THE INFLUENCE OF ENVIRONMENTAL AWARENESS AND CONSERVATION ON THE SUSTAINABILITY OF ECO-HALAL TOURISM IN PAMEKASAN REGENCY

Reza Dwi Rachma Sindi[1]
Dzikrulloh[2]
Nurhisna[3]
Serli[4]
Siti Nafisah[5]
Sri Amilia[6]
[123456] Universitas Trunojoyo Madura
[1] 220721100119@student.trunojoyo.ac.id
[2] Dzikrulloh@trunojoyo.ac.id
[3] Nurhisna.utm@gmail.com
[4] 22072110035@student.trunojoyo.ac.id
[5] 220721100004@student.trunojoyo.ac.id
[6] 220721100011@student.trunojoyo.ac.id

Abstract

This study aims to analyze the influence of environmental awareness and conservation on the sustainability of eco-halal tourism in Pamekasan Regency. Using a quantitative approach with multiple linear regression analysis, data were collected from 80 respondents consisting of tourists, destination managers, and MSMEs involved in eco-halal tourism. Validity and reliability tests showed that all research instruments were valid and reliable. The classical assumptions—normality, multicollinearity, and heteroscedasticity—were all met, indicating that the regression model was feasible. The results showed that environmental awareness had a positive and significant effect on the sustainability of eco-halal tourism, while conservation, although positive, did not have a significant individual effect. However, environmental awareness and conservation simultaneously showed a significant effect on the sustainability of eco-halal tourism with a correlation coefficient (R) of 0.536. These findings highlight the importance of strengthening community environmental awareness and integrated conservation initiatives to improve the long-term sustainability of eco-halal tourism in Pamekasan.

Keywords : *Environmental Awareness, Conservation, Eco-Halal Tourism, Sustainability, Pamekasan Regency.*

INTRODUCTION

The global tourism industry is currently experiencing rapid growth and has become a key pillar of the global economy. This sector not only generates significant

revenue for countries but also creates numerous jobs and encourages international cultural exchange. Along with this rapid development, a new trend has emerged that is attracting the attention of global tourism players: halal tourism. Halal tourism is a growing market segment driven by the need for religious tourism and seeks to address the growing global Muslim population. The growth in the number of Muslim tourists and the expansion of the halal industry globally are the main factors driving this halal tourism trend (Benmehdi, 2025). This trend is also clearly visible in Asia, including Indonesia, which is now beginning to demonstrate superior performance in the international halal tourism arena.

This positive performance further strengthens Indonesia's position as a country with significant potential for developing the halal tourism industry globally. Indonesia ranked second in the 2022 *Global Muslim Travel Index* (GMTI), while Malaysia once again secured first place with a score of 74. Indonesia, Saudi Arabia, and Turkey shared second place in the report. This annual report brings renewed optimism to the tourism sector, especially after experiencing a significant decline due to the *COVID-19* pandemic over the previous two years. Based on pre-pandemic projections, the number of Muslim tourists was expected to reach 20 million by 2025, with spending on halal tourism predicted to reach *US$225* million by 2028. Therefore, the 2022 GMTI report serves as an important reference for stakeholders in optimizing growth opportunities in the halal tourism sector(Potensi Pengembangan Wisata Halal Indonesia, 2021).

Indonesia occupies a strategic position in the development of halal tourism globally because it is the country with the largest Muslim population in the world. More than 87% of its population is Muslim, or approximately 12.7% of the world's total Muslim population, making Indonesia a key hub in the international Islamic community (World Population Review, Muslim Majority Countries 2025, n.d.). This demographic dominance presents significant opportunities for the development of the halal industry, particularly in the tourism sector, which is based on Sharia principles as a social, economic, and religious value for the community. This positive value aligns with the current development and progress of the halal industry (Febriyanti & Hipni, 2021). This condition provides important capital for Indonesia to strengthen the competitiveness of its halal tourism destinations while ensuring their development is in line with the principles of sustainability.

In line with efforts to strengthen the sustainable halal tourism sector in Indonesia, Pamekasan Regency on Madura Island has great potential to be developed as an eco-halal tourism destination, as evidenced by its beautiful natural landscape, religious character, and regional identity as the "*Gate of Greetings*" (*Islamic Community Movement*) (Setya et al., 2023). This concept is implemented through the provision of worship facilities, halal culinary delights, sharia-compliant accommodations, and educational programs to enhance public and business understanding of ecotourism principles (Kunaifi et al., 2021). However, its implementation still faces various challenges. Some tourist locations still demonstrate low environmental awareness, such as the habit of littering and a lack of attention to conservation. This condition indicates that although Islamic values have been internalized in society, the implementation of environmental sustainability principles is not yet fully optimal (Sulistyo et al., 2023).

Previous research conducted by (Aulia Rahmasari et al., 2025) showed a positive and significant relationship between environmental conservation awareness and visitor

participation in ecotourism, with visitors becoming more actively involved in ecotourism activities. However, this research needs to examine more deeply the relationship between variables between environmental awareness and the implementation of halal tourism. (Ma'adi & Hisyam, 2024) explained that management training and development of ecotourism-based halal tourism increases public awareness of environmental conservation while simultaneously boosting the local economy. However, further development is needed to discuss how environmental awareness and conservation practices can be significantly implemented in eco-halal tourism destinations, including their influence on tourist behavior and the long-term sustainability of the destination. (Jaelani et al., 2025) also discussed a model of sustainable halal tourism regulation based on local wisdom through a comparative study of Indonesia and Uzbekistan. Indonesia faces regulatory ambiguity and minimal regional and community involvement, while Uzbekistan has an integrated policy that emphasizes environmental and cultural preservation. These findings emphasize the importance of aligning Indonesian halal tourism regulations with local wisdom and community participation. However, further development is needed to strengthen environmental aspects and conservation practices within the regulatory framework for a more comprehensive halal tourism sustainability.

Although numerous studies have discussed halal tourism and environmental conservation, studies specifically examining the relationship between environmental awareness, conservation practices, and the sustainability of eco-halal tourism are still rare, especially in Pamekasan Regency. This situation indicates a crucial research gap that needs to be filled, as the success of eco-halal tourism development depends not only on the provision of tourism facilities, but also on the extent to which community awareness and conservation practices support sustainability principles while aligning with Islamic values.

Therefore, this study focuses on the influence of environmental awareness and conservation on the sustainability of eco-halal tourism in Pamekasan Regency. It is hoped that the results of this study will contribute academically by enriching the literature on environmentally based halal tourism and providing practical recommendations for local governments, tourism managers, and the community in their efforts to develop sustainable eco-halal tourism that is oriented towards improving the quality of destinations in Pamekasan.

LITERATURE REVIEW

Environmental awareness

Environmental awareness is defined as an awareness of the importance of preserving nature, fostering concern, and playing an active role in protecting and maintaining the sustainability of ecosystems. This concept is not only limited to knowledge about environmental issues, but also includes empathy, social concern, and a sense of moral responsibility that motivates a person to take action. Concrete manifestations of environmental awareness are seen in everyday behavior, such as reducing plastic use, conserving energy, sorting and recycling waste, planting trees, and supporting environmentally friendly policies and programs (Nugroho, 2022). In other words, environmental awareness is a combination of attitudes, knowledge, values, and

actions that consistently demonstrate a commitment to environmental preservation and sustainability for present and future generations.

One definition of environmental awareness is a mindset, attitude, and action that reflects respect and concern for nature. This appreciation includes an awareness that the sustainability of ecosystems and their balance is vital to the survival of humans and other living things. In other words, environmental awareness can be understood as an individual's perspective, values, and behavior that demonstrates respect and responsibility for the preservation of nature. This awareness is not limited to a theoretical understanding of the importance of preserving ecosystems, but is also manifested in concrete daily actions, such as maintaining a clean environment, reducing pollution, and utilizing natural resources wisely (Irawan et al., 2025).

Conservation

Etymologically, conservation means the effort to maintain and protect something regularly to prevent damage or extinction, through preservation and conservation activities. According to the Ministry of Environment and Forestry (BBKSDA West Papua), the idea of conservation was first introduced by Theodore Roosevelt in 1902. The term conservation comes from the word con which means "together" and servare which means "to guard" or "to maintain what is owned." Thus, conservation can be interpreted as an action to maintain and protect the resources we have so that they remain sustainable and are used wisely (wise use). In a broader sense, conservation does not only include the preservation of the physical environment, but also includes efforts to maintain, appreciate, and develop human values and cultural products in order to achieve a better and more sustainable life(Gufron et al., 2025).

Environmental conservation plays a vital role in maintaining the sustainability of human life, ecosystems, and biodiversity. Conservation maintains ecosystem balance because every organism plays a vital role in maintaining environmental stability. This effort also ensures the availability of natural resources such as water, air, soil, and biodiversity for current and future generations through sustainable management. Furthermore, conservation plays a role in preventing damage caused by human activities such as deforestation, pollution, and climate change, thus supporting human health and the sustainability of livelihoods such as agriculture, fisheries, and tourism. Conservation also serves as the foundation for sustainable development and encourages scientific progress and technological innovation in addressing environmental challenges. Therefore, conservation is not only an effort to maintain human survival, but also a shared responsibility to preserve nature for the well-being of all living things and future generations (Hadinoto et al., 2025).

Sustainability of Eco-Halal Tourism

Halal tourism is currently undergoing a transformation from a limited religious activity to a more inclusive, ethical, and environmentally conscious concept, in line with global goals for sustainable development. This change has the potential to influence the future direction and practices of the global tourism industry. Based on the Triple Bottom Line (TBL) framework, the success of halal tourism depends on the synergy between economic, social, and environmental aspects. Economic innovation must be balanced with a social structure that supports collaboration and cultural diversity, while both must be aligned with environmental management that benefits local communities and ensures the long-term sustainability of tourist destinations (Timur et al., 2025).

Sustainability in eco-halal tourism emphasizes the integration of Islamic values and global sustainable development principles. This approach highlights that halal tourism focuses not only on fulfilling spiritual needs and Sharia compliance, but also on social responsibility, environmental preservation, and the economic well-being of local communities. Within the Triple Bottom Line (TBL) framework, the sustainability of eco-halal tourism is achieved when economic, social, and environmental aspects operate harmoniously. Practices include environmentally friendly innovation, ethical destination management, community empowerment, and strengthening tourists' ecological awareness. Thus, eco-halal tourism serves as a model of ethical tourism that supports a sustainable balance between spiritual, economic, social, and ecological aspects (Jabeen et al., 2025).

RESEARCH HYPOTHESES

HO_1 : Kesadaran lingkungan tidak berpengaruh terhadap keberlanjutan eco halal tourism

Ha_1 : Kesadaran lingkungan berpengaruh terhadap keberlanjutan eco halal tourism

HO_2 : Konservasi tidak berpengaruh terhadap keberlanjutan eco halal tourism

Ha_2 : Konservasi berpengaruh terhadap keberlanjutan eco halal tourism

HO_3 :Kesadaran Lingkungan dan Konservasi secara simultan tidak berpengaruh signifikan terhadap keberlanjutan eco halal tourism

Ha_3 : Kesadaran Lingkungan dan Konservasi secara simultan berpengaruh signifikan terhadap keberlanjutan eco halal tourism

RESEARCH METHOD

This study uses a quantitative approach with multiple linear regression methods to analyze the influence of environmental awareness and conservation (*independent variables*) on the desire for Eco-Halal Tourism in Pamekasan Regency (*dependent variable*). The study population consisted of tourists, tourism destination managers, and MSME (*Micro, Small, and Medium Enterprises*). around the destination, with a sample of 80 respondents selected using purposive sampling based on experience and knowledge criteria related to eco-halal tourism, calculated using the Slovin formula with a 10% error tolerance. Data were collected through questionnaires as primary data and literature studies and official documents as secondary data to strengthen and ground the theory (Sugiyono, 2017).

Data analysis was conducted through instrument testing (validity and reliability), classical assumption tests (normality, multicollinearity, heteroscedasticity), and hypothesis testing with multiple linear regression, F-test, T-test, and coefficient of determination (R^2). For respondent demographics, most were aged 20–40 years, balanced between men and women, with educational backgrounds ranging from high school to college, and the majority worked in the tourism sector or local MSME (*Micro, Small, and Medium Enterprises*). Descriptive statistics showed an even distribution of respondent data and research variables had adequate average values, standard deviations, and frequencies for analysis, thus providing a clear picture of the sample

characteristics and supporting the reliability of the research results.(Hotmaulina Sitohang, 2023).

RESULTS AND DISCUSSION

Research Instrument

Validity Test

Validity testing is used to assess the extent to which a research questionnaire is able to measure the variables studied accurately and consistently. In this study, the validity test was applied to three variables, namely Environmental Awareness (X1), Conservation (X2), and Sustainability of Eco Halal Tourism (Y). The test was carried out by comparing the calculated r and table r values, where the question item was declared valid if the calculated r ≥ table r. This validity analysis was carried out with the help of the SPSS version 31 program, involving 30 trial respondents from a total of 80 main respondents to ensure the feasibility of the research instrument before being used in the main data collection. The following are the results of the validity test:

Table 1
Validity Test Results Environmental Awareness
Correlations

		X1_1	X1_2	X1_3	X1_4	X1_5	Jumlah X1
X1_1	Pearson Correlation	1	-.030	.304	.118	.388*	.538**
	Sig. (2-tailed)		.873	.102	.534	.034	.002
	N	30	30	30	30	30	30
X1_2	Pearson Correlation	-.030	1	.374*	.218	.247	.602***
	Sig. (2-tailed)	.873		.042	.247	.187	<,001
	N	30	30	30	30	30	30
X1_3	Pearson Correlation	.304	.374*	1	.448*	.551**	.804***
	Sig. (2-tailed)	.102	.042		.013	.002	<,001
	N	30	30	30	30	30	30
X1_4	Pearson Correlation	.118	.218	.448*	1	.214	.593***
	Sig. (2-tailed)	.534	.247	.013		.256	<,001
	N	30	30	30	30	30	30
X1_5	Pearson Correlation	.388*	.247	.551**	.214	1	.722***
	Sig. (2-tailed)	.034	.187	.002	.256		<,001
	N	30	30	30	30	30	30
Jumla	Pearson	.538**	.602***	.804***	.593***	.722***	1

hX1	Correlation						
	Sig. (2-tailed)	.002	<,001	<,001	<,001	<,001	
	N	30	30	30	30	30	30

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

***. Correlation at 0.001(2-tailed)

Sumber: data diolah peneliti, 2025

Based on the results of the validity test conducted using SPSS version 31, the r table value obtained was 0.361 from 30 trial respondents with a significance level of 5%. The analysis results show that all items in variable X1 have a calculated r value between 0.538-0.804 with a significance level below 0.05. Thus, all items in variable X1 are declared valid and suitable for use as research instruments.

Table 2
Conservation Validity Test Results
Correlations

		X2_1	X2_2	X2_3	X2_4	X2_5	X2
X2_1	Pearson Correlation	1	.476**	.403*	.247	.523**	.693***
	Sig. (2-tailed)		.008	.027	.188	.003	<,001
	N	30	30	30	30	30	30
X2_2	Pearson Correlation	.476**	1	.371*	.440*	.357	.715***
	Sig. (2-tailed)	.008		.044	.015	.052	<,001
	N	30	30	30	30	30	30
X2_3	Pearson Correlation	.403*	.371*	1	.560**	.269	.726***
	Sig. (2-tailed)	.027	.044		.001	.151	<,001
	N	30	30	30	30	30	30
X2_4	Pearson Correlation	.247	.440*	.560**	1	.467**	.788***
	Sig. (2-tailed)	.188	.015	.001		.009	<,001
	N	30	30	30	30	30	30
X2_5	Pearson Correlation	.523**	.357	.269	.467**	1	.708***
	Sig. (2-tailed)	.003	.052	.151	.009		<,001
	N	30	30	30	30	30	30

X2	Pearson Correlation	.693***	.715***	.726***	.788***	.708***	1
	Sig. (2-tailed)	<,001	<,001	<,001	<,001	<,001	
	N	30	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
***. Correlation at 0.001(2-tailed)

Sumber: data diolah peneliti, 2025

Based on the results of the validity test conducted with the help of the SPSS version 31 program, the r table value obtained was 0.361 based on the number of trial respondents of 30 people with a significance level of 5%. The analysis results show that all items in the X2 variable have a calculated r value between 0.693 - 0.788 with a significance level below 0.05. Thus, it can be concluded that all questions in the X2 variable are declared valid and suitable for use as a research instrument.

Table 3
Sustainability of eco halal tourism
Correlations

		Y_1	Y_2	Y_3	Y_4	Y_5	Y
Y_1	Pearson Correlation	1	.379*	.349	.488**	.509**	.729***
	Sig. (2-tailed)		.039	.059	.006	.004	<,001
	N	30	30	30	30	30	30
Y_2	Pearson Correlation	.379*	1	.530**	.585***	.600***	.814***
	Sig. (2-tailed)	.039		.003	<,001	<,001	<,001
	N	30	30	30	30	30	30
Y_3	Pearson Correlation	.349	.530**	1	.463**	.311	.723***
	Sig. (2-tailed)	.059	.003		.010	.094	<,001
	N	30	30	30	30	30	30
Y_4	Pearson Correlation	.488**	.585***	.463**	1	.364*	.766***
	Sig. (2-tailed)	.006	<,001	.010		.048	<,001
	N	30	30	30	30	30	30
Y_5	Pearson Correlation	.509**	.600***	.311	.364*	1	.728***
	Sig. (2-tailed)	.004	<,001	.094	.048		<,001
	N	30	30	30	30	30	30
Y	Pearson	.729***	.814***	.723***	.766***	.728***	1

	Correlation					
	Sig. (2-tailed)	<,001	<,001	<,001	<,001	<,001	
	N	30	30	30	30	30	30

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).
***. Correlation at 0.001(2-tailed)

Sumber: data diolah peneliti, 2025

Based on the results of the validity test conducted using SPSS version 31, the r table value was obtained at 0.361, based on 30 trial respondents, with a significance level of 5%. The analysis results showed that all items in the Y variable had calculated r values between 0.723 and 0.814, with a significance level below 0.05. Thus, all questions in the Y variable were declared valid and suitable for use as research instruments.

Reliability Test

Reliability testing serves to assess the level of consistency and stability of a research instrument. Therefore, reliability testing was conducted on the questionnaire using Cronbach's Alpha calculations. A research instrument is considered reliable if it achieves a Cronbach's Alpha value greater than 0.60. The results of the reliability testing are presented in the following table.

Table 4
Hasil Uji Reliability

Variabel	Cronbach's Apha	Standar	Keterangan
Kesadaran Lingungan (X1)	0,644	0,60	Reliabel
Konservasi (X2)	0,773	0,60	Reliabel
Keberlanjutan Eco Halal Tourism (Y)	0,804	0,60	Reliabel

Sumber: data diolah peneliti, 2025

Based on the results of the table above, it can be seen that the Cronbach's Alpha value for the Environmental Awareness (X1) variable is 0.644, Conservation (X2) is 0.773, and Sustainability of Eco Halal Tourism (Y) is 0.804. This shows that all Cronbach's Alpha values for each variable are greater than 0.60, so the three variables are declared reliable and can be used as research instruments.

Classical Assumption Test

Normality Test

The normality test aims to assess whether the residual data follows a normal distribution. The test is performed using the non-parametric Kolmogorov-Smirnov (KS) test; data are considered normal if the significance value is >0.05, and abnormal if it is <0.05. The results of the normality test are shown below.

Tabel 5
Kolmogorov-Simrnov result
One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			80
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		1.68481222
Most Extreme Differences	Absolute		.083
	Positive		.081
	Negative		-.083
Test Statistic			.083
Asymp. Sig. (2-tailed)[c]			.200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		.182
	99% Confidence Interval	Lower Bound	.172
		Upper Bound	.192

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.
e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

Sumber: data diolah peneliti, 2025

The Kolmogorov-Smirnov test results showed a significance value of 0.200 (>0.05), indicating that the residual data was normally distributed. Thus, the assumption of normality in the model was met.

Multicollinearity Test

The multicollinearity test aims to assess the level of correlation between ependent variables in a regression model. A tolerance value >0.10 or VIF <10 icates the absence of multicollinearity, while a tolerance value <0.10 or VIF >10 icates the presence of multicollinearity. The following are the results of the lticollinearity test:

Table 6
Multicollinearity Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.066	.973		3.150	.002		
	X1	.470	.119	.443	3.953	<,001	.737	1.356
	X2	.157	.117	.150	1.339	.184	.737	1.356

a. Dependent Variable: Y

Sumber: data diolah peneliti, 2025

A tolerance value of 0.737 (>0.10) and a VIF of 1.356 (<10) indicate no signs of multicollinearity among the independent variables. Thus, the regression model meets the multicollinearity-free assumption.

Heteroscedasticity Test

A heteroscedasticity test was performed to ensure the residual variance of the regression model was consistent across observations. Using a significance level of 0.05, if the correlation between the independent variable and the residual is greater than 0.05, the model is free from heteroscedasticity. The results of the heteroscedasticity test are presented in the following table.

Table 7
Heteroscedasticity Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.298	.621		.480	.633
	X1	.135	.076	.231	1.779	.079
	X2	-.019	.075	-.033	-.254	.800

a. Dependent Variable: ABSRES

Sumber: data diolah peneliti, 2025

The significance values for X1 (0.079) and X2 (0.800) are greater than 0.05, indicating no signs of heteroscedasticity. Thus, the regression model meets the assumption of homoscedasticity.

Multiple Linear Regression Equations

Multiple Linear Regression to determine the effect of X1 and X2 on Y. In other words, this method is used to see how much change in the dependent variable can be explained by the independent variables. The model is generally written in the form of an equation:

$Y = a + b_1 + X_1 + b_2X_2 + e$

Table 8

Results of Multiple Linear Regression Equations

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3.066	.973		3.150	.002		
	X1	.470	.119	.443	3.953	<,001	.737	1.356
	X2	.157	.117	.150	1.339	.184	.737	1.356

a. Dependent Variable: Y

Sumber: data diolah peneliti, 2025

Based on the multiple linear regression equation, the regression equation obtained is, Y = 3.066 + 0.470X1 + 0.157X2Y = 3.066 + 0.470 X_1 + 0.157 X_2Y = 3.066 + 0.470X1 + 0.157X2, it can be explained that the sustainability of Eco-Halal Tourism (Y) is positively influenced by environmental awareness (X_1) and conservation (X_2). The intercept of 3.066 indicates the level of sustainability of Eco-Halal Tourism when environmental awareness and conservation are equal to zero. The coefficient of 0.470 on environmental awareness indicates that every increase in one unit of environmental awareness will increase the sustainability of Eco-Halal Tourism by 0.470, while the coefficient of 0.157 on conservation indicates that every increase in one unit of conservation will increase the sustainability of Eco-Halal Tourism by 0.157, assuming other variables are constant. This shows that environmental awareness has a more dominant influence than conservation in supporting the sustainability of Eco-Halal Tourism.

Hypothesis Test

T-Test

The t-test is used to determine whether each independent variable has a partial effect on the dependent variable. The significance level typically used is 0.05. If the significance value is less than 0.05, the null hypothesis is rejected and the alternative hypothesis is accepted, indicating that the independent variable has a significant effect on the dependent variable. Conversely, if the significance value is greater than or equal to 0.05, the null hypothesis is accepted, indicating that the independent variable has no significant effect.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3.066	.973		3.150	.002		
	X1	.470	.119	.443	3.953	<,001	.737	1.356
	X2	.157	.117	.150	1.339	.184	.737	1.356

a. Dependent Variable: Y

Sumber: data diolah peneliti, 2025

Based on the t-test results in the coefficients table, the Environmental Awareness variable (X1) has a calculated t-value of 3.953 with a significance level of <0.001. This significance value is smaller than 0.05, so it can be concluded that Environmental Awareness has a positive and significant effect on the Sustainability of Eco Halal Tourism (Y). This shows that the higher the level of environmental awareness of the community or tourism actors, the higher the sustainability of eco halal tourism that can be achieved. In other words, increasing environmental awareness is an important factor in realizing sustainable, ecological-based halal tourism.

Meanwhile, the Conservation variable (X2) has a t-value of 1.339 with a significance level of 0.184. This value is greater than 0.05, which means that Conservation does not have a significant effect on the Sustainability of Eco-Halal Tourism (Y). Although the regression coefficient shows a positive direction, its influence is not statistically strong enough to influence the sustainability of eco-halal tourism. Thus, it can be concluded that partially only the Environmental Awareness variable has a significant influence on the Sustainability of Eco Halal Tourism, while the Conservation variable does not have a significant influence.

F-Test

The F-test is used to assess whether independent variables collectively exert a significant influence on the dependent variable. The test is conducted at a 0.05 confidence level. If the calculated F-value is greater than the F-value in the table, the alternative hypothesis is accepted, stating that all independent variables simultaneously exert a significant influence on the dependent variable.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	90.239	2	45.119	15.493	<,001[b]
	Residual	224.249	77	2.912		
	Total	314.487	79			

a. Dependent Variable: Y

b. Predictors: (Constant), X2, X1

Sumber: data diolah peneliti, 2025

Based on the results of the F test displayed in the ANOVA table, the calculated F value was 15.493 with a significance value of <0.001. Because the significance value is smaller than 0.05, it can be concluded that the regression model is suitable for use and the variables of Environmental Awareness (X1) and Conservation (X2) simultaneously have a significant effect on the Sustainability of Eco Halal Tourism (Y). This means that together, the two independent variables are able to explain the variation in the dependent variable. In other words, increasing environmental awareness and conservation activities, carried out simultaneously, can have a significant impact on improving the sustainability of eco-halal tourism. These results indicate that the combination of environmental awareness and conservation factors is an important aspect in supporting the sustainability of eco halal tourism, where both collectively make a significant contribution to the achievement of sustainable ecological-based halal tourism.

Test the Coefficient of Determination (R^2)

The coefficient of determination is denoted by R^2 and is used to measure the extent to which an independent variable influences the dependent variable. The greater the R^2 value, the greater the independent variable's ability to explain variation in the dependent variable. R^2 values range from 0 to 1, where 0 means the independent variable has no effect at all, while 1 indicates the independent variable explains all of the variation in the dependent variable.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.536[a]	.287	.268	1.70655

a. Predictors: (Constant), X2, X1

b. Dependent Variable: Y

Sumber: data diolah peneliti, 2025

An R value of 0.536 indicates the level of relationship or correlation between the independent variables (X1 and X2) and the dependent variable (Y). This number ranges from 0 to 1, with the closer it is to 1, the stronger the relationship. A value of 0.536 indicates a strong positive relationship between the independent and dependent variables. This means that as the values of variables X1 and X2 increase, the value of Y tends to increase. Although this relationship is not considered very strong, it indicates a significant correlation between the variables studied.

DISCUSSION

The Influence of Environmental Awareness on the Sustainability of Eco Halal Tourism in Pamekasan Regency

The results of the t-test show that environmental awareness (X1) has a significant and positive effect on the sustainability of eco-halal tourism (Y) in Pamekasan Regency, with a significance value <0.001 and a regression coefficient of 0.470. This means that the higher the level of public and stakeholder awareness toward environmental preservation, the more sustainable eco-halal tourism becomes.

This finding supports the research of Aulia Rahmasari et al. (2025) and Ma'adi & Hisyam (2024), which explain that a strong sense of environmental responsibility influences tourist behavior and managerial decisions toward sustainable practices. In the context of Pamekasan, environmental awareness is reflected in tourists' and communities' attitudes toward cleanliness, waste reduction, and respect for natural resources.

However, although awareness is high, challenges still exist in translating it into consistent actions. Strengthening education and environmental literacy—especially among local tourism actors—is essential to ensure that awareness becomes an active and continuous practice supporting eco-halal tourism sustainability.

The influence of eco halal tourism on the sustainability of eco halal tourism in Pamekasan Regency

The results of the study indicate that conservation (X2) has a positive but not statistically significant effect on the sustainability of eco-halal tourism, with a t-value of 1.339 and a significance level of 0.184 (>0.05). This indicates that conservation practices in Pamekasan are not yet optimal or are still limited in scale and consistency. These results align with the findings of Sulistyo et al. (2023), who stated that despite increasing environmental awareness, conservation actions such as reforestation, ecosystem protection, and waste management have not yet become part of the local tourism culture. Conservation activities still tend to be ad hoc, driven by specific programs rather than embedded in long-term planning.

Therefore, while conservation has a positive direction, its impact will only be significant if supported by structured programs, adequate funding, and active collaboration between local governments, tourism managers, and the local community.

Environmental awareness and conservation simultaneously influence the sustainability of eco halal tourism in Pamekasan Regency.

The F-test results show that environmental awareness and conservation simultaneously have a significant effect on the sustainability of eco-halal tourism, with an F-value of 15.493 and a significance value of <0.001. This means that both variables together play a substantial role in determining the sustainability of eco-halal tourism. The coefficient of determination (R^2) of 0.536 indicates that 53.6% of the variation in tourism sustainability can be explained by these two variables. These results indicate that sustainable eco-halal tourism cannot rely solely on awareness or conservation; it requires an integration of both. High environmental awareness provides motivation and understanding, while conservation ensures the realization of these values through concrete environmental actions.

CONCLUSION

. Based on the results of the research analysis, it can be concluded that environmental awareness (X_1) has a positive and significant influence on the sustainability of eco-halal tourism in Pamekasan Regency, while conservation (X_2) has a positive influence but is not yet statistically significant. Simultaneously, these two variables are proven to significantly influence the sustainability of eco-halal tourism. This shows that the development of sustainable eco-halal tourism does not only depend on increasing environmental awareness, but also requires consistent and

structured conservation practices, so that the integration between motivation, understanding, and real action is the key to the success of sustainable tourism in Pamekasan.

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