

Community-Driven Institutional Strategies for Ecotourism Development: A Case of Village-Owned Enterprises (BUMDes) in South Kalimantan, Indonesia

Muhammad Azmi¹, Yudi Firmanul Arifin², Muhammad Husaini³, Fatmawati⁴,
Emmy Sri Mahreda⁵, Nuri Dewi Yanti⁶, Abdi Fithria⁷

¹Doctoral Student of Agricultural Sciences, Study Program Graduate Program Lambung Mangkurat University

^{2,7}Faculty of Forestry, Lambung Mangkurat University

^{3,6}Faculty of Agriculture, Lambung Mangkurat University

^{4,5}Faculty of Fisheries, Lambung Mangkurat University, Indonesia.

Corresponding Author: Muhammad Azmi

DOI: <https://doi.org/10.52403/ijrr.20250622>

ABSTRACT

This research investigates strategic institutional frameworks for enhancing community-based ecotourism initiatives through Village-Owned Enterprises (BUMDes) in South Kalimantan, Indonesia. Employing a mixed-method design that combines participatory field observations, expert interviews, and the Analytical Hierarchy Process (AHP), the study systematically evaluates the priority actions necessary to strengthen BUMDes as tourism managers. The results indicate that the most critical strategies include inclusive community engagement, the development of conservation-oriented and educational tourism products, and the implementation of digital-based promotional efforts. These elements are shown to contribute significantly to the legitimacy, competitiveness, and long-term sustainability of rural tourism initiatives. The findings emphasize the need for adaptive institutional models that integrate local knowledge and stakeholder participation into tourism governance. The study also underscores the utility of AHP as a decision-making tool in identifying strategic

directions for village-based tourism development. Recommendations are proposed for policymakers to establish enabling regulatory environments and facilitate multi-sectoral partnerships that support the institutional capacity of BUMDes in managing sustainable ecotourism.

Keywords: community-based ecotourism, Village-Owned Enterprises (BUMDes), institutional strategy, AHP, sustainable rural tourism, Indonesia

INTRODUCTION

Tourism has increasingly become a critical sector in achieving inclusive and sustainable economic growth, particularly in rural areas rich in ecological and cultural assets. In recent years, the concept of community-based ecotourism (CBET) has gained significant attention as a viable model for integrating environmental conservation with local economic empowerment [1]. This model emphasizes community ownership, participation, and benefit-sharing while preserving biodiversity and fostering socio-cultural identity. Especially in regions where centralized tourism development has often

led to inequity and ecological degradation, CBET offers an alternative that aligns tourism development with principles of sustainability and justice [2] [3].

In Southeast Asia, and Indonesia in particular, ecotourism is increasingly viewed not just as a conservation strategy but also as a rural transformation mechanism. Indonesia's immense biodiversity—being one of the world's megadiverse countries—coupled with the diverse socio-cultural traditions of its rural communities, presents a fertile ground for CBET. However, the implementation of ecotourism initiatives in Indonesia has often been hampered by weak governance structures, lack of institutional coordination, and minimal community ownership [4]. Many top-down tourism projects have failed to generate long-term economic value or meaningful community involvement, resulting in fragmented and unsustainable outcomes.

To address such institutional challenges, the Government of Indonesia has promoted Village-Owned Enterprises (BUMDes) as a formalized structure for managing village economic activities, including ecotourism. BUMDes, as stipulated under Law No. 6 of 2014 on Villages, are expected to be community-controlled entities that can mobilize local resources, manage assets, and reinvest profits for village development. In practice, however, the effectiveness of BUMDes in managing tourism ventures varies greatly depending on their institutional capacity, strategic orientation, and degree of community participation [5].

While many studies have addressed the potential of BUMDes as instruments of economic decentralization [6], few have explored their strategic capacity in managing complex sectors such as ecotourism. Unlike commodity-based enterprises, ecotourism requires a nuanced approach that balances ecological integrity, socio-cultural sensitivity, and visitor experience. It also demands sophisticated governance, marketing capabilities, and stakeholder coordination—areas where many BUMDes still face significant limitations. Hence, to

harness the full potential of ecotourism, there is a need to examine how BUMDes can be strategically positioned to act as effective institutional managers of tourism ventures.

Recent empirical findings underscore the critical role of institutional strategy in shaping the success or failure of CBET initiatives. For example, [7] emphasize the importance of aligning tourism development with local decision-making structures, participatory planning, and capacity building. Similarly, [8] suggest that sustainable ecotourism requires adaptive institutional mechanisms that can respond to changing environmental and market dynamics. These findings support [9] theory of competitive advantage, which highlights the interplay between internal capacity and external opportunities as drivers of organizational success.

In response to these theoretical and practical gaps, this study applies Porter's Diamond Model to analyze the institutional strengths and weaknesses of BUMDes in managing ecotourism in South Kalimantan, Indonesia. The model consists of six interrelated factors: factor conditions (e.g., natural and human capital), demand conditions (market preferences), related and supporting industries, firm structure and rivalry, government policies, and chance events [9] [10]. Integrating this framework with community-based development principles allows for a more comprehensive understanding of how BUMDes can build and sustain competitive advantage in ecotourism.

In addition to qualitative institutional assessment, this study employs the Analytical Hierarchy Process (AHP) to prioritize strategic actions based on expert input. AHP is a structured decision-making tool that allows for the ranking of alternatives by pairwise comparison, particularly useful in contexts involving multiple stakeholders and complex trade-offs [1]. The combination of AHP with Porter's framework offers a novel methodological approach that bridges theory with actionable insights. While AHP has been previously used in tourism planning

[11], its application in the context of institutional strategy for village enterprises remains limited.

The research is conducted in several villages across Banjar Regency, South Kalimantan, a region characterized by a rich ecological landscape, including tropical forests, rivers, and wetlands, alongside vibrant Dayak and Banjar cultural heritage. Despite such endowments, tourism development in the area remains underdeveloped, largely due to a lack of institutional readiness, limited strategic planning, and insufficient community capacity. By focusing on this region, the study aims to shed light on both the potential and limitations of BUMDes as community-based ecotourism managers.

This study, therefore, seeks to answer two key questions:

- (1) What are the institutional factors that determine the competitive advantage of BUMDes in ecotourism development?
- (2) What strategic priorities should be adopted to strengthen BUMDes' role in managing community-based ecotourism sustainably?

Addressing these questions will contribute to both academic scholarship and policy formulation in the fields of rural development, sustainable tourism, and institutional economics. At the theoretical level, this research advances the understanding of how local institutions can serve as agents of transformation when equipped with strategic clarity and participatory governance. Practically, the findings can inform regional planners, village governments, and tourism stakeholders in designing more effective interventions that empower communities through ecotourism.

In sum, the study positions BUMDes not merely as economic instruments, but as institutional hubs that link local aspirations, ecological stewardship, and economic opportunity. By identifying and prioritizing strategies based on local input and empirical analysis, this research contributes to the growing discourse on sustainable, inclusive,

and locally anchored tourism development in the Global South.

LITERATURE REVIEW

The development and long-term viability of community-based ecotourism (CBET) are intrinsically linked to the presence of institutional frameworks that ensure equity, foster participation, and allow for adaptability in governance structures. In recent discourse, particularly within the realm of sustainable tourism, the emphasis has shifted towards community autonomy, capacity-building, and local control as foundational principles for success [4] [5]. Theoretical perspectives grounded in participatory development and adaptive governance argue that communities must not only be beneficiaries but active designers and decision-makers in tourism systems. These arguments resonate strongly in rural contexts where local knowledge, ecological sensitivity, and cultural assets are core components of the tourism offering.

Emerging empirical studies in the past five years have reinforced the notion that decentralized governance and entrepreneurial agency at the village level are crucial to transforming tourism from a sector of dependency to a catalyst of empowerment [2] [6]. This model has proven especially relevant in Indonesia, where the policy framework has progressively shifted toward village autonomy under Law No. 6 of 2014 on Villages. Within this regulatory landscape, Village-Owned Enterprises (BUMDes) serve as the institutional backbone for mobilizing local resources and structuring community-led development, including ecotourism [7].

BUMDes offer a unique configuration: they are legally established by villages, operate under cooperative or limited liability principles, and are mandated to reinvest profits into public goods and village development. This makes them ideal vehicles for channeling community-based tourism initiatives—provided they are supported by effective governance, inclusive participation, and coherent strategic

planning. Nonetheless, challenges persist, such as limited managerial capacity, lack of institutional coordination, and the absence of strategic decision-making frameworks in tourism-specific domains [6] [8].

One increasingly utilized tool to overcome such limitations is the Analytical Hierarchy Process (AHP)—a multi-criteria decision-making (MCDM) framework developed to facilitate structured comparisons among competing priorities. AHP has been successfully applied in ecotourism planning, particularly where stakeholders must evaluate multiple, often conflicting objectives [1]. For instance, [11] applied AHP to identify priority strategies for ecotourism in Banyuwangi, Indonesia, highlighting its utility in participatory planning contexts.

Despite its growing application in tourism literature, the integration of AHP into the strategic management of BUMDes remains underexplored. Most current studies focus on its technical application for site planning or marketing strategy rather than embedding AHP within broader institutional frameworks for village enterprise governance. This presents an important research gap, particularly considering the complexity of managing ecotourism enterprises that must navigate ecological preservation, community welfare, and economic viability simultaneously.

The incorporation of tools such as AHP into institutional analysis allows for more democratic and transparent decision-making processes. It also enables BUMDes to prioritize actions based on community consensus and empirical analysis rather than top-down directives. Moreover, combining AHP with institutional frameworks like Porter's Diamond model—which assesses competitive advantage based on factors such as resource conditions, demand structure, supporting industries, strategy and rivalry, and government influence—can yield more holistic strategic models [10].

Furthermore, scholars have begun advocating for multi-criteria frameworks that not only facilitate strategic planning but also

support institutional learning. In CBET settings, where dynamic environmental and social factors play significant roles, decision-making must be iterative and informed by continuous feedback loops [8] [4]. This underscores the need for integrating tools like AHP with participatory governance mechanisms, thereby aligning technical rigor with democratic legitimacy.

In summary, the literature suggests that effective institutional strategies for BUMDes-managed ecotourism should rest on three pillars: (1) decentralized and participatory governance, (2) strategic decision-making tools like AHP, and (3) integrated models of competitive advantage. Although substantial work has been done in each area independently, research that synthesizes these dimensions remains scarce. This study contributes to that synthesis by combining institutional diagnostics with strategic prioritization to produce a replicable model for CBET governance in rural Indonesia.

MATERIALS & METHODS

This research adopted a mixed-methods approach, integrating both qualitative and quantitative techniques to comprehensively explore institutional strategies for BUMDes-managed ecotourism. The rationale for employing this methodological framework lies in the need to capture not only numerical priorities but also the contextual and perceptual dimensions of institutional dynamics at the village level [12].

Qualitative data were collected through field observations and semi-structured interviews with key stakeholders, including village officials, BUMDes managers, tourism practitioners, and local community leaders. These data provided insights into the socio-political context, governance challenges, and community perceptions regarding ecotourism development. The selection of participants was conducted via purposive sampling, focusing on individuals with substantial experience or authority in the planning and implementation of rural tourism initiatives. A total of ten expert

respondents were engaged in this phase of the research, consistent with sample sizes recommended in exploratory AHP studies [1].

In the quantitative phase, the Analytical Hierarchy Process (AHP) was applied to structure and prioritize strategic alternatives. AHP is a multi-criteria decision-making (MCDM) technique that enables systematic evaluation of complex decisions by breaking them down into a hierarchical model [13]. In this study, the hierarchy was composed of five interconnected levels: (1) the overall objective (strategic development of BUMDes for ecotourism), (2) key stakeholder groups (government, BUMDes, community, private sector, NGOs), (3) supporting factors (resources, institutional readiness, policy environment), (4) intermediate objectives (capacity building, branding, product innovation), and (5) strategic alternatives.

Each level was populated with criteria and sub-criteria derived from both literature and empirical findings. Respondents were asked to perform pairwise comparisons of the elements within each level using a standardized 1–9 scale. These comparisons were then processed using Expert Choice™ software, which computed the relative weights and consistency indices for each decision node. A consistency ratio (CR) threshold of 0.1 was employed to ensure logical coherence of the judgments, in line with AHP best practices [14].

To enhance the validity and reliability of findings, a triangulation strategy was

employed. This involved comparing data from interviews, observations, and AHP outputs. The triangulation not only validated the consistency of the information across methods but also helped reveal nuanced insights that might be obscured through single-method approaches [11].

The mixed-methods design thus enabled a robust exploration of both the subjective dimensions of stakeholder perspectives and the objective prioritization of strategic options. This methodological integration is particularly suited to complex policy environments such as community-based tourism, where social dynamics, institutional structures, and economic considerations intersect [4].

RESULT

The Analytical Hierarchy Process (AHP) analysis systematically prioritized strategic actions to enhance the capacity of Village-Owned Enterprises (BUMDes) in managing community-based ecotourism. Through expert evaluations and pairwise comparisons, six principal strategies were identified, each assigned a relative weight indicating its importance. These priorities represent expert consensus on the most effective approaches to promoting sustainable and community-driven tourism governance in rural Indonesian contexts. Figure 1 visually summarizes these six strategies, ranked by their significance, providing clear insight into the key focus areas necessary for strengthening BUMDes' role in ecotourism development.

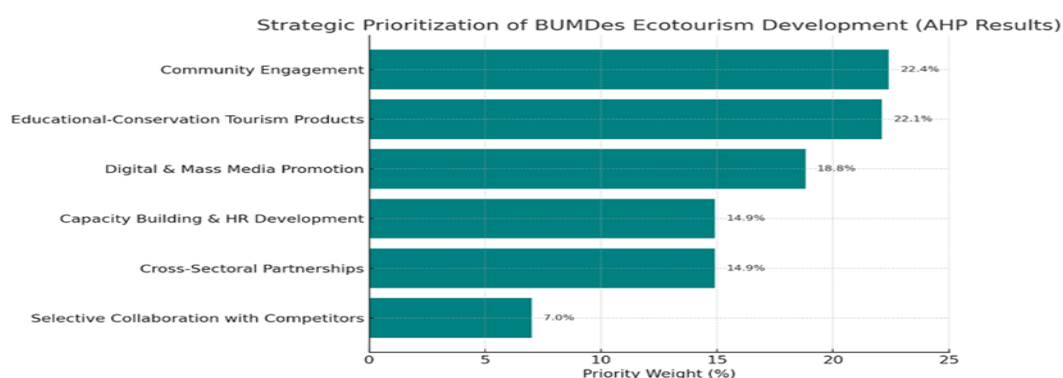


Figure 1. Graphical representation of research findings based on the Analytical Hierarchy Process (AHP), illustrating six prioritized strategies for community-based ecotourism development managed by Village-Owned Enterprises (BUMDes).

Figure 1 illustrates the prioritized strategic actions derived from the Analytical Hierarchy Process (AHP) analysis, which is discussed in detail in the Results and Discussion section. This figure visually represents the relative weights assigned by experts to six key strategies essential for strengthening BUMDes-managed ecotourism. The prioritization highlights the critical role of community engagement, product development, and digital promotion in achieving sustainable rural tourism outcomes, as elaborated in the discussion. The top three strategies accounted for over 60% of the total weighting, underscoring their critical relevance to sustainable ecotourism development.

DISCUSSION

The most prominent strategy, receiving a relative weight of 22.4%, is the active involvement of the community in ecotourism planning and implementation. This finding corroborates a large body of literature that highlights community participation as the cornerstone of effective and sustainable ecotourism initiatives [11][7]. Genuine community engagement is not merely symbolic but involves participatory decision-making, shared governance, and the redistribution of tourism benefits. Such participatory structures foster local ownership, which in turn enhances the legitimacy and resilience of ecotourism ventures [2].

The second strategic priority, weighted at 22.1%, is the development of tourism products grounded in education and environmental conservation. This aligns with the fundamental tenets of ecotourism, which emphasize interpretation, learning, and sustainability. Creating immersive and educational tourism products that highlight biodiversity, cultural traditions, and conservation efforts not only attracts a growing segment of ecotourists but also strengthens the role of tourism as a vehicle for environmental stewardship. Studies by [8] indicate that such products can enhance the perceived value of ecotourism

experiences, thereby increasing visitor satisfaction and repeat visitation rates.

Ranked third, with a weight of 18.8%, is digital and mass media promotion. This strategic priority reflects the evolving nature of tourist behavior, particularly the growing reliance on digital platforms for travel planning, information sharing, and experience evaluation [4]. Effective use of social media, websites, and online booking platforms can dramatically increase the visibility of rural ecotourism destinations, especially those not typically featured in mainstream tourism circuits. In this context, digital marketing serves not only as a promotional tool but also as a means to articulate the values of authenticity, sustainability, and community involvement. The fourth and fifth strategies, each with a weight of 14.9%, involve capacity building and recruitment of local human resources, and establishing strategic partnerships across sectors. The emphasis on capacity building underscores the need for continuous training and professionalization of the workforce engaged in tourism services. As noted by [15], one of the recurring limitations in community-based tourism ventures is the lack of technical and managerial skills among local actors. Therefore, investment in human capital—through formal training, mentoring, and knowledge exchange—is vital for improving service quality and operational efficiency.

Similarly, cross-sectoral partnerships—encompassing government agencies, NGOs, academic institutions, and private tourism operators—are seen as essential for enhancing the institutional strength of BUMDes. Such collaborations can provide access to funding, technical expertise, regulatory support, and broader market linkages (Santoso & Prasetyo, 2021). Moreover, they allow for synergies that promote innovation in product development, destination management, and community outreach.

The sixth and final strategic alternative, with a weight of 7.0%, pertains to selective collaboration with competitors. While less

emphasized, this strategy suggests an emerging awareness among stakeholders about the value of coopetition—cooperative competition—as a means to build destination-level coherence, pool resources, and avoid destructive rivalry [10].

Taken together, the AHP results present a coherent strategic roadmap for BUMDes in ecotourism management. The prioritization hierarchy highlights a model where community empowerment, sustainability-driven product innovation, and digital communication occupy the central axis of transformation. These core strategies are complemented by supporting actions aimed at institutional strengthening and network building, thereby enhancing the adaptive capacity and scalability of local tourism enterprises.

From a theoretical standpoint, the results support the proposition that competitive advantage in community-based ecotourism emerges from the interplay between internal assets (e.g., social capital, knowledge systems) and external linkages (e.g., partnerships, market access). This reflects [9] view that sustainable advantage is rooted in a system of interrelated factors rather than isolated initiatives. In line with this, the study reinforces the need for BUMDes to adopt an integrated strategic approach, aligning institutional objectives with market realities and community values.

In the broader context of Indonesian rural development, the findings carry important policy implications. First, village governments and regional planners should prioritize regulations and funding mechanisms that facilitate participatory tourism governance. Second, investment in digital infrastructure and human resource development should be seen as core components of tourism planning at the village level. Third, the promotion of multi-stakeholder partnerships must be institutionalized through platforms that foster dialogue, trust, and co-creation among actors with diverse mandates and competencies [4].

Finally, this study contributes to the empirical literature by demonstrating the utility of AHP in refining strategic priorities within complex institutional environments. The methodology proved effective in eliciting expert judgments, structuring multi-layered decision problems, and synthesizing qualitative and quantitative insights. Its application in the context of BUMDes-managed ecotourism offers a replicable model for other rural communities seeking to advance sustainable tourism through locally anchored governance structures.

CONCLUSION

This research concludes that the effectiveness of Village-Owned Enterprises (BUMDes) in managing ecotourism initiatives is largely determined by the strength and orientation of their institutional strategies. Three interconnected components are essential: participatory governance, which ensures inclusive decision-making and fosters collective ownership; tourism products rooted in local ecological and cultural contexts, which enhance authenticity and conservation value; and adaptive promotional strategies, particularly through digital and mass media, to increase destination visibility and attract targeted markets.

These institutional approaches collectively contribute to enhancing the legitimacy, operational viability, and long-term sustainability of rural ecotourism enterprises. The findings reaffirm the view that ecotourism cannot thrive through infrastructure and investment alone, but requires robust community-based governance frameworks that are responsive to both internal dynamics and external market shifts.

From a policy perspective, the study highlights the importance of designing regulatory frameworks that support the autonomy of BUMDes while providing oversight and accountability. Moreover, continuous investment in human resource development—through training, mentorship, and knowledge exchange—is crucial to

improving managerial and technical competencies at the village level. The role of cross-sectoral collaboration is equally vital, as partnerships with governmental bodies, NGOs, and the private sector can facilitate access to resources, networks, and innovation.

Importantly, the study demonstrates the utility of the Analytical Hierarchy Process (AHP) as a replicable tool for structuring strategic priorities in rural tourism planning, offering broader applicability in similar contexts across Indonesia and beyond.

Declaration by Authors

Acknowledgement: The author gratefully acknowledges the support of Universitas Lambung Mangkurat for facilitating the fieldwork and academic supervision throughout the research process. Special appreciation is extended to the village governments and BUMDes managers in Banjar Regency for their openness, collaboration, and valuable insights during interviews and data collection. The author also thanks the expert respondents from government agencies, academic institutions, and tourism practitioners who contributed their time and knowledge to the Analytical Hierarchy Process (AHP) assessment. This research would not have been possible without their cooperation and commitment to sustainable rural development

Source of Funding: None

Conflict of Interest: No conflicts of interest declared.

REFERENCES

- Rahman, N. A., Hamzah, A., & Hashim, N. H. (2021). Prioritizing sustainable tourism strategies using Analytical Hierarchy Process (AHP): A case study in Malaysia. *Journal of Sustainable Tourism*, 29(5), 753–770. <https://doi.org/10.1080/09669582.2020.1755278>
- Putra, I. G. A., & Widiastuti, N. K. (2020). Community-based ecotourism development in Bali: Institutional approach and economic impact. *Journal of Sustainable Tourism*, 28(12), 2043–2059. <https://doi.org/10.1080/09669582.2020.1752306>
- Hall, C. M., Roberts, L., & Mitchell, M. (2018). New directions in community-based tourism development: The role of policy and institutions. *Journal of Sustainable Tourism*, 26(8), 1278–1294. <https://doi.org/10.1080/09669582.2017.1405798>
- Wijaya, I. M., Suastika, I. N., & Suryanegara, I. P. (2022). Institutional strengthening in community-based ecotourism development: A study in Gianyar, Bali. *Journal of Ecotourism*, 21(1), 72–89. <https://doi.org/10.1080/14724049.2021.189996>
- Santoso, D., & Prasetyo, H. (2021). Multi-stakeholder collaboration for competitive advantage of rural tourism: Case study of Sleman Regency, Indonesia. *Sustainability*, 13(9), 4856. <https://doi.org/10.3390/su13094856>
- Rahman, M., Suharto, B., & Nugroho, R. (2020). Local regulation strengthening for community-based tourism development in Lombok, Indonesia. *International Journal of Tourism Policy*, 10(4), 317–335. <https://doi.org/10.1504/IJTP.2020.113281>
- Wijayanti, D., & Sari, R. (2019). Multi-criteria decision making for prioritizing community-based tourism development in Yogyakarta. *International Journal of Tourism Policy*, 9(3), 222–240. <https://doi.org/10.1504/IJTP.2019.10020459>
- Kusuma, M., & Hartono, D. (2020). Strengthening multi-stakeholder partnerships for sustainable ecotourism: A case study of BUMDes in Indonesia. *Journal of Sustainable Tourism*, 28(12), 2035–2050. <https://doi.org/10.1080/09669582.2020.1779733>
- Porter, M. E. (1990). *The competitive advantage of nations*. Free Press.
- Nasution, R. A., Subroto, A., & Putra, I. G. A. (2019). Application of Porter's Diamond model for competitive advantage of tourist destinations in Indonesia. *Journal of Tourism and Cultural Change*, 17(4), 418–436. <https://doi.org/10.1080/14766825.2018.1473563>
- Utami, D., & Kurniawan, B. (2020). Community empowerment and digital marketing as priority strategies in ecotourism development: An AHP approach in Banyuwangi, Indonesia. *Journal of*

- Ecotourism, 19(2), 187–204.
<https://doi.org/10.1080/14724049.2019.1643173>
12. Creswell, J. W., & Plano Clark, V. L. (2018). Designing and conducting mixed methods research (3rd ed.). SAGE Publications.
 13. Saaty, T. L. (2008). Decision making with the analytic hierarchy process. *International Journal of Services Sciences*, 1(1), 83–98
 14. Saaty, T. L., & Vargas, L. G. (2012). Models, methods, concepts and applications of the analytic hierarchy process (2nd ed.). Springer.
 15. Wibowo, A., & Handayani, T. (2018). Capacity building of local human resources in ecotourism management: A case study in Indonesian villages. *Tourism Management Perspectives*, 25, 158–166.
<https://doi.org/10.1016/j.tmp.2017.12.007>
- How to cite this article: Muhammad Azmi, Yudi Firmanul Arifin, Muhammad Husaini, Fatmawati, Emmy Sri Mahreda, Nuri Dewi Yanti et.al. Community-driven institutional strategies for ecotourism development: a case of village-owned enterprises (BUMDes) in South Kalimantan, Indonesia. *International Journal of Research and Review*. 2025; 12(6): 175-183. DOI: <https://doi.org/10.52403/ijrr.20250622>
