Developing Visitors' Perception Indicators on Natural Resource Conservation in Tasik Kenyir, Malaysia

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Abstract: The purpose of this paper is to develop scale to measure the indicators of the visitors' perception on natural resources conservation for ecotourism development in Tasik Kenyir, Malaysia. Constructed questionnaires were distributed to visitors in Tasik Kenyir who were selected using the convenience sampling method which is a non-probability sampling technique. The data collection method used in this study was the face-to-face interview. Descriptive analysis was used to describe the socio-demographic profiles of the respondents in this study, while factor analysis was used to develop the scale for the visitors' perception on natural resource conservation. Results obtained in this study indicate that 24 variables have significant contribution in determining the perception on the indicators of natural resource conservation and are distributed into nine factors. These findings can be used undertaking the conservation of natural resource for the development of ecotourism.

Key words: Awareness · Knowledge · Ecotourism Development · Sustainable · Attitude

INTRODUCTION

Tourism is a product where the destination delivers the experience for visitors [1]. Tourism industry is very important to the economy [2] and identified as one of the important sectors that generates Malaysia's economic growth [3]. This is because tourism plays a fundamental role in terms of infrastructure development [4, 5] and contribution to nation's income [6] since every environmental resource conveys an economic value as a marketed product in ecotourism industry [7]. Siew *et al.* [8] reflects that tourism has an influence on resources and at the same time the source has influence on tourism. Malaysian government has consistently strived to accomplish sustainable tourism practices by targeting the balance between business imperatives, conservation of cultural heritage and environmental protection [9].

Ecotourism is one of the sub-components of tourism industry under the scope of nature-based tourism [10]. The main activity in ecotourism is visiting the natural area that contributes to educational awareness [11] maintaining sustainability of the resources [12] and hence providing economic well-being for local communities [13]. Ecotourism is directly dependent on the use of natural resources [14] which are found in relatively undeveloped or undisturbed natural areas [15]. According to Ardoin *et al.* [16] many nature-based tourists are pro environmental protection and eager to learn about nature during their visits. The existence of many activities such as camping, trekking and boating in natural environment area like jungle, lake, rivers and mountain make the particular area has its own recreational value [17].

In ecotourism development, conservation of the natural resources is emphasized to ensure the survival of the genetic stocks of the species which can be made as a resource base for the development of country's tourism industry [18]. Hence it can be resolved that ecotourism has created a win-win situation in which visitors would have enjoyable experience during their visits while stakeholders earn their profits, nature resources are

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conserved and livelihood of the local communities are improved [16]. This has been discussed by Bulus and Emmanuel [19] who suggests that ecotourism trades have therefore become important in accomplishing the emerging environmental, social and economic impact.

Ecotourism in Tasik Kenyir, Malaysia: In Malaysia, tourism had been recognised as the next largest foreign exchange earner [20]. This is because, Malaysia has become an important ecotourism destination due to its attractions of varied natural resources and unique geographical landscape [21]. In Malaysia, Terengganu is a state that is rich with ecotourism natural resources suitable for ecotourism development. Tasik Kenyir is an artificial lake located in Hulu Terengganu district in the state of Terengganu on the East coast of Malaysia. The lake is the largest man-made lake in South East Asia [11] where it shares its borders on the west with Kelantan and the south with Pahang. The main entrance and main jetty to Tasik Kenyir is Pengkalan Gawi which offers the services of a Visitors Services Center, jetty, parking area, boats and houseboats.

Tasik Kenyir is surrounded by the world oldest tropical rainforest which is rich in numerous types of flora and fauna [22]. There are 208 herpetofauna species, 285 bird species and 110 mammal species. The forest consists of more than 8, 000 species of flowers, 2, 500 species of plants and trees, 800 species of orchids and 300 species of fungus who share their habitat in the tropical rainforests surroundings Tasik Kenyir which has become a special attraction for ecotourism activity in Terengganu. The lushness of natural resources in Tasik Kenyir provides opportunities to become an ecotourism destination that attract an increasing number of visitors to participate in various ecotourism activities.

The Terengganu Tengah Development Authority (KETENGAH) is an agency under the Ministry of Rural and Regional Development, which was incorporated on 1973. KETENGAH is authorized to carry out economic and social development in an area covering the interior of Dungun, Kemaman and Hulu Terengganu. In 1993, the plan for the Development Area Kenyir Tasik covering 209, 199 hectares in Hulu Terengganu area have been gazetted as part of the overall territory KETENGAH [23]. The role of KETENGAH are planning and implementing the development of economic and social projects in Tasik Kenyir as an ecotourism destination. Other than that, KETENGAH is also the agency responsible for issuing licenses and monitoring the involvement of local communities in the operation of ecotourism activities at

Table 1: Facilities and services provided by KETENGAH

Facilities	Services
Main jetty	Tour boat
Food courts	Houseboat
Public toilet	Tourist guide
Prayer room	KETENGAH office
Parking lot	Tourist information centre

Source: KETENGAH. 2016

Table 2: Number of visitors in Tasik Kenyir from 2006 to April, 2016

Year	Total
2006	60, 532
2007	92, 199
2008	133, 569
2009	189, 388
2010	225, 570
2011	275, 241
2012	397, 005
2013	467, 678
2014	649, 394
2015	706, 223

Source: KETENGAH. 2016

Tasik Kenyir [24]. Over the period, many projects relating the infrastructures and services have been planned and implemented in Tasik Kenyir by KETENGAH. Table 1 shows the facilities that have been provided for the visitors to access Tasik Kenyir; these facilities are located at the main jetty, Pengkalan Gawi.

Other than that, Table 1 also shows the services provided in Tasik Kenyir which involve local communities that are monitored by KETENGAH such as tour boat, houseboat services and tour guide. Recently, increase in number of visitors at Tasik Kenyir are very significant as seen in the increase of arrival from 60, 532 in 2006 to 706, 223 in 2015 as shown in the Table 2. The increasing number of visitors to Tasik Kenyir indicates the increase in preference for ecotourism activities and services in Tasik Kenyir.

With the increasing number of visitors and the importance of this industry in Malaysia's economy, it is important to understand the antecedent visitation of visitors to Tasik Kenyir from time to time since the intention of human often changes over the time. Other than that, with the increase of demands of ecotourism in Tasik Kenyir, it is crucial for researches and managers to understand the ecotourism destination based on psychology and behaviors of visitors when they are engaged in ecotourism activities. This is important to provide products and services which meet the needs and wants of the visitors.

Research Questions and Objectives: Even though many studies had been conducted in identifying the impacts of ecotourism activities in Tasik Kenyir, the outcome were only focused on the local communities and service and facilities. Some of the past studies done on ecotourism in Tasik Kenyir Terengganu included tourism entrepreneurs investigation of service quality [11] organizational culture dimension [25] tourist perception on local economy [20] ecotourism service attributes in Tasik Kenyir [24] and sustainable measurement [12].

Despite the studies on tourism, the investigation on natural resources conservation, especially the indications are still lacking. This has created a gap in research area on tourist perception towards natural resources conservation for ecotourism purpose at Tasik Kenyir even though the main elements in ecotourism are natural and environmental education and conservation. Furthermore, there are even limited studies which attempt to focus on the measurement of scales and factors which influence the visitors' perception of the indicators on natural resources conservation for ecotourism purposes at Tasik Kenyir. This study attempts to develop the indicators of the perception of visitors to Tasik Kenyir on the conservation of the natural resources. According to Sukserm *et al.* [26] the popularity of ecotourism destination would change the perception of the visitors, thus increase their environmental awareness to change the attitude in conserving environment including their desire in exploring the natural environment.

MATERIALS AND METHODS

Structured questionnaires were distributed to the visitors of Tasik Kenyir using non-probability sampling whereby respondents were selected using the convenience sampling method. This is due to the absence of sampling frame, restricting the possibility to apply probability sampling. The respondents consist of visitors who visited Tasik Kenyir during the survey. The interview method used in this study is face-to-face interview to the respondents to ensure the quality of data are reliable, to trigger the respondents to answer the question accurately and to ensure a full returned questionnaire [27]. To avoid redundancy in this study, only the leaders of the groups were chosen as a respondent [10].

The survey was conducted for 14 days period which covers weekdays, weekends, public holidays and school holidays on 2016. In 2015, the number of visitors in Tasik Kenyir was 706, 223. Hence, the average of the visitor arrival per day was 1, 934. It was estimated that there were 27, 076 population size within these periods. Applying [28] the sample size is estimated at 318 within 95% confidence level and a point error of ±5%.

Approximately 32 items of questions were used in a set of questionnaire in this study. The data were collected from the questionnaires and the checklist were coded and then scored for analysis. This will be achieved using the quantitative data analysis methods. Data analysis were done using excel and Statistical Packages for Social Science (SPSS) 21.0 programme to run descriptive analysis and factor analysis test. A descriptive analysis was used to describe the socio-demographic profile of the respondents in this study, while factor analysis test was used to develop the scale for the visitors' perception on natural resource conservation at Tasik Kenyir, Malaysia. Factor analysis empowers researchers to work on the set of variables that tend to correlate with each other and help identify the basic dimensions [29].

RESULTS

The study obtained 319 useable questionnaires and were analysed.

Socio Demographic Characteristics: Information of the visitors' profile is important and useful for marketing and planning purposes in ecotourism management industry. A descriptive analysis is used to describe the socio-demographic characteristics of the respondents in this study. The characteristics of the respondents included in this study were gender, age, marital status, level of education, occupation and monthly income as shown in Table 3.

In this study, the survey has initiated that majority of the respondents are males 226 (70.8%) as compared to females 93 (29.2). In terms of the age, this study has found that the majority of visitors in Tasik Kenyir are in the middle age group between 21-50 years old (89.0%). The highest number of visitors is in range of 31-40 years old (42.6%), followed by the age range 21-30 years old (30.1%) and 17.2% are 41-50 years age group. Meanwhile, about 6.0% are in the age group between 18-20 years and about 3.8% are in the age group of 51-60 years. These results illustrate that the visitors of Tasik Kenyir are generally in middle age group; this is expected as the ecotourism activities available at the site are most suitable for this age group. It is also anticipated that majority of the respondents come to this ecotourism site with friends who comes from similar age group.

Table 3: Socio-demographic characteristics.

	Item	Frequency	Percentage (%)
Gender	Male	226	70.8
	Female	93	29.2
Age	10 – 20	19	6.0
	21 – 30	96	30.1
	31 – 40	136	42.6
	41 – 50	55	17.2
	51 – 60	12	3.8
	61 or above	1	0.3
Marital status	Single	66	20.7
	Married	253	79.3
Level of education	Secondary school	85	26.7
	STPM and diploma	83	26.0
	First degree	136	42.6
	Higher degree	15	4.7
Occupation	Public sector	113	35.4
	Private sector	92	28.8
	Self employment	71	22.3
	Unemployed	15	4.7
	Students	28	8.8
Average income	Below RM 2 000	45	14.1
	RM 2 001 - RM 4000	124	38.9
	RM 4 001 - RM 6 000	80	25.0
	RM 6 001 - RM 8 000	42	13.2
	RM 8 001 - RM 10 000	15	4.7
	RM 10 001 or above	13	4.1

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.814
Bartlett's Test of Sphericity	Approx. Chi-Square	2649.832
	Df	496
	Sig.	.000

Concerning the visitor's occupation, public sectors employees dominate the group forming 35.4% of the respondents, followed by private sector employees (28.8%) and self-employment group (22.3%). During the survey was made, there are a few organized groups from governance sector and private sector visiting Tasik Kenyir.

In terms of income distribution, this study has found that the majority (38.9%) of the respondents have a medium income level (Between RM2001-RM4000). Meanwhile, about 47.0% of the respondents indicate having gross income of more than RM4000. While another 14.1% of the respondents state that they are having monthly gross income less than RM2000. In this finding, the majority of the visitors are wage earners which indicates that they have stable incomes and as visiting Tasik Kenyir needs expenditures in term of transportation, foods, accommodation and activities, visitors would not have any problem to spend during their visit to Tasik Kenyir.

Factor Analysis: The main objective of this study is to develop the indicators of the perception of visitors to Tasik Kenyir on the conservation of the natural resources. Therefore, factor analysis is used in this study to develop the scale of visitors' perception indicators on natural resource conservation at Tasik Kenyir. The results in Table 4 show that the factor analysis is considered acceptable because the Bartlett's Test of Sphericity is significant at 0.000 (p < 0.5). As shown in the table, the value of KMO is 0.814 which is considered adequate to perform further analysis since the exceeding recommended value of 0.6 [30, 31].

Table 5 shows that there are 24 variables distributed into 9 components. All of the 9 components are named as personal resource, conservation knowledge of friends, active participation, ecotourism development knowledge, individual genuine effort, visit decision, contribution to community benefits, motivation by associates and opportunity cost for conservation.

Factor 1 Personal resources

- I have enough time to visit Tasik Kenyir again. (0.805).

This information can be used by management and service providers to provide activities and facilities that are suitable for middle age group visitors. According to Mohamad *et al.* [21] participation in outdoor activities relates inversely with age as the level of participation in outdoor activities especially in adventure or energetic activities decreases with age. This study shows that the visitors are mainly middle-aged group, adventure or energetic activities for example jungle trekking, caving and water-based activities would attract this group to visit Tasik Kenyir frequently.

In terms of level of education of the respondents, 26.7% of the respondents have completed the secondary school and 26.0% of the respondents have completed STPM and diploma. 47.4% of the respondents have attended an institution of higher education which can be divided into two groups which are first degrees and higher degrees. 42.6% of the respondents have graduated with a first degree and 4.7% of the respondents have completed their Master degree and Ph.Ds. This finding suggests that the visitors at Tasik Kenyir are generally well educated since most of the respondents have the university educational background. According to Lee [15] visitors in the middle aged, have relatively high levels of education and monthly incomes, would express an interest in learning about the environment.

Table 5: Rotated Component Matrix[a]

	Component								
	1	2	3	4	5	6	7	8	9
Personal resources									
Enough time for visits	.805								
Opportunities to visit	.680								
Enough resources for visits	.648								
Disseminate information	.562								
Conservation knowledge of friends									
Friend recommendation for visit		.730							
Close friends understandings		.668							
Close friends supports		.631							
Active participation									
Positive behaviour effects			.735						
Beneficial behaviour effects			.654						
Exciting recreation activities			.509						
Ecotourism development knowledge									
Conservation for ecotourism purpose				.733					
Ecotourism attraction of resources				.678					
Individual genuine effort									
Support for conservation					.653				
Natural resources for future generation					.603				
Visit decision									
Fully control to take action						.687			
Visit on own will						.660			
Contribution to community benefits									
Generate employment							.802		
Local community welfare							.717		
Generate income							.636		
Motivation by associates									
Family approval of visits								.753	
Close friends supports								.605	
Important peoples' recommendation								.502	
Opportunity cost of conservation									
Resource extinction									.568
High conservation expenditure									.773
Eigen value	2.634	2.274	2.169	2.066	1.979	1.913	1.901	1.770	1.678
% variance	8.230	7.106	6.778	6.456	6.183	5.979	5.940	5.530	5.244
% cumulative	8.230	15.336	22.114	28.570	34.753	40.733	46.673	52.203	57.447

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 15 iterations.

Eigen value > 1

Factor loading > 0.5

% of cumulative variance = 57.447%

- I have opportunities to visit Tasik Kenyir again. (0.680).
- I have enough resources (Money) to visit Tasik Kenyir again. (0.648).
- Media should disseminate information on natural resources conservation at Tasik Kenyir. (0.562)

All of the variables are directly related to resources such as information, money, time and opportunities needed for a person to make the visit to an ecotourism destination. Therefore, factor 1 is named as "Personal resources". With regard to Tasik Kenyir, time and financial resources are needed because Tasik Kenyir is a nature-based ecotourism destination which offers a variety of nature-based activities such as fishing, jungle trekking, caving and several water-based activities. The services provided are in the forms of accommodation, restaurants, houseboats and boats for transportation in Tasik Kenyir for visitors to engage in the activities. Other than that, the location of Tasik Kenyir is quite far

from the city Kuala Terengganu thus will affect the cost of visitor's expenditure patter and their willingness to visit Tasik Kenyir.

In terms of impact on tourism, local communities depend on the convenience of the visitors, spending pattern of the visitors and the style of destination management [32]. The provision of the services encourages local community to participate in the ecotourism development in Tasik Kenyir. For the visitors, money and time are required to take part in activities provided during their visit to Tasik Kenyir. A person needs to have time [33] and financial resources [34] to engage in leisure activities. Besides, this factor has also suggested that the support by the media to disseminate information on natural resource conservation at Tasik Kenyir will encourage the visitors to be more concern about the development of ecotourism in Tasik Kenyir.

Factor 2 Conservation knowledge of friends

- My friends recommend that I visit Tasik Kenyir at least once in a life time. (0.730).
- My close friends understand the reason why I visit Tasik Kenyir. (0.668).
- My close friends support that I visit Tasik Kenyir. (0.631).

Factor 2 contains 3 variables relating to conservation knowledge. This factor is titled as 'Conservation knowledge of friends' since the variables are related to the knowledge about conservation of friends who recommend and support the visitors to visit Tasik Kenyir. Recommendation and supports from friends may come if the friends have similar conservation understandings or have experienced participating in activities in Tasik Kenyir. The attractions of Tasik Kenyir include the natural environmental resources and the socio-cultural assets of the communities; friends who have sensitivities toward conservation will support each other to visit Tasik Kenyir. Thus, conservation knowledge of friends can influence visitor's perception that would make a visit to Tasik Kenyir.

Factor 3 Active participation

- I think visiting Tasik Kenyir is a positive behaviour in increasing the contribution of conservation of natural resources of the Tasik Kenyir (0.735).
- I think visiting Tasik Kenyir is a beneficial behaviour to improve the knowledge of natural resources in Tasik Kenyir (0.654).

- I think visiting Tasik Kenyir is exciting to do recreation activities (0.509).

Factor 3 is named as 'Active participation' since the variables loaded in this factor imply the orientation of the participation of the visitors during their visit to Tasik Kenyir in terms of their contribution towards the conservation of natural resource at Tasik Kenyir. The increasing number of visitors in ecotourism area would increase the monetary contribution which is an important requirement in conservation at Tasik Kenyir; the process of conservation of natural resources needs a high financial expenditure. The richness of flora and fauna in ecotourism area provides the opportunities for visitors to learn more about the nature [7].

Participation in recreational activities can produce educational as well as positive behavioural benefits to the individuals and families which could lead the individuals to become more sensitive towards conservation of the natural resources like in Tasik Kenyir. Through education and awareness of environments and the consequences of their actions, visitors tend to practice sustainable behavior and improve their overall experience of the natural surroundings [35]. The richness of natural resources in Tasik Kenyir has made it possible to create many nature-based recreational activities. Nature-based tourism is highly dependent on the conservation efforts; and it cannot survive without the protection of the natural resources [36]. Having a positive attitude towards conservation is a required condition to ensure intention and participation in conservation activities [37].

Factor 4 Ecotourism development knowledge

- Natural resources within Tasik Kenyir area should be conserved for the purpose of ecotourism activities (0.733).
- Conservation of natural resources will promote Tasik Kenyir as the ecotourism attraction (0.678).

Factor 4 is titled as 'Ecotourism development knowledge' because the two variables loaded in this factor are directly related to the knowledge of the visitors on conservation and its impact on the ecotourism development in Tasik Kenyir. According to Nor'Aini and Mohd Fitri [25] the ecotourism products will attract more environmentally aware tourists. In case of Tasik Kenyir, there are several endangered species of flora and fauna such as elephants, Raflesia, wild orchids, kelah fish which must be conserved in order to attract ecotourism enthusiasts. Nor'Aini and Mohd Fitri [25] argues that

visitor's knowledge on environmental practices is vital because knowledge is associated with behavioral intentions. Thus, promoting educational development in ecotourism is essential to create awareness to maintain the sustainability of the ecosystem of the area [38].

Factor 5 Individual genuine effort

- I think visiting Tasik Kenyir is important to show my support in natural resources conservation efforts (0.653).
- Natural resources conservation activities must be conducted on Tasik Kenyir for future generation (0.603).

Two variables are loaded in Factor 5 to indicate the compassion of the visitors for natural resource conservation in Tasik Kenyir. Thus, this factor is named 'Individual genuine effort'. The variables imply the willingness of the visitors to support and to get involved in natural resources conservation in Tasik Kenyir. According to Edson *et al.* [39] education has been suggested to motivate people to develop positive perception towards conservation. It is important that visitors of the area follow the rules and regulations to ensure the objectives of conservation are achieved; therefore, for a sustainable ecotourism development emphasis on the conservation and preservation of the environment must be created among the tourists [40].

The visitors perceive that even among themselves, natural resource conservation should be vital for the implementation of ecotourism activities at Tasik Kenyir. The visitors are aware of the importance and impacts of natural resource conservation at Tasik Kenyir if the conservation efforts are not carried out. Awareness is the understanding of human towards special issues or experiences that they gained.

Factor 6 Visit decision

- I am fully in control of my actions to visit Tasik Kenyir again (0.687).
- visit Tasik Kenyir on my own will (0.660).

'Visit decision' is a suitable title for Factor 6 since the two variables are directly related to decision made by the visitors to visit Tasik Kenyir. The benefits derived from participation in recreational activities are personal thus requiring personal will and judgement although supports from family and friends could encourage them to visit for the leisure benefits. This variable also explains that if they were to visit Tasik Kenyir again in the future, their decision will not rely on other people's opinions.

Factor 7 Contribution to community benefits

- The ultimate goal of natural resources conservation in Tasik Kenyir is to generate employment (0.802).
- Conservation of natural resources activity in Tasik Kenyir will enhance local community welfare (0.717).
- Conservation of natural resources in Tasik Kenyir will generate income for local communities through ecotourism activities (0.636).

In Factor 7, all the variables loaded are directly related to the 'Contribution to community benefits' in terms of economic impact of ecotourism development at Tasik Kenyir as perceived by the visitors. Variables like generation of income and employment would enhance local community's welfare which directly contribute to local economic development. The variables loaded in this factor also explain that the visitors also view that the benefits of ecotourism should not only be in terms of economics but also in terms of welfare of the community. Furthermore for sustainability of the ecotourism development in Tasik Kenyir, the visitors also agree that the benefits from the development should be distributed more evenly. It is observed that members of the local communities are involved in the ecotourism related SMEs such as chalet operations, transportation services, restaurant operations, tour guiding and travel services. According to Kunasekaran *et al.* [41] the concept of social sustainability in ecotourism includes protecting the mental and physical health of all society, encouraging and treating all people fairly, providing vital services and meeting basic needs.

Factor 8 Motivation by associates

- Family members who influence my behaviour approve that I visit Tasik Kenyir in the near future (0.753).
- My close friends support that I visit Tasik Kenyir (0.605).
- Most people who are important to me recommend that I visit Tasik Kenyir (0.502).

Variables loaded in this Factor 8 imply that the 'Motivation by associates' who are family members and people who are important to the respondents contribute

to the visitor's intention in visiting Tasik Kenyir. Ecotourism destinations, like Tasik Kenyir, are usually located in rural, sometimes remote locations and most of the activities provided are related to the nature environment that may pose high risks to safety of participants. Several recreational activities in Tasik Kenyir include adventurous activities because adventure activities are defined as leisure activities where the most likely outcome of a mismanaged mistake or accident is death [42] such as, jungle trekking and caving. Therefore, family support and encouragement are essential to safeguard the visits to the ecotourism destination since family is one of the most influential social groups in ecotourism decision making and consumption [43].

Factor 9 Opportunity cost of conservation

- Natural resources conservation involves high costs (0.773).
- Without conservation, natural resources at Tasik Kenyir will extinct (0.568).

The two variables loaded in Factor 9, entitled 'Opportunity cost of conservation' are indirectly related to the visitor's views on the importance of natural resources conservation in order to sustain the ecotourism development. Variables loaded in this factor are referring to the costs of undertaking conservation of the natural resources in Tasik Kenyir. Extinction of many natural resources are commonly caused by the needs to meet the increase in demand for food, housing and infrastructure as a result of increases in population and incomes. On the other hand, for the benefit of future generations, it is necessary to undertake conservation programs. The visitors realize that the sacrifices of preventing the extinction of the natural resources via conservation entail high opportunity costs.

DISCUSSION AND CONCLUSION

The main objective of this study is to develop the indicators of the perception of visitors to Tasik Kenyir on the conservation of the natural resources. Data were collected from visitors to the site via face to face interviews by trained enumerators using structured questionnaires. Descriptive and factor analyses were used to obtain the summary of the profiles of the visitors and the indicators of the perception of the visitors on the

conservation of the natural resources in Tasik Kenyir. These information is very important for the ecotourism operators and ecotourism planners such as KETENGAH for marketing their products and developing marketing strategies in Tasik Kenyir.

The results show nine factors that relate to the indicators of the visitors' perception on natural resource conservation in Tasik Kenyir, Malaysia. The factors present a new set of scales to measure the visitors' perception on natural resource conservation in ecotourism. This new set of scales consists of nine factorial themes with variables that are related to personal resources, conservation knowledge of friends, active participation, ecotourism development knowledge, individual genuine effort, visit decision, contribution to community benefits, motivation by associates and opportunity cost of conservation.

The finding of conservation knowledge of friends and conservation knowledge of family in this study would be valuable for the further investigation in general perception on conservation of natural resources at Tasik Kenyir. These factors have given the unique result since most of the literature focus on the visitors' knowledge itself that influence their perception in natural resource conservation at their ecotourism destination. Thus, the two factors show the contribution of this study in the literature. Word of mouth (WOM) is an important factor influencing visits to an ecotourism destination because recommendation by other people is one of the most often sought types of information for people interested in traveling [44]. The process of sharing and recommending is possible through word-of-mouth communication or the social interactions among eco-tourists [45]. Thus, WOM publicity is important to persuade people to visit ecotourism destination especially for a newly developing ecotourism site in Tasik Kenyir. This method also can reduce their expenditure for promotion and marketing for KETENGAH.

Other than that, the factor opportunity cost for conservation shows that visitors to Tasik Kenyir are well educated and have good knowledge on natural resource conservation effort for ecotourism purposes. The findings in this study also describe that visitors have a positive perception towards natural resource conservation. Thus, by understanding the critical issues in scale development of visitors' perception on natural resource conservation, an effective decision can be made in order to improve the development of ecotourism industry at Tasik Kenyir, Malaysia.

ACKNOWLEDGEMENT

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