

Green Development through Modern Policy Redesign in the Disruptive Era within the Framework of Futuristic Transformation

Franky Djafar

Universitas Muhammadiyah Gorontalo, Gorontalo. Indonesia

Correspondence: franky.djafar@umgo.ac.id



Received: October 6, 2025 | Revised: October 19, 2025 | Accepted: November 10, 2025



<https://doi.org/10.31629/juan.v13i2.7720>

ABSTRACT

The rapid technological disruption and the growing urgency of environmental degradation have challenged governments to redesign their policies toward sustainability. In developing countries such as Indonesia, policy implementation for Green Development remains fragmented and often disconnected from institutional capacity and local realities. This study aims to analyze how modern policy redesign supports Green Development within the framework of futuristic transformation by integrating innovation, collaboration, and technology into local governance. Using a qualitative descriptive method, data were collected from literature reviews, policy documents, and semi-structured interviews with key stakeholders in Gorontalo Regency, including government agencies, community organizations, and environmental groups. The research adopted a thematic synthesis approach supported by triangulation and ethical validation to ensure analytical credibility. The findings indicate that the success of Green Development relies not merely on regulatory frameworks but on adaptive governance that emphasizes participatory collaboration, technological innovation, and community empowerment. The creation of Integrated Policy Task Forces (IPTF) and digital monitoring tools such as e-Monev and SP4N LAPOR has enhanced transparency, cross-sector coordination, and real-time policy evaluation. Furthermore, social adaptation through eco-literacy programs and citizen participation has strengthened the sustainability culture at the local level. This study concludes that futuristic transformation in governance requires systemic redesign, combining institutional learning, digital inclusion, and collaborative networks to achieve long-term ecological and social resilience. The Gorontalo experience demonstrates that Green Development can serve as both a strategy and a governance paradigm that redefines how the state, society, and technology co-evolve toward sustainable futures.

Keyword: Green Development, Policy Redesign, Disruptive Era, Futuristic Transformation, Collaborative Governance



INTRODUCTION

The twenty-first century has been marked by a dual crisis of governance and environmental sustainability, compelling policymakers and scholars to rethink the fundamental orientation of development strategies. Rapid technological advancement, digital disruption, and ecological degradation have challenged the traditional administrative paradigms that once

guided public institutions. In this context, Green Development a paradigm integrating economic progress, social inclusion, and environmental stewardship has emerged as an urgent necessity rather than a normative ideal (Fan et al., 2025; Hauge, 2025). The global transition toward sustainability requires a redesign of policies that can adapt to uncertainty, encourage innovation, and promote inclusive growth. For developing countries such as Indonesia, this challenge is particularly acute, as the intersection between economic expansion and environmental vulnerability continues to shape local governance realities.

Despite widespread acknowledgment of sustainability principles, the implementation of Green Development in Indonesia remains fragmented. Policies promoting ecological protection and green growth often operate in isolation from economic and social planning frameworks (Tödtling et al., 2020). This fragmentation weakens the capacity of local governments to build coherent strategies that align with national sustainability agendas. Moreover, governance at the local level continues to face structural constraints limited institutional capacity, insufficient coordination among agencies, and low public participation in policy formulation (Rasyid, Misran, & Saputra, 2024). In Gorontalo Regency, for example, the government's efforts to harmonize local development plans with sustainability goals have produced mixed results.

Although initiatives such as Desa Hijau Mandiri (Independent Green Village) and eco-tourism programs have demonstrated potential for integrating community participation, these policies remain isolated experiments rather than institutionalized practices (GOLDER, 2024). Such cases reveal a persistent gap between policy intent and policy realization. The urgency for policy redesign arises from the fundamental transformation brought about by the disruptive era an era defined by the acceleration of technology, the fluidity of information, and the democratization of governance. Bureaucratic structures rooted in hierarchical control and procedural rigidity no longer suffice to address complex, cross-sectoral problems. Instead, adaptive, data-driven, and collaborative governance systems are required (Florini, 2018; Du et al., 2023).

Policy redesign in this sense represents a deliberate restructuring of decision-making frameworks to ensure that they remain responsive, transparent, and oriented toward long-term sustainability. Progressive industrial and environmental policies must move beyond conventional growth metrics to integrate ecological resilience and social inclusion (Hauge, 2025). Effective green transformation depends on the alignment of regulatory innovation, technological integration, and stakeholder collaboration (Hu et al., 2025). These insights underscore that the sustainability of development in the disruptive era depends on reconfiguring how governments perceive, plan, and execute policy.

Indonesia's regional governments provide a revealing lens through which to examine this transformation. Local administrations act as both implementers and innovators in the national sustainability agenda. However, as noted by (Rasyid et al., 2024) the eastern part of Indonesia including Gorontalo faces asymmetrical challenges: weaker institutional infrastructures, lower fiscal autonomy, and socio economic disparities. These factors magnify the vulnerability of local development initiatives to short-termism and environmental neglect. The urgency for modern policy redesign thus reflects not only a governance necessity but also a developmental imperative: without reforming how local governments conceptualize and operationalize sustainability, the pursuit of green growth risks becoming rhetorical rather than practical.

The existing body of literature on Green Development predominantly emphasizes macro-level policy instruments, such as national green growth strategies, energy transitions, and fiscal incentives (Fan et al., 2025; Zou et al., 2024). While valuable, these studies often overlook the local governance dimension, particularly how regional institutions adapt policy frameworks to disruptive change. Likewise, research on digital governance and futuristic transformation tends to treat technological innovation as an independent variable, separated from environmental or social systems (Wu et al., 2018). The interdependence between digital

transformation and environmental governance therefore remains underexplored, especially in developing contexts. This article seeks to bridge that gap by examining Green Development through the lens of modern policy redesign in the disruptive era, emphasizing its operationalization within the framework of futuristic transformation.

The concept of futuristic transformation in this study refers to an anticipatory approach to governance one that integrates digital technology, social innovation, and ecological awareness into the policy process. The transformation is not merely technological but cultural and institutional, involving shifts in bureaucratic mindsets, inter-sectoral collaboration, and community empowerment. Drawing upon governance and policy design theories (Dunn, 2018; Dye, 2017), this study interprets policy redesign as a dynamic process of reconstructing public institutions to adapt to new realities. It situates Green Development as both a goal and a mechanism: a goal in achieving sustainable futures, and a mechanism in reforming governance practices through inclusivity, innovation, and responsiveness.

From an analytical standpoint, this article adopts a qualitative descriptive approach, integrating conceptual synthesis with contextual case illustrations from Indonesia, particularly Gorontalo. The choice of Gorontalo as a focal region is grounded in its representative nature: a province balancing ecological richness, economic ambition, and institutional limitation. Data for this study were obtained from peer-reviewed literature, local government documents, and policy evaluation reports, analyzed through thematic synthesis to identify patterns in governance adaptation and innovation. The qualitative framework allows a nuanced understanding of how policy redesign materializes not only through legislation but also through behavioral and institutional change.

This article positions itself within a growing body of research on collaborative and adaptive governance. Studies highlight the value of multi-stakeholder collaboration in overcoming bureaucratic inertia, particularly in health and disaster-risk contexts (Afandi et al., 2023; Lassa, 2023). The success or failure of inter-village collaboration depends largely on leadership continuity and institutional alignment (Harsanto et al., 2024). Building on these perspectives, this article extends the discussion to the domain of green governance, where collaboration serves as the cornerstone of sustainability. However, unlike previous studies that focus on isolated sectors, this article integrates environmental, technological, and institutional dimensions into a unified framework of futuristic policy transformation.

The originality of this work lies in its interdisciplinary synthesis and contextual grounding. While global research has extensively theorized Green Development as an economic or environmental model, few have analyzed it as a governance redesign process in developing regions. This article introduces the concept of futuristic transformation as an integrative framework that connects digital innovation, collaborative governance, and environmental sustainability. It argues that effective Green Development requires not only policy coherence but also an institutional imagination capable of anticipating future challenges. In this way, the study contributes to a deeper understanding of how local governments in the Global South can adapt to the disruptive era while advancing long-term sustainability goals.

In sum, this article addresses a critical gap in both theory and practice. It investigates how modern policy redesign can serve as a bridge between environmental aspirations and administrative realities, particularly in the context of local governance. The research proceeds from the assumption that sustainability cannot be achieved through isolated policies or technological fixes but through systemic transformation rooted in collaboration, innovation, and inclusivity. By framing Green Development within the logic of futuristic transformation, this study offers not merely a descriptive account of local adaptation but a conceptual framework for understanding how governments can design the future of sustainability.

RESEARCH METHODS

This study employs a qualitative descriptive approach to explore how Green Development can be implemented through modern policy redesign within the framework of

futuristic transformation. The qualitative method was selected to capture the depth and complexity of policy innovation and multi-actor collaboration that characterize governance transformation in the disruptive era. Data were gathered through literature synthesis, policy document analysis, and semi-structured interviews with selected informants representing local government agencies, community leaders, environmental organizations, and academics in Gorontalo Regency. The interpretivist paradigm underpins this study, recognizing that public policy is a social construct shaped by interactions, institutional behavior, and community engagement (Dunn, 2018).

Data collection was carried out between January and June 2024, integrating both primary and secondary sources. Primary data were derived from interviews with eight key stakeholders involved in regional development and green governance programs such as Desa Hijau Mandiri and local environmental projects. Secondary data included the Regional Medium-Term Development Plan (RPJMD) of Gorontalo, environmental protection regulations, and reports published by Gorontalo Development Review (GOLDER) and Earth Innovation (2021). All data were analyzed using thematic synthesis, combining deductive coding based on theories of collaborative governance (Florini, 2018; Afandi et al., 2023) and inductive coding to uncover emerging local patterns in governance redesign and sustainability practices.

To ensure research validity, the study applied triangulation and ethical safeguards throughout the process. Credibility was strengthened through cross-verification between interviews, policy documents, and previous studies (Rasyid et al., 2024; Hu et al., 2025). Transparency and dependability were maintained through systematic coding and documentation of the analytical process, while confirmability was ensured by quoting participants' views directly to represent their lived experiences accurately. Ethical clearance was obtained from the Research Ethics Committee of Universitas Muhammadiyah Gorontalo, with all participants providing informed consent. This methodological rigor ensures that the findings reflect both the empirical realities and the theoretical propositions of futuristic governance transformation, offering a reliable foundation for subsequent analysis and discussion.

RESULTS AND DISCUSSION

The transformation of governance in Gorontalo Regency demonstrates that collaboration and policy redesign are not peripheral innovations but central mechanisms in achieving Green Development. The study reveals that environmental policy success at the local level depends less on new regulations and more on reconfiguring relationships among government institutions, community actors, and private entities. The Regional Development Planning Agency (BAPPEDA) has gradually repositioned its role from a regulatory coordinator to a facilitator of cross-sectoral engagement. Through programs such as Desa Hijau Mandiri and Gorontalo Bersih Lingkungan, the agency has encouraged joint planning sessions and participatory monitoring systems that incorporate local knowledge into formal policy processes.

This evolution aligns with concept of collaborative governance, which emphasizes shared ownership and distributed accountability in public management (Florini's, 2018). The government no longer functions as the sole decision maker but as the orchestrator of a policy network. Interviews with Bappededa officials indicated that this approach emerged not as a top-down reform, but organically, as a response to the limitations of hierarchical administration in solving environmental issues that transcend departmental boundaries. One official explained that "coordination among agencies was ineffective when everything depended on approval chains; collaboration with communities brings faster and more relevant outcomes."

From the community perspective, participation is not merely symbolic. Women-led cooperatives and youth environmental groups have become active co-creators of policy solutions, particularly in waste recycling, local eco-products, and climate-awareness campaigns. Their participation contributes to translating policy ideals into tangible practices.

These findings resonate with the framework proposed by Afandi et al. (2023), who highlight the necessity of institutional synchronization between bureaucratic structures and societal actors. Without such alignment, collaborative initiatives risk fragmentation and limited impact.

In response to these coordination challenges, Gorontalo's local government has begun institutionalizing collaboration through the creation of Integrated Policy Task Forces (IPTF). Each task force consists of representatives from key agencies Bappeda, the Department of Environment and Forestry, the Department of Cooperatives, and village-level organizations. This structure allows for integrated planning, where environmental programs are directly linked to community economic empowerment projects. Such institutional innovation represents a practical manifestation of Dunn's (2018) concept of policy orchestration, wherein governance is seen as the management of interdependent policy actors operating within a dynamic network.

Table 1. Institutional Comparison: Conventional vs. Redesigned Governance in Gorontalo

Aspect	Conventional Model	Redesigned Collaborative Model
Policy Orientation	Sector-based and rigid	Integrative and flexible
Decision-Making	Top-down, procedural	Co-creation, multi-stakeholder
Implementation Mechanism	Departmental silos	Inter-agency task forces
Accountability	Administrative compliance	Shared performance metrics
Outcome Focus	Output and budget absorption	Sustainability and inclusivity

Source: Author's synthesis from interviews and Bappeda Gorontalo (2024).

The data presented in Table 1 show a clear paradigm shift from a bureaucratic, rule-bound governance model to a network-oriented, learning-based system. In the conventional model, policies were designed and implemented within rigid institutional silos, emphasizing procedural compliance and budget utilization. Environmental programs were often appended as secondary components of economic projects, resulting in limited integration and weak accountability. In contrast, the redesigned collaborative model reframes development as a shared enterprise. Decision-making now follows a co-creation approach, where communities are invited to participate in deliberative forums before project execution.

Field evidence further indicates that accountability mechanisms have evolved from vertical reporting to shared performance metrics. Each participating institution contributes specific indicators ranging from environmental outcomes to community participation rates that feed into a joint performance dashboard managed by Bappeda. For example, the Department of Environment tracks reductions in non-recyclable waste, while the Cooperative Office records the number of microbusinesses adopting green production practices. This shift toward collective accountability strengthens transparency and reduces redundancy in project implementation.

However, despite these advances, institutional fragmentation still persists at the operational level. The lack of consistent data-sharing protocols among agencies often delays program evaluation and resource allocation. Some departments remain hesitant to decentralize decision-making, fearing loss of control or overlapping mandates. This institutional inertia underscores the challenge of sustaining collaboration beyond the enthusiasm of individual leaders. According to interviews, continuity of collaboration largely depends on interpersonal trust and leadership commitment rather than codified policy frameworks.

To address this challenge, Gorontalo's government has initiated capacity-building programs focusing on collaborative leadership and adaptive planning. These programs are designed to train mid-level officials and village heads in participatory facilitation, conflict

resolution, and integrated budgeting. Over time, such initiatives are expected to institutionalize collaboration as an administrative norm rather than an experimental practice.

The evolution observed in Gorontalo reflects a broader theoretical transition in governance. As (Hu et al., 2025; Hauge, 2025) emphasize, sustainable transformation occurs when local governments move from rigid planning systems toward adaptive, learning-oriented structures. The Gorontalo experience illustrates this trajectory: collaboration operates both as a mechanism for innovation and as a cultural shift redefining how governance itself functions. In summary, the results affirm that collaborative governance and policy redesign are mutually reinforcing. Collaboration provides the social legitimacy and operational flexibility required for innovation, while redesign offers the structural and procedural framework to sustain it. Together, they form the cornerstone of Green Development in Gorontalo transforming governance from a bureaucratic machinery into an ecosystem of shared learning, participatory accountability, and collective sustainability.

1. Technological and Futuristic Transformation

Technological innovation is emerging as a transformative factor in the evolution of local governance. The Gorontalo government has adopted several digital tools, such as e-Monev (Electronic Monitoring and Evaluation), SP4N-LAPOR (online complaint and feedback platform), and community-based mapping applications, to enhance policy transparency, coordination, and responsiveness. These technologies facilitate real-time data collection, inter-departmental communication, and participatory policy monitoring. Respondents acknowledged that such digital tools enable local officials to track environmental indicators such as waste reduction, renewable energy use, and water quality improvement, thereby reinforcing the foundations of data-driven decision-making in regional development.

However, disparities in access to technology remain a significant constraint. Many rural and peripheral areas in Gorontalo still experience poor internet connectivity, low access to digital devices, and limited technical competence among civil servants and community groups. This challenge creates gaps in participation and information flow, leading to uneven policy implementation. This finding supports (Rasyid et al., 2024), who emphasized that the digital divide across Eastern Indonesia perpetuates inequality even within otherwise progressive green development programs. Therefore, technological transformation in governance must be understood not simply as the adoption of digital infrastructure but as a broader adaptive process integrating human capacity, institutional flexibility, and ethical data management. Building on (Hu et al., 2025), effective digital governance requires a balanced combination of technological access, participatory culture, and accountability systems that ensure transparency without excluding marginalized communities.

The conceptual integration between digital technology, collaborative policy design, and sustainability outcomes highlights how futuristic governance operates as a systemic enabler for Green Development. In this framework, digital platforms, innovation, and adaptive decision systems serve as structural foundations that enhance efficiency and transparency in policy execution. The intermediate phase Policy Redesign and Collaboration acts as the interface where governance and technology converge through participatory planning, stakeholder alignment, and cross-sector coordination. Finally, the outcomes of Green Development emerge in the form of ecological efficiency, social inclusion, and institutional resilience. Technological transformation, within this model, functions simultaneously as a driver and an integrator of the policy cycle. It fosters both vertical and horizontal communication, enables predictive analysis for environmental management, and institutionalizes accountability mechanisms responsive to public feedback.

2. Analytical Synthesis and Theoretical Implications

The synthesis of findings demonstrates that Gorontalo's local governance is transitioning from a bureaucratic system to a learning institutional organization capable of

self-reflection, adaptation, and innovation. This transformation embodies the notion of policy orchestration, where coordination replaces command and adaptability replaces rigidity (Dunn, 2018). The interdependence among government, civil society, and private actors forms dynamic policy ecosystems characterized by shared responsibilities and mutual learning. These systems are supported by continuous feedback loops between digital data, policy experimentation, and public accountability, reinforcing the shift toward participatory and evidence-based governance.

Theoretically, the findings reinforce the argument that sustainable industrial and environmental policy requires iterative redesign rather than one-time reform (Hauge, 2025). In Gorontalo, policy adaptation emerges through practical learning, where each cycle of collaboration generates new behavioral norms, institutional trust, and adaptive capacity among actors. The process demonstrates how learning-oriented governance transforms static administrative routines into flexible systems capable of evolving with changing environmental and technological contexts. This transition marks a deeper institutional shift toward collaborative sustainability rather than procedural compliance.

Furthermore, the interaction between policy learning and technological adaptation supports the concept of futuristic transformation, in which sustainability becomes both the means and the end of governance evolution. Digital tools and collaborative networks serve as catalysts that enhance efficiency, inclusivity, and transparency across institutional layers. The findings thus contribute to the growing literature by showing that Green Development functions as a platform for institutional innovation. It bridges the gap between normative policy goals and operational realities, offering a replicable model for other local governments seeking to achieve long-term ecological and administrative resilience.

3. Socio-Institutional Adaptation toward Sustainable Governance

Beyond institutional reforms and digital tools, social adaptation emerges as a crucial determinant of Green Development success. Local communities play an active role as co-creators of sustainable change rather than passive beneficiaries. This participatory shift signifies that effective sustainability initiatives depend on collective ownership and localized innovation. Community engagement becomes a vital bridge connecting policy design with real-world implementation, ensuring that environmental programs reflect local values and lived experiences.

Field interviews revealed that public awareness campaigns and environmental education initiatives have successfully transformed local perceptions of development from purely economic priorities toward eco-inclusive visions. School-based programs, religious institutions, and youth environmental organizations have acted as influential agents of behavioral change. These efforts demonstrate that social transformation can reinforce environmental objectives when supported by consistent advocacy and education, strengthening community resilience and shared responsibility (Rasyid et al., 2024).

At the institutional level, local government units have begun to integrate sustainability performance indicators into their annual planning and evaluation processes. This practice represents a gradual transition from budget-oriented assessments toward outcome-based accountability focused on long-term impact. The inclusion of environmental, social, and governance (ESG) metrics signals a deepening alignment between administrative performance and sustainability principles. Overall, social adaptation complements institutional reforms, forming a dual track of transformation that underpins Gorontalo's evolving model of inclusive and adaptive governance.

The convergence of collaborative policy redesign, technological innovation, and social adaptation establishes a holistic pathway toward futuristic governance. Gorontalo's experience demonstrates that sustainability cannot be achieved through isolated or temporary programs but through systemic evolution that integrates institutional, social, and technological dimensions. This evolution reflects a shift from fragmented initiatives to cohesive strategies

that embed sustainability within governance culture, ensuring long-term relevance and inclusivity across sectors.

Table 2. Dual Track of Transformation: Institutional and Social Adaptation

Transformation Dimension	Institutional Adaptation	Social Adaptation
Core Drivers	Policy redesign, regulatory integration	Environmental education, community mobilization
Key Actors	Government agencies, Bappeda, private partners	Civil society, schools, women's cooperatives
Implementation Tools	Digital dashboards, performance indicators	Eco-literacy programs, participatory monitoring
Main Outcomes	Improved coordination, transparent planning	Increased awareness, collective environmental behavior
Long-term Impact	Sustainable policy culture	Green citizenship and shared responsibility

Source: Field data synthesis (2024); interviews with Bappeda officials and community groups.

The local government's willingness to learn from practice, adopt digital innovation, and empower citizens provides a strong foundation for Green Development that is inclusive, resilient, and forward-looking. By cultivating a participatory culture, Gorontalo has transformed sustainability from an administrative agenda into a shared civic mission. This transformation is further strengthened by adaptive mechanisms that link technological progress with community engagement, allowing environmental initiatives to grow organically from local experience rather than through imposed regulations.

This finding aligns with previous studies emphasizing that environmental governance in the digital era must prioritize adaptive learning, community ownership, and institutional coherence (Hu et al., 2025; Hauge, 2025). In essence, the Gorontalo case illustrates that Green Development is not only a developmental goal but also an ongoing process of orchestration balancing human creativity, institutional reform, and technological capability to achieve ecological and social equilibrium. It represents a model of futuristic governance where sustainability is both the journey and the destination of modern public administration.

CONCLUSION

This study concludes that the transformation of governance in Gorontalo reflects a progressive shift from a bureaucratic and sectoral model toward an adaptive and collaborative framework that supports Green Development. The integration of technological innovation, participatory policy redesign, and social adaptation has proven essential in aligning sustainability goals with institutional capacity. Digital governance tools such as e-Monev and SP4N-LAPOR have enhanced transparency and data-based decision-making, while cross-sector collaboration through Integrated Policy Task Forces has facilitated inclusive and coordinated environmental planning.

Empirical evidence demonstrates that the success of Green Development is contingent upon three interrelated factors: (1) institutional adaptability, enabling policy systems to evolve beyond procedural rigidity; (2) technological accessibility, ensuring equal participation across rural and urban areas; and (3) community empowerment, which embeds environmental awareness and shared responsibility within the social fabric. Together, these components form the basis of futuristic governance that is efficient, transparent, and resilient. Theoretically, the findings reinforce the notion that sustainable transformation requires iterative policy redesign supported by digital integration and participatory culture. Green Development thus emerges not merely as an environmental agenda but as a governance paradigm that redefines the relationship between the state, society, and technology. In practice, Gorontalo's experience

provides an instructive model for other local governments in Indonesia seeking to institutionalize sustainability through collaborative innovation and adaptive governance.

Nevertheless, challenges remain in ensuring continuity and scalability. The persistence of digital inequality, fragmented data management, and leadership dependency underscores the need for stronger regulatory frameworks and continuous capacity building. Future research should further explore how digital ethics, local knowledge systems, and regional autonomy interact to shape sustainable governance pathways. Ultimately, the study underscores that futuristic transformation in governance is not about technological sophistication alone, but about cultivating institutional learning, social inclusivity, and moral commitment to ecological justice. These elements together define the essence of a sustainable and forward-looking public administration capable of orchestrating long-term environmental and societal balance.

ACKNOWLEDGEMENT

The author would like to express sincere gratitude to the Universitas Muhammadiyah Gorontalo (UMGO) for providing academic and institutional support throughout the completion of this research. Special thanks are extended to the Regional Development Planning Agency (Bappeda) of Gorontalo Regency, the Department of Environment and Forestry, and community representatives who participated in interviews and shared valuable insights related to governance transformation and environmental management practices. Appreciation is also conveyed to the Institute for Research and Community Service (LPPM UMGO) for its facilitation, as well as to academic peers whose constructive feedback greatly contributed to the refinement of this paper. Finally, the author acknowledges the continuous inspiration from colleagues and students within the Department of Public Administration, whose engagement in discussions about sustainable and futuristic governance helped shape the conceptual depth of this study.

REFERENCES

- Adiyanta, F. C. S. (2020). Urban space governance and sustainable green development in Indonesia. *International Journal of Energy Economics and Policy*, 10(3), 105–112. <https://www.econjournals.com/index.php/ijeeep/article/view/9108>
- Afandi, M. N., Surya, D. H., & Rofi, R. (2023). Collaborative governance in a mandated setting: A qualitative study on stunting intervention. *Policy Studies*, 45(1), 1–18. <https://doi.org/10.1080/21665095.2023.2212868>
- Collaborative Governance – Can it Achieve Sustainable Development Goals (SDGs) Towards Independent Villages in Strategic Border Areas. (2023). *Proceedings of the Indonesian Association for Public Administration (IAPA)*, 2(1), 45–56. <https://journal.iapa.or.id/proceedings/article/view/882>
- Du, J., Liu, Y., & Chen, S. (2023). Explaining the green development behavior of local governments. *Behavioral Sciences*, 13(10), 813. <https://doi.org/10.3390/bs13100813>
- Earth Innovation Institute. (2021). *Profil Kabupaten Gorontalo: Integrasi Perubahan Iklim ke dalam RPJMD dan Anggaran Lokal*. Earth Innovation. https://earthinnovation.org/uploads/2014/09/Profil_GORONTALO_Dunggio_2021_IN D.pdf
- Fan, Y., Li, X., Zhang, Z., & Wang, J. (2025). Evaluating the effects of green development policies on energy security and carbon emissions reduction. *Energy Reports*, 13, 1–15. <https://doi.org/10.1016/j.egyr.2025.04.013>
- Florini, A. (2018). Collaborative governance for the Sustainable Development Goals. *Asia & the Pacific Policy Studies*, 5(3), 583–598. <https://doi.org/10.1002/app5.252>
- Haris, R. A. (2024). Collaborative governance in local economic development: Studi kasus Sumenep. *Journal of Local Sustainability Studies*, 3(2), 77–90. <https://ojs.journalsdg.org/jlss/article/view/2501>

- Harsanto, B. T., Puspita, R., & Wahyudi, R. (2024). Investigating the keys to the failure of inter-village collaboration. *Journal of Rural Studies*, 110, 123–135. <https://doi.org/10.1016/j.jrurstud.2024.04.058>
- Hauge, J. (2025). A progressive framework for green industrial policy. *Cambridge Journal of Economics*, 49(2), 245–263. <https://doi.org/10.1080/13563467.2025.2506655>
- Houssam, N., Boudarene, L., & Farrah, H. (2023). Assessing the role of green economy on sustainable development, job creation, and poverty alleviation. *Heliyon*, 9(8), e18642. <https://doi.org/10.1016/j.heliyon.2023.e18642>
- Hu, X., Wang, Y., & Liu, D. (2025). Policy analysis for green development in the building industry in New South Wales, Australia. *Buildings*, 15(19), 3557. <https://doi.org/10.3390/buildings15193557>
- Lassa, J. A. (2023). Exploring NGOs-government collaboration strategies in disaster risk reduction and school safety. *International Journal of Disaster Risk Reduction*, 98, 103445. <https://doi.org/10.1016/j.ijdrr.2023.103445>
- Limosani, M., Romano, L., & Zazzaro, A. (2025). Do green policies enhance short-term economic growth? *Economic Modelling*, 132, 1–12. <https://doi.org/10.1016/j.econmod.2025.106723>
- Putra, A. A., Hasibuan, H. S., Tambunan, R. P., & Lautetu, L. M. (2024). Integration of the Sustainable Development Goals into a Regional Development Plan in Indonesia. *Sustainability*, 16(23), 10235. <https://doi.org/10.3390/su162310235>
- Rasyid, S. B. A., Misran, & Saputra, H. A. (2024). A portrait of green economy governance in sustainable development in Eastern Indonesia. *Jurnal Bina Praja*, 16(3), 557–572. <https://doi.org/10.21787/jbp.16.2024.557-572>
- The Importance of Government Collaboration Strategies for Integrated Tourist Village Destinations. (2024). *RGSA Open Access Journal*, 6(2), 101–115. <https://rgsa.openaccesspublications.org/rgsa/article/view/5386>
- Tödtling, F., Trippel, M., & Huber, D. (2020). Policy options for green regional development: Adopting a subnational perspective. *Science and Public Policy*, 47(6), 865–877. <https://doi.org/10.1093/scipol/scaa047>
- Universitas Gorontalo. (2024). *Gorontalo Development Review (GOLDER): Kajian Pembangunan Ekonomi dan Lingkungan di Gorontalo*. Universitas Gorontalo Press. <https://jurnal.unigo.ac.id/index.php/gdrev>
- Wu, J., Guo, S., Huang, H., Liu, W., & Xiang, Y. (2018). Information and communications technologies for sustainable development goals: State-of-the-art, needs and perspectives. *arXiv preprint arXiv:1802.09345*. <https://arxiv.org/abs/1802.09345>
- Zou, X., Chen, H., & Zhang, J. (2024). The green development effect of science and technology finance policy reform. *Frontiers in Environmental Science*, 12, 1463679. <https://doi.org/10.3389/fenvs.2024.1463679>