

Green Infrastructure and Social Justice: An Evaluation of the Makassar–Barru Railway Development from the Perspective of the SDGs

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Abstract: The construction of the Makassar–Barru railway line is one of Indonesia’s national strategic projects designed to strengthen interregional connectivity and accelerate economic growth. However, behind these objectives lie significant social, economic, and ecological dynamics for rural communities in Barru Regency. This study aims to evaluate the development of the Makassar–Barru railway line from the perspective of green infrastructure and social justice within the framework of the Sustainable Development Goals (SDGs). Using a qualitative approach with a rural sociology perspective, data were collected through in-depth interviews, field observations, and policy document analysis. The findings indicate that the implementation of green infrastructure principles remains limited to technical aspects and has not fully addressed social and ecological dimensions. Inequality in the distribution of development benefits and weak community participation show that social justice has not been fully realized. Nevertheless, local initiatives highlight the adaptive capacity of communities in responding to change. This study underscores the importance of an inclusive, participatory, and sustainable infrastructure development model aligned with the SDGs agenda to promote social justice and environmental sustainability in rural areas.

Keyword: *sustainable development, green infrastructure, social justice, community empowerment, SDGs.*

Introduction

The development of transportation infrastructure is one of the Indonesian government’s primary strategies to accelerate economic growth and enhance interregional connectivity. Through the National Strategic Projects (PSN) initiative, the Makassar–Parepare railway line was constructed as a key route linking the southern and northern regions of South Sulawesi. The line passes through Barru Regency, which holds a strategic position as a logistics and trade hub. This railway project is expected to become a regional economic driver, improve community mobility, and expand market access for agricultural and fisheries sectors that form the backbone of the local economy (Ministry of Transportation of the Republic of Indonesia, 2023). However, alongside this optimism, fundamental questions arise regarding the extent to which the project truly reflects the principles of sustainable and socially just development for rural communities directly affected by the construction.

The concept of green infrastructure has emerged as a new paradigm in sustainable development governance. This approach emphasizes the integration of physical infrastructure with natural systems to enhance resource efficiency while maintaining ecological balance. Benedict and McMahon (2006) explain that green infrastructure is not merely a network of physical structures but also a socio-ecological system that supports long-term sustainability. In the context of the Makassar–Barru railway project, the application of green infrastructure principles should include environmentally sensitive route planning, mitigation of land and ecosystem degradation, and the protection of local communities’ living spaces. Development that overlooks environmental carrying capacity risks undermining the very foundation of social and ecological sustainability central to the green development agenda.

Beyond ecological concerns, social justice represents an equally important dimension in evaluating infrastructure development outcomes. Social justice ensures that the benefits of development are distributed

equitably across all social groups without creating new forms of inequality (Harvey, 1973). In Barru Regency, some residents were forced to relocate due to land acquisition, while others experienced economic gains through improved transportation access and new business opportunities. This situation raises critical questions about the fairness of benefit and burden distribution. If social justice is neglected, infrastructure development may deepen inequalities between communities directly affected by the project and those who gain the most economic advantage.

Barru Regency itself presents a compelling socio-economic context for analysis. The area is dominated by agriculture and fisheries, with most residents depending on natural resources and traditional economic activities for their livelihoods (Barru Regency Central Bureau of Statistics, 2024). The railway construction offers potential improvements in logistics efficiency, interregional connectivity, and market expansion for local products. However, it also generates risks, such as the conversion of productive farmland, changes in livelihood patterns, and the potential erosion of rural social identity. Wibowo (2022) notes that large infrastructure projects in several regions of South Sulawesi often create new spatial inequalities, dividing villages located along development corridors from those outside them.

Previous studies show that research on the Makassar–Parepare railway line has primarily focused on technical aspects, such as route planning, land suitability, and transportation efficiency. For example, Meralda & Firdaus (2025) emphasize the potential for transit-oriented development (TOD) along the railway route, while Hizbaron et al. (2022) examine technical and environmental risks associated with intercity rail development. While important, these studies have not sufficiently addressed the social and ecological implications for rural communities (United Nations Development Programme, 2020). This gap highlights the need for a more comprehensive examination of how transportation infrastructure projects affect social structures, ecological balance, and the equitable distribution of benefits at the local level.

In the global context, the Sustainable Development Goals (SDGs) provide a relevant evaluative framework for assessing how infrastructure development supports sustainability and justice. Four key goals—SDG 9 on sustainable infrastructure, SDG 10 on reducing inequality, SDG 11 on sustainable communities, and SDG 13 on climate action—serve as guiding references for this research. The United Nations Development Programme (2015) emphasizes that SDG-oriented development must balance economic progress, social equity, and environmental protection. However,

Widhiantari & Kurniawan (2025) find that the integration of SDG principles into infrastructure projects in Indonesia remains largely normative and lacks systematic measurement. Therefore, an SDGs-based evaluative approach is essential for empirically assessing the effectiveness of the Makassar–Barru railway development.

Community participation also represents a critical factor in determining the success of sustainable infrastructure development. Chambers (1983) asserts that genuine empowerment occurs when communities function as active agents in the development process rather than passive recipients of project outcomes. In practice, however, community participation in infrastructure projects is often symbolic, limited to superficial socialization activities. PAIR – Australia Indonesia Centre (2024) reports that public consultations for the Makassar–Barru railway project were mostly conducted at the final planning stage, leaving community aspirations insufficiently accommodated. Yet, substantive participation is crucial for establishing social legitimacy and fostering a sense of ownership over development outcomes.

The environmental impacts of the project are equally significant. Railway construction can affect water systems, vegetation patterns, and ecological balance in the coastal region of Barru. PAIR – Australia Indonesia Centre (2024) identifies potential disturbances to mangrove ecosystems and wetland agriculture near the project's route. Pradnyani et al. (2024) add that unplanned land-use changes may increase soil erosion and land degradation risks. Therefore, the application of green infrastructure principles must include concrete and measurable mitigation strategies to ensure that development is not merely physically oriented but also supports long-term environmental sustainability.

The social impacts of the railway development must also be viewed as part of a broader process of social change. The presence of new infrastructure often reshapes social relationships, work structures, and community values in rural settings (Ellis, 2000). Nissa' et al. (2023) found that many Barru residents have shifted their economic activities from agriculture to informal services and trade following the initial phases of railway construction. Yusriadi & Kaslin (2025) emphasize the need to assess the social resilience of rural communities facing these changes, noting that social sustainability depends not only on economic conditions but also on adaptive capacities in the face of modernization.

Based on these observations, there is a clear need to reevaluate the Makassar–Barru railway project through an integrative lens combining green infrastructure, social justice, and the SDGs. Such an evaluation is crucial for understanding how national projects can generate balanced impacts across economic growth, social welfare,

and environmental protection. Through a rural sociological perspective, this study seeks to uncover the social-ecological dynamics emerging at the local level while offering recommendations for more just, inclusive, and sustainable infrastructure development models.

The objective of this study is to evaluate the Makassar–Barru railway project from the standpoint of green infrastructure and social justice, using the SDGs framework as an analytical tool. This study aims to provide both conceptual and practical contributions to the development of socially just and environmentally sustainable policy models, particularly in Indonesian rural areas undergoing major infrastructure-driven transformations.

Methods

This study employs a qualitative approach grounded in rural sociology and oriented toward the Sustainable Development Goals (SDGs) framework. This approach was chosen because the development of the Makassar–Barru railway line is not only related to the physical dimensions of infrastructure but also to the social dynamics, the distribution of benefits, and environmental sustainability within rural communities. The rural sociology perspective enables the researcher to understand the socio-ecological transformations triggered by modern infrastructure development, particularly how rural communities interpret, adapt to, and participate in the development process. This perspective also provides space to examine the relationship between national development policies and local realities through the lenses of social justice and green infrastructure, as mandated by SDG 9, SDG 10, SDG 11, and SDG 13.

The study was conducted in Barru Regency, South Sulawesi Province, an area directly traversed by the Makassar–Parepare railway line. Barru was selected because it represents a coastal rural region experiencing structural transformation as a result of large-scale infrastructure development. Three districts were chosen as the primary research sites: Balusu, Tanete Rilau, and Mallusetasi. These locations represent diverse social and ecological contexts—Balusu as an agrarian region with high levels of land acquisition; Tanete Rilau as a transitional area between rural and urban spaces; and Mallusetasi as a coastal region affected by changes in the fisheries sector and social mobility. The research was carried out between January and July 2025 and encompassed observation, field data collection, and socio-ecological analysis guided by the SDGs.

Informants were selected purposively based on their social positions, experiences, and involvement in the railway development context. They included directly affected residents (landowners, farmers, fishers, and

female-headed households), village officials, community leaders, local MSME actors, and government officers. Snowball sampling was used to identify individuals with specific experiences, such as residents who were relocated or whose employment status changed. This strategy enabled the researcher to trace variations in social experiences at the micro level and connect them to macro-level development processes.

Data were collected using three main techniques: in-depth interviews, participant observation, and policy document review. Semi-structured interviews were guided by themes related to community perceptions of the project, socio-economic impacts, and environmental and justice-related issues. Participant observation was conducted around the project area to identify changes in spatial patterns, environmental conditions, and social interactions. Secondary data were obtained from regional government reports, the Sustainable Development Goals Indonesia Report, Barru Regency Statistical Data, and research by the PAIR – Australia Indonesia Centre (2024).

Data were analyzed using a thematic qualitative approach developed by Miles et al. (2014), which includes four main stages: data reduction, data display, thematic categorization, and inductive conclusion drawing. The analysis focused on identifying patterns linking infrastructure development to three main dimensions: (1) green infrastructure and environmental mitigation, (2) social justice and equitable distribution of development benefits, and (3) contributions to local SDG achievement. The SDGs framework served as an analytical guide—not merely a set of formal indicators but as a conceptual tool to assess how sustainability and inclusivity principles were implemented in development practices.

Validity and reliability of the data were ensured through source and method triangulation. Information gathered from community members was compared with government data and field observations to minimize interpretive bias. Member checking was also conducted by presenting preliminary findings to key informants to verify the accuracy of the interpreted social meanings. The researcher applied reflexivity by acknowledging their own positionality as part of the social construction influencing the interpretation of results.

Ethical considerations were observed throughout the research process. All informants provided voluntary informed consent prior to being interviewed, and their identities were kept confidential. Non-exploitative research practices were prioritized by positioning community members as active subjects with valuable local knowledge. This participatory approach aligns with the spirit of community engagement within rural sociology traditions, which emphasize the importance of prioritizing communities as active development actors (Chambers, 1983).

Through this qualitative rural sociology approach grounded in the SDGs, this research aims to provide a comprehensive portrayal of how the Makassar–Barru railway development affects the social, economic, and environmental structures of rural communities in Barru. The findings are not only expected to contribute to academic discourse on rural sociology and sustainable development but also offer practical insights for designing infrastructure development policies that are more just, inclusive, and environmentally responsible.

Results and Discussion

Green Infrastructure Dimensions in the Development of the Makassar–Barru Railway Line (SDG 9 and SDG 13)

The construction of the Makassar–Barru railway line, which has been promoted as part of the national green infrastructure agenda, essentially reflects the government’s ambition to create a low-emission and energy-efficient transportation system. In the planning documents (Ministry of Transportation of the Republic of Indonesia, 2023), the project is described as an effort to support SDG 9, namely the development of resilient and sustainable infrastructure. However, field observations indicate that the concept of green infrastructure at the local level has not been fully translated into planning and implementation practices. Route alignment, construction waste management, and land rehabilitation at several points along the project have yet to demonstrate adequate ecological integration, particularly in agrarian areas such as Balusu and Tanete Rilau Districts. This reveals a gap between green-principled national policy and village-level implementation, which remains predominantly focused on physical construction.

From the perspective of rural sociology, green infrastructure development should not be viewed merely as a technological project but also as a social intervention that influences the relationship between humans and their environment. According to Bryant and Bailey (1997), sustainable rural development requires recognition of local ecological systems and traditional practices that uphold social and environmental sustainability. In Barru, most community members practice land management based on local wisdom, such as shifting cultivation systems and simple water management practices that have long maintained ecological balance. However, the railway project tends to overlook these values in the name of efficiency and accelerated construction. Interviews with a community leader in Galung Village reveal that residents were not involved in determining the route, even though their

land plays an important ecological role in irrigating nearby rice fields. This phenomenon illustrates how top-down development approaches can disrupt the balance between rural social systems and ecological systems.

Ecologically, the railway development has also affected spatial planning and the function of productive land. According to data from the Barru Regency Central Bureau of Statistics (2024), at least 67 hectares of agricultural land in Balusu District have undergone land-use change due to the project. This process has not been accompanied by adequate ecological compensation measures, such as land rehabilitation or the provision of replacement green areas. Based on the green infrastructure concept proposed by Benedict and McMahon (2006), every infrastructure project should be accompanied by conservation strategies that maintain ecosystem connectivity. However, in practice, understanding of this concept remains limited to planting trees around the railway line without considering the long-term sustainability of ecological functions. This indicates that the ecological dimension of development has not been positioned as an integral part of rural social systems but merely as an additional element within technical policy.

Another finding is the presence of dual public perceptions of the term “green infrastructure.” Some informants—especially village officials and project staff—interpret the term narrowly as development that is “non-destructive” or “technically environmentally friendly.” In contrast, farmers and fishers perceive “green” as relating to land fertility, water availability, and livelihood sustainability. This difference in interpretation reveals a conceptual gap between policy and social reality, which according to Scott (1998) in his *seeing like a state* theory, reflects how the state often reduces complex local realities into simplified administrative categories. In Barru, green infrastructure becomes a concept stripped of its social dimension because it is interpreted technocratically rather than as an ecological and social adaptation system embedded in rural communities.

Beyond ecological aspects, the project also has the potential to contribute to climate change mitigation (SDG 13), particularly through reducing land-transportation emissions. However, these benefits have not been directly felt by local communities. As of 2025, the Makassar–Barru railway line has not been fully operational, while construction activities have instead increased dust pollution, noise, and disturbances to the water sources of nearby residents. In the context of sustainable development, this situation reinforces Escobar’s (1995) view that development is often defined through the lens of the state and international donors rather than through the lived experiences of affected communities. In other words, claims of ecological sustainability at the macro level do not

always align with micro-level ecological realities, especially in villages that depend heavily on environmental stability.

The findings of this study show that the green infrastructure dimension of the Makassar–Barru railway project remains largely declarative and has not been fully internalized into development practices. Village-level participation in ecological planning remains minimal, while impacts on land and environmental systems have not been addressed adaptively. This demonstrates that the green infrastructure concept—intended to integrate ecological and social functions—continues to be understood sectorally at the project implementation level. Moving forward, the application of green infrastructure principles in rural areas such as Barru must adopt participatory and local knowledge-based approaches so that development becomes a true instrument of socio-ecological sustainability rather than merely a green label in policy documents.

Social Justice and the Distribution of Development Benefits

One of the key issues in the development of the Makassar–Barru railway line concerns social justice in the distribution of development benefits and burdens. Normatively, the project is expected to reduce regional disparities and enhance the economic mobility of rural communities (Ministry of Transportation of the Republic of Indonesia, 2023). However, field findings show that the benefits of development have not been distributed evenly. Communities living near stations and along the main corridors tend to gain new economic opportunities, such as transportation services and small-scale trade, while those whose land has been displaced have lost their primary sources of livelihood without receiving adequate compensation. This disparity illustrates the phenomenon of spatial inequality commonly seen in large-scale infrastructure projects, where productive spaces emerge in certain areas while others experience local marginalization.

Land acquisition has become the most sensitive phase, sparking debates about procedural and distributive justice. Interviews in Balusu District reveal that some residents received compensation far below market value, while others had not yet received payment clarity as of 2025. Such conditions create a sense of injustice, reinforced by the lack of transparency and minimal community participation in land valuation processes. From the perspective of rural sociology, this inequality reflects asymmetrical power relations between the state and rural citizens (Scott, 1985), in which local communities often lack bargaining power over decisions affecting their living spaces. This inequity

demonstrates how top-down development logic can sideline agrarian rights that should be protected.

Social justice can also be assessed through equitable access to new economic opportunities resulting from the railway development. Observations in Tanete Rilau District indicate an increase in economic activity around the rail corridor, particularly in the service and small-trade sectors. However, these benefits are largely captured by those with sufficient social and economic capital to adapt. Meanwhile, landless laborers, female-headed households, and small-scale fishers struggle to transition into new types of work due to limited skills and access to information. This phenomenon reinforces Harvey's (1973) argument on *accumulation by dispossession*, wherein development intended to generate progress instead widens inequality by concentrating new resources in the hands of specific groups. In the context of SDG 10 on reducing inequality, these findings highlight the need for more inclusive and pro-poor development designs in rural areas.

From the standpoint of participatory justice, community involvement in project decision-making remains highly limited. Most residents learned about the project only after planning stages were completed, and their participation has been largely symbolic, restricted to formal socialization sessions. A focus group discussion in Bojo Village emphasized that residents felt “informed, not consulted” about the project. This situation illustrates that the principle of community engagement—central to sustainable development—has not been genuinely implemented. According to Chambers (1983), genuine participation in rural development is not merely about physical presence but about creating space for communities to influence the policies that shape their lives. Low participation weakens the project's social legitimacy and fosters cultural resistance embedded within daily community narratives.

The social inequalities arising from this project extend beyond economic impacts to affect social cohesion within rural communities. In several villages, tensions have emerged between groups who benefited from the project and those who felt disadvantaged, particularly regarding compensation distribution and employment opportunities. These changes have shifted traditional patterns of solidarity (*gotong royong*) toward more individualistic relations, as found in Mallusetasi District. Within the SDG 11 framework on sustainable communities, this situation emphasizes that social sustainability is shaped not only by physical infrastructure but also by the strength of social bonds that support community resilience. Therefore, the development of the railway line in Barru must adopt a model that balances economic efficiency with social justice, ensuring that all groups have equitable opportunities to participate in and benefit from this national project.

Implications for Community Empowerment and Rural Transformation within the SDGs Framework

The development of the Makassar–Barru railway line not only brings physical changes to the regional landscape but also serves as a catalyst for social transformation within rural communities. This large-scale infrastructure project creates new connections between rural and urban areas, expanding access to economic resources and information. However, such changes do not always translate into improved well-being, as their impacts largely depend on the social capacity and institutional strength of local communities in managing the transition. According to Ellis (2000), rural transformation accompanied by unequal access to resources often results in new forms of social stratification, where some groups are able to adapt and benefit, while others become increasingly marginalized.

Field findings reveal shifts in livelihood patterns among communities living along the railway corridor, particularly in Balusu and Tanete Rilau Districts. Many farmers sold their land for the project and transitioned into service workers, construction laborers, or small-scale traders. For some residents, this change represents an adaptive response to emerging opportunities; however, for others, losing their land means the loss of identity and long-term economic stability. This illustrates what Long (2001) describes as *social reconfiguration*, namely the restructuring of social relations triggered by development interventions. Within the context of SDG 8 and SDG 11, these economic transitions hold potential for empowerment but also pose the risk of deagrarianization, which weakens the foundation of food production and social solidarity at the village level.

At the same time, new forms of community-based empowerment have emerged spontaneously. For example, women's groups in Bojo Village established small cooperatives to capitalize on economic opportunities around the developing station area. They developed food businesses and rental services targeting project workers. These initiatives demonstrate the adaptive capacity of local communities in responding to emerging opportunities and highlight that empowerment does not always originate from state intervention; it can also arise organically from the bottom up. This phenomenon aligns with Chambers' (1983) concept of *endogenous development*, which argues that the core strength of rural development lies in local initiatives characterized by community values, experience, and creativity.

Nevertheless, empowerment patterns in Barru remain uneven and unsustainable. Many government-led

social compensation programs are short-term in nature, such as skill-training workshops without follow-up support. As a result, most residents return to informal employment with unstable incomes once construction activities end. According to Alsop and Heinsohn's (2005) theory of empowerment sustainability, effective empowerment must produce structural changes in access to resources and decision-making power. In this context, empowerment efforts in Barru remain functional—providing temporary economic opportunities—rather than transformational, which would shift the long-term social position of communities.

The project has also affected spatial and social relations within villages. Areas that were previously connected by traditional farming routes are now divided by the railway line running through settlement areas. This change disrupts mobility patterns and reduces the intensity of social interactions. Observations in Mallusetasi District show that residents report declining participation in communal activities (*gotong royong*) due to increased social distance. This phenomenon can be explained using Polanyi's (1944) concept of *social dislocation*, in which economic-driven spatial restructuring disrupts established social networks. Yet SDG 11 emphasizes the importance of maintaining social connectivity as a key component of sustainable community development.

In terms of local governance, the study finds that village governments occupy a dual role: as implementers of development policies on one hand, and as mediators of community aspirations on the other. This dual position often places them in a dilemma. Village heads and local officials face pressures to comply with national directives while also bearing responsibility for protecting the interests of affected residents. Limited administrative capacity and institutional resources make it difficult for local governments to effectively advocate for community rights. This highlights the importance of strengthening village institutions within the framework of *local governance for SDGs*, whereby villages function not only as implementers but also as social actors with authority to ensure sustainable development (UNDP, 2020).

Beyond economic and social impacts, rural transformation resulting from the railway project also contains cultural and ecological dimensions. Several informants in Galung Village noted that traditional rituals related to rice cultivation are declining as paddy fields are converted. This illustrates a process of *cultural displacement* wherein infrastructure modernization leads to shifts in local values and cultural practices. Within the context of SDG 13 on climate action and ecosystem sustainability, such cultural changes deserve attention because local traditions often play an important role in maintaining environmental balance through ecological knowledge.

Therefore, rural community empowerment should include efforts to preserve cultural values as part of long-term ecological adaptation strategies.

The findings of this study show that the Makassar–Barru railway project presents two contrasting realities for rural communities in Barru: on one hand, it opens economic opportunities and accelerates regional integration; on the other hand, it introduces complex social, ecological, and cultural challenges. The rural transformation triggered by the project is not merely economic but constitutes a broader social restructuring that demands strengthened community adaptive capacity. Accordingly, the implementation of the Sustainable Development Goals at the local level must be oriented toward a development model that integrates green infrastructure, social justice, and community-based empowerment rooted in local knowledge. Such an approach ensures that development does not merely “run on rails,” but also aligns with the well-being and sustainability of rural communities that form the foundation of Indonesia’s social fabric.

Conclusion

This study demonstrates that the development of the Makassar–Barru railway line presents complex social and ecological dynamics within the rural areas of Barru Regency. From the perspective of green infrastructure, the project is conceptually aligned with SDG 9 and SDG 13 through its aim of establishing sustainable transportation. However, its implementation at the local level remains far from ideal. The integration of ecological sustainability principles into spatial planning and environmental governance has not been fully realized, resulting in a gap between policy rhetoric and on-the-ground practices. Rural communities living alongside the railway corridor continue to face vulnerabilities related to land degradation, ecosystem disturbance, and limited participation in environmental decision-making processes that directly affect their living spaces.

From a social justice perspective, the findings reveal significant inequalities in the distribution of development benefits and burdens. Communities with stronger economic and social capital are better positioned to take advantage of new opportunities, while smaller farmers and fishers are more likely to lose their assets and sources of livelihood. The land acquisition process—characterized by limited transparency and insufficient community participation—exposes a persistent power imbalance between the state and rural citizens. These conditions indicate that infrastructure development has not yet fully embraced the principles of equitable welfare distribution expected

under SDG 10 and SDG 11, but instead continues to follow a top-down model that risks deepening social inequalities.

In terms of community empowerment and rural transformation, the study finds dual, contrasting impacts. On one hand, new forms of adaptive social initiatives have emerged, such as cooperatives and microenterprises—particularly led by women—demonstrating community resilience in navigating change. On the other hand, most empowerment programs remain temporary and have not produced structural shifts in access to resources or decision-making power. Infrastructure modernization has also affected cultural and ecological dimensions, contributing to diminishing traditional practices and weakening social cohesion. These changes highlight that rural transformation is not merely about economic diversification but involves broader social restructuring that demands stronger institutional support and adaptive capacities.

Based on these findings, this study recommends the need for an infrastructure development model that embodies both social and ecological justice within the framework of the Sustainable Development Goals. Local governments must strengthen the role of village institutions through genuine participatory mechanisms that give communities real influence over development decisions. Large-scale projects such as the Makassar–Barru railway should function not only as symbols of physical progress but also as instruments for community empowerment. Integrating local knowledge, participatory ecological management, and equitable benefit distribution is essential for ensuring that development becomes inclusive and sustainable.

In conclusion, aligning infrastructure development with the SDGs requires more than policy statements—it demands grounded, community-centered practices that ensure the well-being and long-term sustainability of rural communities. Only through such an integrative approach can the benefits of the Makassar–Barru railway development be fully realized in strengthening social equity and environmental sustainability across rural Indonesia.

References

- Badan Pusat Statistik Kabupaten Barru. (2024). Kabupaten Barru dalam Angka 2024. BPS.
- Benedict, M. A., & McMahon, E. T. (2006). *Green Infrastructure: Linking Landscapes and Communities*. Island Press.
- Bryant, C., & Bailey, S. (1997). *Third World Political Ecology*. Routledge.
- Chambers, R. (1983). *Rural Development: Putting the Last*

- First. Longman.
- Ellis, F. (2000). *Rural Livelihoods and Diversity in Developing Countries*. Oxford University Press.
- Escobar, A. (1995). *Encountering Development: The Making and Unmaking of the Third World*. Princeton University Press.
- Harvey, D. (1973). *Social Justice and the City*. Edward Arnold.
- Hizbaron, D. R., Muthohar, I., & Malkhamah, S. (2022). Risk-Based interurban Makassar-Parepare railway development, Indonesia. *Transportation Research Interdisciplinary Perspectives*, 13, 100541. <https://doi.org/https://doi.org/10.1016/j.trip.2022.100541>
- Kementerian Perhubungan Republik Indonesia. (2023). *Laporan Proyek Strategis Nasional Sektor Perkeretaapian*. Kemenhub.
- Meraldha, A. R., & Firdaus, M. K. (2025). Potensi Pengembangan Kawasan TOD dalam Rencana Pembangunan MRT Koridor Timur-Barat Jabodetabek. 21(September).
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook* (3rd ed.). SAGE Publications, Inc.
- Nissa', N. A., Nurmastiti, A., Setyowati, R., & Mariyani, S. (2023). Livelihood resilience of small fishers households in rural areas, Indonesia. *Habitat*, 34(3), 23. <https://doi.org/10.21776/ub.habitat.2023.034.3.23>
- PAIR – Australia Indonesia Centre. (2024). *Sustainable Connectivity: Social and Environmental Perspectives on Makassar–Parepare Railway Corridor*. AIC.
- Pradnyani, I. A. G. D. E., Tama, G. M., & Herawati, H. (2024). Pengaruh implementasi good corporate governance terhadap sustainable development goals. *Jurnal Ilmiah Manajemen, Ekonomi Dan Akuntansi*, 4(2), 69–85. <https://doi.org/10.55606/jurimea.v4i2.916>
- Scott, J. C. (1985). *Weapons of the Weak: Everyday Forms of Peasant Resistance*. Yale University Press.
- Scott, J. C. (1998). *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. Yale University Press.
- United Nations Development Programme. (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development*. United Nations.
- United Nations Development Programme. (2020). *Local Governance for Sustainable Development Goals*. United Nations Development Programme.
- Wibowo, A. (2022). Implementasi Program SDGs Desa dalam Pembangunan Berkelanjutan. *Jurnal Pembangunan Daerah*, 10(2), 123–134.
- Widhiantari, S. A., & Kurniawan, T. (2025). Collaborative governance in localizing the Sustainable Development Goals (SDGs): A case study of Jakarta's Regional Action Plan (RAD). *COMSERVA: Jurnal Penelitian Dan Pengabdian Masyarakat*, 5(1). <https://doi.org/10.59141/comserva.v5i1.3132>
- Yusriadi, Y., & Kaslin, A. (2025). Resilience of rural communities facing global challenges. *Journal of Indonesian Scholars for Social Research*, 5(1), 65–72. <https://doi.org/10.59065/jissr.v5i1.174>