

## Organic Farming Ecotourism: Making Lubuk Bayas Village a Sustainable Educational Tourism Destination

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Lubuk Bayas Village is a village in Perbaungan District with a center for organic rice fields in North Sumatra, Indonesia. The village had been certified by the Seloliman Organic Certification Institute (LeSOS) in 2018. In addition to having sizeable organic paddy fields, this village has the potential to become a tourist village with natural beauty and agricultural products. However, there are several obstacles in developing organic rice fields, such as low buying interest, switching from organic to conventional rice fields, and the need for knowledge of tourism management. The aims of this study were 1) To determine the potential for rice field tourism by analyzing consumer attitudes toward organic product tourism, 2) To analyze intentions for organic tourism. We are finding and developing a tourism village development model based on organic agricultural commodities in Lubuk Bayas Village, Perbaungan District. Data were analyzed using LISREL and SWOT analysis. The results of this study indicated that tourism activities and community participation significantly affect consumer attitudes toward organic tourism. Attitudes affect interest in organic tourism in the future. The primary strategy for developing a tourist village is to highlight the primary agricultural commodities, such as organic paddy rice, with the support of Serdang Bedagai's natural and cultural tourist attractions

**Keywords:** Ecotourism, organic farming, educational tourism, environmental conservation, local economic development.

### INTRODUCTION

Referring to the UN 2030 Agenda for Sustainable Development, a series of sustainable development goals (SDGs) are established: "to end poverty, protect the earth and ensure prosperity for all" (Hall, 2019). Tourism and the environment are inseparable (Pan *et al.*, 2018). Nature-based tourism development dramatically improves the local community's economy (Nala *et al.*, 2021; Utama, 2014). Organic rice production is still tiny compared to non-organic rice in Indonesia, especially in North Sumatra (Effendi *et al.*, 2015). One of the villages in North Sumatra Province that is developing organic rice is Lubuk Bayas Village in Serdang Bedagai Regency which has been planting organic rice since 2010 and has been certified by the Seloliman Organic Certification Institute (LeSOS) in 2018. Sixty-three organic rice farmers were incorporated in the Subur Farmers group with a land area of 45 ha. At present, the sales of organic rice still need to be satisfactory even though they are supported by NGOs, the government, and universities (Effendi *et al.*, 2015). Only a few people buy these organic products (Effendi

and Shunhaji, 2021). With the role of the government and NGOs, it is easier for organic farmers to survive (Effendi *et al.*, 2022). The production of organic rice plants shows a decline because organic products include ethical activities in developing environmentally friendly products (Effendi, 2020). According to data from the Department of Agriculture for 2021, the total organic rice production in January 2021 in Lubuk Bayas Village was recorded at 55.70 tons, down to 42.87 tons. This decline is due to the decreased enthusiasm of the farmers to run their businesses; there has even been a conversion of land into conventional paddy fields (Annajmi *et al.*, 2022).

The problem-solving approach in this study is the need for businesses still related to environmentally friendly products, namely an effort to exploit the potential of organic farming. This effort is developing a tourist village that needs to be built with community empowerment for economic and ecological sustainability (Widowati *et al.*, 2019). Lubuk Bayas Village has the potential for tourism village activities based on organic farming products through Eco Edu tourism activities. The development of state-of-the-art rice tourism has sprung

up in many regions of Indonesia. One of them is the pioneer in the development of organic tourism villages, namely Ngampel Village, Gentungan Village, Mojogedang Regency, Karanganyar Regency, West Java by building with the concept of developing the concept of a tourist area (Setiawan and Saputra, 2022). In addition, ecotourism has developed in the Jatiluwih Tourism Village, Tabanan Regency, Bali. However, the development of this tourist village is only to attract foreign tourists with its natural beauty with the subak farming system (Rizan *et al.*, 2014). The development of the state of the art in this research differs from that in Kampung Ngampel, where ecotourism development includes education to increase public awareness of the environment. Based on the problem, an in-depth research is needed on developing eco-edu tourism-based tourism villages in Lubuk Bayas Village. The objectives of this study were: 1) To determine the tourism potential of rice fields by analyzing consumer attitudes toward organic product tourism, 2) To analyze intentions for organic tourism, 3) To find and develop a tourism village development model based on organic agricultural commodities in Lubuk Bayas Village. The development of tourist villages through eco-edu tourism is expected to be a stimulus for increasing economic, social, and environmental improvement activities to realize sustainable community welfare. Good tourism management is expected to attract more tourists as consumers (George, 2002; Ojo *et al.*, 2015; Wiweka *et al.*, 2021) because tourists are consumers willing to sacrifice time and money to buy products according to their preferences (Deng *et al.*, 2002; Effendi, 2020), including tourists. The novelty of this research is that organic agricultural commodities are part of the local culture, which can be the basis for making a model for developing a tourist village by prioritizing the environment and education (eco edu tourism), which is applied to Lubuk Bayas Village, Serdang Bedagai Regency. The theory of Rational Action (Theory of Reasoned Action, TRA) is a theoretical framework based on the assumption that humans deliberately take action, considering the available information and the consequences of those actions. This theory assumes that intention is a factor that influences the occurrence of an effort. TRA is a socio-cognitive model that provides a framework for understanding individuals' intentional behavior. Using the Theory of Rational Action (TRA), this study investigated consumer attitudes and interests toward organic tourism using the Theory of Rational Action (TRA). The research hypothesis is as follows:

**H1: Tourism activity (X1) significantly affects attitudes toward eco-edu tourism (Y1):** Tourism activities can affect tourist interest (Al-Swidi *et al.*, 2014; Ojo *et al.*, 2015; Siregar *et al.*, 2023). Organic products have particular appeal in their management, which requires unique action (Effendi, 2020), so eco-edu tourism is expected to have a uniqueness that attracts visitors' attention.

**H2: Community participation (X2) significantly affects attitude toward eco-edu tourism (Y1):** Communities play an essential role in developing local tourism. The active participation of local communities in tourist sites can increase attractiveness (Yeap and Liow, 2023; Iqbal and Ahmed, 2022; Irfan and Suryani, 2017), including natural tourist attractions such as eco-edu tourism (Feti *et al.*, 2020).

**H3: Infrastructure (X3) significantly affects the attitude toward eco-edu tourism (Y1):** Infrastructure quality plays a role in influencing consumer attitudes toward travel (George, 2002; Huang *et al.*, 2023) including organic product tourism. Attitudes can influence purchasing decisions for organic products, including choosing eco-edu tourism.

**H4: Accessibility (X4) significantly affects attitude Toward eco-edu tourism (Y1):** accessibility is one of the essential things in tourism (Nugroho *et al.*, 2018; Siregar *et al.*, 2023), including organic product tourism. Good accessibility can affect visitor attitudes toward eco-edu tourism areas.

**H5: Attitude Toward organic tourism (Y1) to intention toward organic tourism (Y2):** Attitudes influence consumer desires in making choices (Al-Swidi *et al.*, 2014), including the choice of eco-edu tourism and emphasizing emotional intention in their programs (Phau *et al.*, 2014).

## MATERIALS AND METHODS

This study uses a mixed-method approach. A quantitative approach is used to analyze the Structural Equation Modeling (SEM) model with exogenous and endogenous variables: Attitude toward organic tourism and Intention to Organic Tourism. In contrast, a qualitative approach is used to develop a strategic model for the development of eco-edu tourism. Primary data collection techniques were carried out by distributing questionnaires and conducting direct observation and forum group discussions (FGD) with the parties involved. The respondents to this study were sixty-three farmers in Lubuk Bayas Village who consistently practice organic rice farming. This study uses a Likert scale with five scales. The analysis technique used is:

- a. This research used The SEM-LISREL method to analyze attitudes toward organic tourism and Intentions toward organic tourism in organic rice fields. Evaluation of the validity of the measurement model is declared valid if the value of the loading factor is greater than the critical value of 1.96. Reliability is measured using Construct Reliability (CR), which must be greater than 0.7. Model suitability assessment considers various criteria such as p-value, RMSEA, NFI, NNFI, CFI, IFI, RFI, and Std. RMR, and GFI. Testing the model's suitability also uses the path coefficient test (Wijanto, 2008). The t-test was used with a significance level of  $p < 0.05$ , and all coefficients in the model must meet the criteria of good statistical fit (Igarria *et al.*, 1995).



b. SWOT analysis. This study uses SWOT analysis to determine the model for developing a tourist village. SWOT analysis is a strategic planning process in identifying aspects of strengths, weaknesses, opportunities, and threats faced by business actors (Namugenyi *et al.*, 2019; Phadermrod *et al.*, 2016).

The variables and indicators are in the following table:

**Table 1. Research variables.**

No.	Laten Variable	Indicator
1	Tourism activity (X1)	Attraction Biodiversity Tour
2	Community participation (X2)	Involvement in eco-edu tourism
3	Infrastructure (X3)	Business service Tourism facilities Tourism infrastructure
4	Accessibility (X4)	Transportation and the road Location
5	Attitude Toward organic tourism (Y1)	Belief ini organic farming Belief ini social values Belief ini environmental preservation
6.	Intention to organic tourisme (Y2)	Willingness to travel to organic farming Willingness to environmental preservation Intention to repeat travel to organic farm

The analysis model uses Structural Equation Modeling (SEM), a collection of statistical techniques that allows for simultaneously testing a series of complex relationships (Ferdinand, 2002). Evaluation of the model's suitability was carried out by considering several fit criteria, such as p-value, RMSEA, NFI, NNFI, CFI, IFI, RFI, and Std. RMR, and GFI. Model testing involves the entire model and goodness of fit statistics, as well as testing the path coefficient. Test the significance of the path coefficients ( $\alpha$  and  $\beta$ ) using the t-test with a significance level of  $p < 0.05$ , and all coefficients in the model must be significant according to the Statistical Goodness of Fit criteria.

**Table 2. Goodness of fit index (GOFI).**

GOFI	Standard value
p-value	$p\text{-value} \geq 0.05$
RMSEA	$RMSEA \leq 0.08$
NFI	$NFI \geq 0.90$
NNFI	$NNFI \geq 0.90$
CFI	$CFI \geq 0.90$
IFI	$IFI \geq 0.90$
RFI	$RFI \geq 0.90$
AGFI	$AGFI \geq 0.90$
GFI	$GFI \geq 0.90$

This study uses two software to process data: Excel and LISREL (Wijanto, 2008) 8.50. The raw data can be effectively processed using Excel 2007 and SPSS 17 software. Furthermore, indicator data for each latent variable is processed using the CFA method through LISREL 8.50 software. After obtaining valid and reliable CFA results, data processing was continued using the SEM method, which is the primary method in this study, with the help of LISREL 8.5 software.

**RESULTS**

**Reliability:** In this study, each indicator was tested by evaluating model measurements. This evaluation is carried out on each latent variable and its indicators to see the relationship between a latent variable and the observed indicators.

**Table 3. Standard Loading Factor (SLF).**

No.	Indicator	Label	t-value	Evaluation
1	Attraction	X11	8.17	Good
2	Biodiversity	X12	13.64	Good
3	Tour	X13	8.57	Good
4	Involvement in eco-edu tourism	X21	16.77	Good
5	Business service	X22	15.56	Good
6	Tourism facilities	X31	12.27	Good
7	Tourism infrastructure	X32	12.78	Good
8	Transportation and the road	X41	7.48	Good
9	Location	X42	10.41	Good
10	Belief ini organic farming	Y11	8.17	Good
11	Belief ini social values	Y12	13.64	Good
12	Belief ini environmental preservation	Y13	8.58	Good
13	Willingness to travel to organic farming	Y21	13.81	Good
14	Willingness to environmental preservation	Y22	14.54	Good
15	Intention to repeat travel to organic farm	Y23	13.29	Good

Source: Data Processed, 2023

The results of the measurement and evaluation of the reliability of the latent variables have good conclusions. The results of the measurement and evaluation of the reliability of the Tourism Activity variable show that two variables have good conclusions, namely variables X11 and X12. The results of the measurement and evaluation of the reliability of the community participation variable (X2) show that two variables have good conclusions, namely variables X21 and



X22. The results of measuring and evaluating the reliability of the latent infrastructure variable (X3) show that both variables have good conclusions. Thus, the variables X31 and X32 are included in the model. The results of measuring and evaluating the reliability of the latent variable Attitude Toward organic tourism (Y1) showed three variables with good conclusions, namely Y11, Y12, and Y13 and the indicator of intention to organic tourism also had good results. So that all indicators can be included in the model.

**Validity:** The measurement model's validity can be evaluated in Table 4 which shows the standard loading factor (SLF). From the table, it can be concluded that the construct or measurement model has good validity because the Standard Loading Factor (SLF) > 0.5 (Ihantola and Kihn, 2011). Standard loadings can be obtained directly from the LISREL output 8.8. Variance extracts reflect the extent to which latent variables explain the indicator variation.

**Table 4. Construct reliability, variance extracted, reliability model stability alienation.**

Variable	CR	VE	Evaluation
Tourism activity (X1)	0.98	0.80	Good
Community participation (X2)	0.95	0.67	Good
Infrastructure (X3)	0.78	0.70	Good
Accessibility (X4)	0.74	0.65	
Attitude toward Organic tourism (Y1)			Good
Intention to organic tourism (Y2)	0.76	0.56	Good

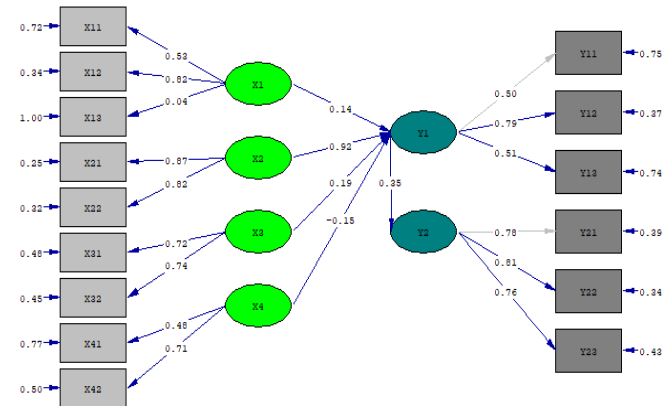
Source, Primary Data Analysis (Lisrel 8.5)

The conclusion from the table above is all latent variables in eco-tourism research have validity that can be accounted for where Construct Reliability (CR)  $\geq 0.70$  and Variance Extracted (VE)  $\geq 0.5$  are as expected. It can be concluded that they give good results.

**LISREL Data Analysis:** To confirm a model in Structural Equation Modeling (SEM), researchers must ensure that the model has been determined correctly according to the type of analysis. To get an accurate model, two types of variables are used, namely exogenous variables and endogenous variables. The role of exogenous variables is arrow-sending variables to predict endogenous variables. Conversely, endogenous variables act as arrow receivers in the model. The standard solution result for this model is given in Fig.1 and Fig.2.

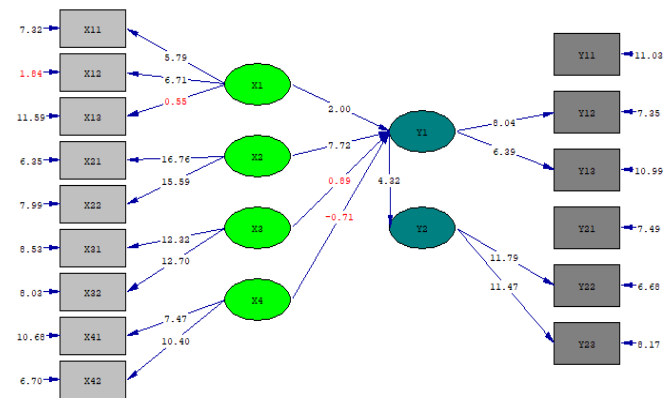
The Goodness of Fit Index (GOFI) table shows that the eco-edu tourism model is good because no Goodness of Fit Index (GOFI) value shows GOFI output outside the predetermined index. These results mean that this model can be used to assess the model that has been produced. With the development of this model, assumptions about the process

and development of measurement models produce eco-edu tourism model variables.



Chi-Square=101.73, df=79, P-value=0.05544, RMSEA=0.033

**Figure 1. Standard Solution.**



Chi-Square=101.73, df=79, P-value=0.05544, RMSEA=0.033

**Figure 2. T-Value from Lisrel.**

**Table 5. Goodness of Fit Index (GOFI).**

No.	Goodness of Fit Index (GOFI)	GOFI score	Output
1	p-value $\geq 0.05$	0.0554	[Good]
2	RMSEA $\leq 0.08$	0.033	[Good]
3	NFI $\geq 0.90$	0.92	[Good]
4	NNFI $\geq 0.90$	0.97	[Good]
5	CFI $\geq 0.90$	0.98	[Good]
6	IFI $\geq 0.90$	0.98	[Good]
7	RFI $\geq 0.90$	0.90	[Good]
8	AGFI $\geq 0.90$	0.052	[Good]
9	GFI $\geq 0.90$	0.95	[Good]

From the results of the data analysis, tourism activities, and community participation significantly influence Attitudes toward eco-edu tourism. At the same time, the infrastructure and accessibility variables show insignificant results towards Attitude toward eco-edu organic tourism. Furthermore,



**Table 6. Standard solution for eco-edu tourism lubuk bayas.**

No.	Effect of Endogenous and Exogenous Variables	Eco-edu Tourism Model
1	Tourism activity (X1) to attitude toward eco-edu tourism (Y1)	0.01
2	Community participation (X2) to attitude Toward eco-edu tourism (Y1)	0.92
3	Infrastructure (X3) to (Y1) Attitude Toward eco-edu tourism (Y1)	0.19
4	Accessibility (X4) to Attitude Toward eco-edu tourism (Y1)	-0.15
5	Attitude Toward organic tourism (Y1) to Intention toward eco-edu tourism (Y2)	0.35

**Table 7. Results of the significance test of structural model research on eco-edu tourism.**

No.	Effect of Endogenous and Exogenous Variables	Eco-edu Tourism Model
1	Tourism activity (X1) to attitude toward eco-edu tourism (Y1)	2.00
2	Community participation (X2) to attitude Toward eco-edu tourism (Y1)	7.72
3	Infrastructure (X3) to (Y1) Attitude Toward eco-edu tourism (Y1)	0.89
4	Accessibility (X4) to Attitude Toward eco-edu tourism (Y1)	0.71
5	Attitude Toward organic tourism (Y1) to Intention toward eco-edu tourism (Y2)	4.32

**Table 8. Results of the significance test of the eco-edu tourism model.**

Hypothesis.		t-score	Significancy test
Hypothesis 1	Tourism activity (X1) significantly affects attitudes Toward eco-edu tourism (Y1)	2.00	H0 declined
Hypothesis 2	Community participation (X2) significantly affects attitude toward eco-edu tourism (Y1)	7.72	H0 declined
Hypothesis 3	Infrastructure (X3) significantly affects the attitude toward eco-edu tourism (Y1)	0.89	H0 accepted
Hypothesis 4	Accessibility (X4) significantly affects attitude toward eco-edu tourism (Y1)	0.71	H0 accepted
Hypothesis 5	Attitude Toward organic tourism (Y1) to intention toward eco-edu tourism (Y2)	4.32	H0 declined

Attitude toward eco-edu tourism has a significant effect on Intention toward organic tourism

**SWOT Analysis:** The development of eco-edu tourism needs an appropriate strategy. This study uses SWOT analysis in formulating strategies. We collected data from FGDs, observations, and interviews with stakeholders to determine various parameters for the development of eco-edu tourism in Lubuk Bayas Village. Identification of the factors that become strengths (Strengths), Weaknesses (Weaknesses), opportunities (Opportunities), and threats (Threats) based on the results of data collection are as follows:

1. Internal factor: Strength
  - a. Organic rice farmers commit to developing organic rice fields
  - b. Organic rice farmer groups have good management in controlling the quality of rice
  - c. Organic rice farmer groups have independent drying and rice milling facilities
  - d. The fertile land of Lubuk Bayas Village allows for the development of eco-edu tourism with organic rice as a superior commodity
  - e. The community is enthusiastic about participating in developing eco-edu tourism (e.g., opening a business around the location, joining a tourism driving group)
  - f. Lubuk Bayas Village has excellent irrigation channels
  - g. The village's security situation is relatively good
  - h. Organic rice field farmers have an initiator to develop the tourism potential of organic rice fields
2. Internal factor: Weakness
  - a. Access/means of transportation (public transportation) to the village is inadequate
  - b. The infrastructure/condition of the road leading to the village is mainly damaged
  - c. Coverage from websites and social media regarding organic rice fields in Lubuk Bayas Village was minimal
  - d. There was a transfer of organic rice fields to conventional rice fields
  - e. Limited skills of farmers in producing organic fertilizers and pesticides.
  - f. Managing organic agricultural land requires more time, money, and effort
  - g. The low interest of the younger generation in Lubuk Bayas Village in pursuing organic rice fields
  - h. Facilities and infrastructure supporting the development of organic rice field tourism are still minimal (restaurants and lodging)
3. External factor: Opportunity
  - a. The enthusiasm of the people of North Sumatra for nature tourism is increasing
  - b. Many tour agents, such as travel agents, can promote organic village rice field tourism
  - c. There is no eco-edu tourism in Serdang Bedagai Regency yet
  - d. Serdang Bedagai Regency is famous for having many natural attractions such as beaches, waterfalls, and baths, so it is hoped that visitors can stop by to tour eco-edu tourism in Lubuk Bayas Village
  - e. Government support for the development of eco-edu tourism



4. External factor: Threat
  - a. There are no investors yet to build eco-edu tourism
  - b. People, in general, are not used to consuming organic rice
  - c. Inflation affects the purchasing power of visitors/tourists
  - d. Extreme and erratic weather harms lowland rice farmers

## DISCUSSION

In organic farming, the tourism industry is still underdeveloped at this time. The people of North Sumatra still need to be more interested in ecological tourism and tend to choose tourism in the mountains and beaches. Educational tourism based on organic farming has yet to be popular nationally, so it needs the government's attention. Even though organic farming contributes to public health, it is popular among students, educators, and the general public. The development of eco-edu tourism needs to provide insight for students from elementary school to university level. organic market tourism needs to be packaged with the concept of Edu (Education) and Tourism (Tourism) so that learning activities will be more exciting and the results will add new knowledge about organic farming. Furthermore, organic farming tourism aims to invite visitors to love the environment and introduce an environmentally friendly lifestyle. Activities in Eco-edu tourism include exploring the types of plants in the garden, learning rice cultivation, making organic fertilizers and pesticides through organic farming activities, and many more. It is necessary to create exciting games for students who visit the tourist attractions that will be formed (Lubis *et al.*, 2023; Rhama, 2020). Tourism development must pay attention to the availability of facilities and infrastructure. Tourism-supporting facilities and infrastructure are also needed to meet the needs of tourists while in tourist destinations. The findings above show that infrastructure issues are essential for eco-tourism that will be developed by the community, such as restaurant facilities, lodging, toilets, prayer rooms, health facilities, banks/ATMs, parking areas, and security. In terms of quantity, namely the number of available facilities and quality, it describes the quality of service and tourist satisfaction in obtaining services. In addition, clean water, electricity, drainage, waste, and telecommunications networks are essential to provide more excellent tourist services. Analysis of physical characteristics, especially tourism infrastructure, in terms of infrastructure quality still needs to be improved. For example, for the garbage network, even though each beach has trash bins, there is still garbage piled up in Lubuk Bayas Village that still needs to be managed, thus disturbing the view. The electricity network is not considered feasible for tourism development; the electricity capacity of each house still needs to be higher, so stakeholders need more power to carry out

tourism activities. The telecommunications network is good, although sometimes the network could be more consistent. One of the factors driving the development of tourism is the road network (Kachniewska, 2015). The quality of roads leading to tourist sites is the most critical infrastructure. Lubuk Bayas Village is 70 km from Medan City, and it takes one hour and thirty minutes to reach the village location. Construction of the toll road cut travel time from the previous two hours. The village is close to the famous romantic beach in the Serdang Bedagai area. However, the road to enter the planned tourist area of Lubuk Baya Village has yet to be paved. Public transportation is also unavailable, which will affect tourism developments. From the identification of the SWOT analysis, stakeholders can carry out the primary strategy to develop eco-edu tourism in the village of Lubuk Bayas, which is a growth strategy that maximizes the opportunities it has to continue to develop its products. Are as follows: 1) Develop facilities and infrastructure, including educational games that attract visitors; 2) Improve accessibility such as public transportation and road repairs to the location of Lubuk Bayas village; 3) Develop coordination with stakeholders and establish cooperation with investors to develop eco-edu tourism 4) Utilizing advances in digital technology in marketing eco-edu tourism, 5) Create community groups that drive eco-edu tourism, and provide training to tourism actors on how to manage good tourism. The community's perception of eco-edu tourism development will be favorable if its presence provides direct economic benefits, such as opening new business opportunities and job creation. Meanwhile, tourism service providers will have a positive perception if the government supports infrastructure improvements, which are crucial for facilitating mobility/access to eco-edu tourism locations. Tourism service providers may view the area as economically unviable without infrastructure improvements. On the other hand, from the market's perspective (tourists), new tourist locations like eco-edu tourism must offer unique features to attract interest. Without good management, such as proper facilities and effective promotion, it will be difficult for eco-edu tourism in Lubuk Bayas to compete and grow in North Sumatra. Eco-edu tourism development can have a multiplier effect on the village economy. The first economic impact is that eco-edu tourism can boost farmers' enthusiasm for organic farming and increase the market value of organic rice. The second impact is that the development of eco-edu tourism can create economic diversification in the village through the tourism sector, such as tour guide services, culinary businesses, handicraft businesses, and other enterprises supporting the tourism sector. The third impact is that the government will pay more serious attention to infrastructure problems supporting tourism access. Infrastructure improvements will have a wide-ranging effect on the community's economy. Promotion strategies in the development of eco-edu tourism need to consider cost and effectiveness. With a limited



budget, using social media can effectively reach consumers regionally and nationally (Siregar *et al.*, 2021). Eco-edu Tourism Management can leverage promotion through local influencers with high regional loyalty to maximize the promotion of eco-edu tourism. By disseminating information to hundreds of thousands of followers on Instagram, TikTok, and YouTube, eco-edu tourism in Lubuk Bayas can be communicated effectively.

**Conclusion:** Based on the results of this study, several conclusions can be drawn and formulated:

1. Implementing community empowerment through community participation in this study consists of 2 parts: potential involvement in ecotourism and tourism service providers.
2. Creating activities in Lubuk Bayas Village is very important, such as playing games, studying biodiversity, and touring the location of the organic rice production process. So, the goal of developing ecotourism to increase the consumption of organic products is realized.
3. Improving Lubuk Bayas village infrastructure must be a concern so the community's intention to come to eco-edu tourism is realized.
4. The provision of transportation is essential for the government to pay attention to because the long distance between the cities of Medan and Lubuk Bayas can affect interest in visiting.
5. The local government can carry out The primary strategy to develop eco-edu tourism in the village of Lubuk Bayas is a growth strategy, namely, a strategy that maximizes the opportunities it has to continue to develop its products as follows: 1) Developing facilities and infrastructure, including educational games that attract visitors; 2) Improve accessibility such as public transportation and road repairs to the location of Lubuk Bayas village; 3) Develop coordination with stakeholders and establish cooperation with investors to develop eco-edu tourism 4) Utilizing advances in digital technology in marketing eco-edu tourism, 5) Create community groups that drive eco-edu tourism, and provide training to tourism actors on how to manage good tourism.

**Authors contributions statement:** Ihsan Effendi conducted data collection and analysis. Adelina Lubis completed the draft journal. M. Akbar Siregar performed translation and proofreading.

**Conflict of interest:** The authors declare no conflict of interest.

**Acknowledgment:** We are thankful to Dhian Rosalina for SWOT Analysis.

**Funding:** The authors acknowledge the Indonesian Government through the Ministry of Education, Culture, Research, and Technology for funding this research in 2023.

**Ethical statement:** This research involved farmers in Lubuk Bayas, and they willingly participated as respondents without any coercion.

**Availability of data:** All data used are within the manuscript.

**Informed consent:** Written informed consent was obtained from all participants regarding publishing their data.

**Consent for publication:** All authors submitted consent to publish this research article in JGIAS.

**SDGs Addressed:** Zero Hunger, Decent Work and Economic Growth, Responsible Consumption and Production, Climate Action, Life Below Water.

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