

## **Non-Visitors' Attitude Towards Kubah National Park's Roles and Functions**

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### **Abstract**

Besides being a vital component of Malaysia's ecotourism, the biodiversity of national parks is the heart of the existing protected areas and heavily support the domestic, national and international policies on conservation of endangered species, especially in the state of Sarawak which houses a large number of protected species. Therefore, it is imperative to study the behaviour and attitude of ecotourism consumers to ensure sustainable management of national parks. This paper examines the perception of non-visitors regarding the roles, policies and proper operations of national parks in Malaysia, based on data from Kubah National Park (KNP), Sarawak. Findings show that respondents have a very positive attitude towards the roles and functions of KNP. The majority of the respondents' express eagerness to visit KNP in the future. They agree that KNP is a place to protect the natural beauty of the environment and wildlife. Respondents also acknowledge that KNP protects endangered species and should continue to be protected for the enjoyment of future generation. While wildlife protection and ecotourism activities receive support, respondents regard commercial development, socializing and spiritual fulfilment as inappropriate. The results of this paper are significant in order to maintain management and conservation of KNP.

**Keywords:** National Park, Protected Areas, Non-Visitor Attitudes.

### **Introduction**

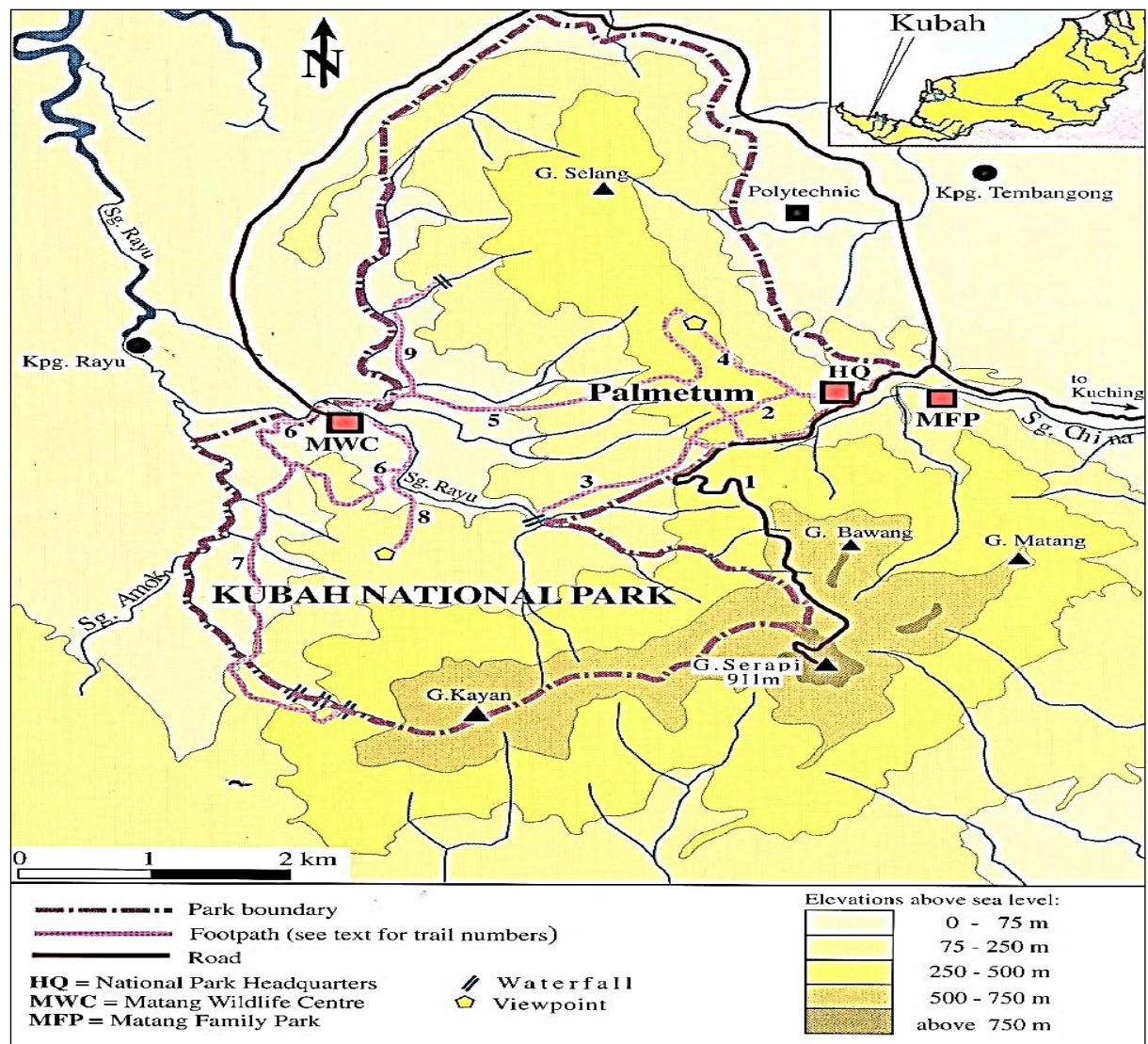
The rise in the number of tourists to Malaysia's national parks prompts an increase in the demand for funding from the conflict between advancement interests and money related issues. As of now, the majority of the Malaysian public parks are making shortfall and a couple of, for example, Kinabalu National Park would figure out how to drop by (Backhaus, 2005). Along these lines, the utilization of non-market valuation techniques to secured territories, for example, public parks in Malaysia is likely the significance given the basic need to

guarantee the assignment of the normal assets to be viable that will add to progress in overseeing and moderating ensured regions. In this way, the non-market valuation strategies for these natural assets are getting progressively critical to ensure the execution of compelling administration and preservation approaches.

Kubah National Park (KNP) gives a decent representation of a public decent of the natural assets. It is situated on the southwest (Figure 1) of Sarawak and arranged around 22 kilometers, from the west of Sarawak's capital city, Kuching. In its 22 square kilometer region, 98 types of palm trees have been recorded, which makes it one of the most extravagant palm environments on the planet (Cubitt & WWF Malaysia, 1998). Besides, the territory offers a wide assortment of local greenery, for example, pitcher plants and bintangor trees, orang utan, birds, frogs and others.

This study offers to assist in the further development of the current management guidelines and policies in the ecotourism development that shall contribute to the sustainable development and conservation in Malaysia's national parks, particularly in the state of Sarawak. The assessment of the natural resource's value at KNP is essential to understand the respondents' preferences for the attributes offer at the park. The information from the results of this research would help the policy makers and park wardens in implementing suitable management policies and guidelines, as well as in planning and managing conservation issues in parks.

Figure 1: Geographical Map of Kubah National Park



Source: Hazebroek & Morshidi (2000).

## Literature Review

### National Parks in Sarawak

The idea of establishing national parks has long been accepted in Sarawak early in the 1950s. This could be seen by the passing of the National Park Ordinance in 1956. The ordinance provides for constitution, maintenance and control of national parks in the Sarawak's state. Bako National Park became the first national park in Sarawak when it is legally constituted on the 1st May 1957. Nature reserves are similar to the national parks, but smaller in size. However, both areas are equally important for the preservation and conservation of natural resources of the ecosystem. Currently, with the inclusion up to Feb 2009, there is a total of 25 protected areas that falls under the definition IUCN Category II in Sarawak. Out of the 25 protected areas, 20 of them are designated as national parks while the other 5 areas are designated as nature reserves. Additionally, two wildlife centers were created in protected areas (such as the Semenggoh Wildlife Centre in Semenggoh Nature Reserve and Matang Wildlife Centre in Kubah National Park) to provide a venue for conservation and appreciation of wildlife (Tisen, 2008).

National parks and nature reserves are one of the most significance to the economic aspects of Sarawak (Hazebroek & Morshidi, 2000). Despite the fact that Sarawak's national parks and

nature reserves holds are set up to ensure this exceptional biodiversity, they additionally become the principal attractions for tourists to Sarawak (Tisen, 2008). Apparently, the State's government is right now advancing society, experience and nature the tourism industry as a strategy of the tourism industry. It is the rich and special biodiversity, social and chronicled values that propel tourists to Sarawak. Along these lines, national parks and nature reserves are vital to Sarawak's tourism industry and diversion. Accordingly, all together for the improvement and manageable of the tourism industry in the State, the issues of protection and the tourism industry are significant in dealing with the national parks and nature reserves in Sarawak.

### **Kubah National Park**

Kubah National Park (KNP) is one of the most appropriate territories that could offer the best ecotourism exercises in Sarawak. This rainforest territory is a home to a portion of Sarawak's endangered wildlife and plant life. It is located in the Southwest of Sarawak and situated around 22 kilometers from the west of Sarawak's capital city, Kuching. The protected area is one of the most open national parks in Sarawak, because of the separation and the accessibility of fixed street to the zone. Typically, the park is reachable inside 30 to 45 minutes' drive from the Kuching town.

KNP is internationally recognized as one of the important conservation sites in the world (WWF Malaysia, 1998). The park was officially gazetted on 11th May 1989 and was only open to the public 6 years later in 1995. It is the 7th national park established out of the current total of 20 national parks gazetted in Sarawak. KNP contains among the richest rainforests on earth. With the richness of the ecosystem, it is no doubt that KNP is made of diversified habitats consisting spectacular flora and fauna, crystal clear jungle streams, waterfalls and other great nature components. The rich forest ensures the national park is flourishing with spectacular faunas such as rare ferns, bintangor trees, orchids, and especially for one group of plant, the palms. It is known to international botanists as the "world of palms" as it is the richest palm habitat for its size anywhere in the world, making it in place of an extremely important protected site for the palms. It is estimated that there are more than 100 species of palms around the forests of the park. KNP's wildlife includes a range of mammals, birds, frogs, geckos, snakes and insects. Mammals such as deer, bearded pig and squirrel may be observed in the park's boundaries.

### **Methodology**

Research instrument used in this study is a designed questionnaire, specifically; Contingent Valuation Method and Likert Scales. The questionnaire designated consist of Section I (Introduction), Section II (Attitudinal Information), Section III (Contingent Valuation Questions) and Section IV (Background Information). Respondents are requested to answer the questionnaire based on their personal perceptions and on their own perspective and opinions.

As scales are relatively clear, they offer varieties of avenues of investigation and easy to use, hence allowing researchers to question large samples of people about relatively complex attitudinal concepts. Therefore, Likert scales are used in this study to allow the respondents to state their opinions through the ranges offered. There are 30 items with a five-point Likert scale provided to measure the functions and roles of the Kubah National Park. A five (5) to



one (1) score was given according to the extent of agreement and disagreement. The one (1) reflects 'strongly disagree', two (2) reflects 'disagree', three (3) reflects 'neutral', four (4) reflects 'mildly agree' and five (5) reflects 'strongly agree'.

### **Data Collection**

The target populations of this study are the Kuching's residents. Based on the Sarawak Government official website, the total population in the year of 2010 was 617, 887. Since the Population and Housing Census is conducted once in every 10 years by the Department of Statistics Malaysia, the latest total population in Kuching area could not be obtained.

The simple random sampling method is chosen for this study as it allows each individual to be chosen entirely by chance and each member of the population has an equal chance and probability of being included in the sample from a larger group. The target respondents of this study are the residents of Kuching's area and aims to collect a sample between 150 to 200 respondents. According to Limae, Safari & Merceh (2016), sample size is an important issue for proper and reliable estimation of the economic value of the recreational site. The questionnaires are then distributed at Kuching Waterfront, Kuching's Town areas and housing areas.

### **Results and Discussion**

#### **Sociodemographic Characteristics**

An aggregate description of the total respondents is given in the descriptive results. Table 1 below provides an overview of the respondents' profile. Among 160 of the respondents surveyed, they are reflected nearly evenly in both gender groups; where there were 48.8% male and 51.3% female respectively. Interviewers were directed to interview working adults over 18 years of age who earned monthly income during the interview session for the household survey. This particular respondent was to be put heavier priority to be the first to agree to be interviewed, however, in the event that this individual was not working or earned no wage, the interview would be held with another person in the household. In addition, the interviewers were also told that a maximum of 5% of the interviews for household survey should be performed in households that did not have any people with permanent jobs or a fixed monthly salary, but earned money only from part time work at home such as sewing or babysitting.

Age in the sample is a categorical variable. There are six age groups employed in this survey. They apply to an age beginning at 18 years of age and the apex of age more than 65 years old. There are no respondents among non-visitors of age under 18 years, thus the findings of this study are generally only applicable for adults over the age of 18 years old. The age group of '18 to 25 years of age' has the highest percentage of the sample population with 37.5% (49 respondents) while 'more than 65 years of age' has the lowest percentage with only 0.6% (1 respondent). The majority of the respondents who voluntarily agreed to participate in the study are part of the middle age group. In contrast, the older age group tended to refuse to participate or showed no interest to be part of the study.

The highest level of formal education obtained by the respondents is reported in the variable for education. All visitors confirmed that they had at least completed primary school, with 43.1% of them having obtained a bachelor's degree, 40.6% having obtained a high school

certificate and only 9.4% of the respondents reported to have a postgraduate degree. This paper also utilized a variable to capture the job status of the respondents. This is an equally important factor because it is strongly related to their level of education. Usually, a higher level of education will be likely to display a better level of jobs and higher monthly profits, contributing to a greater propensity to pay for the security of KNP's conservation and management attributes. The highest percentage of the population estimated to be working is 93.8%. Just a minor segment of the population of study is not earning any income during the interview was conducted due to either being out of the labour force or unemployed or retired at the moment. This is because the interviewers were directed beforehand to ensure the minimal portion of respondents who are not earning income by preventing the distribution of questionnaires to students and people under 18 years of age, thus the number of respondents who were unemployed was reduced as they were more likely to not work and do not earn any income. There were four income categories employed in the questionnaire to present the total monthly income level, such as: 'low' for total income less than RM3,000, 'medium' for total income between RM3,001 and RM6,000, 'high' for income between RM6,001 and RM9,000 and 'very high' for income greater than RM9,000. 38.1% and 45.6% of the respondents reported to be within the category of low and medium income respectively, showing that the majority of the respondents who participated in this study are reported to earn income of between less than RM3,000 and RM6,000 monthly.

Table 1: Socioeconomics Profile for Total Sample

Variable		Total (N = 160)	
		Frequency	(%)
Gender	Male	78	48.8
	Female	82	51.3
Age group	18 – 25 years old	49	37.5
	26 – 35 years old	60	30.6
	36 – 45 years old	23	14.4
	46 – 55 years old	21	13.1
	56 – 65 years old	6	3.8
	More than 65 years old	1	0.6
Education level	Primary school	11	6.9
	Secondary school	65	40.6
	Undergraduate degree	69	43.1
	Postgraduate degree	15	9.4
Working status	Employed	150	93.8
	Unemployed	4	2.5
	Retired	3	1.9

Variable	Total (N = 160)		
	Frequency	(%)	
Total monthly income	Other	3	1.9
	< RM3,000 (Low)	61	38.1
	RM3,000 – RM6,000 (Medium)	73	45.6
	RM6,001 – RM9,000 (High)	19	11.9
	> RM9,000 (Very high)	7	4.4

### Respondents' Characteristics of Visits

The results of respondent characteristics of visits are demonstrated in Table 2. Results represented are based on the responses to Question 1 to 5 in the questionnaire, where Question 1 to 5 describes the characteristics of visit to KNP. Respondents who answered 'Yes' to Question 1 were required to answer Question 2 and 3, while respondents who gave a 'No' answer were requested to answer Question 4 and Question 5. Question 3 asked for reasons of visiting and involved in multiple responses as respondents may select more than one answer to these questions.

The first question asked the respondents whether they have visited KNP before. The results show that less than 62.8% of the respondents have never visited KNP before. In terms of the number of visits, 41.4% of visitors stated that it was their first time visit to the park, 34.2% claimed for the second time visit and 9.0% and 15.3% for the third time and more than three times, respectively. On the other hand, 46.4% and 23.2% of the non-visitors stated that they have been at least one or two times to the park, respectively. Thus, a lower percentage could be seen in the third (8.0%) or more (2.2%) visitation rate for the non-visitors.

The survey also asked respondents who responded 'yes' to the Question 1 on the reasons for visiting KNP where they were allowed to select more than one reason from eight reasons provided in Question 3. According to the statistics, 76.2% of the total respondents selected 'to do recreational activities' as their reason of visiting the park. This is followed by 'to observe the plant life' (39.9%), 'to observe the wildlife' (29.6%), 'to participate in organizational activities' (11.7%), 'to spend an overnight in a natural setting' (6.7%), 'to attend organized training and courses' (4.0%) and 'to do research activities' (3.1%). The attractions of the natural environment and availability of waterfalls in the park area support for recreational activities such as picnicking and forest walk that seems possible to be consistent with these findings. It could obviously be seen that the top three reasons for visiting for both on-site visitors and the off-site visitors (non-visitors who have visited KNP previously) were likely similar and only differ slightly in the percentages.

Meanwhile, the fourth and fifth question in the survey were meant to the respondents who never visit KNP before. The results show that a high percentage of 89.7% respondents would like to visit KNP in the future. More than half (50.3%) of the respondents interviewed stated that their reason of not visiting the park was because they did not have time to do so. Moreover, 23.4% of respondents stated that are not aware of the park's existence, did not care or interested and other reason (14.5% and 9.7%, respectively) and cost (2.1%) as their reason of not visiting KNP.

### **Attitudinal Information Towards Management and Conservation Attributes**

A series of attitudinal questions were asked in the questionnaire to capture the respondents' attitude and interpretation of the roles and functions of KNP in Question 11. In order to measure KNP's roles and functions, twenty items with a 5-point Likert scale were given. In this question, for each item where the choices represent the degree of agreement for each respondent, five choices were given. A weighted mean scale was then used to interpret the cumulative answers of all respondents for each statement in the question. For the understanding of the Likert scale, the weighted mean of each question is used as it expresses the importance of each quantity to the average. For each statement, the results will be interpreted such that a low score reflects an unfavourable response while a high score reflects a favourable response. The interpretation scores over a five point scale from the responses of the respondents to each object were such as; '0.00 – 1.00' for strongly disagree, '1.01 – 2.00' for disagree, '2.01 – 3.00' for neutral, '3.01 – 4.00' for mildly agree and '4.01 – 5.00' for strongly agree. Consequently, the percentage and weighted mean for the twenty statements the roles and functions of KNP are tabulated in Table 3. Over 80% of respondents agreed mildly or strongly with nine statements (items a, b, c, d, e, f, l, q and r) out of the twenty statements for visitors. These nine statements were closely linked to the conservation of natural biodiversity as well as the practices of science and learning. This implies that the participants had a very positive outlook towards KNP's roles and functions.

**Table 2: Respondents' Characteristics of Visits to Kubah National Park**



Questions and Responses	Non-visitors (N=160)	
	Frequency	Percentage (%)
Q1. Visited Kubah National Park before:		
(1) Yes ( <i>Answered Q2 &amp; Q3</i> )	54	37.2
(2) No ( <i>Answered Q4 &amp; Q5</i> )	91	62.8
<i>Total Responses =</i>	<i>160</i>	<i>100.0</i>
<b>*Answered 'Yes' in Q1</b>		
Q2. Number of visit(s):		
(1) 1 time	16	29.6
(2) 2 times	18	33.3
(3) 3 times	6	11.1
(4) More than 3 times	14	25.9
<i>Total Responses =</i>	<i>54</i>	<i>100.0</i>
Q3. Reason(s) of visiting:		
(1) Observe plant life	34	63.0
(2) Observe the wildlife	23	42.6
(3) Do recreational activities	47	87.0
(4) Spend an overnight	5	9.3
(5) Do research activities	3	5.6
(6) Participate in organizational activities	9	16.7
(7) Attend organized training & courses	4	7.4
(8) Other		
<i>Total Responses =</i>	<i>145</i>	<i>(% is based from 54 'Yes' responses)</i>
<b>*Answered 'No' in Q1</b>		
Q4. Will visit Kubah National Park in the future:		
(1) Yes	130	89.7
(2) No	15	10.3
<i>Total Responses =</i>	<i>145</i>	<i>100.0</i>
Q5. Main reason of not visiting:		
(1) No time	80	50.0
(2) Not aware of the existence	37	23.1
(3) Cost	3	1.9
(4) Did not care/interested	23	14.4
(5) Other	7	4.4
<i>Total Responses =</i>	<i>160</i>	<i>100.0</i>

Table 3: Percentage, Means and Standard Deviations for National Park's Roles and Functions

Items		% of respondents		Descriptive Statistics	
		MA	SA	M	SD
1.	KNP protects endangered species of flora, fauna and wildlife habitats.	52.4	35.2	4.2	0.7
2.	Protecting the natural environment and wildlife should be the first priority of KNP.	47.6	37.9	4.2	0.8

Items		% of respondents		Descriptive Statistics	
		MA	SA	M	SD
3.	KNP's function is to preserve biological diversity.	49.0	38.6	4.2	0.7
4.	KNP is a place for protecting the natural environment and wildlife.	48.3	42.8	4.3	0.6
5.	KNP is a place to protect the scenic beauty of nature.	52.4	37.9	4.3	0.7
6.	KNP is a place for learning about nature.	51.0	31.7	4.1	0.8
7.	KNP is a place for protecting cultural and historical heritage.	42.8	30.3	4.0	0.9
8.	KNP is a place for scientific research and monitoring.	49.7	26.2	4.0	0.8
9.	KNP is a place for tourist destinations.	46.2	33.1	4.1	0.8
10.	KNP is a place for all living things to exist.	51.7	22.1	3.9	0.8
11.	KNP helps to reduce global warming.	53.1	22.8	3.8	0.9
12.	KNP is a reserve of natural resources for future use.	49.7	34.5	4.1	0.8
13.	Visiting KNP can enhance people's love to the country.	47.6	17.9	3.8	0.8
14.	KNP provides economic benefits.	49.0	17.9	3.8	0.8
15.	KNP is a place for people's enjoyment.	51.7	15.2	3.7	0.9
16.	KNP is a place functions as places for spiritual fulfilment.	35.9	9.7	3.3	1.0
17.	KNP is a place for recreational activities.	62.1	18.6	4.0	0.7
18.	KNP is a place to be protected for the enjoyment of future generation.	54.5	35.9	4.2	0.7
19.	KNP functions as place of socializing.	47.6	9.7	3.7	2.5
20.	KNP is a place for commercial development of natural resources (such as oil, timber, minerals).	27.6	6.9	3.0	1.1

Notes: MA, SA, M and SD refer to 'mildly agree', 'strongly agree', 'mean' and 'standard deviation', respectively.

### Factor Analysis

Exploratory Factor Analysis (EFA) was carried out to determine the existence of simple patterns among the variable studies. The key component factor analysis (with Varimax rotation) was performed on variables measuring the roles and functions of KNP. As indicated by the result of Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) of 0.826, there is positive relationship between the variables, proving that they are relevant for factor analysis. In addition, Bartlett's also showed significant result of Chi-Square = 1149/242,  $p < 0.001$ . The results of the EFA are presented in Table 4 below.

Table 4: Varimax Factor Analysis of Kubah National Park's Roles and Functions (Non-Visitors)

Items	F1	F2	F3	F4	F5
1. National Parks are to protect endangered species of flora, fauna and wildlife habitats.	.868				
2. Protecting the natural environment and wildlife should be the first priority of National Parks.	.860				
4. National Parks are places for protecting the natural environment and wildlife.	.631				
3. National Parks function to preserve biological diversity.	.626				
6. National Parks are places for learning about nature.	.537				
5. National Parks are places to protect the scenic beauty of nature.	.532				
12. National Parks are reserves of natural resources for future use.		.761			
13. Visiting National Parks can enhance people's love to the country.		.750			
14. National Parks provide economic benefits.		.683			
11. National Parks help to reduce global warming.		.614			
18. National Parks are places for recreational activities.		.586			
7. National Parks are places for protecting cultural and historical heritage.			.786		
10. National Parks are places for all living things to exist.			.709		
8. National Parks are places for scientific research and monitoring.			.679		
16. National Parks function as places for spiritual fulfilment.				.741	
17. National Parks are places for recreational activities.				.601	
9. National Parks are tourist destination.				.551	
20. National Parks are places for commercial development of natural resources (such as oil, timber, minerals).				.535	
19. National Parks function as place of socializing.					.742

Note: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 9 iterations.

### Conclusion

Globally, national parks have faced the pressure to provide opportunities for public enjoyment while protecting the ecological integrity of their ecosystems. This dual mandate gives the main priority on the conservation of park resources in certain developing nations such as Malaysia. However, in other less developed countries, tourism in protected areas is considered as a tool to foster economic development among the local communities. Therefore, there is a widening gap in terms of the popularity of nature-based tourism, which pushes a wedge between conservation and commercial use of national parks. This phenomenon is especially true in Malaysia, where its national parks are a huge part of its tourism industry, particularly in ecotourism.

Malaysia houses a number of endangered animals that are protected in national parks and protected areas such as forest reserves. In the case of Sarawak, two wildlife centres are conserved to protect and appreciate wildlife, namely the Semenggoh Wildlife Centre in Semenggoh Nature Reserve and Matang Wildlife Centre in Kubah National Park (KNP) (Tisen, 2008). Aside from conserving the exceptional biodiversity, national parks and nature reserves are one of the most significant economic aspects of Sarawak as they increasingly become the main attraction for tourists to visit Sarawak (Hazebroek & Morshidi, 2000; Tisen, 2008). However, despite the continuous support from the state government, conserving nature reserves and ensuring the protection of endangered species require extremely high cost-financing. Therefore, it is imperative for researchers and policymakers to understand the attitudes and perception of the local community regarding the roles and functions of national parks.

This study aims to obtain information about the sample's sociodemographic characteristics, in general, and attitude and perception towards KNP's roles and functions with respect to improvement in the management and conservation, in particular. The main objective of this study was to examine the non-visitor's attitude and perception towards KNP's roles and functions. In general, the respondents are aware of the importance of protecting and conserving the studied area. Respondents also show very positive attitude towards the roles and functions of KNP particularly in terms of conserving wildlife and nature while criticizing commercial and spiritual use of KNP aside from tourism. Results from the socioeconomic profiles of the respondents are essential not only for the management and conservation authorities in KNP, but also act as an important key in marketing strategies for ecotourism operators and national park's authorities.

In general, it can be said that the different socioeconomic clusters of the non-visitor's population were well covered in this survey. According to the survey results, an equal share of male and female in both samples were interviewed during the survey, corresponding to 48.8% for male and 49.7% for female in the total population of the samples. Whilst the median age of respondents is 26 to 35 years old. This information is useful to the park's authorities and tourism operators in providing activities related to both gender and particular age range. The results show that from the 20 statements relating to the roles and functions of KNP, over 80% of respondents either 'mildly agree' or 'strongly agree' with 9 statements particularly for the roles of protecting endangered species of wildlife, preserving biological diversity, conserving the beauty of nature and providing a place for the enjoyment of future generation. In contrast, respondents disagreed with statements relating to roles and functions of KNP that are not related to conserving the nature and wildlife particularly the use of KNP for spiritual fulfilment, socializing and commercial development of natural resources. This suggests a very positive perception towards KNP's roles and functions.

The results of this study are significant to the study as in order to maintain sustainable management and conservation of KNP requires an understanding the non-visitor's attitude and perception. Besides that, this study also provides some valuable information for decision-making and policies regarding the protection of the Kubah National Park in Sarawak. The survey shows that the level of understanding among the respondents was relatively low about the value of national parks and their ecological integrity. Therefore, in order to address this issue, a few initiatives such as investing more in public education programs can be taken to

instill self-awareness among local communities to improve their environmental conservation knowledge. Besides that, the results also show that one of the major reasons for not visiting KNP is their lack of awareness and interest in its existence. Notwithstanding, majority of the respondents expressed their desire to visit KNP in the future. Hence, the management of KNP can increase their efforts of marketing the national park as a hot place for tourism while still making sure to maintain the roles and functions of KNP. This may attract more visitors in the future, which will help with cost-financing of KNP.

While this study is able to provide useful information for policymakers and management authorities of KNP, the findings are not suitable to be generalized to the entire country. This is due to the limitation of sample size which may lack the statistical power that is needed to determine all of the relationships that are examined in this study. To expose the wider trend of public opinion, a broader sample size that is indicative of Malaysia's larger population should be implemented in future studies. Besides that, it is also important for future research to discern the determination of acceptable use by respondents are made on the basis of the environmental effects of the use of national parks or other concerns, such as basic human needs or ethical considerations. This is to ensure the understanding of the respondents' viewpoint of the appropriateness of usage of national parks. To conclude, future research is required to explore the optimal use of basic and critical services, local environmental and economic conditions, visitor counts and the demand for long-term use of national parks in order to further understand the attitudes of visitors and non-visitors of national parks' roles and functions (Deng, Walker & Swinnerton, 2005).

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