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Integration of SWOT Analysis and Land Suitability in Determining the Development Strategy of Cocoa Farming in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province

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ABSTRACT: This study integrates SWOT analysis and land suitability assessment to determine the most appropriate development strategy for cocoa farming in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province. Primary and secondary data were collected through field surveys, interviews, and document analysis. SWOT analysis identified internal and external strategic factors influencing cocoa farming, while land suitability analysis evaluated the biophysical potential of the land. The results show that cocoa farming in Ekasari Village possesses strong internal strengths, such as stable production, fertile soils, and extensive land availability, while weaknesses include limited product diversification and low technological adoption. Externally, government support and increasing demand for cocoa-based products represent major opportunities, whereas threats include low youth interest in agriculture and fluctuating market prices. The integrated SWOT–land suitability analysis positioned cocoa farming in Quadrant I (Aggressive Strategy), indicating strong potential for development. Therefore, the recommended strategies include encouraging farmers to obtain quality certifications (e.g., organic or Fairtrade), using high-quality cocoa seeds, expanding market access, and enhancing technological innovation to achieve sustainable cocoa farming development in Ekasari Village.

KEYWORDS: Cocoa Farming; SWOT Analysis; Land Suitability; Development Strategy; Sustainable Agriculture; Bali Province.

I. INTRODUCTION

Cocoa is one of the plantation commodities that plays an important role in both the national and regional economy (Nurhadi, 2019). Indonesia is recognized as one of the largest cocoa producers in the world, contributing significantly to the country's foreign exchange earnings and improving the welfare of farming communities (Aulia, 2020). In Bali Province, Jembrana Regency is one of the major cocoa production centers, and Ekasari Village in Melaya Subdistrict is known as one of the areas engaged in cocoa cultivation (Ardana, 2020).

Cocoa farming in Ekasari Village has considerable potential, as indicated by the availability of extensive land, fertile soil conditions, and a strategic location for the development of this commodity. In addition, government support and the growing demand for cocoa-based products present great opportunities to increase the added value and competitiveness of local cocoa. However, this potential has not been optimally utilized. This can be seen from the low level of cocoa promotion as a leading commodity, limited use of technology in cultivation, low economic condition of farmers, and minimal involvement of young generations in the agricultural sector.

In addition to social and economic factors, the development of cocoa farming is also greatly influenced by the biophysical conditions of the land (Hasyir, 2025). Factors such as climate, topography, soil fertility, water availability, and drainage are crucial components that determine the degree of land suitability for cocoa cultivation. Land suitability evaluation is essential to ensure that cocoa is planted in optimal locations, thereby achieving high productivity, sustainability, and resilience to climate change challenges.

Therefore, a comprehensive approach is needed to formulate development strategies for cocoa farming in Ekasari Village. The SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) can be used to identify internal and external factors that influence cocoa development, while land suitability analysis provides a more objective biophysical basis related to land potential and constraints. The integration of these two approaches is expected to produce development strategies that are appropriate, realistic, and sustainable.

Hence, this study is essential to analyze internal and external factors, assess land suitability levels, and formulate cocoa farming development strategies in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province. The research problems are formulated as follows: What are the internal factors (strengths and weaknesses) and external factors (opportunities and threats) that influence cocoa farming in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province?. What is the level of land suitability for cocoa cultivation in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province?. What are the appropriate alternative strategies for developing cocoa farming through the integration of SWOT analysis and land suitability in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province?

II. RESEARCH METHODS

2.1. Research Location and Period

This research was conducted from September to October 2025 in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province. The location was purposively selected, considering that Ekasari Village is one of the main cocoa-producing villages in Jembrana Regency. It has relatively extensive land, fertile soil conditions, and a community where most residents work as cocoa farmers and traders. These characteristics make the area relevant as an object of research related to cocoa farming development.

2.2. Data and Data Collection Methods

The data used in this study consist of primary and secondary data. Quantitative data, as one of the data types, were used to describe research findings numerically (Fitriani, 2022; Sugiyono, 2010). Based on the source, primary data were collected directly from field interactions with respondents (Tes, 2017; Nanga, 2022), while secondary data were obtained indirectly from documents or literature (Siyoto & Sodik, 2015; Sugiyono, 2012).

Accordingly, data collection in this study was carried out through field surveys to observe cocoa farming conditions, in-depth interviews with cocoa farmers and key informants such as the Pekaseh (village head) and officials of Ekasari Village, cocoa farmers in Ekasari Village, and agricultural extension officers in the area. In addition, literature studies and documentation were conducted using official sources such as reports from the Jembrana District Agriculture Office, rainfall data from BMKG (Meteorological, Climatological, and Geophysical Agency), population data from the Central Bureau of Statistics (BPS) of Jembrana, biophysical data from the Soil Laboratory of the Faculty of Agriculture, Udayana University, as well as scientific journals and academic publications (Jamali, 2009).

Thus, the data collection methods in this study combined theoretical and empirical approaches to produce comprehensive and valid results.

2.3. Research Population and Sample

The population of this study consisted of cocoa farmers in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province. The total population included 40 cocoa farmers. A total of 6 samples (15%) were selected using a descriptive percentage analysis approach.

2.4. Research Variables and Measurement

The variables used in this study include internal and external strategic factors, as well as land suitability levels. Internal strategic factors consist of strengths and weaknesses, while external strategic factors include opportunities and threats faced by cocoa farmers.

The land suitability variable was analyzed based on biophysical parameters, including climate, soil physical and chemical properties, topography, and hydrology. The SWOT factors were measured using an ordinal scale based on respondents' perceptions, while land suitability assessment was conducted using a matching approach between the cocoa crop's growth requirements and the actual biophysical conditions in the field, referring to the FAO (1976) classification.

2.5. Data Analysis Methods

Data analysis was carried out through several stages. First, qualitative descriptive analysis was used to describe the general condition of cocoa farming, farmer characteristics, and the problems they face. Second, SWOT analysis was employed to identify and evaluate internal and external factors through the IFAS (Internal Factor Analysis Summary) and EFAS (External Factor Analysis Summary) matrices. Third, land suitability analysis was applied to assess the biophysical potential and limitations in supporting cocoa cultivation.

The results of the SWOT and land suitability analyses were then integrated to formulate appropriate, realistic, and sustainable cocoa farming development strategies.

Integration of SWOT Analysis and Land Suitability in Determining the Development Strategy of Cocoa Farming in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province

Land suitability analysis was conducted to determine the biophysical potential of land in supporting cocoa cultivation in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province. This evaluation referred to the FAO (1976) land suitability classification framework, which was modified according to local conditions. The parameters used in the analysis included rainfall, soil texture, pH, organic matter availability, elevation, and land slope.

The analysis was conducted by matching cocoa growth requirements with the biophysical conditions of the land in Ekasari Village. The results were categorized into land suitability classes, namely: S1 (highly suitable), S2 (moderately suitable), S3 (marginally suitable), and N (not suitable).

The results of the land suitability analysis were then integrated with the SWOT analysis, particularly regarding internal factors such as strengths (soil fertility, land area) and weaknesses (use of cultivation technology).

III. RESULTS

3.1. Results of Internal and External Strategy Evaluation

a. Results of Internal Strategic Factor Evaluation in Cocoa Marketing

The identification of internal strategic factors in Ekasari Village was carried out through in-depth interviews and surveys using structured questionnaires. This process involved individuals who are knowledgeable about the operational activities and business development in Ekasari Village and who are directly involved in cocoa marketing activities. Based on the internal strategic factors, an assessment was conducted to identify the main strengths and weaknesses in cocoa marketing in Ekasari Village.

The evaluation of internal strategic factors consisted of key strengths and weaknesses, which were analyzed using the IFAS (Internal Factor Analysis Summary) matrix. Each parameter of strength and weakness was assigned a weight and a rating. The determination of weights and ratings for internal strategic factors was conducted by five internal respondents, consisting of the village head (Pekaseh) and supervisors in Ekasari Village.

Weighting was determined using the paired comparison method, which involves comparing each key factor to determine its level of importance for the enterprise. The rating was obtained from the average score given by the five respondents for each internal factor. The score for each internal strategic factor parameter was then obtained by multiplying the weight by the rating.

The results of the evaluation of internal strategic factors consisted of five strengths and five weaknesses. The strength factors are as follows: Cocoa production is relatively stable compared to other commodities, Availability of large areas of land for cocoa cultivation, Strategic location in the agricultural sector for cocoa cultivation,Optimal soil fertility for cocoa cultivation, Good quality of cocoa production. The weakness factors are as follows:Low diversification of processed cocoa products, high levels of pests and diseases in cocoa cultivation, Low adoption of sustainable farming practices, Dependence on fluctuating market prices, Limited use of technology in cocoa cultivation.

The results of the IFAS matrix calculation for cocoa marketing strategy in Ekasari Village are presented in the following table:

Table 1. Internal Strategic Factor Matrix

No	Internal Strategic Factors	Rating	Weight	Score (R X B)
	Strengths:			
1.	Cocoa production is relatively stable compared to other commodities	3.4	0.15	0.51
2.	Availability of large areas of land for cocoa cultivation	3.4	0.15	0.51
3.	Strategic location in the agricultural sector for cocoa cultivation	3.3	0.14	0.47
4.	Optimal soil fertility for cocoa cultivation	3.3	0.13	0.44
5.	Good quality of cocoa production	3.1	0.13	0.41
	Total Strengths		**0.70**	**2.34**
	Weaknesses:			
1.	Low diversification of processed cocoa products	3.4	0.15	0.51
2.	High levels of pests and diseases in cocoa cultivation	3.0	0.12	0.37
3.	Low adoption of sustainable farming practices	1.2	0.03	0.04
4.	Dependence on fluctuating market prices	1.0	0.02	0.02
5	Limited use of technology in cocoa cultivation	1.0	0.02	0.02
	Total Weaknesses		**0.3**	**0.96**
	TOTAL		**1.0**	**3.30**

Source: Processed primary data, 2025

Based on the table above, it can be seen that cocoa farmers in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province, have five strengths and five weaknesses in cocoa farming. The data show that the total weight of strengths is 0.70, while the total weight of weaknesses is 0.30. This indicates that the strengths outweigh the weaknesses, suggesting that cocoa farming in Ekasari Village tends to be profitable. Therefore, cocoa farmers can utilize their strengths to overcome weaknesses and achieve better results.

In efforts to improve cocoa farming, the strength factors with the highest scores are "Cocoa production is relatively stable compared to other commodities" and "Availability of large areas of land for cocoa cultivation." This shows that the large land area owned by cocoa farmers significantly contributes to increasing cocoa production. However, the lowest strength factor is the quality of cocoa production, indicating that farmers should pay more attention to other factors such as seed selection, cultivation techniques, and soil management to improve cocoa quality.

Meanwhile, the weakness factor with the highest score is low diversification of processed cocoa products, showing that farmers need to improve their knowledge and skills in processing cocoa into higher-value products. The lowest weakness factor is limited use of technology in cocoa cultivation, indicating that cocoa farmers must adapt to cultivation technologies to help address production challenges and gain support from relevant stakeholders.

b. Results of External Strategic Factor Evaluation in Cocoa Marketing

The identification of external strategic factors in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province, was conducted through in-depth interviews and surveys based on structured questionnaires. This process involved stakeholders who are familiar with operational activities and business development in Ekasari Village. Based on these external strategic factors, an assessment was made to identify the main opportunities and threats faced by cocoa farmers in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province.

The evaluation of external strategic factors consisted of major opportunities and threats, analyzed using the EFAS (External Factor Analysis Summary) matrix. Each parameter for opportunity and threat factors was assigned a weight and rating. The determination of weights and ratings for external strategic factors was carried out by six external respondents, consisting of the secretary of Melaya Subdistrict, agricultural extension officers from the Melaya Agricultural Extension Center, the Perbekel (village head) of Ekasari Village, agricultural extension officers in the Ekasari area, inter-island traders, and local collectors.

The weights were determined using the paired comparison method, by comparing each key factor to determine its level of importance for the enterprise. The ratings were obtained from the average rating assigned by the six respondents for each external factor. The scores were then calculated by multiplying the weight by the rating for each external strategic factor parameter.

The results of the evaluation of external strategic factors identified three opportunity factors and three threat factors. The opportunity factors include: Government support for cocoa cultivation in Ekasari Village, Melaya Subdistrict, Jembrana Regency, cocoa as a leading commodity compared to other crops such as cashew and coconut, Continued demand for cocoa-based processed products.

The threat factors include: Low interest of the younger generation in the agricultural sector, Unpredictable climate change, Fluctuating prices.

The results of the EFAS matrix calculation for cocoa marketing strategy management in Ekasari Village are presented in the following table:

Table 2. External Strategic Factor Matrix

No	External Strategic Factors	Rating	Weight	Score (R X B)
	Opportunities: :			
1.	Government support for cocoa cultivation in Ekasari Village, Melaya Subdistrict, Jembrana Regency	4.0	0.18	0.72
2.	cocoa as a leading commodity compared to other crops such as cashew and coconut	3.7	0.16	0.59
3.	Continued demand for cocoa-based processed products	3.9	0.17	0.67
	Total Opportunities		0.51	**1.98**
	Threats:			
1.	Low interest of the younger generation in the agricultural sector	1.0	0.18	0.18
2.	Unpredictable climate change	2.4	0.10	0.25

3.	Fluctuating prices	1.3	0.16	0.21
	Total Threats		0.44	**0.64**
	TOTAL		**1.0**	**2.62**

Source: Processed primary data, 2025

Based on the table above, it can be seen that cocoa farming in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province, faces three opportunities and three threats. The external factor analysis shows that the total weight of opportunities is 0.51, while the total weight of threats is 0.44. This indicates that opportunities outweigh threats, suggesting that cocoa farming in Ekasari Village has strong potential for success. Therefore, cocoa farmers should capitalize on existing opportunities and manage threats effectively to achieve better outcomes in cocoa farming.

Based on the SWOT analysis results, the opportunity factor with the highest score is government support for cocoa cultivation in Ekasari Village, Melaya Subdistrict, Jembrana Regency. This indicates that government support and strong demand for cocoa products are crucial factors in developing the cocoa farming business in Ekasari Village. However, the lowest-scoring opportunity factor is cocoa as a leading commodity compared to other crops such as cashew and coconut. This suggests that farmers should also consider other factors, such as geographical conditions and their own farming experience, when making business decisions.

Meanwhile, the highest-scoring threat factor is the low interest of the younger generation in the agricultural sector, which represents a serious challenge for the future development of the cocoa business in Ekasari Village. The lowest-scoring threat factor is fluctuating cocoa prices, suggesting that farmers need to develop strategies to mitigate price volatility to maintain stability in their cocoa farming business.

Based on the analysis and discussion above, the final values of strengths, weaknesses, opportunities, and threats are presented in the following table:

Table 3. Swot Analysis Calculation For Cocoa Farming Strategy In Ekasari Village, Melaya Subdistrict, Jembrana Regency

No	Description	Value
1	**Internal Factors**	
	a. Strengths	2.34
	b. Weaknesses	0.96
2	**External Factors**	
	a. Opportunities	1.98
	b. Threats	0.64

Source: Processed primary data, 2025

Based on the SWOT analysis, the basic strategy for cocoa farming development in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province, is to fully utilize existing opportunities, prepare to face and mitigate threats, use strengths as a foundation for operations, and minimize or eliminate existing weaknesses. This strategic approach will help ensure the long-term success and sustainability of cocoa farming in the area.

The calculation results show that cocoa farming in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province, possesses dominant strengths compared to weaknesses, and greater opportunities than threats, with the following values:

Strengths – Weaknesses (Internal Factors) : 2.34–0.96=1.38

Opportunities – Threats (External Factors) : 1.98–0.64=1.34

c. Position Matrix

Based on the results of the analysis using the position matrix, it can be concluded that cocoa farming in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province, has a higher strength score than weakness score. The difference between strengths and weaknesses is 1.38, indicating that cocoa farming holds a strong position.

Furthermore, the opportunity score (1.98) is higher than the threat score (0.64), with a difference of 1.34, demonstrating that the potential for cocoa farming development is highly favorable. Therefore, cocoa farming in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province, has excellent potential for further development.

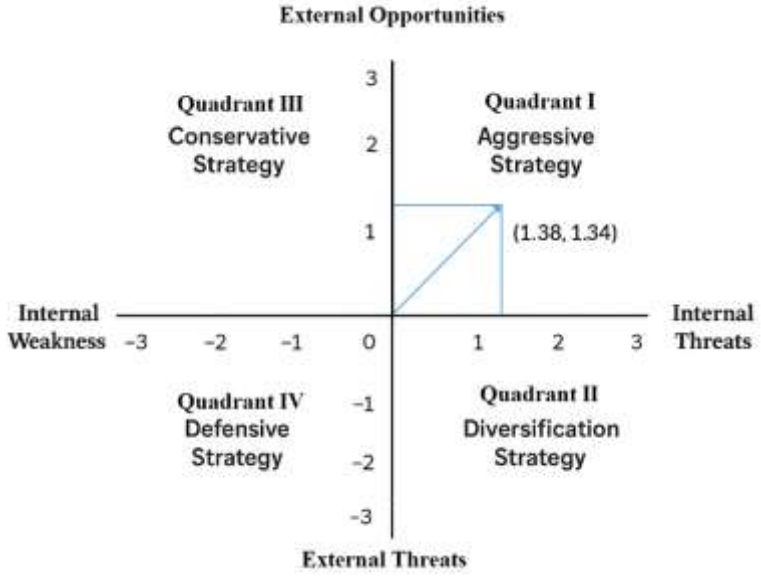

Figure 1. SWOT Position Matrix in Cocoa Farming

Based on the position matrix analysis, it can be concluded that the cocoa cultivation business in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province, has a strong position, as indicated by the higher strength score compared to the weakness score (1.38). Additionally, the opportunity score (1.98) exceeds the threat score (0.64) with a difference of 1.34, confirming that the prospects for developing cocoa cultivation are highly promising. Hence, the cocoa farming business in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province, has great potential for sustainable development.

d. SWOT Matrix

Table 4. SWOT Matrix

IFAS / EFAS	STRENGTHS (S)	WEAKNESSES (W)
	1. Relatively stable cocoa production compared to other commodities. 2. Availability of large areas of land for cocoa cultivation. 3. Strategic location in the agricultural sector for cocoa cultivation. 4. High soil fertility suitable for cocoa cultivation. 5. Good quality of cocoa cultivation output.	1. Low diversification of cocoa processed products. 2. Limited farmer access to new technical training. 3. Low adoption of sustainable farming practices. 4. Dependence on market prices. 5. Limited use of technology in cocoa cultivation.
OPPORTUNITIES (O) 1. Government support for cocoa cultivation in Ekasari Village, Melaya Subdistrict, Jembrana Regency. 2. Cocoa as a leading commodity compared to other agricultural products such as cashew and coconut. 3. Continued demand for cocoa-based processed products.	**SO STRATEGIES** 1. Encourage farmers to obtain cocoa quality certifications such as organic or Fairtrade certification. 2. Select high-quality cocoa seeds to improve production quality and attract buyers or investors willing to pay higher prices. 3. Enhance market access by helping farmers reach broader markets, particularly for exports.	**WO STRATEGIES** 1. Collaborate with research institutions to produce high-quality cocoa. 2. Conduct training on environmentally friendly pest and disease control. 3. Sell local cocoa products to domestic markets to increase price bargaining power and profitability.
THREATS (T) 1. Low interest of the younger	**ST STRATEGIES** 1. Utilize strategic location to attract	**WT STRATEGIES** 1. Increase product

generation in the agricultural sector. 2. Unpredictable climate change. 3. Fluctuating prices.	investment or training programs for the younger generation. 2. Leverage stable cocoa production and fertile soil to adopt innovative cocoa cultivation techniques.	diversification by utilizing cocoa production to improve the quality of local products. 2. Improve access to modern technology for climate change adaptation, such as advanced irrigation monitoring systems.

3.2. Strategy Decision Making

The final stage, known as the "decision making stage," aims to formulate strategies derived from the SWOT matrix so that these strategies can serve as guidelines to enhance cocoa production in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province. The proposed strategies are as follows:

a. SO Strategies

1. Encourage farmers to obtain cocoa quality certifications, such as organic or Fairtrade certification.
   This certification provides international recognition of the quality and sustainability practices of cocoa farmers. With certification, cocoa from Ekasari Village can gain wider market access and command higher prices.
2. Select high-quality cocoa seeds to improve production quality and attract investors or buyers offering premium prices.
   The use of high-quality seeds in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province, positively impacts cocoa production. Quality seeds produce better yields, increasing demand and farmers' income. Therefore, farmers must ensure they use high-quality seeds to maintain production stability and secure higher prices. According to Hatta et al. (2006), one way to increase cocoa production is by selecting good and healthy seeds that support optimal growth in the field.
3. Support farmers in gaining wider market access, both locally and internationally.
   This strategy can be achieved through partnerships with companies or institutions that have strong marketing networks. By expanding market reach, farmers can sell quality cocoa directly to consumers or secure contracts with buyers who value cocoa quality, resulting in higher prices and profits.

b. WO Strategies

1. Collaborate with research institutions to produce high-quality cocoa.
   This collaboration involves cooperation between farmers and research institutions, such as universities and cocoa research centers, to develop superior cocoa varieties that meet quality standards.
2. Conduct training on environmentally friendly pest and disease control.
   Through training and education, farmers are expected to be able to manage pest and disease problems more effectively, reducing potential losses in cocoa production.
3. Sell local cocoa products to domestic markets to increase bargaining power and profits.
   Farmers can supply their cocoa to domestic manufacturers, allowing them to obtain better prices and improve overall profitability.

c. ST Strategies

1. Utilize strategic location to attract investment or training for the younger generation.
   By taking advantage of the village's favorable geographic location, farmers can create economic opportunities such as establishing enterprises or attracting investors to fund cocoa cultivation projects that empower youth through skills development and entrepreneurship.
2. Leverage stable cocoa production and fertile soil to adopt innovative cultivation techniques.
   Stable production and fertile soil can support the implementation of modern farming methods, such as precision agriculture and high-yield cocoa varieties.

d. WT Strategies

1. Increase product diversification by utilizing cocoa production to improve local product quality.
   Cocoa farmers can develop a variety of processed cocoa products focused on enhancing quality to remain competitive in the market.
2. Improve access to modern technology for climate change adaptation, such as advanced irrigation monitoring systems.
   The adoption of advanced technologies in cocoa cultivation will help farmers address environmental challenges beyond their control.

3.3. Alternative Strategies in Decision-Making

The SWOT analysis for cocoa farming in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province, indicates that the strategy derived from the SWOT matrix places cocoa farming in Quadrant I, meaning it is highly favorable for continuous expansion and development. Cocoa farmers can use their strengths as operational capital and maximize opportunities to anticipate and overcome potential threats.

Therefore, cocoa farmers in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province, can adopt several alternative strategies to increase cocoa productivity and price competitiveness, including: 1) Encouraging farmers to obtain cocoa quality certifications, such as organic or Fairtrade certification, which provide international recognition and market access with premium pricing. 2) Selecting high-quality cocoa seeds, which will enhance production volume and quality, resulting in higher market prices. 3) Supporting farmers in gaining broader market access, both local and export, through partnerships with organizations or companies with strong marketing networks.

By implementing these strategies, cocoa farmers in Ekasari Village can improve both productivity and product quality, attract more buyers, and obtain higher prices. Furthermore, farmers can strengthen their competitiveness by enhancing product quality through technology adoption and sound production management systems.

Technological applications include improved cultivation techniques, soil management, and pest and disease control practices. Additionally, farmers can enhance efficiency and effectiveness in cocoa product management by processing their harvest into value-added products and building partnerships with investors or business networks. This will improve market bargaining power, resulting in better income and community welfare.

3.4. Results of Cocoa Land Suitability Analysis

The land suitability evaluation results show that most areas of Ekasari Village are classified as moderately suitable (S2) for cocoa cultivation. This is supported by relatively fertile clay soils containing about 40% volcanic material, soil pH between 5.8–6.3, and adequate organic matter availability. In addition, the village's altitude of 150–300 meters above sea level and annual rainfall of 1,400–1,600 mm further support cocoa growth.

However, several limiting factors exist, including: 1) Land slope in some areas exceeding 15–25%, which poses erosion risks. 2) Water availability, with annual rainfall of 1,400–1,600 mm, which remains adequate during the dry season but requires monitoring.

Overall, the biophysical conditions of Ekasari Village support the sustainability of cocoa cultivation. This aligns with the SWOT analysis results, which identified land area and soil fertility as key strengths. Therefore, land suitability serves as a foundation for developing cocoa cultivation strategies, particularly in improving productivity and quality.

Integrating the land suitability results with SWOT analysis provides a more comprehensive perspective. This approach not only considers socio-economic and market aspects but also takes into account the biophysical potential of the land as a determining factor for the long-term success of cocoa farming in Ekasari Village.

V. CONCLUSIONS

1. Cocoa farming in Ekasari Village, Melaya Subdistrict, Jembrana Regency, Bali Province, shows strong internal potential, supported by fertile soils, stable production, and extensive cultivation areas. However, several weaknesses remain, such as limited technological adoption, low diversification of processed cocoa products, and dependency on fluctuating market prices.
2. External analysis indicates significant opportunities through government support and rising demand for cocoa-based products, while threats include low youth participation in agriculture, unpredictable climate change, and unstable prices.
3. The integration of SWOT analysis and land suitability assessment places cocoa farming in Quadrant I (Aggressive Strategy), signifying favorable conditions for expansion and development.
4. Recommended strategies include promoting cocoa quality certifications (organic, Fairtrade), selecting superior seed varieties, expanding access to domestic and export markets, collaborating with research institutions for innovation, and improving technological adaptation to ensure long-term sustainability.
5. Land suitability evaluation reveals that most of Ekasari Village is classified as moderately suitable (S2) for cocoa cultivation, supported by fertile volcanic soils, suitable pH, and adequate rainfall. These biophysical conditions align with the identified strengths and should be leveraged to enhance productivity and resilience.
6. The integration of social–economic analysis (SWOT) and biophysical analysis (land suitability) provides a comprehensive framework for sustainable cocoa development, serving as a model for other regions in optimizing agricultural potential.

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