



INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES



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ISSN: 2222-6990

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To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v11-i3/8468>

DOI:10.6007/IJARBSS/v11-i3/8468

Received: 21 January 2021, **Revised:** 23 February 2021, **Accepted:** 02 March 2021

Published Online: 15 March 2021

In-Text Citation: (Sharif et al., 2021)

To Cite this Article: Sharif, N. M., Lonik, K. 'Azam T., & Muda, N. S. (2021). The Environmental Impact of Perhentian Island. *International Journal of Academic Research in Business and Social Sciences*, 11(3), 301-318.

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Vol. 11, No. 3, 2021, Pg. 301 - 318

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The Environmental Impact of Perhentian Island

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Abstract

As a natural island, Perhentian Island has now become a popular attraction for both local and international tourists because of its beautiful beaches and islands. The rapid development of the tourism sector will consequently lead to the high influx of tourists to the tourist destination. However, uncontrolled tourism development can have negative impacts on the environment. The purpose of this study is to identify the perception of the residents on the environmental impact of tourism development in their area. A total of 200 questionnaires were applied in Perhentian Island by using a simple random sampling method. The collected data were analysed using descriptive statistics, reliability test, factor analysis, independent t-test, one-way ANOVA and multiple regression. The results of this study showed that 38.855% of variance of residents perception has been explained by natural resources of tourism, 23.163% of variance has been explained by environmental concerns of tourism and 16.210% of variance has been explained by environmental pollution of tourism. There were significant differences in variables such as age [$F(74,125) = 1.574, p=0.013$] and monthly income [$F(74,125) = 2.424, p=0.000$] with resident perception of the overall impacts of the environment. Further, the components of environmental impact namely natural resources, environmental concern and environmental pollution, are predictors of resident support for the tourism sector [$F(3,196) = 4.704, p<0.05$] in Perhentian Island. As a conclusion, this study has provided a clear picture of the environmental impacts of tourism development and residents support for tourism development in Perhentian Island. Subsequently, the environmental impacts received by the residents were further explored to identify the components involved and subsequently linked to their support for the development of the tourism sector.

Keywords: Environmental Impacts, Island Tourism, Community Support.

Introduction

Through the Tenth Malaysia Plan (2011-2015), tourism sector development has been recognized as one of the key catalysts in the National Key Economic Areas (NKEA) where it serves as a driver of significant economic activity that could contribute significantly to the growth of the Malaysian economy (Department of Information Malaysia 2019). In fact, the

influx of tourists, especially from foreign countries, helps boost a country's economy through foreign exchange (Ohlan, 2017; Manzoor et al. 2019).

The existence of beautiful beaches and islands in Malaysia has the great potential to be one of the tourism products that can attract tourists to this country. In addition, CNN Travel (2017) also recognized three beaches in Malaysia in the list of 50 best beaches in the world namely Tanjung Rhu in Langkawi, Kedah (49th rank), Juara Beach in Tioman Island, Pahang (21st rank) and Pulau Perhentian Kecil, Terengganu (13th rank). In addition, Malaysia is also listed as one of the 10 best destinations in the world that should be visited (Lonely Planet, 2017). However, the influx of tourists exceeding the destinations limit can result in adverse environmental impacts on the area (Marsiglio, 2017).

However, the uncontrolled tourists' activities are feared to affect the environmental capacity limit and consequently cause damage to the natural environment at the tourist destination (Taiminen, 2019). In fact, poor tourism development has contributed many problems on the environment (Mohammed, 2018; Mikayilov et al., 2019). More worryingly, the environmental damage that has occurred will take a long time to recover and consequently, affect the quality and experience of tourists in the areas affected (Asadzadeh and Mousavi, 2017; Deng et al., 2017; Zhu, 2018).

In this regard, the study consists of four (4) main objectives, namely: (a) to identify the sociodemographics of residents of Perhentian Island, (b) to study the environmental impact perceived by residents from the tourism development (c) to analyze the relationship between sociodemographic factors and the environmental impact of tourism development and (d) to analyze the relationship between the environmental impact of tourism development with residents' support towards the tourism development.

This study could help provide information that would contribute to the development of policies guiding tourism in this country through the government's planning in developing the tourism sector. It is important to study the perception of the local residents on the impact of tourism on the environment and to examine its positive and negative impacts on the tourism sector. This is in line with the National Tourism Policy 2030 aimed at strengthening its commitment to sustainable tourism. In addition, research and development (R&D) should be intensified to improve service quality and ensure sustainability in the island's tourism sector.

Study Area

Perhentian Island

Perhentian Island is one of the island's tourist destinations under the auspices of Besut District Council, Terengganu since 1995 and has grown rapidly to become a major tourist attraction and destination, both locally and internationally. The location of Perhentian Island is approximately 10.8 nautical miles (20 kilometres) northeast of Kuala Besut and the island is within the administrative area of Besut District Council (Besut District Council 2020). The archipelago comprises nine islands, namely Perhentian Besar, Perhentian Kecil, Rawa, Tokong Burung, Tokong Bopeng, Susu Dara Kechil, Susu Dara Besar, Serenggeh and Tokong Laut (Figure 1).

from disruption and damage through future generations. It is also in line with the objective of establishing a Marine Park which is to inculcate an understanding among the Malaysian community to protect, admire and enjoy the beauty of the country's treasures (Department of Marine Park Malaysia, 2019).

Figure 2: The surroundings of Perhentian Island, Terengganu



Source: www.booking.com

Figure 2 shows the surroundings of Perhentian Island. The island conservation measures should be implemented to ensure that the marine resources of Perhentian Island are protected. Tourism planning in Perhentian Island should be well integrated with the entire tourism plan. The sustainability of the tourism industry in Perhentian Island and its surrounding areas depends on the well-being of its marine environment, especially coral reefs.

Literature Review

Environmental Impacts of Tourism

Previous studies (Gong et al., 2019; Santos, 2020; Mikayilov et al., 2019; Wang, 2019) revealed that tourism development caused many problems to the environment, including the destruction of vegetation, water pollution in coastal areas and the destruction of the coastal landscape. In addition, the tourism industry has also affects water quality through the construction and maintenance of infrastructure for boat and recreational facilities (Sagerman et al., 2020). Additionally, uncontrolled waste disposal also contributes to environmental problems as a result of tourism activities (Asadzadeh and Mousavi, 2017; Chen et al., 2017; Ferronato and Torretta 2019). In fact, the problem of sewage treatment system management has also led to the release of high levels of nitrogen and phosphorus thus affecting the life of coral reefs in the oceans (Burke et al., 2002). Besides, previous studies (Wang et al., 2018; Yan et al., 2019; Zajchowski et al., 2018; Zhou et al., 2018) found that tourism activities also contribute to air pollution problems. Besides, the tourism activities have contributed to the effects of air pollution through the carbon dioxide (CO²) emission and therefore, causes

environmental degradation (Capocchi et al., 2019; Newsome and Hughes, 2018; Tang et al., 2018).

Apart from being the main cause of the negative impacts, the tourism sector can also contribute to the positive impact of the environment. Tourism development has the potential to increase public appreciation and awareness of the environment. Basically, environmental awareness is fundamental to a change in the behaviour of a person responsible for protecting the environment (Asadzadeh and Mousavi, 2017; Lee et al., 2017; Queiros and Mearns, 2018). According to (Snyman and Bricker, 2019; Yuxi and Linsheng, 2017), understanding of the importance of the environment will influence the behaviour and interaction between tourists and the environment.

Residents Perception towards Environmental Impacts of Tourism Sector

There have been many previous studies examining the local resident's perception of tourism development (Da Silva Lopes et al., 2020; Mbaiwa and Stronza, 2011; Nunkoo and Ramkissoon, 2012; Kim et al., 2013; Styliadis et al., 2014; Chen, 2015; Ribeiro et al., 2017; Alrwajfah et al., 2019). Such studies are important and highlight how these perceptions are shaped as they serve as a source of information to decision-makers in each planning because local communities are the ones who will receive either positive or negative impacts from tourism development (Nunkoo and Ramkissoon, 2012).

Previous studies on the differences between female and male perceptions on the impact of tourism are an important part of improving understanding of perceptions of tourism development (Figueroa-Domecq and Segovia-Perez, 2020). A study conducted by Afthanorhan et al (2017) found that males were more supportive of tourism development than females. On the other hand, (Alrwajfah et al., 2019; Sinclair-Maragh, 2017) revealed that females support of the provision of better tourism development more than males.

In addition, age is one of the aspects considered as a variable that explains the differences in resident perceptions. Previous studies found that older people's perceptions were less positive about tourism (Almeida-García et al., 2016; Bagri and Kala, 2016). Contrarily, the findings of (Snyman, 2014; Liu and Li, 2018) found that older people showed a positive attitude towards tourism.

Previous studies also have included educational level as one of the important predictors that form a perception. Other reports highlighted the educational level as a variable to predict population perceptions (Alipour et al., 2020; Muresan et al., 2016). The study of (Almeida-García et al. 2016; Foroni et al. 2019) stated that the higher the educational level, the higher the percentage of residents who acknowledge that tourism benefits their community.

Local Community Perceptions of the Impact of Tourism Development

This growing tourism sector is seen as contributing to a wide range of positive and negative impacts on the economy, the environment and social life (Ardahaey, 2011; María-Elena et al., 2019). Community perceptions of the impact of tourism also change over time. Meimand et al. (2017) stated that the perceptions and attitudes of the community vary over an impact. In general, the impact of tourism development received by the local community will affect their perception and support of the tourism sector (Brida et al., 2011; Boonsiritomachai &

Phonthanukithaworn, 2019; Garcia et al., 2015; Nunkoo and Gursoy, 2012; Stylidis et al., 2014).

There have been numerous studies examining the perception of local communities on tourism development (Chen, 2015; Harun et al., 2018; Kim et al., 2013; Mak and Cheung, 2017; Marques et al., 2020; Mbaiwa and Stronza, 2011; Nunkoo and Ramkissoon, 2012; Bueno & Mejia, 2010; Santos et al., 2020; Stylidis et al., 2014). Such studies are important to examine how these perceptions are shaped as they will be important information to decision-makers in each planning, as local communities are the ones who will receive either positive or negative impacts from tourism development.

Methodology

Sampling Method

The data for this study was obtained through a questionnaire survey of 200 residents residing in Perhentian Island using a simple random sampling technique. Data were collected through the questionnaire, which consisted of three (3) main sections:

1) Characteristics of resident socio-demographic profiles

The features of the resident's profile which includes gender, age, marital status, educational level, employment sector, monthly income and occupational status.

2) Impact of environment on tourism

This section focused on the resident's perception of the environmental impact brought about as a result of the tourism sector operating on Perhentian Island. In this section, 15 questions were provided based on the 5-point likert scale to measure perceptions of the environmental impact of tourism.

3) Residents' support towards the tourism sector

There were three questions provided in this section using the 5-point likert scale. In this section, respondents answered the questions based on their overall views and perceptions on the development of the tourism sector on Perhentian Island.

Data Analysis

In this study, data analysis processes were performed using the Statistical Package for the Social Sciences (SPSS) software system, version 24. The data analyzes used in this study were descriptive analysis such as mean, percentage, standard deviation, reliability test, factor analysis, one-way ANOVA, independent t-test and linear regression.

Result And Discussion

1) Sociodemographic Profile

The results in Table 1 shows that the majority of respondents were male (83%) and the rest (17%) were female. Most respondents were aged between 25 until 59 years old, which is the most economically active age group. In terms of marital status, the majority of respondents were married (91%), while only 3.5% of respondents were single. Respondents mostly received educational level at the secondary school (70%), primary school (22%) and the remaining of respondents had no formal education (8%). In terms of employment, most of the respondents were involved in tourist boat services (34.5%), water equipment activity services (19.5%), accommodation (15.5%), grocery stores (8%) and souvenirs (6%). As the Perhentian Island is one of the most popular tourist destinations, the respondents were

mostly involved in tourism-based jobs. The outcome of the analysis also showed that most of the respondents (59%) received an estimated income of RM1001 - RM2000. The study also indicated that the majority of the respondents were indigenous people of Perhentian Island (96.5%).

Table 1: Socio-demography profile of respondent in Perhentian Island, Malaysia

Variables	Description	N	%
Gender	Male	166	83.0
	Female	34	17.0
Age	15 - 24	10	5.0
	25 - 59	176	88.0
	60 - 74	14	7.0
Marital status	Single	7	3.5
	Married	182	91.0
	Widow	5	2.5
	Widower	6	3.0
Educational level	No education	16	8.0
	Primary school	44	22.0
	Secondary school	140	70.0
Job sector	Tour boat	69	34.5
	Accommodation	31	15.5
	Souvenirs	12	6.0
	Grocery store	16	8.0
	Water activity equipment services	39	19.5
	Food/drink stall	33	16.5
Monthly income	RM1000 and below	76	38.0
	RM1001 - RM2000	118	59.0
	RM2001 - RM4000	3	1.5
	RM4001 - RM5000	1	.5
	RM5001 and above	2	1.0
Are you a native?	Native	193	96.5
	Not a native	7	3.5

2) Residents' Perception Towards Tourism Sector

Residents' perception towards environmental impacts of the tourism sector

In this study, factor analysis was used to identify constructs that showed correlations among several variables. According to Chua (2006), factor analysis is a commonly used procedure for identifying, reducing and organizing a large number of questionnaire items into specific constructs under a dependent variable in the study. The study selected 15 variables to be included in analysing the environmental impact.

The result of the study is shown in Table 2. KMO test results for the 15 environmental impact variables is 0.787. This result shows that the KMO value exceeds the minimum value of 0.50 which indicates that the sample size used is adequate and independent of multicollinearity problems. In addition, the Bartlett's test showed a significant value of $p=0.000$ which is

smaller than the significance level ($\alpha=0.05$) ($\chi^2=3462.550$, $df=105$, $p=0.000$, sig. $p<0.05$). Because the KMO value exceeded 0.5 and Bartlett's test was significant, the factor analysis is possible.

The factor analysis revealed that there were 3 eigenvalues obtained above level 1. The eigenvalue of Factor 1 was 5.828, for Factor 2 was 3.474, and Factor 3 was 2.432. All three factors contributed to 78.228% of the variance. The percentage of variance obtained for Factor 1 was 38.855%, Factor 2 was 23.163% and Factor 3 was 16.210%.

Table 2 also presents the results of the matrix rotation of the Varimax method using Kaiser normalization. The result of the rotation resulted in 3 extracted factors. Factor 1 comprised 6 items, Factor 2 comprised 5 items and Factor 3 comprised 4 items. Subsequently, each factor was labelled accordingly, Factor 1 (natural resources), Factor 2 (environmental concern) and Factor 3 (environmental pollution).

Table 2: Factor analysis of the environmental impact variables of the tourism sector

	Rotated Component Matrix ^a			Mean	Std. D
	Factor				
	1	2	3		
Factor 1: Natural resources					
The sewerage system of the chalet was not well managed.	0.906			3.93	1.17
Coastal erosion caused by hotel/chalet construction.	0.901			3.85	1.19
The marine life is affected by the oil spill.	0.849			3.78	1.15
The landslides in the hills are due to tourism development.	0.848			3.90	1.18
The landscape of the island's surroundings is changing.	0.713			3.52	1.41
Affect the flora and fauna habitat as a result of exploiting forest areas to develop tourism activities.	0.685			3.55	1.49
Factor 2: Environmental concern					
Environmental training for tourism operators		0.935		4.15	0.76
Awareness of the tourists and local communities about protected places.		0.919		4.14	0.746
Monitoring of each business premises by the Department of Environment.		0.883		3.54	1.49
Control of development and increase enforcement of environmental laws.		0.815		4.18	0.739
Tourism development should take into account environmental sustainability.		0.690		4.01	0.971
Factor 3: Environmental pollution					
Water pollution.			0.969	4.28	0.76
Air pollution.			0.966	4.27	0.75
Waste accumulation.			0.953	4.26	0.81

Soil pollution.			0.735	4.05	1.03
Eigenvalue	5.828	3.474	2.432		
% of Variance	38.855	23.163	16.21		
Cumulative %	28.750	54.467	78.22		
Cronbach's alpha	0.877	0.721	0.711		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.787				
Bartlett's Test of Sphericity	Approx. Chi-Square	3462.550			
	df	105			
	Sig.	0.000			

As shown in Table 2, the Cronbach's alpha coefficient values for each factor under the environmental impact variables are as follows: Factor 1 (natural resources) is 0.877, Factor 2 (environmental concern) is 0.721 and Factor 3 (environmental pollution) is 0.711. All factors showed a satisfactory validity scale, where Cronbach's alpha was still greater than 0.65 and items were used for subsequent analysis. In terms of environmental impacts, this study found that the tourism sector in Perhentian Island could have the impacts on the: (a) natural resources, (b) environmental concern and (c) environmental pollution.

The findings of this study concluded that the tourism sector in Perhentian Island has contributed to the impact on the natural resources and environmental pollution. The results of this study are similar to that of previous studies (Ghobadi and Verdian 2016; Nunes et al. 2020) which indicated that tourism development caused many problems to the environment, including the destruction of vegetation and pollution in coastal areas. However, the tourism sector has also contributed to the awareness and concern of the physical environment. This finding is in line with the some studies (GhulamRabbany et al., 2013; Lee et al., 2017; Queiros and Mearns, 2018; Snyman and Bricker, 2019; Ibnou-Laaroussi et al., 2020) which revealed that tourism sector management needs to raise the level of physical environmental awareness in the society.

Residents' perception towards environment impacts of tourism by respondents' sociodemographic

T-test statistical analysis was used on sociodemographic variables that were measured along a dichotomous scale. These included gender (1=male, 2=female). As shown in Table 3, Independent samples t-test results revealed that the value of $t=0.071$, and the significance level of $p=0.943$, is greater than 0.05 ($p>0.05$). This indicates that there is no significant difference between gender and perceptions of environmental impact on Perhentian Island. This can be shown by the mean value of the male resident (mean=4.0092) which was slightly greater than the female resident (mean=4.0008). The finding is similar to previous research (Alipour et al., 2020) which found that there is no significant difference between the mean values of the two groups (male/female). In addition, (Figuroa-Domecq and Segovia-Perez 2020; Nunkoo and Gursoy 2012) stated that gender can influence residents' perceptions regarding tourism in general.

Table 3: Independent-samples t-test for comparing perceptions of the environmental impact of the tourism sector for males and females.

Gender	N	Mean	Std. Deviation	t - value	Sig. (2-tailed)
Male	166	4.0092	.64685	0.071	0.943
Female	34	4.0008	.51758		

One-way analysis of variance (ANOVA) was performed in order to assess whether the residents' perceived impacts of tourism on the environment were influenced by their socio-demographic characteristics. Characteristics of respondents' sociodemographic such as age, marital status, educational level and monthly income were measured along with interval scale differences, which were sought through one-way analysis of variance. The significance level was determined as 0.05.

Results of the one-way ANOVA (Table 4) revealed that age [$F(21,178) = 1.633, p=0.046$], educational level [$F(21,178) = 1.671, p=0.039$] and monthly income [$F(21,178) = 3.379, p=0.000$] was significantly associated with residents' perceptions of the natural resources. However, marital status was not significant [$F(21, 178) = 1.070, p=0.385$] with residents' perception of the natural resources. This result explains that age, educational level and monthly income affect residents' perception of the natural resources. In contrast, marital status does not affect residents' perceptions of the natural resources.

In terms of environmental concerns, one-way ANOVA revealed that age [$F(12, 187) = 2.263, p=0.011$], marital status [$F(12, 187) = 2.403, p=0.006$], educational level [$F(12, 187) = 1.876, p=0.040$] and monthly income [$F(12, 187) = 1.966, p=0.029$] were statistically significant. This finding reveals that age, marital status, education level and month income influence residents' perceptions towards environmental concerns.

In terms of environmental pollution, profile demographics such as age [$F(11, 188) = 3.115, p = 0.001$] and educational level [$F(11, 188) = 3.546, p=0.000$] were statistically significant. Meanwhile, marital status [$F(11, 188) = 0.408, p=0.951$] and monthly income [$F(11, 188) = 0.595, p=0.832$] did not significantly affect environmental concerns. This result indicates that age and educational level affect residents' perceptions of the environmental pollution. On the other hand, marital status and month income do not influence residents' perceptions on the environmental pollution due to tourism development.

Overall, when all the mean of natural resources, environmental concerns and environmental pollution were combined into one mean value (compute mean), only demographic factors such as age $F(74,125) = 1.574, p=0.013$ and monthly income $F(74,125) = 2.424, p=0.000$ have a significant relationship with resident perception of the overall tourism impacts. This result explains that monthly income and age influence residents' perceptions of the overall environmental impacts (natural resources, environmental concerns and environmental pollution) in Perhentian Island. This finding consistent with previous research (Alipour, Fatemi and Malazizi 2020) which revealed that the level of income and age have a correlation with local residents' perceptions of the sustainability tourism in six areas located around the university campuses, including Sakarya, Baykal, Kaliland, Çanakkale, Karakol, and Maras.

Table 4: Perceived impacts of tourism on the environment by socio-demographic characteristics.

ANOVA								
	Natural resources		Environmental concerns		Environmental pollution		Overall environmental impacts	
	F	Sig.	F	Sig.	F	Sig.	F	Sig.
Age	1.633	0.046	2.263	0.011	3.115	0.001	1.574	0.013
Marital status	1.070	0.385	2.403	0.006	0.408	0.951	0.792	0.862
Education level	1.671	0.039	1.876	0.040	3.546	0.000	1.202	0.181
Monthly income	3.379	0.000	1.966	0.029	0.595	0.832	2.424	0.000

3) Environmental impacts and residents support towards the tourism sector

In this section, Multiple Regression analysis was used to identify the relationship between a dependent variable (support towards tourism sector) and several independent variables (tourism impacts: environmental cost, environmental benefit and environmental concern). Table 5 shows the regression analysis of environmental impact variables with the residents' support for the tourism sector. The result shows that the set of the independent variables combines to explain about 6.7% of the variation in environmental impacts. A significant positive relationship was established between environmental pollutions and support for the tourism sector ($b = 0.150$, p -value = 0.003). This indicates that the more residents are aware of the effects of environmental pollution, the more they believe that the tourism sector will damage the environment on Perhentian Island.

In contrast, an insignificant positive relationship was identified between environmental concerns and residents support for the tourism sector ($b = 0.043$, p -value = 0.445). At the same time, an insignificant positive relationship was identified with natural resources and residents support for the tourism sector ($b = 0.041$, p -value = 0.329). The indication is that there is no relationship between both environmental concerns and natural resources with resident support for the tourism sector.

Table 5: Regression analysis of environmental impacts with residents support for the tourism sector

Regression Analysis							
Model	B	se	Beta	t	Sig.	Collinearity Statistics	
						Tolerance	VIF
Constant	4.087	0.227		18.022	0.000		
Natural resources	0.041	0.042	0.100	0.979	0.329	0.459	2.178
Environmental concerns	0.043	0.057	-0.074	-0.765	0.445	0.507	1.972
Environmental pollutions	0.150	0.050	0.230	3.023	0.003*	0.819	1.221
Model Summary							
Multiple R	R Square		Adjusted R ²		Standard Error		
0.259	0.067		0.053		0.39266		
ANOVA							
Model	df		Sum of Squares	Mean square	F	Sig.	
Regression	2.176		3	0.725	4.704	0.003	
Residual	30.219		196	0.154			
Total	32.395		199				

ANOVA analysis was used to determine whether the model, which was a combination of independent variables had a significant relationship with the dependent variable using F-test. Table 5 shows that significantly, the three independent variables were factors in residents' support for the tourism sector [F (3,196) = 4.704, $p < 0.05$]. Based on the results of the multiple regression analysis, environmental impacts such as natural resources, environmental concerns and environmental pollution are factors contributing to residents' support for the tourism sector in Perhentian Island.

Environmental impacts have been studied extensively as a contributor to the tourism sector. Previous research have shown that the environmental impact of tourism depends on the location, type of activity, nature of tourism infrastructure and the outcome of planning practices (Hearne and Salinas, 2002; Lai and Nepal, 2006; Yu, 2018). Besides, Stoeckl et al. (2016), noted that some areas are more fragile than others, such as rural and urban areas as well as the types of human activities that impact specific areas. In addition, the provision of infrastructure and construction for tourism services also has a significant impact on the environment (Chang et al., 2016; Hearne and Salinas, 2002). If tourism activities such as the construction of buildings, roads, parking lots and other facilities are not carefully planned, they could impact the local ecology of habitats, damage original visual resources and weaken the resilience of sites to natural disasters in extreme weather, such as soil erosion, landslides and use overloads (Chang et al., 2018).

Conclusion

To sum up, the results of this study were intended to shed more light on the environmental impact of the tourism sector based on the perception given from the residents living in Perhentian Island, Terengganu. The study found that the majority of the respondents involved in this study were male respondents, aged 25 to 59, married, have a high school education, working in the tourist boat sector, received a monthly income between RM1,001.00 to RM2,000.00 and majority of the respondents were indigenous people of Perhentian Island.

In terms of environmental impact, the results of this study concluded that; (a) natural resources, (b) environmental concerns, and (c) environmental pollution are the components of resident-impact caused by tourism development on Perhentian Island. The study also concluded that age and monthly income influence residents' perceptions of the overall environmental impacts (natural resources, environmental concerns and environmental pollution) in Perhentian Island. Further, the components of environmental impact, namely natural resources, environmental concern and environmental pollution were predictors of residents' support for the tourism sector in Perhentian Island.

Therefore, it is clear that every impact of tourism development received by the local community will affect their perception and support of the tourism sector. The study of the community's perception of the tourism sector is important because they are the ones who will benefit from the development. The local community is a key stakeholder in determining support for the tourism sector. Overall, this study has provided a clear picture of the environmental impact of tourism development and its support for tourism development in Perhentian Island. Subsequently, the environmental impacts received by the residents were further explored to identify the components involved and subsequently linked to their support for the development of the tourism sector.

In order to ensure that the environment in an area is maintained, all parties including the government, private sector, NGOs, tourists, and residents should be aware of the importance of protecting the environment so that it is not affected by irresponsible and poorly regulated activities. These steps are important to ensure that the earth's ecosystem is maintained while future generations can use this environment for their survival.

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