

PAPER • OPEN ACCESS

Visitor's Perception and Attitude toward the Ecotourism Resources at Taman Negara Kuala Koh, Kelantan

To cite this article: Siti Zubaidah Junus *et al* 2020 *IOP Conf. Ser.: Earth Environ. Sci.* **549** 012088

View the [article online](#) for updates and enhancements.

Visitor's Perception and Attitude toward the Ecotourism Resources at Taman Negara Kuala Koh, Kelantan

Siti Zubaidah Junus¹, Kamarul Ariffin Hambali¹, Abdul Hamid Mar Iman¹,
Muhamad Azahar Abas¹, Nor Hizami Hassin^{1*},

¹ Faculty of Earth Science, Universiti Malaysia Kelantan, Jeli Campus, 17600 Jeli, Kelantan.

E-mail: hizami.h@umk.edu.my

Abstract. Ecotourism resources is the key element that supply the greatest value for tourist attraction. However, the scenerity of the resources could have a risk to destroy if it was not managed properly or could not be taken seriously preserved . Thus, this paper is aim to explore visitors' perceptions and attitude toward the ecotourism resources at Taman Negara Kuala Koh (TNKK), Gua Musang, Kelantan. A one month survey with closed-ended questionnaire format was administered to 113 visitors during their visit to TNKK. SPSS 12.0 statistical software was used to carry out the descriptive and inferential analysis to show the sample distribution, the differences in the perception, and the level of attitude toward sustainability of eco-tourism resources among visitors. The results showed that the visitors have a positive perceptions and attitudes toward the ecotourism resources provided at TNKK. Most of the visitors agreed that TNKK have a plenty of attractive ecotourism resources that they enjoyed in the nature-based tourism destination. Thus, the park management should be further initiate the necessary efforts and actions in order to withstand the ecotourism resources provided in TNKK. The fascinating view and resources in TNKK would have attracted more visitors to come as well as to have generating more income for the the park mantainance and development in future.

1. Introduction

Ecotourism is a form of tourism activity that is focusing more on natural environment. According to [1], ecotourism is defined as a responsible travel to natural areas that conserves their environment, sustains the well-being of the locals, and involves education and interpretation. Ecotourism is the platform of tourism that has potential to increase the awareness of visitors and local community towards understanding and appreciation of the nature, the locals, and their culture [2,3]. Besides, ecotourism is one of the industries known for its considerable contribution to the economy and the evaluation of tourist satisfaction is specific in the case of ecotourism destinations as eco-tourists are different from mass tourists [4]. It is also has become a popular choice for tourist recently because of its concept of nature preservation and conservation practiced [5]. For instance, sustainable ecotourism resources are essential to be managed properly in order to reduce the impact to the environment [6]. Thus, Taman Negara Kuala Koh (TNKK) is one of the popular ecotourism sites in Kelantan that provides with valuable and attractive natural features and resources including activities organized for the visitors and, the cultures of the local community.

However, lack of understanding about eco-tourists' perception on ecotourism experience and lack of evidence about the quality of experiences at ecotourism sites partly cause the number of visitors to



decrease [7]. Visitors' attitude towards the environment is a measure of how tourists or visitors would like to experience the environment based on their own preferences that are related to cultural, social and environmental aspects [8]. Numerous studies have been conducted to understand the attitudes of the public and visitors towards the environment, ecotourism activities and management of national park [9,8,10]. In this context, the aim of this study is to investigate the visitors' perception and attitude towards the ecotourism resources in Taman Negara Kuala Koh, Kelantan.

The findings of this study would be assist the management of the park to improve and sustaining the ecotourism resource provided at TNKK as well as will increase the total number of both locals and international visitors in future.

2. Methodology

2.1 Study Area

Taman Negara Kuala Koh is located in Gua Musang, Kelantan, near to the borderlines of Terengganu and Pahang. It is also located within the Forest Reserve of Lebir and Bukit Hantu. Taman Negara Kuala Koh is 96 km away from the Gua Musang township. It can be accessed through Gua Musang-Kuala Krai road, either by own transportation or by taxi from the Gua Musang town. There are many activities offered in TNKK such as hiking, fishing, bird watching, sightseeing with boat, camping and others activities that directly involve with nature. Visitors need to pay RM 1 for the entrance fee when visit TNKK. Figure 1 shows the map of Taman Negara Kuala Koh, Kelantan.

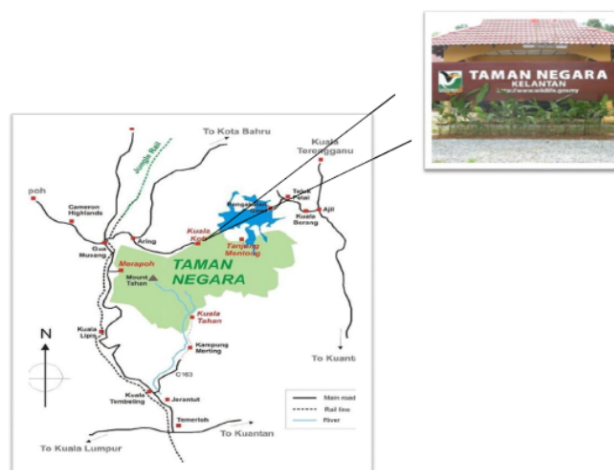


Figure 1. Map of Taman Negara Kuala Koh, Source; DWNP, (2018)

Meanwhile, table 1 shows the total number of visitors in TNKK from the year 2010 to 2017. Based on the table, the number of local visitors dropped gradually from 2010 to 2013 and the number of international visitors also showed an inconsistent trend from 2010 to 2014. Generally, the declining number of visitors were due to the massive flood that occurred during end of December 2014. Consequently, there were many facilities including canopy walkway, suspension bridges, and chalets that have been damaged and still have not been properly repaired due to the budget constraint of the park management. Further, most of the activities at the park were not made available after the flood disaster.

Table 1. Number of visitors at TNKK from 2010 to 2017, Source: TNKK, (2018)

Year	Number of visitors		Total
	Local	International	
2010	6,683	251	6,934
2011	5,253	196	5,449

Year	Number of visitors		Total
	Local	International	
2012	4,796	238	5,034
2013	3,001	779	3,780
2014	5,079	257	5,336
2015	3,265	63	3,328
2016	4,242	37	4,279
2017	2,601	32	2,633
Total Visitors			36,773

2.2 Questionnaire Design

A set of questionnaires were designed comprising both open-ended and closed-ended questions. Open-ended refers to the questions that require the respondents to answer in their own perspectives whereas close-ended questions required respondent to answer the questions based on the options given. The questionnaires, comprising four main sections, namely the socio-demographics of the visitors, the visitors' visit characteristics, visitors' perception, and their attitude towards ecotourism in TNKK. For the demographic profile, the collected information of the visitors including their gender, citizenship, age, education level, average income per month, and types of occupation. Visitors visit characteristics comprising the information for their visit to TNKK including the purpose of visit, frequency of the visitors come to TNKK, and the source of information about TNKK.

For the perception of visitors, the section was divided into two parts comprising the perception on ecotourism and the perception on ecotourism resource management in TNKK. Similarly, there also two subsections for the attitude of visitors towards ecotourism comprising their attitude during the visit and attitude towards ecotourism and the conservation effort. For the perception and attitude section, a Likert scale was used with the scale from 1 to 5 that indicates the respondents are "strongly disagree," "disagree," "neutral," "agree," and "strongly agree." Respondents are required to choose only one option from the given scale.

2.3 Data Collection and Analysis

The data in this study were gathered from the visitors through questionnaires via face to face interview technique that was administered on site at Taman Negara Kuala Koh. The respondents consisted of 113 visitors of TNKK. All of them were chosen randomly. To avoid redundancy, for each group of visitors, only one of them was selected as a representative to participate in the survey. The completed questionnaire was then analysed by using the IBM Statistical Package Social Science (SPSS) 12.0.

Two types of analysis were performed, namely descriptive analysis and correlation analysis. For this study, correlation analysis was performed to determine the relationship between the perception and attitude of the visitors towards ecotourism resource management in TNKK. Correlation analysis is a statistical method used to evaluate the strength of relationship between two quantitative variables. A high correlation means that two or more variables have a strong relationship with each other, while a weak correlation means that the variables are hardly related [11].

3. Results and Discussion

3.1 Respondent demographic profile

The result presented in Table 2 show that they were 95 out of 113 visitors are male visitors and the remaining 18 were the female visitors. The analysis for the age group shows that the majority of the visitors are from 21 to 30 years old (47% of total number of respondents). It is followed by visitors from 31 to 40 years old (30%) and visitors under 20 years old (9%). The total number of visitors from the age group 51 years old and above was the least among all the age groups with only 3% of the total number of respondents. It indicates that young visitors prefer to experience the ecotourism activities compared to the older visitors. For the highest education level achieved by the visitors, the results

show that 49 % of the total number of visitors achieved secondary school, 23 followed by 37 % of them who were from university level and 11% total number of visitors which got the highest education level were in college.

Meanwhile, the remaining groups which were primary school and never been to school both recorded only 2% of total number of visitors for each group. In term of analysis of occupation, 26% of total number of visitors work in the government sector and 20% of them are self- employed. The majority of visitors which is 45 out of 113 visitors (40%) are from the private sector while the remaining 9% of total number of them are students and 5% of the visitors are unemployed. As the last part for the demographic profile which is income per month, similar to the studies conducted by [5]; [3] majority of the visitors (45%) had earned income range from RM 1000 – RM 2000. It then followed by visitors who earned RM 2100 – RM 3000 (19%), 17% of total number of visitors earned in the range from RM 0 – RM 900, and 10% of them earned their income between RM 3100 – RM 4000. Meanwhile, only 5% from the total of 113 visitors earned in between RM 4100– RM 5000 and above RM 5100 with only. This indicated that the visitors that came to TNKK are from the average of income group levels.

Table 2. Respondents of Socio-demographic Profile

Items	Frequency	Percentage
Genders		
Male	95	84.1
Female	18	15.9
Citizenship		
Malaysian	113	100
Others	0	0
Age		
<20 years' old	10	8.9
21 – 30 years' old	53	46.9
31 – 40 years' old	34	30.3
41 – 50 years' old	13	11.7
>51 years' old	3	2.7
Education level		
Primary school	2	1.8
Secondary school	55	48.7
Never been to school	2	1.8
College	12	10.6
University	42	37.2
Occupation		
Government	29	25.7
Self- employment	23	20.4
Retired	0	0
Private	45	39.8
Unemployed	6	5.3
Student	10	8.8
Average income per month		
RM 0 – RM 900	19	16.9
RM 1000 – RM 2000	51	45.1
RM 2100 – RM 3000	21	18.6
RM 3100 – RM 4000	11	9.8
RM 4100 – RM 5000	6	5.3
>RM 5100	5	4.5

3.2 Visitor's Perception of Ecotourism in TNKK

In this section, visitors are required to state their perception rating Likert scale from 5 (strongly agree) to 1 (strongly disagree) for the six statements regarding the ecotourism resources in TNKK as stated in Table 3. The result showed that the ecotourism activities in TNKK have a potential to be improved has the highest mean of 4.22. Meanwhile, the lowest mean is referring to that TNKK offers a lot of activities for the visitors with mean score is 2.99. This was due to the flood disaster phenomena that affected to the most of the whole park operational activities. For the example, some of the activities provided in TNKK previously, such as water tubing were no longer available due to the safety reasons.

As for now, the activities provided are on-boat sightseeing, camping, jungle trekking, fishing, wildlife observation and bird watching. In fact, some of the facilities including chalet for accommodation, suspension bridge and canopy walkway have been destroyed during the 2014 immense flood. Hence, only 10.6 % of total number of visitors stated that ecotourism at TNKK provides benefits to local people by providing them with job opportunities such as boating. This was because TNKK is located far from the residential areas. Meanwhile, 52.2% of visitors agreed that made vacation in TNKK gives enjoyment for them and 60.2% of visitors stated agree that TNKK is suitable for scientific research and education purposed.

Table 3. Visitors Perception on Ecotourism in TNKK

Statement	Scale Mean	1	2	3	4	5
		Freq (%)	Freq (%)	Freq (%)	Freq (%)	Freq (%)
Vacation in TNKK gives enjoyment to the visitors.	4.06	0 (0.0)	5 (4.4)	16 (14.2)	59 (52.2)	33 (29.2)
TNKK offers a lot of activities for the visitors to enjoy.	2.99	7 (6.2)	36 (31.9)	27 (23.9)	37 (32.7)	6 (5.3)
Ecotourism in TNKK can help in conservation and protection of natural resources.	4.11	0 (0.0)	3 (2.7)	16 (14.2)	57 (50.4)	36 (31.9)
TNKK is suitable for scientific research and education.	3.97	0 (0.0)	4 (3.5)	18 (15.9)	68 (60.2)	23 (20.4)
The ecotourism activities at TNKK have potential to be improved.	4.22	0 (0.0)	2 (1.8)	9 (8.0)	64 (56.6)	38 (33.6)
Ecotourism at TNKK provides job opportunities to the locals	3.00	10 (8.8)	39 (34.5)	17 (15.0)	35 (31.0)	12 (10.6)

Note: 1: Strongly disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree

3.3 Attitude towards ecotourism and conservation in TNKK

According to Table 4, 50.4% of the visitors strongly agreed that ecotourism can help to conserve the beauty of the nature in TNKK. Moreover, 50.4% of the visitors also agreed that ecotourism can help to protect wildlife from extinction in TNKK and 46.9% agreed that the beauty and uniqueness of TNKK were the main attractions to visitors. However, 12.4 % of the visitors strongly disagreed that ecotourism in TNKK can improve the quality of life of the local community. Overall, the visitors generally agreed that ecotourism and conservation efforts in TNKK can give benefits to the environment and the wildlife.

Table 4. Attitude towards Ecotourism and Conservation in TNKK

Statement	Scale Mean	1	2	3	4	5
		Freq	Freq	Freq	Freq	Freq

		(%)	(%)	(%)	(%)	(%)
Ecotourism helps in improving visitors' awareness on the importance of conservation	4.33	1 (0.9)	0 (0.0)	9 (8.0)	54 (47.8)	49 (43.4)
Ecotourism contributes to the effort of saving the forests.	4.39	0 (0.0)	1 (0.9)	8 (7.1)	50 (44.2)	54 (47.8)
Ecotourism helps in protecting the wildlife from extinction.	4.32	1 (0.9)	0 (0.0)	8 (7.1)	57 (50.4)	47 (41.6)
Ecotourism helps in preserving the natural beauty of TNKK.	4.43	1 (0.9)	0 (0.0)	5 (4.4)	50 (44.2)	57 (50.4)
TNKK becomes a main attraction of visitors due to its beauty and the uniqueness of the environment	4.21	2 (1.8)	4 (3.5)	8 (7.1)	53 (46.9)	46 (40.7)
Ecotourism assists the development of the surrounding communities	2.97	11 (9.7)	41 (36.3)	20 (17.7)	22 (19.5)	19 (16.8)
Ecotourism improves the quality of life of the local communities	2.89	14 (12.4)	40 (35.4)	20 (17.7)	22 (19.5)	17 (15.0)

Note: 1- Strongly disagree, 2 - Disagree, 3- Neutral, 4 – Agree, 5 - Strongly Agree

3.4 Correlation Analysis

Correlation analysis is a widely used statistical measure through which different studies have efficiently identified interesting collinear relations among different attributes of datasets [12]. As stated by [13], correlation analysis is one of the analysis that used to determine a possible two-way relationship between two continuous items. For this study, Pearson's correlation is used because the data is in normal distribution. Based on the result stated in table 5, the overall perception variables recorded a weak correlation. This is because the value of correlation coefficients are in the range from 0.30 to 0.50. For the two demographic variables which are age and income, it can be seen that they are no variables that have the p- values less than 0.01 or 0.05. This means that the perception of the visitors were not influenced by their age also their income Other than that, for education and occupation, it can be seen that most of the perception variables shown negative correlation which means that even though the visitors have low education level and income, they have positive perception towards ecotourism in TNKK. For the perception and education correlation, the highest correlation coefficient recorded is -0.296 which is significant in p-value less than 0.01.

Table 5. Correlation Analysis between demographic profile and visitors' perception on ecotourism in TNKK

Item		Age	Education	Occupation	Income
Vacation in TNKK gives enjoyment to the visitors	Pearson Co.	.009	-.296**	.202*	-.152
	Sig.(2-tailed)	.925	.001	.032	.107
TNKK offers a lots of activities for the visitors to enjoy.	Pearson Co.	.068	.090	-.279**	.085
	Sig. (2-tailed)	.477	.342	.003	.372
Ecotourism in TNKK can help in conservation and protection of wildlife	Pearson Co..	.046	-.281**	.182	-.092
	Sig. (2-tailed)	.626	.003	.054	.334
TNKK also is a place that is suitable for	Pearson	.116	-.175	.000	-.007

scientific research and education	Co. Sig. (2-tailed)	.222	.064	.996	.937
The development of ecotourism activities need to be sustain.	Pearson Co. Sig. (2-tailed)	.152	-.049	-.004	.027
Ecotourism also provide benefits towards the local people by providing them with job opportunities	Pearson Co.. Sig. (2-tailed)	.081	.186*	-.278**	.121
		.395	.048	.003	.201

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

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

In addition, the result of correlation between the age and the attitude recorded positive correlation with the value of correlation coefficient below 0.200 as shown in Table 6. There are three items that recorded the significant p- value which are ecotourism helps improve visitors' awareness on important of conservation (0.42), ecotourism contributes to the effort of saving the forests (0.38) and ecotourism helps in protecting wildlife from extinction (0.36). Therefore, it indicates that age is influencing the attitude of visitors towards ecotourism and conservation effort.

Next, for education the overall statements under this part recorded as negative correlation and only two statements recorded the positive correlation and significant p- value which are ecotourism assist the development of surrounding communities (0.05) and ecotourism improved quality of life of the locals (0.12). It shows that the education level of visitors gives influences to their attitudes towards ecotourism and conservation effort in TNKK. For the occupation and income, there are two same statements that gives out significant p-value which are ecotourism assist the development of surrounding communities and ecotourism improved quality of life of the locals. The p- values recorded for occupation part for both statements are 0.000 and the relation shows is negative correlation. Meanwhile, for income the p-values recorded for both statements are 0.13 and 0.05 and the relation shows is positive correlation.

Table 6. Correlation Analysis between demographic profile and visitors' attitude towards ecotourism and conservation effort

Item		Age	Education	Occupation	Income
Ecotourism helps improve visitors' awareness on important of conservation.	Pearson Co.	.191*	-.072	-.086	.123
	Sig. (2-tailed)	.042	.448	.364	.196
Ecotourism contributes to the effort of saving the forests.	Pearson Co.	.196*	-.173	-.041	-.019
	Sig. (2-tailed)	.038	.066	.666	.840
Ecotourism helps in protecting wildlife from extinction	Pearson Co.	.197*	.011	-.146	.165
	Sig. (2-tailed)	.036	.908	.123	.081
Ecotourism helps preserves the natural beauty of TNKK.	Pearson Co.	.165	-.047	.052	.086
	Sig. (2-tailed)	.081	.621	.583	.366

TNKK become an attraction due to its beauty and uniqueness.	Pearson Co.	.086	-.115	.017	.020
	Sig. (2-tailed)	.363	.227	.858	.830
Ecotourism assist the development of surrounding communities.	Pearson Co.	.120	.263**	-.337**	.234*
	Sig. (2-tailed)	.205	.005	.000	.013
Ecotourism improved quality of life of the locals.	Pearson Co.	.147	.237*	-.401**	.265**
	Sig. (2-tailed)	.119	.012	.000	.005

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

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

4. Conclusion

The study concluded that visitors generally are satisfied with the ecotourism resources offered at TNKK. Based on the findings above, most of the visitors that are visiting TNKK are young visitors. Overall, the attraction of visitors to TNKK was for fishing activity. Most of the visitors both young and old that have visited TNKK tend to visit TNKK again especially for fishing. Besides, majority of the visitors know about TNKK from their friends and family.

For the perception of visitors towards ecotourism management in TNKK, majority of the visitors agreed the management of TNKK should be improved for the facilities and accommodations including toilet, surau, camping site, and chalets. For the visitors' perception on ecotourism in TNKK, there were positive feedbacks for scientific research purposes, conservation and preservation efforts of wildlife, and visitors' enjoyment in TNKK. For the attitude aspect, visitors were aware that they need to show good attitudes such as walks through the trails, keeping their litters during trekking, follow instruction or signage and many more.

This study indicates that the management of TNKK should improve their accommodation and facilities in order to improve the satisfaction of visitors during their visit. Besides that, management team of TNKK should hire an expert or trained tour guide who can share information about the attractions with the visitors. Management team of TNKK can promote conservation efforts towards visitors through educational activities. Hence, the park management should take the necessary efforts and planning in order to sustain the ecotourism resources available at the park which can attract more visitors and generate more revenue for the park development in future.

Acknowledgements

This research was funded by SHORT TERM GRANT SCHEME (R/SGJP/A08.00/01598A/001/2018/000516) from Universiti Malaysia Kelantan. The authors also would like to acknowledge the Department of Wildlife and National Park and all the staffs at Kuala Koh National Park for providing their technical support throughout the research until has been completed.

References

- [1] TIES 2015 What is Ecotourism? Retrieved on 20 Jun 2018 from <http://www.ecotourism.org/whatis-ecotourism>.
- [2] Nor Hizami H, Mohd Rusli Y and Alias R 2014 *Australian Journal of Basic and Applied Sciences*, **8(3)**, 416-425.
- [3] Fiffy-Hanisdah S, Prideaux B, Maryati M and Zulhazman H 2016 *Advances in Hospitality and Leisure*, **12**, 119-144. doi:10.1108/S1745-354220160000012010.
- [4] Kadir Wahab S and Yacob M *Environmental Research Project* 1 -17.

- [5] Nor Hizami Hassin, Muhamad Azahar Abas, Siti Nur Asikin Sidek, Mohamad Faiz Mohd Amin and Abdul Hamid Mar Iman 2020. *International Journal of Advanced Science and Technology* Vol. **29**, No. 9s, (2020), 1748-1758.
- [6] Beerli A and Martin J D 2004 *Annals of tourism research*, **31(3)**, 657-681.
- [7] Chan J K L and Baum T 2007 *Journal of Sustainable Tourism*, **15 (5)**, 574-5903.
- [8] Seow T W, Abas M A, Goh K C and Mohamed S 2017 The constraints of good governance practice in national solid waste management policy (NSWMP) implementation: A case study of Malaysia *AIP Conference Proceeding* **1891**:020127
- [9] Miller L R, Dickinson J E and Pearlman-Houghie D J 2001 *Leisure Studies*, **20(1)**, 19-40.
- [10] Digun-Aweto O and Fawole O P 2016 *Tourism Research Institute*, **15(1)**, 33-51.
- [11] Monica F and Antonella I 2019 *Correlation Analysis. Encyclopedia of Bioinformatics and Computational Biology*. Volume 1. Pages 706-721. <https://doi.org/10.1016/B978-0-12-809633-8.20358-0>.
- [12] Kumar S and Chong I 2018 *International Journal of Environmental Research and Public Health*, **15**, 2907; doi:10.3390/ijerph15122907.
- [13] Seow T W, Abas M A, Mohamed S, Goh K C and Zainal R 2017 Good governance in national solid waste management policy implementation: A case study Malaysia *AIP Conference Proceeding* **1891**:020128.