



Collaborative Governance in Sustaining Road Infrastructure Development: Addressing Land Acquisition Challenges

Hasnaini Hawazi Harmi, Rizki Syafril*

Universitas Negeri Padang, Indonesia

Email : rizkisyafri@fis.unp.ac.id

DOI: <https://doi.org/10.61987/jemr.v5i4.2786>

ABSTRACT

Keywords:

Collaborative
Governance; Land
Acquisition;
Infrastructure
Development

*Corresponding Author

This study aims to analyze the implementation of collaborative governance in supporting the continuation of strategic road infrastructure development, particularly in addressing land acquisition challenges involving multiple stakeholders. A qualitative descriptive approach was employed. Data were collected through interviews, observations, and document analysis, and were analyzed using the Miles and Huberman interactive model. Data validity was ensured through source triangulation. The findings indicate that the collaborative governance process has been implemented through stakeholder dialogue, coordination, trust building, commitment, shared understanding, and intermediate collaborative outcomes. However, its implementation remains suboptimal due to limited public participation in decision-making, insufficient integration of inter-organizational coordination, the absence of formal agreements among stakeholders, and persistent administrative and land ownership issues affecting the land acquisition process. The study implies that strengthening institutional coordination, expanding meaningful public participation, and establishing formal collaborative mechanisms are essential to improving the effectiveness of collaborative governance and ensuring the successful implementation of strategic infrastructure development projects.

Article History:

Received: April 2026; Revised: May 2026; Accepted: June 2026

Please cite this article in APA style as:

Harmi, H. H., Syafril, R. (2026). Collaborative Governance in Sustaining Road Infrastructure Development: Addressing Land Acquisition Challenges. *Journal of Educational Management Research*, 5(4), 4917-4932.

INTRODUCTION

Infrastructure development has become one of the primary drivers of sustainable economic growth, regional connectivity, and equitable public service delivery (Williams et al., 2021). Among various types of infrastructure, road networks play a strategic role because they facilitate the movement of people, goods, and services while reducing regional disparities and supporting social inclusion (Bianchi et al., 2021; Prasad et al., 2024). Effective road infrastructure not only improves accessibility but also stimulates investment, tourism, and local

economic activities, thereby strengthening regional competitiveness. In Indonesia, the importance of road infrastructure is reinforced through Law Number 2 of 2022 concerning Roads, which emphasizes that road development should encompass planning, construction, preservation, and meaningful public participation throughout the development process. This policy reflects the recognition that infrastructure development is no longer solely a governmental responsibility but requires collaboration among public institutions, communities, and other stakeholders (Tassadiq, 2024). Therefore, successful road development depends on the ability of multiple actors to establish collaborative relationships that balance public interests, technical requirements, and socio-economic considerations, ultimately ensuring that infrastructure investments generate sustainable and inclusive development outcomes (Firmansyah et al., 2025).

The increasing complexity of infrastructure projects has made collaboration among stakeholders an essential prerequisite for achieving effective and sustainable development (Ameyaw & De Vries, 2021). Large-scale infrastructure initiatives frequently involve multiple government agencies, local communities, private actors, and regulatory institutions whose interests, responsibilities, and expectations often differ. Without effective collaboration, infrastructure projects are vulnerable to delays, escalating costs, legal disputes, and declining public trust. Collaborative governance has consequently emerged as an important public administration approach for coordinating diverse stakeholders, promoting transparent decision-making, and facilitating consensus-building in complex policy environments (Zheng et al., 2024). Rather than relying exclusively on hierarchical government authority, collaborative governance encourages shared responsibility, mutual trust, and continuous dialogue to resolve conflicts and improve policy implementation. Consequently, understanding how collaborative governance operates within infrastructure development is not only academically significant but also practically important for governments seeking to improve project effectiveness, strengthen stakeholder engagement, and minimize implementation barriers that frequently arise in strategic public infrastructure projects.

Despite its strategic importance, infrastructure development continues to encounter significant implementation challenges, particularly during land acquisition processes. Land acquisition often becomes the most critical stage because it involves legal ownership, administrative verification, compensation mechanisms, environmental considerations, and competing interests among affected stakeholders. These complexities frequently generate disputes between government institutions and local communities, resulting in prolonged negotiations and delays in project implementation. Such conditions indicate that technical planning alone is insufficient to ensure successful infrastructure

delivery (Tohet et al., 2025). Instead, institutional coordination, public participation, and collaborative decision-making become equally important determinants of project success. Although Indonesian regulations encourage community involvement in infrastructure development, practical implementation often reveals limited participation, fragmented inter-agency coordination, and inconsistent communication among stakeholders (Dai & Azhar, 2024). These circumstances demonstrate that infrastructure challenges are increasingly institutional rather than purely technical, highlighting the need to examine collaborative governance processes capable of integrating diverse interests while maintaining accountability, transparency, and public legitimacy throughout infrastructure development.

These challenges are evident in the continuation of the Purus–Bandara Internasional Minangkabau (BIM) Road development project, which has experienced prolonged delays despite its strategic role in improving regional accessibility and supporting economic development. According to the Regional Spatial Plan of West Sumatra Province (Mukhlis & Perdana, 2022), the road constitutes part of the primary collector road network intended to strengthen connectivity between urban centers and surrounding development areas. Nevertheless, project implementation has been constrained by unresolved land acquisition issues, overlapping land ownership claims, discrepancies in land measurement resulting from coastal abrasion, post-disaster planning adjustments, and the absence of agreement regarding compensation between government authorities and affected communities. These interconnected problems illustrate that project continuation depends not only on engineering and financial capacity but also on effective collaboration among government agencies, landowners, and other relevant stakeholders. Consequently, this case provides an important empirical context for examining how collaborative governance influences the sustainability of strategic road infrastructure development (Parker, 2024).

Previous studies have consistently emphasized that collaborative governance has become an effective governance approach for addressing the complexity of infrastructure development involving multiple stakeholders. Collaboration among government institutions, private organizations, and local communities has been recognized as an essential mechanism for resolving conflicts of interest and facilitating land acquisition processes in strategic infrastructure projects (Adigeh & Abebe, 2024). Similarly, collaborative governance has been shown to enhance infrastructure implementation by improving stakeholder coordination, strengthening communication, and encouraging broader participation throughout the policy process (De Maria et al., 2023). These studies collectively indicate that infrastructure development is

no longer determined solely by governmental capacity but also by the quality of interaction among diverse actors with different interests and responsibilities. Their findings provide empirical evidence that collaborative governance contributes to reducing implementation barriers and increasing policy effectiveness through consensus-building and shared commitment. Consequently, the existing literature establishes collaborative governance as an important theoretical and practical framework for understanding how complex infrastructure projects can be managed more effectively through cross-sector collaboration.

Although previous studies have demonstrated the significance of collaborative governance in infrastructure development, several important limitations remain. Existing research generally examines collaborative governance from a broad perspective of infrastructure management without thoroughly investigating the collaborative process throughout project continuation after implementation barriers emerge. Furthermore, limited attention has been devoted to understanding how stakeholder dialogue, trust building, commitment, shared understanding, and intermediate collaborative outcomes interact during prolonged land acquisition disputes. The institutional dynamics among government agencies, affected communities, and other stakeholders in sustaining infrastructure development also remain insufficiently explored. Consequently, the mechanisms through which collaborative governance influences project continuity under conditions of administrative uncertainty and conflicting land ownership have not been comprehensively explained (Dokyi et al., 2025). This research therefore addresses these limitations by focusing on the collaborative governance process during the continuation of road infrastructure development experiencing persistent land acquisition challenges (Yu et al., 2024), thereby extending existing knowledge beyond the general discussion of collaborative governance implementation in infrastructure projects.

This study offers a different perspective by examining collaborative governance as a dynamic process rather than merely an administrative arrangement among stakeholders. The analysis focuses on how dialogue, trust, commitment, shared understanding, and collaborative outcomes evolve throughout the continuation of infrastructure development when land acquisition problems remain unresolved. Instead of emphasizing the success or failure of infrastructure implementation alone, this research explores the interactions among stakeholders that influence collaborative decision-making under complex institutional conditions. By integrating process-oriented analysis with the practical challenges of land acquisition, the study provides a more comprehensive understanding of the governance mechanisms that sustain

strategic infrastructure development. The findings are expected to enrich the theoretical discussion of collaborative governance while providing practical insights into strengthening institutional coordination, improving stakeholder participation, and developing collaborative strategies capable of addressing persistent implementation challenges in public infrastructure development.

Based on the identified research gap, this study addresses the following research question: how is collaborative governance implemented in supporting the continuation of strategic road infrastructure development under conditions of persistent land acquisition constraints? This study argues that the sustainability of infrastructure development depends not only on technical planning, financial resources, or regulatory support but also on the quality of collaborative governance established among relevant stakeholders. Effective collaboration is expected to emerge through continuous dialogue, mutual trust, shared commitment, and coordinated institutional actions that enable stakeholders to negotiate competing interests and collectively resolve implementation barriers. Conversely, weak collaboration is likely to prolong administrative disputes, reduce stakeholder confidence, and delay project completion. Therefore, this study aims to analyze the collaborative governance process and explain how interactions among stakeholders shape the continuation of infrastructure development, while providing policy recommendations for improving collaborative practices in future strategic infrastructure projects.

RESEARCH METHODS

This study employed a qualitative descriptive case study design to examine the collaborative governance process in the continuation of the PurusBandara Internasional Minangkabau (BIM) Road development project (Lavarda & Bellucci, 2022). A qualitative approach was selected because the study sought to obtain an in-depth understanding of stakeholder interactions, collaborative dynamics, and institutional processes that could not be adequately explained through quantitative measurement. The descriptive case study design enabled the researchers to investigate the phenomenon within its real-life context while capturing the perspectives and experiences of multiple actors involved in the collaboration. The research was conducted at the Department of Highways, Human Settlements, and Spatial Planning of West Sumatra Province, the Regional Office of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) of West Sumatra Province, and the urban villages directly affected by the project. These locations were purposively selected because they represent the principal institutions and communities involved in planning, land acquisition, and project implementation (Cleland et al., 2021).

Data were collected through semi-structured interviews, direct field observations, and document analysis to obtain comprehensive and triangulated evidence regarding the collaborative governance process. Informants were selected using purposive sampling and snowball sampling techniques to ensure that participants possessed relevant knowledge and practical experience related to the project. The participants included representatives from the provincial road authority, the regional land agency, local government officials, village administrative staff, and community members directly affected by the road development project. Semi-structured interviews were conducted to explore stakeholder experiences, institutional coordination, decision-making processes, and challenges encountered during land acquisition and project implementation. Field observations were undertaken to examine the physical progress of the project and stakeholder interactions, while documentary evidence including regulations, official reports, photographs, and other administrative records was analyzed to strengthen the credibility and completeness of the research findings (Wang et al., 2026).

The collected data were analyzed using the interactive qualitative data analysis model developed by Miles and Huberman, consisting of data condensation, data display, and conclusion drawing or verification. Data condensation involved selecting, simplifying, coding, and organizing the information obtained from interviews, observations, and documents to identify patterns relevant to collaborative governance. The condensed data were subsequently presented through systematic narratives and thematic matrices to facilitate comparison across different stakeholder perspectives and institutional contexts (Defitri & Syafril 2025). The final stage involved drawing conclusions and continuously verifying the emerging findings by comparing evidence obtained from multiple sources throughout the research process. To enhance the trustworthiness of the study, source triangulation was employed by cross-checking information obtained from different informants and documentary evidence to ensure consistency, credibility, and analytical rigor. This analytical procedure enabled the researchers to produce a comprehensive understanding of the collaborative governance process and the factors influencing its implementation in the continuation of the infrastructure project (Mahmood et al., 2024).

RESULTS AND DISCUSSION

Results

The findings indicate that the collaborative governance process in the continuation of the Purus–Bandara Internasional Minangkabau (BIM) Road development involved multiple stakeholders, including the Department of

Highways, Human Settlements, and Spatial Planning of West Sumatra Province, the Regional Office of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) of West Sumatra Province, district and village governments, and communities directly affected by the project. The participation of these actors reflects the complexity of the road development process, particularly in land acquisition, which requires coordination among institutions with different authorities and responsibilities. The findings are presented according to the dimensions of collaborative governance used in this study: face-to-face dialogue, trust building, commitment to the process, shared understanding, and intermediate outcomes.

Face-to-Face Dialogue

The findings show that face-to-face dialogue has become the primary mechanism for communication among stakeholders involved in the continuation of the road development project. Periodic coordination meetings were conducted by the Department of Highways, Human Settlements, and Spatial Planning of West Sumatra Province together with the Regional Office of ATR/BPN, district and village governments, and other relevant institutions to discuss the progress of land acquisition and identify solutions to obstacles encountered during project implementation. These meetings enabled participating institutions to exchange information, clarify responsibilities, and coordinate subsequent actions related to land acquisition.

Communication among government institutions was relatively intensive throughout the implementation process. Coordination was carried out through formal meetings, technical discussions, and direct communication whenever administrative or technical issues arose. These interactions facilitated information sharing regarding project progress, administrative procedures, and institutional responsibilities. However, community participation in these forums remained limited. Most affected residents did not attend coordination meetings directly and generally received information through village officials or neighborhood leaders. Several informants explained that they had only been invited to participate in a coordination meeting once during the implementation process.

The findings also indicate that communication between government institutions and affected communities mainly occurred during socialization activities organized at specific stages of land acquisition. These meetings provided information regarding project objectives, land acquisition procedures, and administrative requirements. Nevertheless, opportunities for affected communities to actively express concerns, propose alternatives, or participate directly in collective decision-making remained limited. As a result, communication among government institutions functioned more effectively than communication between institutions and local communities.

Trust Building

The findings indicate that trust-building efforts have been initiated by the stakeholders involved in the continuation of the road development project. The Department of Highways, Human Settlements, and Spatial Planning of West Sumatra Province sought to strengthen public confidence by implementing land acquisition procedures in accordance with applicable regulations. Informants explained that compensation values were determined through independent appraisal and that compensation payments would only be provided after ownership status had been legally verified. These procedures were intended to provide legal certainty and protect the rights of affected landowners.

The provincial government also maintained annual budget allocations for the project while continuing coordination with the Regional Office of ATR/BPN. Information regarding project objectives, infrastructure benefits, compensation mechanisms, and land acquisition procedures was regularly communicated to affected communities through socialization activities. These activities were intended to improve transparency and increase public understanding of the implementation process.

The Department of Highways, Human Settlements, and Spatial Planning of West Sumatra Province and the Regional Office of ATR/BPN jointly conducted socialization activities on land acquisition inventory and identification for communities affected by the project.



Figure 1. Socialization Activities on Land Acquisition Inventory Conducted by the Regional Office of ATR/BPN of West Sumatra Province

Figure 1 illustrates the socialization activities organized for communities affected by the road development project. The activities provided information on land inventory, ownership verification, administrative requirements, community rights and obligations, and the procedures to be completed before compensation payments could be processed. Despite these efforts, the findings indicate that

trust among stakeholders has not yet been fully established. Informants stated that several affected residents still had limited understanding of land acquisition procedures, ownership verification, and compensation mechanisms. Consequently, administrative issues continued to emerge during implementation, while differences in understanding between institutions and communities remained evident throughout the land acquisition process.

Commitment to the Process

The findings demonstrate that stakeholders have maintained their commitment to the continuation of the collaborative process despite delays in physical construction. Each institution continued to perform its responsibilities according to its respective authority. The Department of Highways, Human Settlements, and Spatial Planning of West Sumatra Province consistently allocated funding for the project, while the Regional Office of ATR/BPN continued implementing land identification, measurement, and inventory activities. District and village governments also remained involved in facilitating communication between government agencies and affected communities.

Coordination among stakeholders continued throughout the implementation period. Regular meetings and institutional communication were maintained to monitor project progress, discuss administrative issues, and coordinate subsequent activities related to land acquisition. These collaborative efforts ensured that the project remained under continuous institutional attention despite unresolved implementation constraints.

Nevertheless, the findings reveal that stakeholder commitment remained largely organizational rather than collective. Each institution focused primarily on fulfilling its formal responsibilities within its respective mandate, while integrated efforts to resolve cross-sectoral issues were still limited. Coordination mainly involved administrative communication and information exchange rather than joint decision-making or integrated problem-solving. Consequently, although institutional commitment has been sustained, collaboration has not yet resulted in comprehensive solutions capable of accelerating the continuation of physical road construction.

Shared Understanding

The findings indicate that a shared understanding has gradually developed among the stakeholders involved in the continuation of the Purus-Bandara Internasional Minangkabau (BIM) Road development project. Most stakeholders expressed a common view that the project should be continued because of its importance in improving regional accessibility, supporting

economic activities, and providing broader public benefits. This common objective encouraged government institutions to continue coordinating despite the prolonged delay in project implementation.

Although stakeholders generally agreed on the importance of continuing the project, differences remained regarding the mechanisms for resolving land acquisition issues. Informants explained that no formal agreement, such as a Memorandum of Understanding (MoU), had been established to regulate collaborative mechanisms for resolving land acquisition problems. Consequently, inter-institutional relationships continued to rely primarily on coordination based on the respective authority and responsibilities of each organization.

The findings further reveal that different perceptions persisted regarding the legal status of several land parcels included in the acquisition process. These differences affected administrative procedures and delayed decision-making because additional verification and coordination were required before subsequent stages of land acquisition could proceed. As a result, the implementation process became more time-consuming and required repeated consultations among relevant institutions.

Differences in understanding were also found among affected communities. While many residents supported the road development project, several informants acknowledged that they did not fully understand the procedures for land acquisition, compensation assessment, administrative requirements, or the legal status of their land. Consequently, questions and differing interpretations frequently emerged during public consultation and socialization meetings. These conditions indicate that stakeholders shared similar development objectives but had not yet achieved a common understanding regarding the technical and administrative aspects necessary to support project continuation.

Intermediate Outcomes

The findings show that the collaborative process has produced several intermediate outcomes despite the delay in physical construction. Continuous coordination among government agencies has been maintained throughout the implementation period. Stakeholders continued to organize coordination meetings, exchange information, and monitor the progress of land acquisition activities to ensure that the project remained under active institutional management.

The study also found that several technical activities related to land acquisition had been completed. These activities included field measurements, land parcel identification, ownership inventory, and administrative verification

conducted by the Department of Highways, Human Settlements, and Spatial Planning of West Sumatra Province in collaboration with the Regional Office of ATR/BPN and local government authorities. These activities provided updated information regarding land ownership and administrative conditions required for the subsequent stages of land acquisition.

However, the findings indicate that these intermediate outcomes have not yet enabled the continuation of physical road construction. Administrative problems related to land ownership, unresolved ownership verification, and incomplete land acquisition procedures have delayed compensation payments to affected landowners. As a result, the construction phase has not been able to proceed despite the completion of several preparatory activities.

Overall, the findings demonstrate that collaborative governance has succeeded in maintaining coordination among stakeholders and facilitating the implementation of preparatory activities throughout the land acquisition process. Nevertheless, the collaborative process has not yet produced outcomes sufficient to overcome the remaining administrative constraints that continue to delay the implementation of the road construction project.

Discussion

The findings indicate that collaborative governance has been implemented through continuous coordination among government agencies and affected communities during the land acquisition process. Regular coordination meetings demonstrate that stakeholders recognize their interdependence in addressing administrative and legal challenges that cannot be resolved by a single institution. This condition reflects the importance of face-to-face dialogue in facilitating communication and consensus-building among stakeholders (Awuah & Abdulai, 2022). The findings also illustrate the practice of principled engagement, in which repeated interaction supports information exchange and collaborative problem-solving (Xu et al., 2025). However, unlike previous studies reporting that dialogue effectively promotes stakeholder participation, this study found that community involvement remained largely limited to receiving information rather than participating directly in decision-making (Tumpa & Naeni, 2025). These findings imply that improving the quality of participation is as important as maintaining institutional coordination to achieve effective collaborative governance.

The findings further show that trust-building efforts have been undertaken through transparent land acquisition procedures, regular socialization activities, and continuous institutional coordination. Nevertheless, several affected residents still experienced uncertainty regarding land ownership verification, compensation mechanisms, and administrative procedures. This

condition indicates that trust requires consistent interaction, transparency, and institutional credibility throughout the collaborative process rather than formal procedures alone (Wang et al., 2026). Similarly, trust develops through reciprocal relationships, mutual respect, and confidence among collaborating actors as part of shared motivation (Valderrama & Polanco, 2022). These findings support previous studies highlighting the importance of transparency and communication consistency in collaborative governance while demonstrating that procedural transparency alone is insufficient when community understanding remains limited (Aulia & Syafril, 2024). Therefore, stronger public engagement is required to reinforce stakeholder trust and improve collaboration throughout land acquisition.

The findings also reveal that stakeholder commitment and shared understanding have not yet developed into integrated collaborative action. Although each institution consistently performed its formal responsibilities, coordination remained largely sectoral, and no formal collaborative agreement had been established to address land acquisition issues collectively. This condition suggests that collaborative governance requires commitment beyond organizational responsibilities to achieve common objectives (Rodenbiker, 2022). Likewise, institutional interdependence alone does not automatically generate collective action without effective collaborative arrangements (Mahmood et al., 2024). Unlike previous studies suggesting that collaboration can effectively resolve land acquisition conflicts, this research demonstrates that sustained coordination without formal collaborative mechanisms is insufficient to overcome prolonged administrative constraints (Bianchi et al., 2021). The novelty of this study lies in demonstrating that successful collaborative governance depends not only on coordination intensity but also on integrated commitment, shared institutional arrangements, and inclusive stakeholder participation.

The findings indicate that stakeholders shared a common objective of continuing the road development project but differed in their understanding of land acquisition procedures, land ownership status, and institutional responsibilities. The absence of a formal collaborative agreement further limited the development of a common framework for resolving these issues. This finding suggests that shared goals alone are insufficient to ensure effective collaboration when stakeholders interpret implementation procedures differently. Collaborative governance requires not only agreement on common objectives but also a shared understanding of roles, responsibilities, and decision-making processes among participating actors (Williams et al., 2021). This finding also supports the view that shared understanding emerges through continuous dialogue, joint learning, and collective problem-solving rather than through coordination alone (Zheng et al., 2024). Practically, establishing formal

collaborative mechanisms and strengthening stakeholder capacity can reduce differences in perception and improve the effectiveness of collaborative governance in infrastructure development.

The findings demonstrate that collaborative governance has produced several intermediate outcomes, including continuous interagency coordination, field measurements, land inventory, and administrative verification. These achievements indicate that collaboration has been sustained despite delays in physical construction. However, the collaborative process has not yet generated sufficient outcomes to overcome administrative and land ownership constraints that continue to delay project implementation. This finding is consistent with previous studies showing that collaborative processes may continue even when the expected policy outcomes have not yet been achieved because they remain influenced by institutional and external constraints (De Maria et al., 2023). Likewise, early collaborative achievements represent an important stage in maintaining stakeholder engagement before final objectives can be accomplished (Dokyi et al., 2025). Practically, stakeholders should transform these intermediate outcomes into coordinated actions that directly address unresolved land acquisition issues and accelerate project implementation.

Overall, this study demonstrates that collaborative governance in strategic infrastructure development is a dynamic process influenced by the interaction of dialogue, trust, commitment, shared understanding, and intermediate outcomes. Although these dimensions have been established, they have not yet been sufficiently integrated to resolve the substantive constraints affecting project continuation. The novelty of this study lies in revealing that sustained coordination alone does not guarantee successful infrastructure implementation when institutional integration, formal collaborative arrangements, and meaningful public participation remain limited. This perspective extends previous studies that primarily emphasize the importance of collaboration in infrastructure development by highlighting the institutional conditions required to transform collaboration into tangible implementation outcomes (Valderrama & Polanco, 2022). Therefore, this study contributes to the development of collaborative governance theory while providing practical recommendations for strengthening cross-sectoral coordination, institutional integration, and participatory governance in future infrastructure projects.

CONCLUSION

This study demonstrates that the effectiveness of collaborative governance in strategic infrastructure development depends not only on the involvement of multiple stakeholders but also on the quality of their interaction, institutional integration, and collective commitment throughout the collaborative process.

Although collaboration has been established through dialogue, trust-building, commitment, shared understanding, and intermediate outcomes, unresolved land acquisition issues, limited public participation, fragmented coordination, and the absence of formal collaborative arrangements continue to hinder project implementation. These findings contribute to the advancement of collaborative governance by providing empirical evidence that sustained coordination alone is insufficient to ensure successful infrastructure development unless supported by inclusive participation and integrated institutional mechanisms. This study is limited to a single case and primarily focuses on public-sector stakeholders, which may limit the transferability of the findings to other contexts. Future research is recommended to investigate multiple infrastructure projects, involve a broader range of stakeholders, and employ comparative approaches to deepen understanding of collaborative governance in infrastructure development.

REFERENCES

- Adigeh, D. T., & Abebe, B. (2024). Land acquisition policy and practice for cooperative housing scheme in Bahir Dar, Ethiopia: Toward affordable housing solutions. *Frontiers in Sustainable Cities*. <https://doi.org/10.3389/frsc.2023.1234620>
- Ameyaw, P., & De Vries, W. (2021). Toward smart land management: Land acquisition and the associated challenges in Ghana—A look into a blockchain digital land registry for prospects. *Land*, 10(3), 239. <https://doi.org/10.3390/land10030239>
- Aulia, N., & Syafril, R. (2024). Integrated team collaboration for Maninjau Lake rescue in overcoming the sulfu tubo phenomenon. *Santhet (Jurnal Sejarah Pendidikan Dan Humaniora)*, 8(2), 1980–1985. <https://doi.org/10.36526/santhet.v8i2.4272>
- Awuah, K., & Abdulai, R. (2022). Urban land and development management in a challenged developing world: An overview of new reflections. *Land*, 11(1), 129. <https://doi.org/10.3390/land11010129>
- Bianchi, C., Nasi, G., & Rivenbark, W. (2021). Implementing collaborative governance: Models, experiences, and challenges. *Public Management Review*, 23(11), 1581–1589. <https://doi.org/10.1080/14719037.2021.1878777>
- Cleland, J., MacLeod, A., & Ellaway, R. (2021). The curious case of case study research. *Medical Education*, 55(10), 1131–1141. <https://doi.org/10.1111/medu.14544>

- Dai, J., & Azhar, A. (2024). Collaborative governance in disaster management and sustainable development. *Public Administration and Development*, 44(4), 358–380. <https://doi.org/10.1002/pad.2071>
- De Maria, M., Robinson, E., & Zanello, G. (2023). Fair compensation in large-scale land acquisitions: Fair or fail? *World Development*, 170, 106338. <https://doi.org/10.1016/j.worlddev.2023.106338>
- Defitri, R., & Syafril, R. (2025). The role of the village government in efforts to equalize infrastructure development in Sungai Rimbang Village, Suliki District, Lima Puluh Kota Regency. *Santhet (Jurnal Sejarah Pendidikan Dan Humaniora)*, 9(4), 1178–1185. <https://doi.org/10.36526/santhet.v9i4.5817>
- Dokyi, G., Osei, K., Tookey, J., & Rotimi, F. (2025). A SWOT analysis of stakeholder perspectives on the strategic application of economic sustainability indicators in Ghana's road infrastructure development. *International Journal of Sustainable Transportation*, 19(5), 375–392. <https://doi.org/10.1080/15568318.2025.2496894>
- Firmansyah, A., Desnora, B., Pratama, A., Muazza, M., & Aprillitzavivayarti, A. (2025). Empowering educators through CPD: Enhancing teacher competencies in the era of the independent curriculum. *Indonesian Journal of Education and Social Studies*, 4(2), 143–152.
- Lavarda, R., & Bellucci, C. (2022). Case study as a suitable method to research strategy as practice perspective. *The Qualitative Report*, 27(4), 1023–1041. <https://doi.org/10.46743/2160-3715/2022.4296>
- Mahmood, S., Sun, H., Iqbal, A., Alhussan, A., & El-Kenawy, E.-S. (2024). Green finance, sustainable infrastructure, and green technology innovation: Pathways to achieving sustainable development goals in the Belt and Road Initiative. *Environmental Research Communications*, 6(11), 115012. <https://doi.org/10.1088/2515-7620/ad898f>
- Mukhlis, M., & Perdana, R. (2022). A critical analysis of the challenges of collaborative governance in climate change adaptation policies in Bandar Lampung City, Indonesia. *Sustainability*, 14(7), 4077. <https://doi.org/10.3390/su14074077>
- Parker, S. (2024). Transformation of international students' perceptions of Indonesian culture in the era of diversity. *Indonesian Journal of Education and Social Studies*, 3(1), 49–60.
- Prasad, K., Karanam, S., Ganesh, D., Liyakat, K. K. S., Talasila, V., & Purushotham, P. (2024). AI in public-private partnership for IT infrastructure development. *The Journal of High Technology Management Research*, 35(2), 100496. <https://doi.org/10.1016/j.hitech.2024.100496>

- Rodenbiker, J. (2022). Green silk roads, partner state development, and environmental governance: Belt and Road infrastructure on the Sino-East African frontier. *Critical Asian Studies*, 55(2), 169–192. <https://doi.org/10.1080/14672715.2022.2150249>
- Tassadiq, F. (2024). Colonial laws, postcolonial infrastructures: Land acquisition, urban informality, and politics of infrastructural development in Pakistan. *Environment and Planning D: Society and Space*, 42(3), 401–421. <https://doi.org/10.1177/02637758241240363>
- Tohet, M., Rodmaya, R. S., & Homaidi, H. (2025). From uswah to habitus: Transformation of religious character through example in madrasah. *Indonesian Journal of Education and Social Studies*, 4(1), 29–41.
- Tumpa, R., & Naeni, L. (2025). Improving decision-making and stakeholder engagement at project governance using digital technology for sustainable infrastructure projects. *Smart and Sustainable Built Environment*. Advance online publication. <https://doi.org/10.1108/sasbe-10-2024-0451>
- Valderrama, E., & Polanco, J.-A. (2022). Understanding how collaborative governance mediates rural tourism and sustainable territory development: A systematic literature review. *Tourism Recreation Research*, 49(4), 888–904. <https://doi.org/10.1080/02508281.2022.2072653>
- Wang, S., Li, L., Wan, M., Wang, S., & Zhang, S. (2026). Exploring drivers of green innovation in major transportation infrastructure projects by collaborative governance. *International Journal of Construction Management*. Advance online publication. <https://doi.org/10.1080/15623599.2026.2643735>
- Williams, G., Mahadevia, D., Schindler, S., & Chattaraj, S. (2021). Megaprojects, mirages and miracles: Territorializing the Delhi–Mumbai Industrial Corridor (DMIC) and state restructuring in contemporary India. *Territory, Politics, Governance*, 11(3), 456–477. <https://doi.org/10.1080/21622671.2020.1867630>
- Xu, X., Chen, T., & Yu, X. (2025). From risk perception to sustainable governance: A stakeholder-centric approach in urban infrastructure development. *Sustainability*, 17(8), 3483. <https://doi.org/10.3390/su17083483>
- Yu, Y., Appiah, D., Zulu, B., & Adu-Poku, K. (2024). Integrating rural development, education, and management: Challenges and strategies. *Sustainability*, 16(15), 6474. <https://doi.org/10.3390/su16156474>
- Zheng, X., Sun, C., & Liu, J. (2024). Exploring stakeholder engagement in urban village renovation projects through a mixed-method approach to social network analysis: A case study of Tianjin. *Humanities and Social Sciences Communications*, 11(1), 1–15. <https://doi.org/10.1057/s41599-023-02536-7>