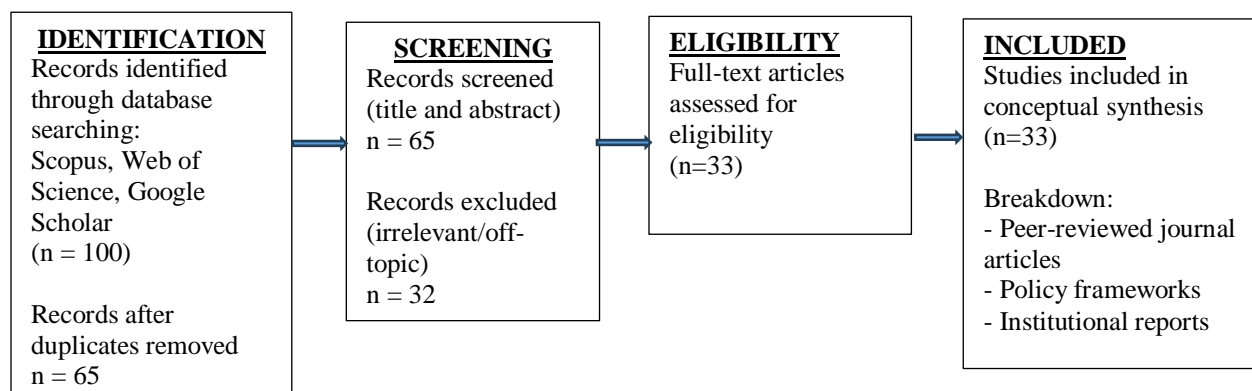


Figure 2. PRISMA Flow Diagram.

Data Analysis and Theoretical Integration

The analytical process in figure 2 followed a three-stage thematic analysis. First, governance-related constructs were identified through open coding, focusing on key dimensions such as regulation, coordination, participation, accountability, and institutional capacity. Next, these codes were grouped into broader themes reflecting governance mechanisms, implementation dynamics, cross-sector interactions, and societal outcomes. Lastly, the themes were synthesized into higher-level conceptual insights that informed the development of the integrated framework.

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To strengthen analytical rigor, a theory-driven coding approach was employed, grounded in systems theory, institutional theory, and a rights-based perspective. These theoretical lenses guided both the interpretation of findings and the structuring of analytical categories. The iterative coding and synthesis process ensured alignment between empirical observations and theoretical constructs.

Trustworthiness and Rigor

The trustworthiness of the analysis was enhanced through methodological transparency, systematic source selection, and theoretical triangulation. The use of multiple data sources, combined with a PRISMA-informed selection process and theory-guided analysis, strengthens the credibility, dependability, and analytical robustness of the study. Through this approach, the study provides a comprehensive and conceptually grounded understanding of governance systems and their role in shaping societal transformation.

4. Results and Discussion

Governance Mechanisms Across Policy Domains

The analysis reveals that governance mechanisms, such as regulation, coordination, participation, and accountability, are always integrated into the environmental, consumer, and health domain policies. These mechanisms demonstrate shared governance frameworks and are prominent in Philippine policies such as the Ecological Solid Waste Management Act of 2000, the Consumer Act of the Philippines, and the Universal Health Care Act of 2019.

Philippine governance studies reveal that these frameworks are comprehensive and institutionally designed, but their effectiveness greatly relies on implementation procedures (Rebullida & Taguibao, 2023; Brual-Basilan, 2025). Although governance mechanisms are well-defined at the policy level, their implementation remains sector-specific. For instance, environmental governance focuses on regulatory compliance, consumer protection in market monitoring, and health governance on service provision.

Moreover, the operationalization of these mechanisms varies across sectors and localities. As noted by Ertis (2025), even well-designed policies like RA 9003 depend on enforcement, public compliance, and institutional commitment to achieve intended outcomes. Indeed, Philippine policies are well-established but remain sector-bound and inconsistently operationalized, limiting their transformative potential.

From a systems theory perspective, shared governance mechanisms reflect the interconnected nature of policy subsystems. However, their sector-bound implementation indicates weak integration and limited coordination across domains. This fragmentation constrains system coherence and reduces the capacity to achieve sustained, transformative outcomes. Overall, these findings support P4 and suggest that the integrative benefits proposed in P1 remain under-realized.



Implementation of Governance Mechanisms

Governance mechanisms are operationalized through institutional actors, particularly national government agencies and local government units (LGUs), which play a central role in policy execution. Within the Philippine decentralized governance system, LGUs serve as primary implementers of national policies, especially in areas such as environmental management and service delivery.

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However, Philippine studies consistently demonstrate that LGUs differ markedly in their ability to implement policies effectively. Variations in institutional capacity, financial resources, technical expertise, and administrative efficiency contribute to uneven policy execution (Campaner et al., 2026; Maria & Lee, 2021). Empirical evidence further reinforces these observations. LGUs have not fully complied with the Ecological Solid Waste Management Act of 2000 due to weak enforcement, inadequate monitoring systems, and limited technical capacity. Similarly, Yazawa et al. (2025) found that waste collection systems remain inefficient, particularly in remote barangays. Additional studies indicate that while awareness of waste management policies exists, gaps persist in information dissemination, program sustainability, and actual compliance (Andaya et al., 2025; Catiil & Daud, 2025).

At the broader governance level, Dumael et al. (2023) highlight that the Philippine government continues to face challenges in policy implementation, particularly in balancing regulatory functions, economic priorities, and service delivery demands. Philippine government systems are largely shaped by local institutional capacity, resource availability, and administrative effectiveness, leading to inconsistent policy outcomes across regions.

Analyzed using institutional theory, findings indicate that differences in organizational capacity, administrative norms, and resource availability across LGUs shape variations in policy implementation. Inconsistent enforcement and service delivery reflect misalignment between institutional arrangements and policy objectives, suggesting that governance effectiveness is mediated by institutional strength. This reinforces P2, highlighting that effective implementation depends on the capacity and alignment of institutional systems.

Cross-Sectoral Governance Interactions

The findings emphasize the systemic interlinkages among environmental, economic, and health governance in the Philippines. Environmental degradation, like improper waste management, has direct implications for public health, while economic conditions influence both environmental behavior and access to essential services. These interdependencies reflect a systems-oriented reality in which governance outcomes emerge from interactions across multiple policy domains.

Despite these linkages, governance processes remain fragmented across sectors. Policies are implemented independently, limiting opportunities for coordination, integration, and synergy. This fragmentation is a recurring feature in the country, where sectoral approaches continue to dominate policy implementation (Rebullida & Taguibao, 2023). Meanwhile, environmental governance studies indicate that waste management challenges persist despite the comprehensive legal frameworks (Coracero et al., 2021). Similarly, analyses of RA 9003 show that governance issues exist across sectors and levels of government. These issues include weak enforcement, inconsistent compliance, and limited coordination (Guisansana et al., 2020).

Limited cross-sectoral integration weakens policy effectiveness and co-benefits, with governance systems remaining fragmented despite structural linkages. Interpreted through a systems perspective, environmental, economic, and health domains operate in parallel rather than as an integrated whole, constraining coordination and the ability to address complex, cross-cutting challenges. These findings support P1 while confirming P4, highlighting that institutional fragmentation undermines coordinated and effective policy outcomes.

Role of Stakeholders in Governance

Stakeholders play a vital role in shaping governance processes and influencing policy outcomes. These comprise government agencies, LGUs, the private sector, civil society organizations, and communities. Their involvement is



essential for effective implementation, monitoring, and accountability across environmental, economic, and health sectors.

Studies highlight that public awareness and engagement are key determinants of policy effectiveness. In fact, Asas (2024) found that while consumers recognize their rights, they lack sufficient knowledge of enforcement mechanisms and the capacity to exercise these rights effectively.

Community-level evidence further reinforces this pattern. Molina and Catan (2021) revealed that while individuals are aware of waste management practices, knowledge of relevant policies remains low. Similarly, although households exhibit positive attitudes toward waste management, gaps persist in awareness and utilization of available facilities (Cando III, 2022).

Meanwhile, stakeholder participation remains limited and uneven. Community participation is often passive, particularly in policy formulation and implementation, with engagement largely limited to compliance rather than active decision-making (Saguban and General, 2024).

Indeed, community participation is critical for effective waste management but is often constrained by limited awareness, insufficient engagement strategies, and weak institutional support (Maria & Lee, 2021). Stakeholder participation is formally recognized in policy frameworks but remains weak, passive, and uneven in practice, thereby limiting governance effectiveness and accountability.

From a governance participation perspective, passive, uneven stakeholder engagement reflects compliance-driven participation rather than co-production, weakening accountability and responsiveness. This participation deficit constrains governance effectiveness, supporting P3 and underscoring the need for more inclusive and participatory governance processes.

Societal Outcomes of Governance Systems

The Philippine governance structure generates measurable yet uneven outcomes across environmental, economic, and health sectors. Environmental policies contribute to localized improvements in waste management, consumer protection mechanisms enhance market regulation, and health policies expand access to services.

However, these outcomes remain inconsistent across regions and population groups, reflecting imbalances in institutional capacity and resource distribution. Health governance studies highlight persistent inequities in access to services, particularly among vulnerable populations (Domingo et al., 2023; Nisperos & Ornos, 2022). Similarly, environmental governance outcomes vary depending on local capacity, enforcement effectiveness, and community participation (Campaner et al., 2026).

These inconsistencies are revealed by Carmen (2023) after identifying discrepancies in perceptions of policy implementation among residents, barangay officials, and government actors, suggesting uneven experiences of governance outcomes. Although LGUs may comply with structural requirements such as planning and organization, challenges related to enforcement, resource limitations, and community cooperation continue to hinder effective outcomes (Dalugdog, 2021).

Overall, governance outcomes are uneven and localized, reflecting partial societal transformation where sectoral improvements do not translate into integrated and equitable change. From a transformation perspective, this indicates misalignment across institutions, capacities, and governance processes, limiting systemic impact. These support P4 and suggest that without integration and capacity alignment, the transformative potential outlined in P1 and P2 remains futile.



Pathways to Integrated and Adaptive Governance

Integrated and adaptive governance are critical pathways for improving policy effectiveness and achieving societal transformation. Integration involves aligning policies, institutions, and stakeholders across environmental, economic, and health sectors. However, adaptability refers to the capacity of governance systems to learn, adjust, and respond to evolving conditions.

Literature emphasizes the need for stronger institutional coordination, capacity-building, and policy alignment to address complex and interrelated societal challenges (Dumael et al., 2023). Effective governance requires not only clear policy frameworks but also the ability of institutions to work collaboratively across sectors and levels of government.

At the sectoral level, specific governance gaps further highlight the need for integration and adaptability. In the health sector, Capeding et al. (2025) underscore the need for addressing financing and resource constraints to improve policy implementation and service delivery. In environmental governance, strengthening local capacity, improving public awareness, and promoting meaningful community participation are essential for achieving sustainable outcomes (Rebullida & Taguibao, 2023; Yazawa et al., 2025; Andaya et al., 2025).

Effective governance depends on continuous feedback and institutional responsiveness. This is intensified by adaptive governance, which allows systems to evolve in response to changing conditions and stakeholder inputs. In the country, integrating coordination, participation, and capacity-building with adaptive processes is essential for enhancing resilience and long-term policy effectiveness. These strongly support P5 while reinforcing the combined importance of P1, P2, and P3 in achieving sustained and transformative governance outcomes.

To synthesize the relationships between empirical findings, theoretical interpretations, and policy implications, Table 1 presents an integrated framework that links governance patterns with their corresponding theoretical explanations and actionable policy recommendations. This underscores how observed governance dynamics inform strategies to improve policy effectiveness and advance societal transformation.

Table 1. Summary of findings, theoretical insights, and policy implications derived from the analysis.

Key Findings	Supporting Evidence	Theoretical Interpretation	Policy Implications
Fragmented governance across sectors	Rebullida & Taguibao (2023); Dumael et al. (2023)	Institutional misalignment (Institutional Theory)	Strengthen inter-agency coordination mechanisms
Uneven implementation across LGUs	Campaner et al. (2026); Maria & Lee (2021)	Capacity-driven governance variation	Enhance LGU technical and financial capacity
Weak stakeholder participation	Molina & Catan (2021); Asas (2024)	Participation deficit (Governance Theory)	Promote community engagement and awareness programs
Sectoral silos limit policy effectiveness	Coracero et al. (2021); Guisansana et al. (2020)	Systems fragmentation (Systems Theory)	Integrate cross-sector policy platforms
Partial and localized societal outcomes	Domingo et al. (2023); Carmen (2023)	Uneven transformation dynamics	Target equity-focused policy interventions
Need for adaptive governance	Yazawa et al. (2025); Andaya et al. (2025)	Feedback-driven systems (Adaptive Governance)	Institutionalize monitoring, learning, and policy adjustment



Theoretical Contribution

This contributes to Philippine governance and sustainability literature by showing that societal transformation emerges from the dynamic interaction of governance systems across environmental, economic, and health domains, rather than isolated policy interventions. It reveals the critical roles of institutional capacity, integration, and stakeholder participation. Such roles emphasize that governance effectiveness depends on coordination, adaptability, and responsiveness. By adopting a multi-sectoral perspective, this advances a more holistic understanding of governance dynamics and underscores the importance of cross-sectoral alignment in achieving sustainable and equitable transformation.

5. Policy and Societal Implications

The findings indicate that the Philippines is in urgent need of governance reforms to address persistent structural and institutional challenges, as policy effectiveness remains constrained by fragmentation, uneven capacity, and weak coordination. These gaps contribute to disparities in environmental health, economic security, and access to essential services, disproportionately affecting vulnerable groups and communities. To address these issues, reforms should prioritize strengthened national–local coordination, enhanced institutional capacity, active stakeholder participation, and integrated cross-sector policies. Advancing these measures is essential for achieving equitable, inclusive, and sustainable societal outcomes.

6. Conclusion

This study examined how governance mechanisms across environmental, economic, and health sectors shape societal outcomes in the Philippines. The findings show that fragmented governance systems limit policy effectiveness despite comprehensive frameworks, due to weak coordination, uneven institutional capacity, and limited cross-sector integration. Governance systems operate as interconnected yet insufficiently aligned subsystems, resulting in partial rather than transformative outcomes.

Effective governance depends on the interaction among institutions, stakeholders, and contextual conditions, with institutional capacity, participation, and coordination as critical factors. Adaptive governance further supports learning and resilience. The study advances a systems-oriented perspective through an integrated conceptual framework. Strengthening coordination, capacity, participation, and policy integration is essential for achieving sustainable and equitable societal transformation.

Practical Recommendations

To enhance governance effectiveness and support societal transformation in the Philippines, several key actions are recommended. These include establishing integrated governance platforms to improve coordination across environmental, economic, and health sectors, and strengthening inter-agency coordination through clearly defined roles, shared indicators, and aligned implementation processes. Efforts should also focus on enhancing local government capacity through targeted funding, technical support, and improved monitoring systems. Promoting meaningful stakeholder participation is essential to ensure active engagement in policy design, implementation, and evaluation, while improved data integration and monitoring systems can support transparency and evidence-based decision-making. In addition, aligning policies across sectors is critical to address interdependencies and maximize co-benefits. Finally, institutionalizing adaptive governance through feedback mechanisms and continuous policy learning, alongside prioritizing equity in service delivery, will help reduce disparities and strengthen inclusive outcomes.

Credit Authorship Contribution

The primary author contributed to all aspects of the study, including conceptualization, methodology, formal analysis, investigation, data curation, and writing. The remaining three authors contributed to the literature search.

Ethical Statement

This study does not involve human participants, animals, or primary data collection. It is based solely on the analysis of publicly available literature, policy documents, and institutional reports. Therefore, ethical approval was not required.

Declaration of Interests

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The author declares that there are no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability

The data supporting the findings of this study are derived from publicly available sources, including peer-reviewed journal articles, policy documents, and institutional reports. All relevant sources are cited within the manuscript. No new data were generated or analyzed in this study.

AI Usage Disclosure

Artificial intelligence (AI) tools were used in a limited and supportive capacity during the preparation of this manuscript. Specifically, AI was employed to assist in identifying potential research topics, developing preliminary outlines, and refining language and grammar. The author assumes full responsibility for the accuracy, integrity, and originality of the work.

References

Andaya, E., Antonio, M., Espina, M., Ignacio, J. R., Rebuya, M. A., & Cabaddu, J. A. (2025). Implementation of R.A. 9003 (Ecological Solid Waste Management Act) in Barangay Gen. T. de Leon, Valenzuela City: An assessment. *Journal of Governance and Public Administration*, 2(3), 633–644. <https://doi.org/10.70248/jogapa.v2i3.2187>

Asas, MA. (2024). Review on the Implementation of the Consumer Act of the Philippines: Insights to Its Plausible Future. *Int. J. Manag. Account.* 6(4), 71-84. <https://doi.org/10.34104/ijma.024.071084>

Beck, S., Jasanoff, S., Stirling, A., & Polzin, C. (2021). *The governance of sociotechnical transformations to sustainability.* Current Opinion in Environmental Sustainability, 49, 143–152. <https://doi.org/10.1016/j.cosust.2021.04.010>

Biermann, F., Hickmann, T., Sénit, CA. *et al.* Scientific evidence on the political impact of the Sustainable Development Goals. *Nat Sustain* 5, 795–800 (2022). <https://doi.org/10.1038/s41893-022-00909-5>

Brual-Basilan, Dpa, R. (2025). Exploring the Administrative Implications of Developmental Models on Good Governance in the Philippines. *Scientific and Social Research*, 7(11), 66–76. <https://doi.org/10.26689/ssr.v7i11.12946>

Campaner, D., Marcos, A., & Moreno, F. (2026). Environmental governance across local government units in the Zamboanga Peninsula Region, Philippines: A comparative analysis of policy implementation and impact in the Anthropocene. <https://doi.org/10.13140/RG.2.2.36417.01121>

Cando III, E. N. (2022). Knowledge, Attitude and Practices on Solid Waste Management Among Households in the Urban Communities of Butuan City, Philippines. *Journal of Environmental Science and Management*, 25(1), 1. https://doi.org/10.47125/jesam/2022_1/01

Capeding, T. P. J., Pepito, V. C., Lim, L. T., Legaspi, R. S., Ong, M. M., Loreche, A. M., & Dayrit, M. M. (2025). Financing and Resource Constraints Hindering the Optimal Implementation of the Universal Health Care Act in the Philippines. *Health Systems & Reform*, 11(1), 2596404. <https://doi.org/10.1080/23288604.2025.2596404>



Carmen, J. V. S. (2023). Implementing the Ecological Solid Waste Management Act of 2000: Challenges and opportunities in a Philippine municipality. *EPRA International Journal of Multidisciplinary Research (IJMR)*, 9(10). <https://doi.org/10.36713/epra14476>

Catiil, M. A. A., & Daud, Y. P. (2025). Solid Waste Management Practices in Gingoog City: An Assessment of Compliance with the Republic Act 9003. *Journal of Exceptional Multidisciplinary Research*, 2(1), 63-70. <https://doi.org/10.69739/jemr.v2i1.558>

Clamo, L. P., Guiral, R. E., Crisostomo, A. S. I., & Legion, M. C. (2026). Policy integration and fragmentation in child-centered development in the Philippines: A document and narrative analysis of juvenile justice, school feeding, and basic education access. *International Journal of Educational Contemporary Explorations*, 3(1), 94–115. <https://doi.org/10.69481/EXLX1382>

Coracero, E. E., Gallego, R. J., Frago, K. J. M., & Gonzales, R. J. R. (2021). A Long-Standing Problem: A Review on the Solid Waste Management in the Philippines. *Indonesian Journal of Social and Environmental Issues (IJSEI)*, 2(3), 213–220. <https://doi.org/10.47540/ijsei.v2i3.144>

Dalugdog, W. (2021). Best practices in the implementation and enforcement of R.A. 9003 (known as Ecological Solid Waste Management Act of 2000) by the local government units (LGUs) in Calabarzon. *Academia Letters*. <https://doi.org/10.20935/AL3382>

Del Rosario, M. M. (2023). Assessing the Compliance of a Coastal Municipality to the Ecological Solid Waste Management Act of 2000 (RA 9003). *Applied Environmental Research*. <https://doi.org/10.35762/AER.2023021>

Domingo, E. O., Paterno, R. P. P., Lorenzo, F. M. E., Acuin, C. S., Garcia, F. B., Jr., Faraon, E. J. A., Faraon, A. R. G., Marcelo, A. B., Perez, J. A. A., III, Ramos, R. P., & Silva, M. E. C. (2023). Equity in health and the new normal: The Philippine Universal Health Care law. *Transactions of the National Academy of Science and Technology Philippines*, 45, 1–20. <https://doi.org/10.57043/transnastphl.2023.3496>

Dumael, E., Toraldo, A., Vigonte, F. G., & Abante, M. V. (2023, May 18). Role of the government in the economy: Challenges and opportunities of the Philippine government. *SSRN*. <https://doi.org/10.2139/ssrn.4453908>

Ertis, M. (2025). Article Review: Republic Act No. 9003 - The Ecological Solid Waste Management Act of 2000. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.5422754>

European Commission, EC. (2024). Cross-sectoral integration. https://portico.urban-initiative.eu/sites/default/files/2024-05/Chapter%204%20-%20Cross-sectoral%20Integration_0.pdf

Guisansana, L. G. G., Mag, J. D. R., Nabing, C. B. P., & Festijo, F. (2020). Solid waste management: The enactment of ecological solid waste management act of 2000 (RA 9003) in addressing the waste crisis. *European Journal of Molecular and Clinical Medicine*, 7(2), 4186-4196.

Janssen, M., & van der Voort, H. (2020). Agile and adaptive governance in crisis response: Lessons from the COVID-19 pandemic. *International Journal of Information Management*, 55, 102180. <https://doi.org/10.1016/j.ijinfomgt.2020.102180>

Maria, C. D. L. S. N., & Young-Suk, L. E. E. (2021). Environmental governance practices of local government units on waste policy implementation. *The Journal of Industrial Distribution & Business*, 12(5), 17-25.

Marfil, A. A. R. (2026). The interrelationship between family support and student motivation: Implications for academic achievement. *International Journal of Educational Contemporary Explorations*, 3(1), 61–75. <https://doi.org/10.69481/CRPXS734>

Molina, R. A., & Catan, I. (2021). Solid Waste Management Awareness and Practices among Senior High School Students in a State College in Zamboanga City, Philippines. *Aquademia*, 5(1), ep21001. <https://doi.org/10.21601/aquademia/9579>



Nilsson, M., Chisholm, E., Griggs, D. *et al.* Mapping interactions between the sustainable development goals: lessons learned and ways forward. *Sustain Sci* **13**, 1489–1503 (2018). <https://doi.org/10.1007/s11625-018-0604-z>

Nisperos, G. A., & Ornos, E. D. B. (2022). The Philippine Universal Health Care Law: A Differing View. *Social Medicine*, *15*(2), 96–105. <https://doi.org/10.71164/socialmedicine.v15i2.2022.1405>

Organization for Economic Cooperation and Development, OECD. (2020). Taking an integrated approach to the promotion of transparency, integrity, accountability and stakeholder participation: Towards an open government strategy. [https://one.oecd.org/document/GOV/PGC/OG\(2020\)4/FINAL/en/pdf](https://one.oecd.org/document/GOV/PGC/OG(2020)4/FINAL/en/pdf)

Peters, B. G. (2022). Institutional theory. In C. Ansell & J. Torfing (Eds.), *Handbook on theories of governance* (pp. 323–335). Edward Elgar Publishing. <https://doi.org/10.4337/9781800371972.00039>

Republic Act No. 9003 (2000). Ecological Solid Waste Management Act. <https://pepp.emb.gov.ph/wp-content/uploads/2016/06/RA-9003-Ecological-Solid-Waste-Management-Act-of-2000.pdf>

Republic Act No. 7394 (1992). Consumer Act of the Philippines. https://aseanconsumer.org/file/pdf_file/Republic%20Act%20No.%207394%20The%20Consumer%20Act%20of%201992.pdf

Republic Act No. 11223 (2019). Universal Health Care Act. https://lawphil.net/statutes/repacts/ra2019/ra_11223_2019.html

Rebullida, M. L. G., & Taguibao, J. G. (2023). Urban Environmental Governance and Sustainable Development: Empowering National and Local Governments for Solid Waste Management in the Philippines. In T. S. E. Tadem & M. E. L. Atienza (Eds.), *A Better Metro Manila?* (pp. 371–406). Springer Nature Singapore. https://doi.org/10.1007/978-981-19-7804-3_12

Saguban, L. E., & General, J. R. D. (2024). Dichotomy of solid waste management: Practices and challenges. <https://doi.org/10.5281/zenodo.13118475>

World Bank. (2025). The Worldwide Governance Indicators: Revised Methodology for Measuring Governance Using Perception Data. <https://www.worldbank.org/content/dam/sites/govindicators/doc/The%20Worldwide%20Governance%20Indicators%202025%20Methodology%20Revision.pdf>

World Health Organization, WHO. (2025). A global health strategy for 2025–2028: Executive summary. <https://www.who.int/publications/i/item/B09277>

Yazawa, T., Tablada, K. N., Baring, K. M., Alojipan, K. L., & Watanabe, M. (2025). Act and reality of the ecological solid waste management act on barangay-level waste management in Barbaza, the Philippines. *Discover Sustainability*, *6*(1), 1060. <https://doi.org/10.1007/s43621-025-01965-5>

