Coffee agrotourism development strategy in Belok Sidan Village, Petang District, Badung Regency

Desak Made Mas Swandewi¹, I K. Sumantra^{2*}, I GD. Yudha Pratama³, I K. Widnyana⁴

^{1,3,4}Master of Regional and Rural Planning Study Program, Universitas Mahasaraswati, Indonesia ²Department of Agrotechnology Facululty of Agriculture and Business, Universitas Mahasaraswati Indonesia

*Corresponding Author: ketut.sumantra@unmas.ac.id

Abstract: The study was aimed to determine the strategy for developing coffee agro-tourism in Belok Village, Petang District, Badung Regency. The method used is a qualitative method with interviews, which are then analyzed using SWOT analysis by evaluating strengths and weaknesses as internal factors, opportunities and threats as external factors, and using the AHP (Analytical Hierarchy Process) method to calculate the priority weight of the criteria considered. The support from the private sector in developing tourism villages plays a significant role in the development of Belok Sidan Village (strength), the lack of supporting facilities for agro-tourism activities (weakness), the number of tourism workers returning to the village and entrepreneurial factors through MSMEs can play a role in diversifying people's livelihoods (opportunity). Natural disasters/disorders (threats) are a significant factor in developing coffee plantation-based agro-tourism in Belok Sidan Village. Belok Sidan village coffee agro-tourism has the potential as a coffee farming area that can support the eco-nomic structure of Badung Regency. Based on the IFAS and EFAS matrix score analysis, the alternative strate-gies used in developing Belok Sidan village coffee agro-tourism are developing creative economy businesses, agro-tourism digitalization, and Agro Techno Park. According to the AHP analysis results, the Agro Techno Park development is the priority strategy.

Keywords: Agrotourism, Coffee Plantation, Community Participation, SWOT, AHP

History Article: Submitted 13 February 2023 | Revised 27 October 2023 | Accepted 28 December 2023

How to Cite: Swandewi, D. M. M., Sumantra, I. K., Pratama, I. G. Y., Widnyana, I. K. (2023). Coffee agrotourism development strategy in Belok Sidan Village, Petang District, Badung Regency. International Journal of Applied Sciences in Tourism and Events, 7(2), 170-181. https://doi.org/10.31940/ijaste.v7i2.170-181

Introduction

Indonesia is one of the countries in Southeast Asia that has high tourism potential. In 2019, Indonesia's Tourism Direct Gross Domestic Product (TDGDP) reached 4.97 percent, an in-crease from 2016, which reached 4.65 percent (Badan Pusat Statistik, 2021). From these data, tourism in Indonesia has quite a good potential. One area that is so massive in bringing in tourists is Badung Regency, which makes it the largest foreign exchange earner in Bali.

The COVID-19 pandemic had an extraordinary impact on people's purchasing power and slowed down the economy in Badung. Slowing economic growth causes the fragility of social, eco-nomic, and political dynamics. Regarding this, the Badung Regency Government is trying to devel-op sectors other than tourism by leveling the economy in the North Badung region. Here, the gov-ernment does not build tourism resorts, considering that the northern region is a catchment area that needs to be balanced (Dipayana & Sunarta, 2015). Strengthening the potential of village areas to accelerate development is carried out by maximizing the agricultural, plantation, ornamental plant, and tourism village potential sectors (Nyoman & Nalayani, 2016).

Entrepreneurship is needed to develop the village's potential. Nowadays, entrepreneurship is associated with economic profit and developing innovative solutions for social and environmental issues (Sørensen & Grindsted, 2021). Social entrepreneurship can be defined as an entrepreneurial activity to develop new solutions for societal problems to make a difference and change the lives of individuals and communities (Aquino, 2022). Linking tourism and social entrepreneurship is a reasonable action to take. Tourism social entrepreneurship can provide more meaningful action than Corporate Social Responsibility. It called us to care about things less and for others more, putting social benefit as the central mission of the business and promoting the social benefits louder than an individual social enterprise (Sheldon & Daniele, 2017).

Seeing the tourism potential in North Badung, agro-tourism can be a new alternative for tourism destinations. Agrotourism is nature tourism that consists of creating and understanding the natural environment and having direct experience with the agricultural products' production pro-cess (Erkinov & Nosirov, 2022). Tourism activities utilize the agricultural sector from production to obtaining agricultural products to expand knowledge, experience, and recreation in agriculture (Ci-olac et al., 2019; Sumantra & Wijaya, 2021). Agrotourism can also intensify the socioeconomic aspects of the local communities (Rosardi et al., 2021). The agro-climatic conditions in Indonesia are very suitable for developing agricultural commodities, which, with their unique high value, can be a tourist attraction. In addition to creating jobs, developing agro-tourism can conserve re-sources, preserve local wisdom and technology, and increase the income of farmers or communi-ties around agro-tourism (Trimo & Nurafifah, 2017; Sumantra & Martiningsih, 2022).

One of the villages in North Badung that has potential in the agricultural and plantation sectors is Belok Sidan Village, Petang District. It is located in the mountains with fertile soil. This village is known for its agricultural and plantation products. One of them is coffee, with the types of robusta and arabica. The area in Belok Sidan Village for the arabica coffee commodity as of 2021 is 765 (ha) with a production of 311.10 metric tons per year, and the area for the robusta coffee commodity as of 2021 is 140.30 (ha) with a productivity of 60.2 metric tons per year, which is the highest producer among other villages in Badung Regency. Almost all farmers in Belok Sidan Village grow coffee. Still, they have yet to be able to influence farmers' bargaining positions when faced with market mechanisms, in this case, the middleman network (Teguh et al., 2019).

Another thing worth knowing is the increasing curiosity of the public, especially young people, about various processed coffees, which have increased the amount of coffee consumption (Alfawaz et al., 2020) to support coffee plantation activities. Responding to this potential, the gov-ernment of Badung Regency built an Agro Techno Park located in Belok Sidan Village, Petang Dis-trict, North Badung Regency. Various types of vegetables, horticulture, and coffee are planted in this area, which are the mainstays. Natural beauty, biodiversity, and geographical advantages are the potential for developing agro-tourism in Belok Village (Teguh et al., 2019).

Nowadays, agrotourism is growing rapidly. It gives tourists the experience of escaping from noisy cities, getting acquainted with the locals' lives and customs, living in country houses, and participating in local sports competitions (Khodjayev AR & Anvar Rasulovich, 2021). Agro-tourism based on coffee plantations can be a new opportunity for village development, but it re-quires optimizing local resources. Various efforts continue to be made to improve the welfare of coffee farmers in Belok Sidan Village through agricultural intensification and extension. The inten-sification carried out by the Agriculture Service includes counseling and assistance for coffee farm-ers to improve coffee quality, including post-harvest processing of coffee. Meanwhile, the extensification carried out by the Badung Regency Government, namely, the Badung Regency Trade and Industry Service in terms of marketing, assisted the downstream of coffee products so that they did not only sell coffee in the form of logs or green beans but man-aged to turn it into a powder ready for brewing. The development of coffee-based agro-tourism is still facing many obstacles, which are caused by several factors such as traditional cropping pat-terns, agricultural diversification that has not been maximized, farmers inability to meet market needs, the lack of interest of the younger generation to get involved in the agricultural sector, and the lack of synergy between sectors such as the tourism sector and the agricultural sector (Ma-hagangga et al., 2015). The problems of coffee farmers in Belok Sidan Village are similar to those of smallholder coffee farmers. In this digital era, they have yet to make digital marketing efforts to optimize product information to reach a broader market. In addition, agritourism actors, espe-cially those in rural locations, need more English, an internationally accepted language (Kamisan et al., 2013).

The development of agro-tourism based on coffee plantations in Belok Sidan Village has yet to be optimally carried out. Therefore, it is essential to research agro-tourism development based on coffee plantations in the Belok Sidan area of North Badung . Based on the explanation

above, the question is what is the potential of the coffee commodity if it is used as an agrotourism and what is the development strategy.

Methodology

The research location is in Belok Sidan Village, Petang District, Badung Regency, about 50 kilometers north of Denpasar. Belok Sidan Village is part of Badung Regency, which is located 17 kilometers to the north of Badung Regency. Belok Sidan Village, Petang District, is agricultural land utilized for the Agro Techno Park, and Petang coffee agricultural products are Badung's export commodities.

The data in this study are quantitative and qualitative. Quantitative data is the form of numbers obtained through questionnaire data collection techniques. In contrast, qualitative data emerges from data collection techniques such as interviews, observations, focus group discussions, and document studies. There were forty respondents from the research location, determined purposively, namely farmers who own coffee plantations, coffee entrepreneurs and community leaders. Meanwhile, nine experts were used for the Analytic Hierarchy Process (AHP).

Data sources in this study can be divided into two types: primary and secondary data sources. The primary data sources specified in this study were data obtained from interviews with informants, namely the Head of the Badung Regency Tourism Office, the Village head of Belok Sidan, Traditional Leaders (Bendesa Adat), and academics, as well as conducting focus group discussions (FGDs). Secondary data sources are obtained indirectly through existing supporting documents according to the research topic and are seen as capable of completing the data obtained from primary data sources. Primary data includes information on internal and external factors from questionnaires and focus group discussions. In contrast, secondary data includes demographic and coffee commodity data from Central Bureau of Statistics, Badung Regency and the Badung Regency Agriculture Service.

Respondents are determined by considering the expertise and relevance of prospective respondents to the problem to be studied. Respondents' selection was determined purposefully or directly based on their knowledge of the problem being studied. Respondents asked to evaluate internal and external factors in the SWOT questionnaire were farmer groups, coffee entrepreneurs, regional officials (Badung Regency Research and Development), academics, the Agriculture Office, the Tourism Office, and the Village head of Belok Sidan.

The methods of data collection, namely observation, interviews, and focus group discussions, were analyzed descriptively and qualitatively. The data analysis technique in this study combines SWOT analysis (strength, weakness, opportunity, and threat) using the AHP (analytical hierarchy process) method. The first step begins with an analysis of internal and external factors. Then a SWOT analysis was carried out using the IFAS-EFAS matrix to obtain several alternative strategies that were most dominant according to their priority scale. Against the several alternative strategies that were generated, a selection of priority scales of interest was carried out among the problems raised at each level using the AHP model analysis. The second step is to choose which policy alternatives should be prioritized using the AHP approach (**Figure 1**). Data processing was carried out by giving weight to each respondent. Data processing in the AHP method uses the Excel program with GEOMEAN format, with results in the form of AHP Recapitula-tion (Saaty, 2000). The results of this AHP analysis will become recommendations for alternative policy strategies in making decisions to achieve the expected goals.



(Source: General structure of the hierarchy (Saaty, 2000)) **Figure 1.** General structure of the hierarchy

Results and Discussions

Results

The internal factor analysis results shows the strength total score is 4.084, and weakness total score is 2.241, and external factor (total opportunity scores is 3.51 and threat total score is 2.63) (Table 1 and 2)

No.	Internal Factor	Weight	Rating	x Rating (Score)
Streng	th			
1	Geographical position and strategic topog- raphy for tourism activities	0,09	7.8	0.71
2	The quality and quantity of Belok Sidan Vil- lage Human Resources in the context of de- veloping a tourism village	0,06	7	0.42
3	Availability of basic infrastructure such as irrigation, and road infrastructure for better economic growth	0,07	6.1	0.42
4	Belok Sidan Village as a coffee farming area to support the economic structure of Badung Regency	0,08	7.8	0.63
5	Beautiful natural scenery, interesting and unique tourist objects, as well as many nat- ural educational tour packages	0,08	8	0.64
6	The supporting from the private sector in the development of tourist villages, and co- operation has been established (Communi- cation Forum, University, Media, Travel Agent, Business)	0,08	8.7	0.70
7	Participation in mitigation activities inde- pendently by business actors	0,07	7.9	0.55

Table 1. Summary of Internal Factor Analysis of Belok Sidan Coffee Development

Walaht

Strength Total Score		-	-	4.084
Weakn	ess			
1	The tourism potential and homestay has not been arrangement maximized	0,07	5.5	0.38
2	There is no website, and the promotion of tourism activities is not maximized	0,08	4.6	0.37
3	The planning for the spatial development of coffee agro tourism is not yet clear	0,06	2.8	0.17
4	Less than optimal institutional manage- ment	0,06	4.7	0.28
5	Lack of supporting facilities for agro-tour- ism activities (sign boards, parking lots, toi- let facilities)	0,05	6.4	0.32
6	Lack of entrepreneurial capabilities (entre- preneurial capabilities) covering creativity and innovation as well as literacy on finan- cial aspects and literacy on digitalization is- sues	0,07	4.1	0.28
7	Regional regulations on Agrotourism have not yet been drafted	0,08	5.1	0.408
Weakness Total Score		-	-	2.241
Total				6.325

Source: Processed data, 2023

Based on the calculation of the IFAS matrix (Table 1), which consists of strengths and weaknesses, the most crucial strength factor is the existence of supporting from the private sector in developing tourist villages and collaboration (Communication Forum, University, Media, Travel Agent, Business), with a rating of 8.7, a weight of 0.08, and a score of 0.70. The weakness in Belok Sidan Village's potential is that regional regulations regarding agro-tourism still need to be drafted. Agrotourism Development Policy Priority in Belok Sidan Village weighs 0.08, a rating of 5.1, and a score of 0.408. The evaluation of internal factors is 6.325, meaning that internal factors reach 65%, indicating they are in the average category. It means that the potential in Belok Sidan Village utilizes strengths to overcome weaknesses. Later, the strength will be in the form of support from the private sector in the development of tourist villages, and collaboration has been established to support the development of Belok Sidan Coffee, even though regional regulations governing agro-tourism still need to be drafted.

Fable 2. Analysis of Externa	al Factors for the Development of Belok Sidan Coffee
------------------------------	--

No.	External Factors	Weight	Rating	Weight x Rating (Score)
Орр	ortunity			
1	The number of workers in the tourism sector who returned to the village (Most of the operator level)	0,07	7.4	0.52
2	Growing technology	0,08	6.8	0.55
3	The community's interest in Belok Sidan Village is quite large for tourism	0,07	6.4	0.45
4	The foreign market and domestic tourists is still open to visit the Belok Sidan village	0,07	6	0.42
5	The strong support from the Department of Tourism and other related institutions	0,08	7	0.56
6	The existence of entrepreneurial factors through MSMEs can play diversifying the livelihoods of the Belok Sidan community and	0,08	7.4	0.59

No.	External Factors	Weight	Rating	Weight x Rating (Score)
	reducing dependence on one source of income, especially the vulnerable tourism sector.			
7	The emergence of a self-help movement initiative pioneered by the Belok Sidan village community as a positive solidarity initiative between communities	0,07	5.8	0.41
Tota	l Opportunity Score	-	-	3.51
Thre	at		-	
1	The occurrence of natural disasters/disturbances	0,08	9	0.72
2	Migration worker from offline-based businesses to online-based channels	0,08	5.8	0.47
3	Redefinition of social capital in crisis conditions that demand the importance of social connections	0,08	5	0.4
4	Limited resources, both capital, material, consumer base, business partner base, social connections, and technology	0,06	6.7	0.40
5	Creativity and adaptability are needed, such as discipline and never giving up to create business resilience	0,06	3.8	0.22
6	There was a wave of unemployment due to layoffs from the tourism sector in the city, eventually flowing to the village so that the village became the foundation of the lives of residents who returned to the village because the city and tourism were facing a crisis.	0,07	3.8	0.26
7	There was a wave of unemployment due to layoffs. Employment relations from the tourism sector in the city eventually flow to the village so that the village becomes the foundation of the lives of residents who return to the village due to the city and tourism facing a crisis	0,05	2.9	0.14
Threa	at Total Score	-	-	2.63
Total	Score			6.14

Source: Processed data, 2023

Based on the calculation of the EFAS matrix, Table 2, which consists of opportunity and threat factors, the most important opportunity factor is the existence of entrepreneurial factors through MSMEs that can play a role in diversifying the livelihoods of the Belok Sidan community and reducing dependence on one source of income, especially the tourism sector, which is vulnerable with a rating of 7, 4 and a weight of 0.08 and a score of 0.59. The threat factor in the potential of Belok Sidan Village is the occurrence of natural disasters and disorders, with a weight of 0.08, a rating of 5.1, and a score of 0.408. Overall, the evaluation of external factors is 6.14, meaning that external factors reach 61%, indicating that they are in the average category. It means that the potential in Belok Sidan Village takes advantage of opportunities to overcome threats. So that later opportunities in the form of entrepreneurial factors through MSMEs can play a role in diversifying the livelihoods of the Belok Sidan community and reducing dependence on one source of income, especially the vulnerable tourism sector, it will be able to overcome threat of natural disasters that may occur in Belok Sidan Village.

1. SWOT Analysis Quadrant

The position or level of Belok Sidan Village Agrotourism in the SWOT matrix is shown below.



(Source: Processed data, 2023)

Figure 2. SWOT matrix of IFAS and EFAS scores

From Figure 2 above, it can be seen that Belok Sidan Village Agrotourism is in quadrant one, which is a very favorable situation where Belok Sidan Village Agrotourism has strengths and opportunities that can be utilized to create a strategy that can support aggressive development policies.

The SWOT matrix analysis used in determining the strategy for developing agro-tourism potential in Belok Sidan Village will be described as follows:

1) Strategy S-T (Strengths and Threats) is a strategy for using the strengths possessed to overcome threats. The recommended strategies are building networks with other tourist villages, increasing the accessibility of transportation facilities, involving the active role of the millennial generation around Belok Sidan coffee agrotourism in digital promotion, and maintaining the quality of existing tourist attractions.

2) The W-T (weaknesses and threats) strategy is a defensive activity that seeks to minimize existing weaknesses and avoid threats. The recommended strategies are increasing the involvement of all components (stakeholders), both customary villages and official villages, in building tourist villages; increasing public awareness of tourism and sapta charms; increasing the superior quality of tourist destinations in Belok Sidan Village; and maintaining the quality and attractiveness of existing tours.

3) The S-O (strengths and opportunity) strategy utilizes all strengths to seize and seize as many opportunities as possible. The recommended strategies are developing creative economy businesses, digitalizing agro-tourism, and developing an Agro-Techno Park.

4) The W-O (Weakness and Opportunity) strategy utilizes existing opportunities by minimizing existing weaknesses. The recommended strategies are promotion through strengthening partnerships among stakeholders, strengthening tourism village management institutions and social, economic, and cultural institutions, and improving the quality of community management of tourism through technical and managerial training.

After determining the alternative options, the best alternative is chosen using the hierarchical analysis approach. This approach was chosen because it can help determine the best choice by involving many criteria based on intuition and expert perceptions while considering consistency. The alternative selection process uses the scoring method, which provides a score based on several assessment criteria. The selected option is expected to be the best strategy so that efforts to develop Belok Sidan Village Coffee Agrotourism can be carried out effectively and efficiently. Calculating the experts' assessment results, the percentage of each alternative strategy is then calculated into the Alternative matrix, as shown in Table 3 below.

Table 3. Matrix of Alternative Coffee Agrotourism Development Strategies in Belok Sidan Village

Criteria Alternative	Sustainability	Independence	Required costs	Achievement of targets	Amount
Creative economy business development	14%	28%	13%	69%	124%

Development of digitalization of agro-tourism	43%	14%	17%	23%	97%
Development of Agro Techno Park	43%	58%	69%	8%	178%

Source: Processed data, 2023

In Table 3, it can be seen that the development of the Agro-Techno Park has a score of 178%, followed by the development of creative economy businesses with a score of 124%, and finally, the development of digitalization in agro-tourism with a score of 97%. The next step in the analysis is to determine the weight of each criterion. In this study, all criteria have the same weight, namely 25%. All criteria have the same weight because they are equally important and have the same level of urgency. So, the priorities of the coffee agro-tourism development of the Agro-Techno Park; the second priority is the development of creative economy businesses; and the third priority is the development of the digitalization of agro-tourism.

Based on the results of the Analytical Hierarchy Process (AHP) analysis of the development of coffee agro-tourism in Belok Sidan village, the policy strategy chosen was the Tekno Park Agro Development strategy. Agro Tekno Park is a center for developing agricultural products, which is managed as entrepreneurial growth and as a place for science and technology service centers about agriculture. Apart from being a place for developing science and technology about agriculture, Agro Tekno Park is also established as a new tourist spot with the concept of educational tourism to preserve and introduce the noble values of Indonesian culture (Andini et al., 2022).

Agro Techno Park is a center for implementing technology related to agriculture as a container for processing crops. In addition, regarding innovation to disseminate technology in agriculture, Agro Techno Park is increasing production, leading to constant socioeconomic development, and can achieve success in the green revolution among other areas in Badung Regency (Mwangi & Kariuki, 2015). Agro Tekno Park is included in the Taman Teknologi Pertanian (TPP), which includes several activities, such as learning how to use technology in agriculture. Creating an Agro-Tecno Park in an area requires land and existing data that have their potential and attractiveness from the natural resources that exist in the area and have fertile soil for planting plants and crops (Chudhriati & Yayi Arsandrie ST., 2018).

Agriculture has so far only been valued for its ability to produce food. In contrast, other functions of agriculture in the environmental, social, cultural, economic, and technological fields have yet to be widely utilized or tend to be neglected (EEA, 2022). The multifunctional concept of agriculture is vital in repositioning the agricultural sector for its proper function. By applying the concept of multifunctional agriculture by applying existing technological advances and spatial planning that follows educational, usability, and aesthetic values, it can maximize the value of agricultural functions, which have an essential role in supporting life (Alim, 2019a). It is called multifunctional agriculture because, in practice, this concept can produce various benefits for farmers and the surrounding environment. Agro Techno Park is part of a tourist attraction that utilizes agricultural businesses as a tourist attraction. The goal is to broaden knowledge, recreational experience, and business relationships in agriculture.

By developing an Agro-Techno Park that emphasizes local culture in utilizing land, it is hoped that it can increase farmers' income while conserving land resources and maintaining local culture and technology (indigenous knowledge), which generally follow the conditions of their natural environment. Agro Techno Park also educates the general public about agricultural cultivation and the importance of balancing and ecosystem sustainability (Pertapa, 2020). Today, people's lives are filled with boredom, routine, and busyness. With the conditions and community needs for these refreshing facilities, the prospects for developing Agro-Techno Park are promising. Agro Techno Park is a unique land arrangement that follows land capability and typology to support an effective and sustainable farming system. The main components of developing an Agro-Techno Park are cultivation technology, post-harvest agricultural commodities that are unique and have historical value, and natural scenery with an agricultural background that can be felt (Alim, 2019b).

The development of Agro Techno Park is expected to follow the land's capabilities, typologies, and ecological functions so that it will directly affect the sustainability of land resources and the income of local communities. The development of Agro Techno Park can create jobs to withstand or reduce the flow of urbanization, which is currently increasing (Alim, 2019b).

The benefits that can be obtained from Agro Techno Park are conserving natural resources, preserving local technology, and increasing the income of local people. Engaging in friendly cultivation practices can increase net returns by making coffee production sustainable (Krishnan, 2017). One of the keys to the success of developing an Agro-Techno Park is the ability of the local community to act as coaches, implementers, and tour guides. For this reason, the provision and development of managerial staff and professional Agro-Techno Park guides in their fields is necessary. Besides that, it can also be included in the presentation of local arts and cultural attractions to tourists (Alim, 2019b).

tanghtshould be clear and concise. The results should summarize (scientific) findings rather than providing data in great detail. Present raw data here without comment, using tables and figures if this makes the data clearer. What answer was found to the research question; what did the study find? Was the tested hypothesis true?

Discussions

Belok Sidan Village is an agro-tourism village with coffee as its main attraction. However, coffee agrotourism in Belok Sidan Village has not met expectations, so it requires a strategy for its development. With the potential that Belok Sidan Village has, several strategies can be implemented, such as:

1. Development of creative economy businesses

Belok Sidan Village has several sectors that can increase economic growth, namely the agricultural, livestock, and industrial sectors. In the industrial sector, which includes large, medium, and small industries as well as households, as of 2017 in Petang District, there were 473 craft industries, which absorbed a workforce of 584 people; two small industries, which absorbed a workforce of 14 people; and one medium industry, which absorbed a workforce of 20 people (Balitbang, 2018). It is in this sector that the creative economy plays an important role. By developing this sector, Agro Techno Park can diversify production, build a competitive advantage, attract investment, support entrepreneurship and innovation, and promote cultural diversity and well-being. It is one of the world's fastest-growing sectors and can also create employment and income, which makes this sector a feasible option for development (Development, 2022). 2. The development of digitalization in agrotourism

The development of digitalization of agro-tourism in Belok Sidan Village itself is included in the principles and aspects of the Petang Agro-Techno Park development, namely being able to increase the availability of facilities and infrastructure that can attract visitors' interest in agrotechnology (Balitbang, 2018). The development concepts applied in ATP Petang include the following: agro-knowledge, agro-partnership, bio-agroindustry, agro-tourism, and agro-networking. The digitalization of agro-tourism in Belok Sidan Village is included in the agro-knowledge concept, in which Belok Sidan Village will develop agro-technology skills education and training units, develop units and media for conveying agro-technology information, develop models and simulations of agro-technology application, provide community access to the results of agricultural and animal husbandry research and studies, and facilitate publication and dissemination. Investing in high-end technologies, skills, and services, especially in the creative industries, can strengthen Indonesia's position in ASEAN and help it become the world's 7th largest economy by 2030. Combining agrotourism with creative industries like fashion, design, games, and animations is favorable for expanding shortly (Lane, 2014).

3. Development of Agro-Techno Park

To develop the Agro-Techno Park area of Petang District, the government of Badung Regency, independently or in cooperation with other parties, has launched various programs of development activities in the area (Balitbang, 2018). One of them is creating a coffee processing unit so the coffee harvest can be more valuable for sale. Some of the programs that have been implemented are the construction of coffee processing factories (including warehouses), the provision of coffee processing equipment, the assistance of post-harvest processing technical equipment in the form of fermentation tubs, para-para, measuring instruments, scales, and coffee bean drying machines, the provision of organic fertilizer assistance and agricultural equipment in efforts to develop organic coffee, national coffee movement activities targeting coffee farmer groups, assistance with coffee pest catching equipment, training in post-harvest coffee processing skills and cooperative management, PLA (Participatory Learning and Action) mentoring, assistance with coffee plant rejuvenation and intensification, facilitating coffee processing technology development, and the improvement of production facilities and infrastructure improvements.

It is hoped that the agro-tourism development in rural areas based on the local community will provide many benefits, not only for rural communities but also for urban communities to understand and give appreciation to the agricultural sector, as well as to become educational facilities (Sumantra et al., 2015).

Conclusions

Based on the IFAS and EFAS matrix score analysis results, the alternative strategy used in developing Belok Sidan village coffee agro-tourism is the one with the highest score, namely the Strength-Opportunity (SO) strategy. The strategies formulated include developing creative economy businesses, digitalizing agro-tourism, and developing an Agro-Techno Park. According to the AHP analysis results, the priority strategy for the development of coffee agro-tourism in Belok Sidan village, with the highest score of 45%, is the development of an Agro-Techno Park. Agro Techno Park is helpful as a center for applying technology related to agriculture and as a place for processing crops. In addition, regarding innovation to disseminate technology in agriculture, the Agro-Techno Park is an area that can make a village self-sufficient, gain positive value from the community, and grow the community's economic income.

References

- Alfawaz, H. A., Khan, N., Yakout, S. M., Khattak, M. N. K., Alsaikhan, A. A., Almousa, A. A., Alsuwailem, T. A., Almjlad, T. M., Alamri, N. A., Alshammari, S. G., & Al-Daghri, N. M. (2020).
 Preva-lence, Predictors, and Awareness of Coffee Consumption and Its Trend among Saudi Female Stu-dents. *International Journal of Environmental Research and Public Health*. *17(19)* https://doi.org/10.3390/IJERPH17197020
- Andini, A., Nugroho, S., Suryawan, I. B., Andini, A., Nugroho, S., & Suryawan, I. B. (2022). Tourism Planning Based on Educational Tourism in Agro-Tourism. European Journal of Business and Man-agement Research, 7(4), 245–250. https://doi.org/10.24018/EJBMR.2022.7.4.1544
- Aquino, R. S. (2022). Community change through tourism social entrepreneurship. Annals of Tourism Research, 95. https://doi.org/10.1016/J.ANNALS.2022.103442
- Ciolac, R., Adamov, T., Iancu, T., Popescu, G., Lile, R., Rujescu, C., & Marin, D. (2019). Agritourism Sustainable Development Factor for Improving the 'Health' of Rural Settlements. Case Study Apuseni Mountains Area. *Sustainability 2019, Vol. 11, Page 1467, 11*(5), 1467. https://doi.org/10.3390/SU11051467
- Dipayana, A., & Sunarta, I. N. (2015). Dampak pariwisata terhadap alih fungsi lahan di desa tibubeneng kecamatan Kuta Utara Kabupaten Badung (studi sosial-budaya). *Jurnal Destinasi Pariwisata*, 3(2), 58–66. https://doi.org/10.24843/JDEPAR.
- Erkinov, E., & Nosirov, B. (2022). Leading experiences of development of agrotourism. *American Journal of Science and Learning for Development* 1(2). https://www.researchgate.net/publication/366330108_Leading_Experiences_of_Development_of_Agrotourism
- Kamisan Pusiran, A., & Xiao, H. (2013). Challenges and community development: A case study of Homestay in Malaysia. Asian Social Science, 9(5), 1–17. https://doi.org/10.5539/ASS.V9N5P1
- Khodjayev AR, K. A., & Anvar Rasulovich -Lecturer, K. (2021). The role of agro-tourism in the development of socioeconomic infrastructure in rural areas. *Наука и Образование*

Сегодня, 3 (62). https://cyberleninka.ru/article/n/the-role-of-agro-tourism-in-the-development-of-socio-economic-infrastructure-in-rural-areas

- Mwangi, M., & Kariuki, S. (2015). Factors determining adoption of new agricultural technology by smallholder farmers in developing countries. Journal of Economics and Sustainable Development 6(5). https://www.researchgate.net/publication/303073456_Factors_determining_adoption_of_new_agricultural_technology_by_smallholder_farmers_in_developing_countries
- Nyoman, N., & Nalayani, A. H. (2016). Evaluasi dan strategi pengembangan desa wisata di KA-BUPATEN BADUNG, BALI. *Jurnal Master Pariwisata (JUMPA)*, *2*. https://doi.org/10.24843/JUMPA.2016.V02.I02.P12
- Rosardi, R. G., Prajanti, S. D. W., Atmaja, H. T., & Juhadi. (2021). Sustainable tourism model in pagilaran tea plantation agrotourism, in Indonesia. *International Journal of Sustainable De*velopment and Planning, 16(5), 981–990. https://doi.org/10.18280/IJSDP.160519
- Sørensen, F., & Grindsted, T. S. (2021). Sustainability approaches and nature tourism development. Annals of Tourism Research, 91, 103307. https://doi.org/10.1016/J.AN-NALS.2021.103307
- Sumantra, I. K., Yuesti, A, & Sudiana, A. A. (2015). Pengembangan model agrowisata salak berbasis masyarakat di desa sibetan. *Jurnal Bakti Saraswati*, 4 (2), 75473. https://www.neliti.com/publications/75473/
- Teguh, I. P., Putra, S., & Sudiana, I. K. (2019). Analisis skala produksi tanaman kopi di desa pelaga Kecamatan Petang Kabupaten Badung. *PIRAMIDA*, *15*(1): 90–120. https://ojs.unud.ac.id/index.php/piramida/article/view/55762
- Trimo, L., & Nurafifah, I. (2017). Study of the development of agro-tourism potential on tea smallholder. *Jurnal Penelitian Teh Dan Kina*, 20(1): 36. https://doi.org/10.22302/PPTK.JUR.JPTK.V20I1.122
- Sumantra, I K., IM. W. Wijaya. (2021). Environment carrying capacity of Pandawa Beach ecosystem and how to optimize it to support sustainable development. *IOP Conf. Series: Earth* and Environmental Science 896 012065. doi:10.1088/1755-1315/896/1/012065.
- Sumantra, I K., E.Martiningsih. (2022). Land conservation and the potential goal for food security in an urban city. *IOP Conf. Series: Earth and Environmental Science* 1111 012046. doi:10.1088/1755-1315/1111/1/012046
- Mahagangga, I. G. A. O., Anom, I. P., Suryasih, I. A., Suryawan, I. B., & Mertha, I. W. (2015). Kajian pengembangan desa wisata di Kabupaten Badung. *Seminar Nasional Sains dan Teknologi* (*Senastek*). https://www.researchgate.net/publication/342520810_kajian_pengembangan_desa_wisata_di_kabupaten_badung
- Alim, M. F. (2019a). Agrotechno Edupark Ecotourism Solusi Pasti Optimalisasi Multifungsi Pertanian. Pusat Manajemen Pengetahuan Fakultas Teknologi Pertanian Universitas Gadjah Mada. https://kmc.tp.ugm.ac.id/2019/10/02/agrotechno-edupark-ecotourism-solusi-pastioptimalisasi-multifungsi-pertanian/
- Alim, M. F. (2019b). Konsep dan Pengertian Agrotechno Edupark. Pusat Manajemen Pengetahuan Fakultas Teknologi Pertanian Universitas Gadjah Mada. https://kmc.tp.ugm.ac.id/kms/konsep-dan-pengertian-agrotechno-edupark-ecotourism/
- Badan Pusat Statistik. (n.d.). Retrieved February 12, 2023, from https://www.bps.go.id/publication/2021/07/06/6f2f99f9fdf5e645773c906b/tourism-satellite-account-indonesia-2016-2019.html
- Balitbang, B. (2018). Kajian Agro Techno Park di Kecamatan Petang Kabupaten Badung.
- Chudhriati, S. A., & Yayi Arsandrie ST., MT. (2018). Dasar Program Perencanaan dan Perancangan Arsitektur (DP3A)Agro Techno Park Kuningan (Pendekatan pada Konsep Arsitektur Kontemporer dan Arsitektur Berkelanjutan).
- Development, U. N. C. on T, (2022). *Creative Economy Outlook 2022*.
- EEA. (2022). *Rethinking agriculture*. https://www.eea.europa.eu/publications/rethinking-agriculture

- Indonesia Needs Knowledge Driven Economy To Sustain Growth Report / Asian Development Bank. (n.d.). Retrieved February 12, 2023, from https://www.adb.org/news/indonesianeeds-knowledge-driven-economy-sustain-growth-report
- Krishnan, S. (2017). *Sustainable Coffee Production*. Oxford Research Encyclopedia of Environmental Science. https://doi.org/10.1093/ACREFORE/9780199389414.013.224
- Saaty, T. L. (2000). *Fundamentals of decision making and priority theory with the analytic hierarchy process.* Pittsburgh: RWS Publications.
- Sheldon, P. J., & Daniele, R. (Eds.). (2017). *Social Entrepreneurship and Tourism*. https://doi.org/10.1007/978-3-319-46518-0
- Sørensen, F., & Grindsted, T. S. (2021). Sustainability approaches and nature tourism development. Annals of Tourism Research, 91, 103307. https://doi.org/10.1016/J.AN-NALS.2021.103307
- Pertapa. (2020). *Kunjungan kerja kepala badan ketahanan pangan kementerian pertanian ri di Kabupaten Kulon Progo*. https://pertanian.kulonprogokab.go.id/detil/645/kunjungan-kerja-kepala-badan-ketahanan-pangan-kementerian-pertanian-ri-di-kabupaten-kulon-progo