

Integration of Landscape Aesthetics and Sustainable Business Models in Kaliaren Village Land Utilization

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Article Info :	ABSTRACT
Accepted: 28-08-2026 Approved: 22-09-2026 Published: 29-10-2026	Background: Kaliaren Village has landscape assets whose economic potential remains underdeveloped. Objective: This study examines land-use conditions and proposes an integrated landscape-aesthetics and sustainable-business framework. Methods: A descriptive-exploratory qualitative approach combines field observation, interviews, focus group discussions, documentary review, SWOT assessment, and exploratory spatial analysis. Results: The manuscript reports 385 hectares of land, comprising 180 hectares of rice fields, 95 hectares of mixed gardens, 65 hectares of settlements, 15 hectares of public facilities, and 30 hectares of vacant land. Five potential development zones are identified, encompassing the village entrance, road corridor, terraced rice fields, hillside gardens, and natural springs. Stakeholder accounts favor participatory development, local product diversification, and coordination through village economic institutions. The proposed model integrates aesthetic improvements, institutional development, skills training, branding, and differentiated products. However, the manuscript does not report the number of participants, validated spatial datasets, or measured implementation outcomes. Conclusion: The integrated framework provides a preliminary planning proposition rather than evidence of proven business or environmental effectiveness. Further verification, participatory feasibility assessment, and outcome monitoring are necessary before implementation or replication.
Keywords: land use; landscape aesthetics; village development; sustainable business model; kaliaren village.	

INTRODUCTION

Kaliaren Village is a micro-representation of the challenges and opportunities faced by villages in Indonesia in the context of local economic development. The geographical and demographic conditions of Kaliaren

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Villages show significant potential for productive land development that has not been optimally optimized ([Mulyani et al., 2022](#); [Nugraha et al., 2022](#)).

The land tenure structure in these villages is still dominated by traditional patterns with varying levels of productivity, creating opportunities for more strategic planning interventions ([Shan et al., 2022](#); [Yin et al., 2022](#)). Changes in the consumption patterns of urban communities that increasingly appreciate the aesthetic value and authenticity of local products open up opportunities for Kaliaren Village to develop an economy based on local uniqueness ([Figueiredo et al., 2022](#); [Staffolani et al., 2022](#)). Administratively, Kaliaren Village is located in Cilimus District, Kuningan Regency, West Java Province. Rural economic transformation requires a holistic approach that considers ecological, social, and economic aspects simultaneously.

The literature shows that the success of village economic development is highly dependent on the community's ability to identify and utilize unique local assets ([Navarro-Valverde et al., 2022](#); [Zhao & Morimoto, 2022](#)). In the context of Kaliaren Village, these assets include local wisdom in land management, biodiversity, and the potential for the development of high-value-added products ([Abas et al., 2022](#); [Kurnia et al., 2022](#)). However, the main challenge faced is how to translate this potential into a viable and sustainable business model without sacrificing aesthetic and ecological values that are the main attraction ([Galardi et al., 2022](#); [Ricket et al., 2023](#)).

The main problem faced by Kaliaren Village is the low level of productive land use that integrates aesthetic aspects with business orientation. Data shows that most of the village land is still used for subsistence agriculture with minimal economic added value ([Achmad et al., 2022](#)). In Kaliaren Village, this condition is confirmed by the field observation of the present study, in which rice fields and mixed gardens cover approximately 275 of the 385 hectares of village land (see Table 1). Limited public knowledge about the concept of productive landscapes and aesthetic-based product marketing strategies is a significant obstacle in local economic development ([Rodrigues et al., 2023](#)).

In addition, the lack of a comprehensive framework to integrate landscape aesthetic planning with the development of business models that are appropriate to the local context causes village development initiatives to often be unsustainable ([Raja et al., 2022](#); [Shi et al., 2022](#)). Fragmentation of land ownership and weak coordination between stakeholders are structural problems that hinder the implementation of comprehensive land development plans.

Research shows that without effective collaboration mechanisms, village landscape transformation efforts tend to be partial and do not have a significant economic impact ([Effendi et al., 2023](#); [Irungu et al., 2023](#)). The lack

of access to capital and appropriate technology to develop a landscape aesthetics-based business is also a serious obstacle (Anatan & Nur, 2023; Stojanova et al., 2022). Furthermore, the lack of a strong brand identity for Kaliaren Village's products and destinations has caused this village to not be able to compete in the regional and national markets (de San Eugenio-Vela et al., 2023).

The urgency of this research is driven by the urgent need to develop a rural land use model that not only focuses on economic productivity, but also maintains and improves the aesthetic quality of the environment. The Indonesian government's policies through the tourism village and creative economy programs require empirical research support that can be used as a guide for implementation at the local level (Annahar et al., 2023; Ristiawan et al., 2023).

Global trends show increasing consumer demand for authentic and aesthetic products and experiences, creating a window of opportunity for villages like Kaliaren to develop competitive advantage (Csordás et al., 2022; Zheng et al., 2023). Without planned interventions, this potential will be wasted and Kaliaren Village will continue to be trapped in a subsistence economic pattern that is unable to significantly improve the welfare of the community (Djuwendah et al., 2023; Jin et al., 2022).

This research is also important in the context of environmental conservation and rural ecological sustainability. Unplanned land use can lead to environmental degradation and loss of local biodiversity (Kelly-Fair et al., 2022; Widyati et al., 2022). By developing a model that integrates aesthetics, economics, and ecology, this research can contribute to the achievement of the Sustainable Development Goals (SDGs), specifically goals 8, 11, and 12 (Octavia et al., 2022; Widawski et al., 2023). Furthermore, the results of this study are expected to be a reference for other villages in Indonesia that have similar characteristics, so that the multiplier effect of this study can be felt more widely (Ahlmeyer & Volgmann, 2023; Sili et al., 2022).

Various studies have explored the relationship between rural land use and local economic development, but with different focuses and approaches. A study conducted by Luo et al. (2023) shows that the integrated development of agriculture and tourism significantly increases farmers' income, with effects that vary according to tourism resource endowment and the level of local economic development.

A similar study by Costantino et al. (2022) in a depopulated rural village in Italy found that integrating historic footpaths and cultural heritage with digital itineraries and visitor wayfinding can serve as a strategy for revitalizing rural areas through sustainable tourism. Meanwhile, Amrullah et al. (2023)

identified critical factors for the success of tourism village development on Java Island, showing that village capability and business innovation significantly improve management performance. From a landscape planning perspective, research by Li et al. (2022) developed an indicator-based framework to evaluate rural tourism landscape resources by combining expert judgment with fuzzy multi-criteria analysis.

Jiang et al. (2023) further found that tourists' preferences for rural settlements are strongly influenced by perceived aesthetic qualities, while their assessments reflect the cultural heritage of the village and visitors' familiarity with rural settings. In the rural tourism context, Tang et al. (2022) surveyed visitors to three rural destinations in Nanjing, China, and found that destination image and tourist satisfaction positively shape the willingness to revisit. Recent research by Notaro et al. (2022) uses a discrete choice experiment to estimate visitors' willingness to pay for alpine pasture landscapes in Italy, making an important contribution to understanding the trade-offs between conservation and development. However, most previous research has focused on a single aspect, either aesthetic or economic, and has not comprehensively integrated these two dimensions in the specific context of villages in Indonesia.

The research by Utami et al. (2022) tries to integrate a participatory and multidisciplinary co-design approach in Sabrang Village, Indonesia, but focuses on reviving indigenous values and community resilience rather than on concrete business strategies that can be implemented by local communities. A study by Zhu et al. (2022) on rural revitalization through comprehensive land consolidation in Gansu, China, provides valuable insights into the role of government in facilitating rural economic development, but different socio-political contexts limit its direct applicability in Indonesia. Therefore, there is still a significant gap in the literature on how villages in Indonesia can systematically develop sustainable business models by leveraging their landscape aesthetic assets.

The novelty of this research lies in the development of an integrative model that simultaneously accommodates the aesthetic dimension of the landscape and business viability in the specific context of Kaliaren Village. In contrast to previous research that tends to separate aesthetic and economic studies, this study develops a holistic framework that shows how the two aspects can reinforce each other (Bindi et al., 2022; Wang et al., 2023). This research also uses a participatory action research approach that places local communities as co-researchers, ensuring that the solutions developed are truly applicable and culturally appropriate (Kusmulyono et al., 2023).

In this study, this participatory orientation is operationalized within a descriptive-exploratory design, in which community members contributed as key informants and focus group participants and validated the interpretations through member checking, as detailed in the Research Method section. Another innovative aspect is the use of spatial analysis tools to identify potential zones in the village based on a combination of aesthetic, accessibility, and economic potential criteria ([Acharya et al., 2022](#); [Chandel et al., 2023](#)). The theoretical contribution of this research is to the development of the concept of "aesthetic entrepreneurship" which integrates the principles of landscape aesthetics, community-based tourism, and sustainable business models.

Conceptually, this notion builds on the view that rural entrepreneurs create and extract value from their environment by commodifying non-material and aesthetic values ([Antunes et al., 2023](#); [Tabares et al., 2022](#)), and on place-based perspectives which emphasize that rural entrepreneurship is embedded in the material, social, and collaborative attributes of a locality ([Lobo et al., 2022](#)). Accordingly, landscape aesthetics is treated in this study not merely as scenery but as a place-bound asset that can be valorized through community-based enterprises. This concept offers a new perspective in understanding how rural communities can create competitive advantage through the capitalization of their aesthetic assets without sacrificing authenticity and sustainability ([Purnamawati et al., 2022](#)).

Practically, this research produces a toolkit that can be used by other villages to conduct self-assessments and design customized development strategies according to their respective local characteristics ([Liu et al., 2023](#)). Thus, this research not only contributes to the body of knowledge about rural development, but also provides actionable practical solutions for stakeholders at the village level ([Auliah et al., 2022](#); [De Rosa et al., 2022](#)).

This research aims to identify and analyze the potential land use of Kaliaren Village that integrates the aesthetic aspects of the landscape with the development of sustainable business models. Specifically, this study aims to: first, map the existing conditions of land use in Kaliaren Village along with its aesthetic characteristics and economic potential; second, identifying the preferences and perceptions of local communities and external stakeholders towards aesthetic-based and business-based land development; third, formulate feasible strategies and business models to optimize land use by considering aesthetic, ecological, social, and economic aspects; fourth, develop an implementation framework that can be used as a guide for the Kaliaren Village community and other villages with similar characteristics in developing a local economy based on landscape aesthetics.

The theoretical benefit of this research is the development of a body of knowledge in the field of rural development studies, especially related to the integration of landscape aesthetics and business development. This research is expected to enrich the literature on community-based economic development by offering a more holistic perspective that considers the aesthetic dimension as economic capital. Practically, this research will provide direct benefits to the people of Kaliaren Village in the form of a land development blueprint that can increase their income and quality of life. Local governments can use the results of this research as a reference in formulating village development policies and resource allocation for community empowerment programs.

The broader implications of this study are its contribution to efforts to achieve sustainable development in Indonesia. By showing that economic development and aesthetic-ecological preservation are not trade-offs but can run synergism, this research can change the paradigm of development in rural areas. The model developed in this study has the potential to be replicated in other villages, creating a significant multiplier effect on the national rural economy. From an academic perspective, this research opens up opportunities for more specific follow-up research, for example on certain aspects of aesthetics-based business models or comparative studies between villages with different characteristics. For practitioners and consultants of village development, this research provides tools and frameworks that can be directly applied in rural community empowerment projects.

RESEARCH METHOD

This study employed a qualitative approach with a descriptive-exploratory design to examine in depth the land use of Kaliaren Village from aesthetic and business perspectives. The research object comprised all productive and non-productive land in Kaliaren Village with potential for development, as well as existing land-use practices. The research data sources consisted of primary data obtained through direct observation, in-depth interviews with key informants (village heads, community leaders, local business actors, and members of the general public), and focus group discussions with various stakeholders. Secondary data were obtained from official village documents, statistical data, regional maps, relevant literature, and visual documentation of the existing land conditions.

The research population included all residents of Kaliaren Village who were involved in productive activities related to land use. The sample was selected purposively based on the following criteria: ownership of or access to productive land, active involvement in village economic activities, knowledge

of village conditions, and willingness to participate in the research. The number of informants was determined based on the principle of data saturation in qualitative research. Data were collected using triangulation methods to ensure the validity and reliability of the findings.

Participatory observation was conducted to examine the physical condition of the land, existing land-use practices, community interactions with the environment, and the aesthetic potential of the landscape that could be developed. Semi-structured in-depth interviews were conducted using an open-ended interview guide that allowed for an in-depth exploration of the informants' perspectives. Focus group discussions were conducted to obtain consensus and identify stakeholder dynamics regarding land development plans. Documentation was carried out through photographs, videos, and spatial mapping using GPS to record existing conditions and assess land potential.

The research instruments included structured observation guides, interview guides, audio-visual recording devices, cameras, GPS devices, and spatial analysis software. The research procedure consisted of a preparation stage (licensing and instrument preparation), a field data collection stage (observation, interviews, and focus group discussions), a data analysis stage, and a recommendation formulation stage. Data were analyzed using the Miles and Huberman model, which included data reduction, data display, and conclusion drawing ([Miles et al., 2014](#)).

Data analysis was conducted iteratively from the beginning of data collection through the completion of the research. To enhance the credibility of the findings, triangulation of sources, methods, and theories was employed. Member checking was conducted by confirming the interpretations of the findings with the informants. Spatial analysis was conducted to identify potential development zones based on aesthetic, accessibility, and economic criteria. The results of the analysis were subsequently used to formulate an integrative and contextual land-development framework that was aligned with the conditions of Kaliaren Village ([Creswell & Poth, 2018](#)).

Methodological reporting limitation: The manuscript does not specify the exact number of interviewees or focus group participants, the fieldwork dates, the administrative district and regency, or the name and version of the spatial-analysis software. These details require verification from the original field records before publication; no values have been inferred. The spatial overlay described here should be interpreted as an exploratory zoning assessment until its input layers, weighting rules, coordinate reference system, and validation procedures are documented. The proposed three-year

implementation roadmap is a planning output, not an intervention whose outcomes have already been measured.

RESULT AND DISCUSSION

Existing Conditions of Land Use in Kaliaren Village

The results of field observations show that Kaliaren Village has an area of about 385 hectares with a land use composition dominated by a rice field farming area of 180 hectares, mixed gardens of 95 hectares, 65 hectares of settlements, 15 hectares of public facilities, and vacant or unproductive land of about 30 hectares. The topography of the village varies with altitudes between 450-680 meters above sea level, creating an undulating landscape with interesting views towards the valley and hills. Accessibility to the village is relatively good with asphalt roads that connect the village with the sub-district center for 7 kilometers. Tropical climatic conditions with an average rainfall of 2,400 mm per year support agricultural productivity throughout the year.

The current land use pattern is still very conventional with the main orientation on rice farming and palawija crops. Most farmers use conventional farming systems with high chemical inputs and have not considered aesthetic aspects in land management. Mixed garden areas are traditionally managed with diverse plants but without spatial planning that pays attention to visual value. Vacant land scattered in several strategic locations, especially along the main village road and in hilly areas with good views, has not been optimally utilized. Some residents' houses have large yards but are only planted with makeshift plants without a clear landscaping concept.

In terms of supporting infrastructure, this village has several public facilities such as village halls, mosques, elementary schools, and posyandu. However, these public areas have not been laid out with aesthetic aspects that can improve the visual quality of the village. There are no public green open areas that can function as a space for social interaction as well as tourist attractions. The existing irrigation system is good enough but these waterways have not been optimized as landscape elements that can add aesthetic value. Street lighting at night is still limited, reducing the potential for economic activity at night and not allowing visitors to enjoy the village atmosphere at night.

The natural aesthetic potential of Kaliaren Village is very significant with a view of the expanse of rice fields with green terraces, rows of large trees along the village road, and views towards the hills that are still beautiful. Some spots in the village have the potential to be interesting viewpoints but have not been developed properly. The existence of natural springs in several locations

is also an asset that can be developed into an attractive water feature element. The traditional architecture of residents' houses that are still preserved in some parts of the village gives a distinctive and authentic visual character. The diverse local vegetation including flowering plants and ornamental plants that grow wild in certain areas shows the potential for the development of a garden or thematic garden.

The community's economic activities are currently dominated by the agricultural sector with an average income that is still relatively low. There has not been significant economic diversification into other sectors such as tourism, creative industries, or services. Some residents have small businesses such as grocery stalls and workshops but on a very limited scale. There are no superior products in the village that are well packaged and marketed more widely. Some agricultural products such as organic vegetables and garden products are sold directly to middlemen without a value addition process, causing the profit margins received by farmers to be very small.

The potential to develop agro-tourism or agricultural educational tourism is very large, but it has not been explored at all. From a socio-cultural perspective, the people of Kaliaren Village have strong social capital with active mutual cooperation and well-functioning community organizations. The level of education of the community varies with most high school graduates and more and more young people going on to college. However, there is a tendency to urbanize among youth looking for work in the city, leading to a reduction in the productive workforce in the villages.

Public awareness of the importance of environmental aesthetics is still limited, reflected in the condition of several areas that are not well organized and the habit of disposing of waste that is not optimal. Women's involvement in productive economic activities is still low, even though they have great potential in the development of businesses based on creativity and aesthetics. Descriptive summary of the reported land-use composition: rice fields account for 180 of 385 hectares (46.8%), mixed gardens 95 hectares (24.7%), settlements 65 hectares (16.9%), public facilities 15 hectares (3.9%), and vacant or unproductive land 30 hectares (7.8%). These proportions are calculated from the figures already reported in this manuscript; the underlying cadastral or GIS dataset was not supplied for independent validation.

A SWOT analysis of existing conditions shows that Kaliaren Village has strength in the form of abundant natural resources, strategic location, strong social capital, and unique local characteristics. The main weaknesses are the low capacity of human resources in business management and landscaping, limited capital, non-existent tourism supporting infrastructure, and the absence of village branding. Opportunities that can be taken advantage of

include increasing rural tourism trends, government programs for village development, increasingly open market access through digital platforms, and growing demand for organic and authentic products. Threats that need to be anticipated are competition with other tourist villages, climate change that can affect agriculture, fluctuations in agricultural commodity prices, and potential land conflicts if development is not managed properly.

Perception and Aspirations of Stakeholders on Land Development

In-depth interviews with village heads and village officials revealed that they strongly support village development efforts that can improve community welfare. The village head stated that so far there has been a desire to develop the village to be more advanced but constrained by limited knowledge, capital, and access to relevant empowerment programs. They realize that the village has unexplored potential, especially from the aspect of natural beauty that can attract tourists. However, they do not yet have a clear blueprint on how to package this potential into marketable tourism products. The village apparatus also emphasized the importance of the involvement of the entire community in the development process so that the results are sustainable and acceptable to all parties.

Community leaders and traditional elders provided perspectives on the importance of maintaining local wisdom values in every development effort. They fear that modernization and commercialization could erode the village's cultural identity that has been preserved for decades. Some community leaders emphasized that economic development must still respect existing social norms and must not cause sharp economic disparities between citizens. They propose that development be carried out in an inclusive manner by ensuring that economic benefits can be felt by all levels of society, not just a handful of people with large capital. In terms of aesthetics, they want the characteristics of traditional architecture to be maintained and used as a unique selling point for the village.

Local business actors, although still limited in number, show high enthusiasm for village development plans. They see a great opportunity to develop new businesses or expand existing ones if the infrastructure and number of visitors increase. Several business actors who have food stalls expressed their readiness to improve the quality of service and menus if there is an increase in demand. Owners of large tracts of land express their willingness to allocate part of the land for the development of public facilities or tourist attractions if there is a clear and profitable model of cooperation. However, they also expressed concerns about investment risks and asked for assistance in aspects of business management and marketing.

Farmer groups as a representation of the majority of the village community welcomed the idea of integrating aesthetics in their agricultural practices. They are interested in the concept of organic farming and agro-tourism but need technical training and better access to markets.

Some farmers reveal that they are tired of conventional farming patterns that provide smaller profit margins and are vulnerable to price fluctuations. They see the development of agro-tourism as an alternative to income diversification. Women's groups, which have been less involved in formal economic activities, have shown great interest in business opportunities in the culinary, handicrafts, and homestay accommodation sectors. They have skills in making traditional foods and handicrafts that can be developed into marketable products.

Focus group discussions with village youth produced very valuable insights on how the young generation sees the future of their villages. Most of the youth who still live in the village express a desire to stay in their hometowns if there are adequate economic opportunities. They have creative ideas on how to utilize digital technology to promote villages and market local products. Some of the experienced young men working in the city bring a new perspective on the quality standards of products and services expected by urban consumers. They are also more open to innovation and ready to learn new things that can increase the competitiveness of the village. Village youth propose the development of digital content and a strong social media presence as a village marketing strategy.

In the FGD session with various stakeholders, a consensus emerged on several development priorities. First, the visual arrangement of the village is a top priority because it will be a first impression for visitors. This includes arranging the entrance area of the village, making clear and aesthetic signage, arranging small parks in public areas, and painting residents' houses with a harmonious color palette. Second, the development of at least one unique and high-quality village superior product that can become a signature product. Third, the development of basic infrastructure to support tourism such as clean public toilets, parking areas, and rest areas. Fourth, increasing human resource capacity through trainings on hospitality, business management, digital marketing, and landscaping. Fifth, the establishment of tourism village institutions or BUMDes which will be the driving force and coordinator of village development.

In terms of the desired business model, people tend to want a cooperative model where profits can be distributed fairly. They propose the formation of cooperatives or BUMDes that will manage village assets and joint ventures, while individuals or small groups can develop complementary businesses. For

the aesthetic aspect, the community wants development that is not too artificial but still organized and clean. They want to maintain the rural character that is the strength of the village while improving visual quality and comfort. There is an agreement to develop village regulations on building aesthetic standards and land planning to ensure visual consistency throughout the village. The community also emphasized the importance of education and continuous socialization to change their mindset and behavior in maintaining the cleanliness and beauty of the environment.

The Potential of Landscape Aesthetic-Based Business Development

Identification of business development potential is carried out through an overlay analysis between aesthetic potential maps, accessibility maps, and land tenure maps. The results show that there are five development priority zones with different business characteristics and potential. The first zone is the village entrance area which has an empty land of about 2 hectares with an open view towards rice fields. This zone is very strategic for the development of a welcome park or thematic park equipped with an information center, photo spots, and small commercial areas such as souvenir kiosks and cafes. The development of this zone will give a strong first impression to visitors and can be an initial information point before visitors explore the village more deeply.

The second zone is the main road corridor of the village for about 2 kilometers which is currently planted with large trees on both sides. This corridor has the potential to be developed into a scenic route with the addition of aesthetic elements such as small gardens at certain intervals, artistic street furniture, aesthetic lighting at night, and murals or street art that raise local themes. Along this corridor, homestays can be developed in residents' houses that are strategically located and have attractive buildings. Stalls and shops may be asked to standardize the façade with certain guidelines to create visual harmony. The pedestrian area can be improved in quality by attractive paving and the addition of ornamental plants in regularly placed pots.

The third zone is a rice field area of about 15 hectares that forms a terraced landscape with beautiful contours. This area is the strongest visual asset that the village has and has great potential for agro-tourism development. Business models that can be developed include agricultural educational tour packages where tourists can learn and participate in farming activities, pre-wedding photo packages or photography tours with beautiful rice field backgrounds, the development of cafes or restaurants with views of rice fields, and the construction of viewing decks or gazebos in several strategic spots. Farmers who own land can be involved as educators or tour guides who will receive fee

sharing from each visit. Agricultural products from this area can be packaged into organic premium products with strong branding.

The fourth zone is a mixed garden area in the hills of about 8 hectares that is currently traditionally managed. This area has the potential to be developed into an eco-farm or permaculture garden that is not only economically productive but also aesthetically and educational. The concept that can be applied is a food forest where various types of fruit plants, vegetables, medicinal plants, and ornamental plants are planted in layers with attractive landscape designs. The area can be equipped with a comfortable walking trail, a camping or glamping area, and workshop facilities for organic gardening or permaculture training. The business model can be a combination of selling fresh and organic crops, fees from educational activities and workshops, and revenue from camping or glamping accommodation services.

The fifth zone is the area around the natural spring water source which has only been used for irrigation. This area has the potential to be developed into a water park or natural water park that takes advantage of the freshness and clarity of mountain water. The design can be made semi-natural by utilizing natural rocks and vegetation, natural swimming pools of varying depths, safe children's play areas, and gazebos for resting. The business model can be a daily admission ticket, a family package, or a membership. The development of this area will provide additional attraction especially for the family and children's segment. This area can also be a venue for events such as gatherings, outbound, or corporate family days.

In addition to the development of these physical zones, there is great potential for the development of products and services based on local aesthetic and cultural characteristics. Traditional recipe-based culinary products can be packaged with attractive and modern packaging while maintaining authentic taste. Handicrafts such as woven bamboo, written batik with local motifs, or ceramics can be developed with a more contemporary design to appeal to a wider market segment.

Agricultural products such as organic vegetables, fresh fruits, or processed foods can be packaged in aesthetically pleasing hampers with strong village branding. Homestay services can be improved by providing hospitality training to homeowners and setting minimum standards for facilities and cleanliness. Guide services or tour packages can be developed with various themes such as cultural tours, culinary tours, farming experiences, or photography tours.

From the perspective of the value chain, business development in this village needs to pay attention to the integration between various activities. For example, organic agricultural products produced in agro-tourism zones can be

processed into menus in cafes or restaurants in the entrance zone or corridors, and can also be sold as souvenirs in attractive packaging. Handicrafts produced by women's groups can be sold at souvenir kiosks as well as used as decoration elements in homestays or other public facilities. Photography activities in the rice field area can be packaged with makeup services and traditional costume rentals provided by local business actors. Thus, a local economic ecosystem is created that is interrelated and strengthens each other, where increasing activity in one sector will provide a multiplier effect to other sectors.

Business Model and Implementation Strategy

Based on an analysis of the potential, stakeholder perception, and best practices of other successful villages, a holistic business model for Kaliaren Village was formulated which consists of several layers. The first layer is the development of basic infrastructure and aesthetics that are the foundation of the entire development. This includes the arrangement of the entrance area, beautification of the main corridor, the construction of signage and wayfinding systems, the improvement of the quality of public areas, and the creation of instagrammable photo spots in various strategic locations.

The development of basic infrastructure and aesthetics requires a relatively large allocation of resources as the initial foundation for village development. In the context of this scientific article, the need is positioned as a scenario-based indicative estimate, which is compiled to illustrate the scale of the intervention, rather than as a final budget calculation. The implementation timeline for this layer is 6-12 months by involving community cooperation to reduce costs.

The second layer is the development of BUMDes or village economic institutions which will be the driving force and coordinator of all economic activities in the village. This BUMDes will have several business units including a tourism unit that manages tourist attractions and tour packages, a production unit that coordinates the production of agricultural products and handicrafts, a retail unit that manages souvenir shops and e-commerce, and a service unit that manages homestays and other supporting services.

The ownership structure of BUMDes is a collective with all villagers as shareholders through the mechanism of village capital participation. The profit-sharing system will be set up in such a way that part of the profits are used for reinvestment, partly for dividends to shareholders, and partly for village social programs. Strengthening village economic institutions through BUMDes requires start-up capital on a medium scale, which is sourced from a combination of village assets and collaborative financing mechanisms. The

amount of capital in this study is hypothetical and contextual, used as an illustration of the feasibility of the business model, not as a normative number.

The third layer is human resource capacity development through continuous training and mentoring programs. The required training programs include hospitality and customer service for homestay and stall actors, landscape gardening for groups that will manage parks, digital marketing and e-commerce for BUMDes marketing teams, food processing and packaging for agricultural product processing groups, handicraft design for craftsmen, photography and content creation for social media teams, and business management for BUMDes management.

These trainings will be carried out in stages by inviting trainers from outside and utilizing competent local human resources. Human resource capacity building programs require a commitment to sustainable investment, especially in the early phases of development. In this study, the need for training costs was treated as a conceptual estimate to show the importance of the aspect of capacity building, not as a draft operational budget. The fourth layer is the comprehensive development of village branding and marketing. Kaliaren Village needs to have a strong brand identity including logos, taglines, color palettes, and visual guidelines that are consistently used across all touchpoints.

The proposed tagline is "Kaliaren: Where Nature Meets Nurture" which represents a combination of natural beauty and community warmth. The marketing strategy will use a multi-channel approach with a focus on digital marketing considering its cost effectiveness and wide reach. Social media platforms such as Instagram, TikTok, Facebook, and YouTube will be optimized with high-quality content that displays the beauty of the village and interesting activities that can be done.

The official website of the village will be developed with a booking system feature for homestays and tour packages. Collaboration with travel bloggers, influencers, and mass media will be carried out to increase awareness. Village branding and marketing activities require a proportionate allocation of resources to the target market reach, especially in the early stages of destination identification. The estimates presented in this study serve as a strategic simulation, not as a definitive financing reference.

The fifth layer is the development of superior products and services that will become the signature of Kaliaren Village. The featured product that is prioritized is the Kaliaren Organic Farm Package which is an agro-tourism package for a full day where visitors can learn and practice directly about organic farming, enjoy lunch with a farm-to-table menu, and take home

harvested organic products. This package is targeted for families and corporate groups at a price of around 350 thousand rupiah per person.

The second product is the Kaliaren Artisan Collection, which is a collection of premium handicrafts with a contemporary design but still maintains traditional techniques. Each product will be accompanied by a certificate of authenticity and storytelling about the craftsman. The third product is the Kaliaren Heritage Homestay Experience which offers a traditional home stay experience with modern facilities, complete with cultural activities such as learning to make crafts or cooking traditional food.

The pricing strategy for products and services will use a value-based pricing approach where prices are determined based on the perceived value received by consumers rather than just based on cost. For tour packages, prices will be set in the middle to upper range considering that the target market is the urban middle class who value quality and authenticity. For physical products such as handicrafts and agricultural products, there will be product differentiation with various price points to accommodate various market segments.

The promotional strategy will be intensive in the first year with various programs such as early bird discounts, referral programs, and loyalty programs to build customer databases and encourage repeat visits. Partnerships with travel agents, hotels in nearby cities, and corporate for gathering packages or CSR programs will be actively established. The distribution strategy will combine direct selling through websites and physical stores in the village, indirect selling through resellers and online marketplaces, as well as strategic placement in hotels, restaurants, and modern retail in nearby cities.

The logistics and delivery system will be professionally arranged to ensure that products reach customers in good condition and on time. The packaging will be designed with great care as this is one of the main differentiators, using eco-friendly materials that are visually and functionally appealing. Quality control will be a top priority with strict standards for all products and services, regular monitoring, and a feedback system from customers for continuous improvement. Sustainability of the business model will be built by ensuring that the growth that occurs is inclusive and does not create gaps. A fair profit-sharing mechanism will ensure that the benefits of development can be felt by the entire community.

Environmental sustainability will be maintained by applying the principles of eco-tourism, limiting the number of visitors in some sensitive areas, and conducting conservation programs. Social sustainability will be maintained by ensuring that local cultural values and traditions are

maintained, and the younger generation is actively involved in village development so that they have a sense of ownership and commitment to maintain sustainability.

Financial sustainability will be achieved through revenue stream diversification, efficient cost management, and the right reinvestment strategy to continue to improve the quality of products and services. It should be emphasized that all resource and financing estimates in this article are presented as academic scenarios and conceptual illustrations, not as budget proposals or technical planning documents.

Evaluation Implementation and Monitoring Roadmap

The roadmap for the implementation of Kaliaren Village development is designed in a period of 3 years with a clear division of phases. The first phase or the first year (months 1-12) is focused on foundation building including institutional strengthening by forming or strengthening BUMDes, preparation of AD/ART, organizational structure, and operational systems. The development of basic infrastructure such as the arrangement of the entrance area, beautification of the main corridor, the construction of signage, and the improvement of public facilities will be carried out in stages.

The intensive capacity building program will be carried out with various trainings for various community groups. Branding development and website launching and social media will be completed in the first semester. Pilot projects for several superior products such as agrotourism packages and artisan products will be carried out for market testing and getting feedback. The detailed timeline of the first phase is as follows: Months 1-2 focus on socializing the program to the entire community, forming work teams for various fields, and detailed surveys for technical planning.

Months 3-4 began the physical construction of the entrance area and the arrangement of the corridor while in parallel conducting the first training for the hospitality and landscape groups. Month 5-6 launching brand identity and digital platform, starting the production of superior products on a limited scale, and the second training for the production and marketing groups. Months 7-8 soft opening for friends and family as beta testing, gathering feedback, and improvements. Months 9-10 grand opening with media and influencer invitations, launching intensive campaigns, and starting full operations for several products. Months 11-12 focus on first-year evaluation, financial closing, and detailed second-year planning.

The second phase or second year (months 13-24) is focused on scaling up and quality improvement. Based on learning from the first year, there will be an expansion of products and services that have been proven successful. The

development of other zones that have not been worked on in the first year such as eco-farms in hilly areas and water parks in spring areas will begin. Improving the quality of existing products and services based on customer feedback and benchmarking with competitors. Intensifying marketing by expanding channels and partnerships. Development of human resources that are more specialized for various functions. Implementation of more sophisticated technology systems such as POS system, inventory management, CRM, and analytics tools for better decision making.

Detailed timeline of the second phase: Months 13-15 of infrastructure expansion with the construction of an eco-farm area and the preparation of land for a water park. Months 16-18 product diversification by launching new variants and category extensions, increasing production capacity, and expanding distribution channels to other cities. Months 19-21 implementation technology system, upgrading websites with more advanced features, and integration with various online travel agent platforms. Months 22-24 focus on customer retention with a more robust loyalty program, community building through events and customer gatherings, as well as a comprehensive evaluation of the second year and strategic planning for the third year.

The third phase or third year (months 25-36) is focused on consolidation and preparation for sustainable long-term growth. Fine-tuning of all operational aspects to achieve optimal efficiency. Development of talent pool from the young generation of the village to ensure leadership sustainability. Explore new market segments or geographic expansions if possible. Strengthening collaboration with external stakeholders such as local governments, universities, and the private sector. Documentation and codification of best practices that have been formed for the purpose of knowledge sharing and potential replication in other villages.

Detailed timeline of the third phase: Months 25-27 focus on operational excellence by streamlining all processes, cost optimization without sacrificing quality, and enhancing customer experience across all touchpoints. Months 28-30 leadership development program for prospective leaders from the younger generation, succession planning for key positions, and creating innovation culture. Months 31-33 exploration for geographic expansion or strategic category expansion, feasibility study, and if feasible start preparation. Months 34-36 comprehensive evaluation three years performance, documentation of lessons learned, strategic planning for next phase, and potentially celebration milestones with the community and stakeholders.

The monitoring and evaluation system is designed to ensure that the implementation runs according to the plan and objectives are achieved. Key Performance Indicators (KPIs) are set for various aspects including financial

performance such as total revenue, profit margin, and return on investment; market performance such as number of visitors, conversion rate, and customer satisfaction score; operational performance such as occupancy rate homestay, production volume, and distribution coverage; social impact such as the number of citizens involved, income improvement, and employment creation; and environmental impact such as waste management performance and conservation efforts. Data for these KPIs will be collected regularly and analyzed to identify trends, issues, and opportunities.

The evaluation mechanism will be carried out at various levels with different frequencies. Weekly monitoring by the operational team to track progress and identify immediate issues. Monthly review meeting with BUMDes management to evaluate performance and decide corrective actions if needed. Quarterly evaluation by involving a wider range of stakeholders including community representatives to discuss progress, challenges, and strategic adjustments. Annual comprehensive evaluation with an external evaluator to obtain objective assessments and recommendations.

The results of the evaluation will be communicated transparently to the community through village meetings and displayed on village information boards and websites. Feedback from the public and customers will be used as important input in the evaluation and improvement process. It is also important to prepare a risk management framework considering the various uncertainties that may occur. Risks that need to be anticipated include financial risks such as revenue shortfall or cost overrun which will be mitigated by conservative financial planning and maintaining adequate cash reserves.

Operational risks such as quality issues or service failure will be mitigated with clear standard operating procedures and regular training. Market risks such as changes in consumer preferences or intensification of competition will be mitigated by continuous market research and product innovation. Social risks such as internal conflicts or resistance to change will be mitigated through transparent communication and inclusive decision-making. Environmental risks such as natural disasters or climate change impacts will be mitigated with proper insurance and adaptation strategies.

Success factors that are critical for the success of implementation include strong leadership from village heads and BUMDes administrators who are committed and capable, active participation from the community at all stages from planning to implementation and evaluation, adequate funding from both internal and external sources, continuous capacity building to upgrade skills and knowledge, effective marketing to create awareness and attract customers, Quality consistency to build trust and reputation, adaptive

management that is responsive to changing situations, and external support from the government, academia, and the private sector. With proper attention to all these aspects and disciplined execution, the development of Kaliaren Village based on aesthetics and business has a great opportunity to succeed and become a model that can be replicated by other villages.

The five-zone prioritization can be interpreted alongside the landscape-assessment framework discussed by Li et al. ([Li et al., 2022](#)), while the proposed combination of traditional aesthetics and visitor amenities is comparable to Costantino et al. ([Costantino et al., 2022](#)). However, the present manuscript reports proposed development functions rather than observed changes in visitation, revenue, or environmental quality. Accordingly, the identified zones should not be interpreted as evidence that the proposed businesses are financially feasible or ecologically sustainable.

The preference for participatory village enterprises is consistent with the emphasis on village capability and business innovation reported by Amrullah et al. ([Amrullah et al., 2023](#)). In contrast, this study has not yet evaluated the governance capacity or distributive outcomes of the proposed BUMDes arrangement. The proposed cooperative approach therefore remains a context-specific recommendation requiring consultation and feasibility testing.

Discussion

The results of the study show that Kaliaren Village has significant potential to be developed as a destination that integrates landscape aesthetics with sustainable economic activities. The main finding of this study is the identification of five development priority zones that each have unique characteristics and different business opportunities. The entrance area with the potential for a thematic park and information center will function as a gateway that gives a strong first impression for visitors.

The main corridor zone with scenic routes and homestays will be the spine that connects the various attractions in the village while providing a pleasant visual experience. The rice field zone with a terraced landscape is the strongest visual asset with huge agro-tourism potential. The mixed garden zone in the hills is suitable for the development of an educational and recreational eco-farm. Meanwhile, the natural spring zone can be developed into an appealing water attraction for the family segment.

What is interesting about the results of this study is the high level of public support and enthusiasm for development plans, although they still have limitations in terms of technical and managerial knowledge. This shows that strong social capital in Kaliaren Village is an excellent foundation for the

implementation of empowerment programs. The perception of people who want inclusive development while respecting local values is in line with the principles of sustainable development that emphasize the importance of a people-centered approach.

Their aspiration to develop a cooperative business model through BUMDes reflects the understanding that economic development must provide equal benefits to the entire community. From the perspective of the business model, the multi-layer approach formulated in this study provides a comprehensive structure for village transformation. The infrastructure and aesthetic layer as the foundation ensures that the village has the necessary visual attraction to attract visitors.

The institutional layer through BUMDes provides the necessary organizational structure to coordinate various economic activities. The capacity building layer ensures that human resources have the necessary competencies. The branding and marketing layer ensures that village products and services can reach the target market effectively. And the superior product layer ensures that the village has a clear differentiation from competitors. The integration of these five layers creates a holistic and mutually reinforcing value system. The three-year implementation roadmap is designed to show a realistic timeline with proper prioritization.

The first phase that focuses on foundation building is crucial because this is the period where the basic infrastructure, systems, and capacity are built. Without a solid foundation, scaling up in the next phase will be very challenging. The second phase focuses on scaling up and quality improvement utilizing the momentum and learning from the first phase to accelerate growth. The third phase focuses on consolidation, ensuring that the growth achieved is sustainable and the village is ready for long-term success.

This timeline is also realistic considering the complexity of the desired transformation and necessary for behavior change at the community level. Compared to previous research on the development of tourism villages in Indonesia, this research makes a distinctive contribution in terms of seamless integration between aesthetics and business. Many previous studies tend to address the two aspects separately or focus only on one of them. This research shows that aesthetics are not only ornamental but can be a core value proposition that can be translated into economic value.

This is in line with the findings of several international researchers who stated that the aesthetic quality of the destination is an important determinant of visitor satisfaction and willingness to pay. However, this research is more advanced by not only identifying the importance of aesthetics but also formulating a concrete action plan on how aesthetics can be developed and

monetized. In terms of development approach, this study uses a participatory approach that places the community as a subject rather than an object of development.

This is different from many village development projects that tend to top-down and produce solutions that are not locally appropriate or sustainable. By involving the community from the assessment stage to planning, this research ensures that the resulting solutions truly reflect local needs, aspirations, and capabilities. This is consistent with the literature on community-based development that emphasizes the importance of local ownership for sustainability. Several researchers have proven that development programs that are designed and implemented in a participatory manner have a much higher success rate and better sustainability.

An innovative aspect of this research also lies in the use of spatial analysis to identify potential zones. Many previous studies have taken a more general or intuitive approach in determining priority areas. By using overlay analysis that considers multiple criteria such as aesthetics, accessibility, and economy, this study results in a more objective and data-driven prioritization. This is important to ensure that limited resources are allocated to areas that provide the greatest return on investment. Some studies on tourism development planning also use spatial analysis tools, but not many have applied them in the context of rural development with a focus on landscape aesthetics.

The BUMDes model proposed in this study as a vehicle to organize village economic activities is also an appropriate adaptation of the institutional form that has been recognized in Indonesia. In contrast to the individual entrepreneurship or pure cooperative approach, each of which has its limitations, BUMDes provides flexibility to combine collective enterprise with individual initiatives. Studies on BUMDes in Indonesia show mixed results with many BUMDes struggling due to governance issues, limited capacity, or unclear business models. This research contributes by providing a more detailed blueprint on how BUMDes can be structured and operated effectively in the context of aesthetic-based tourism villages.

The branding and marketing strategies formulated in this study also show a good understanding of the contemporary marketing landscape where digital presence and content marketing are very crucial. The use of the tagline "Where Nature Meets Nurture" effectively encapsulates the value proposition of the village that combines natural beauty with the warmth of community. The emphasis on storytelling and authenticity in marketing communication is in line with the trend of consumer behavior where modern consumers increasingly value authentic and meaningful experiences compared to purely

transactional relationships. Research in tourism marketing shows that destinations that manage to build an emotional connection with visitors tend to have higher loyalty and positive word-of-mouth.

Pricing strategies that use value-based pricing show a shift from cost-plus thinking that is still common in many rural enterprises. By positioning products and services at the medium-to-premium price point, villages can capture the higher margins necessary for sustainable operation and continuous improvement. This is also consistent with the target market, namely the urban middle-class who are willing to pay a premium for quality and authenticity. Several studies on rural tourism pricing show that many destinations underprice their products because they do not fully appreciate the value they deliver, resulting in lower profitability and perception of low quality.

A comprehensive sustainability framework that includes financial, social, and environmental dimensions shows a holistic understanding of what is needed for long-term success. Financial sustainability through diversified revenue streams and efficient operations ensures economic viability. Social sustainability through inclusive benefit sharing and preservation of culture ensures social cohesion and intergenerational continuity. Environmental sustainability through eco-tourism principles and conservation efforts ensures that natural assets that are the main attraction are maintained. This framework is in line with the concept of triple bottom line which is increasingly adopted as a standard for measuring success beyond pure financial metrics.

The risk management framework prepared shows anticipation of various uncertainties that can threaten implementation. In the context of rural development, risks are very real considering the limited buffer capacity of the community and exposure to various external shocks. By identifying potential risks upfront and preparing mitigation strategies, the likelihood of successful implementation increases significantly. The literature on project management and rural development shows that projects that incorporate a robust risk management framework from the beginning have a higher completion rate and better outcomes.

System monitoring and evaluation with multi-level mechanisms and clear KPIs ensure accountability and enabling adaptive management. Weekly operational monitoring allows for quick response to immediate issues. Monthly and quarterly reviews allow for identification of trends and strategic adjustments. Annual comprehensive evaluation with an external evaluator provides objective assessment and learning for improvement. Transparency in communicating evaluation results to the community builds trust and

maintaining engagement. Research on development programs shows that programs with robust M&E systems have significantly better performance because they enable evidence-based decision making and continuous learning.

From the perspective of practical implications, this study provides an actionable roadmap that can be directly implemented by Kaliaren Village. Detailed timeline, budget estimation, and task breakdown provide the clarity needed to mobilize resources and coordinate actions. Developed toolkits such as brand guidelines, marketing templates, and training modules can be used immediately. But more importantly, the framework and approach developed in this study can be adapted by other villages in Indonesia that want to carry out a similar transformation. With the necessary contextualization to reflect local specifics, this model has the potential for wide applicability.

For higher-level stakeholders such as local governments or ministries, this research provides insights into what is needed for successful rural development and how they can better support communities. Findings on critical success factors such as capacity building, access to funding, and enabling policy environment can inform the design of support programs. Understanding common challenges and effective solutions can help in avoiding pitfalls and replicating successes. Research also highlights the importance of patient capital and long-term commitment considering that this kind of transformation requires time and sustained effort.

The manuscript contains descriptive land-area figures and stakeholder accounts, but does not provide raw interview transcripts, respondent counts, mapped spatial layers, financial feasibility calculations, or implementation outcome data. Consequently, claims of effectiveness, economic returns, and replicability must be treated as hypotheses for future evaluation rather than established empirical effects. This study identifies the potential of Kaliaren Village to integrate landscape aesthetics with sustainable local enterprise development. Reported land uses include rice fields, mixed gardens, settlements, public facilities, and vacant land, while stakeholder accounts indicate interest in inclusive economic diversification.

Five priority development zones are proposed: the village entrance, main road corridor, terraced rice fields, hillside gardens, and natural springs. A community-oriented business framework combines environmental improvements, BUMDes coordination, capacity building, village branding, and locally distinctive products. These findings offer a preliminary planning basis for village authorities and community enterprises. However, the proposed activities have not been implemented or evaluated, and their economic and ecological outcomes remain uncertain. Future research should validate spatial

data, document stakeholder participation, assess feasibility, and monitor measurable outcomes before broader replication in comparable rural settings.

The limitations of this study need to be acknowledged so that the findings can be interpreted with appropriate caveats. First, this research was conducted in a village with certain geographical, social, and economic characteristics, so the generalizability of findings to very different contexts may be limited. Villages in other regions with different cultures, topography, or economic bases might need substantial adaptations. Second, the research timeframe does not allow to observe actual implementation and evaluate real outcomes, so the effectiveness of the proposed model has not been empirically tested. Follow-up research after implementation is necessary to validate and refine the model.

Third, this research is primarily qualitative so that certain aspects are quantifiable such as financial projections or market size estimation based on assumptions that may not be fully accurate. Complementary quantitative studies to validate assumptions and provide more precise estimates will be very valuable. Fourth, this study does not deeply explore certain technical aspects such as detailed architectural design, engineering specifications, or legal regulatory requirements that will be necessary in the implementation stage. Collaboration with experts from relevant technical fields will be needed.

Fifth, external factors that can significantly impact implementation such as government policy changes, macroeconomic conditions, or competitive dynamics are not fully explored and remain as uncertainties that need to be continuously monitored and adapted to. Despite these limitations, this research has successfully achieved the objectives set in providing a comprehensive understanding of potential, formulating feasible strategies, and developing an implementable framework for aesthetic and business-based land use in Kaliaren Village.

The theoretical contribution in enriching literature on rural development and practicality in providing actionable solutions is significant. This research opens up various avenues for further research both for deepening understanding on specific aspects and for comparative studies across different contexts. Most importantly, this research demonstrates that with proper planning, community engagement, and holistic approaches, rural communities have the potential to transform themselves and achieve sustainable prosperity without sacrificing their identity and natural assets.

CONCLUSION

This study concludes that Kaliaren Village's 385 hectares remain dominated by rice fields and mixed gardens oriented toward subsistence agriculture, while its terraced landscapes, springs, and traditional architecture

constitute underused aesthetic assets. Stakeholders, including farmers, women, and youth, support inclusive, participatory development coordinated through BUMDes. Five priority zones were identified: the village entrance, road corridor, terraced rice fields, hillside gardens, and natural springs.

The resulting framework integrates aesthetic improvement, institutional strengthening, capacity building, village branding, and signature products within a three-year roadmap. Practically, it offers village authorities a preliminary planning basis for allocating resources and designing empowerment programs; theoretically, it supports aesthetic entrepreneurship by positioning landscape aesthetics as economic capital.

ACKNOWLEDGEMENT

The authors thank the Kaliaren Village Government, Cilimus District, Kuningan Regency, for granting permission and facilitating fieldwork. We are grateful to the community leaders, BUMDes management, farmer groups, women's groups, village youth, and local business actors who generously shared their time and insights as informants and focus group participants. We also thank Politeknik Siber Cerdika Internasional for its academic support throughout this research.

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