



Universiti Malaysia  
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**WILLINGNESS TO PAY FOR THE ECOTOURISM  
FACILITIES AND SERVICES AT TAMAN NEGARA  
KUALA KOH, KELANTAN**

By

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## DECLARATION

I declare that this thesis entitled Willingness to Pay for The Ecotourism Facilities and Services at Taman Negara Kuala Koh, Kelantan is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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**WILLINGNESS TO PAY FOR THE ECOTOURISM FACILITIES AND  
SERVICES AT TAMAN NEGARA KUALA KOH,  
KELANTAN**

**ABSTRACT**

National Park is one of the most important and attractive treasures in the world. This is due to the national park still has all the valuable resource and can benefit people in different ways. Taman Negara Kuala Koh (TNKK) is one of National Park that provided ecotourism activities for visitors such as research, education and recreation. The objectives of this study to determine the visitor's Willingness to Pay (WTP) for conservation of the ecotourism resources at Taman Negara Kuala Koh (TNKK) by using Conjoint Analysis Method (CJ). The Conjoint Analysis Method (CJ) was used to elicit Willingness to Pay (WTP) among visitors. A total of 113 respondents were involved in this survey. The questionnaires were distributed to visitors at TNKK and also interview was applied among respondents to complete the survey. The results show that most of visitors have come to TNKK more than once and they are willing to pay for conservation at TNKK. A logit regression model was used in this study to determine visitor's WTP. Besides that, the results indicated that education level and income level were significant variables that influencing the visitors' WTP for the entrance permit to TNKK. The estimated mean WTP at TNKK was 1.20 per visit. It can be concluded that, visitor's WTP gives benefits to conserve ecotourism resources at TNKK and suggestion by respondents also will give benefits to TNKK in future.

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**KESANGGUPAN MEMBAYAR UNTUK KEMUDAHAN DAN  
PERKHIDMATAN EKOPELANCONGAN DI TAMAN NEGARA KUALA KOH,  
KELANTAN**

**ABSTRAK**

Taman Negara merupakan salah satu khazanah yang paling penting dan menarik di dunia. Ini disebabkan oleh Taman Negara masih mempunyai semua sumber yang berharga dan boleh memberi manfaat kepada manusia dengan cara yang berbeza. Taman Negara Kuala Koh (TNKK) merupakan salah satu Taman Negara yang menyediakan pelbagai aktiviti ekopelancongan kepada pelawat seperti penyelidikan, pendidikan serta menyediakan tempat rekreasi. Objektif kajian dijalankan ini adalah untuk mengenal pasti kesanggupan pengunjung untuk membayar permit masuk ke Taman Negara bagi pemuliharaan sumber ekopelancongan di Taman Negara Kuala Koh (TNKK) dengan menggunakan Kaedah Analisis Conjoint (CJ). Kaedah Analisis Conjoint (CJ) digunakan untuk mendapatkan Kesanggupan untuk Membayar (WTP) di kalangan pengunjung. Sejumlah 113 responden telah menyumbang untuk mengumpul data. Soal selidik diedarkan kepada pengunjung di TNKK dan juga temuramah telah dijalankan di kalangan responden untuk melengkapkan kaji selidik. Hasil kajian menunjukkan bahawa kebanyakan pengunjung telah datang ke TNKK lebih dari sekali dan mereka sanggup membayar untuk pemuliharaan di TNKK. Model regresi logit digunakan dalam kajian ini untuk menentukan Kesanggupan untuk Membayar dalam kalangan pengunjung. Di samping itu, keputusan menunjukkan bahawa tahap pendidikan dan tahap pendapatan adalah pembolehubah yang signifikan yang mempengaruhi Kesanggupan untuk Membayar sebagai permit masuk ke TNKK. Anggaran purata Kesanggupan untuk membayar di TNKK adalah 1.20 untuk setiap lawatan. Kesimpulannya, Kesanggupan untuk Membayar dalam kalangan pengunjung memberikan manfaat untuk memelihara sumber ekopelancongan di TNKK dan cadangan oleh responden juga akan memberi manfaat kepada TNKK di masa akan datang.

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## LIST OF ABBREVIATIONS

TNKK	Taman Negara Kuala Koh, Kelantan
CJ	Conjoint Analysis Method
CVM	Contingent Valuation Method
IUCN	International Union for Conservation of Nature
WTP	Willingness to Pay
SPSS	Statistical Package for Social Sciences
ICCA	Territories and areas conserved by indigenous peoples and local communities

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## LIST OF FORMULA

- 1) Slovin's Formula 1960

$$n = \frac{N}{1 + Ne^2}$$

- 2) Regression Analysis

$$Y = \beta_0 + \beta_1 X + u$$

- 3) Logistic Regression Analysis

$$\hat{p} = \frac{\exp(B_0 + B_1 X)}{1 + \exp(B_0 + B_1 X)} = \frac{e^{B_0 + B_1 X}}{1 + e^{B_0 + B_1 X}}$$

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of Study

National Park is one of the most important treasures in the world. This is due the national park still has all the valuable resource whether it is already in the venture or not. National parks can benefit people in different ways. For examples, the national park is famous as a recreational park. Then, the resources have many functions especially that related to ecological function and known as a recreational park (District & Council, 2016). The specialty that provided in this park is it has attracted visitors to visit this place and it can generate national income in many countries. The central purpose of protected area is to conserve biodiversity and keep ecosystems healthy and resilient. Even though it produces some benefit from this economic, but it can also give negative impact to the natural environment and socio-cultural circumstances (Nuva et al., 2009). The challenge is to realize the tourist about this nature and conserve the scenery and natural resources.

In Malaysia, National Park is one of the places that involved in preserving the objects and places of aesthetic and historical of scientific interest. Other than that, the also involve in the protection and preservation of the indigenous flora and fauna of Malaysia. One of National Park that will discuss in this research is Taman Negara Kuala Koh, Kelantan, which is known as TNKK. At TNKK, there are over 300 species that can

be spotted by bird-watchers, while anglers can try their luck in the rivers that run through the national park. Camera bugs, kayak enthusiasts and campers can specify National Park as paradise for them. Other than that, Kuala Koh offers activities like Canopy walk, jungle treks, water tubing, fishing, and bamboo rafting. Being more secluded, the chances of spotting wild animals are higher in this park where elephants are common just outside this area but visitors are more likely to encounter their footprints and dung than actually seeing one. Besides that, elephants are always hovering along the route to TNKK especially in midnight. It is proven based on the footprint and dung that were found. Leeches are common along the jungle trek just like some treks at the Kuala Tahan entrance. Due to the huge floods that happened at TNKK in 2014, there are many activities cannot be carried out because it will cause a risk to visitors. However, fishing is very popular here since there are fewer disturbances in the river (Singapore Adventure Records, 2016). Table 1.1 shows activities that are provided at Taman Negara Kuala Koh, Kelantan.

**Table 1.1:** The activities at Taman Negara Kuala Koh, Kelantan

Activities	
Bird Watching	<ul style="list-style-type: none"> <li>• There are diverse species of birds as the main attraction such as White-rumped Shama, Rhinoceros Hornbill, the Great Argus, Helmeted Hornbill and Greater Racket-Tailed Drongo.</li> </ul>
Fishing	<ul style="list-style-type: none"> <li>• There are some great fishing spots;               <ul style="list-style-type: none"> <li>- Lubuk Sinar</li> <li>- Lubuk Kedah</li> <li>- Lubok Kaloj Bawah</li> <li>- Lubok Kaloj Atas</li> <li>- Lubuk Jengal</li> <li>- Lubuk Pintu Raja (open twice/ month and maximum of 3 people)</li> <li>- Lubuk Kem Besu (open once a month)</li> </ul> </li> </ul>
Photography	<ul style="list-style-type: none"> <li>• Taman Negara has an exquisite beauty and variety of flora and fauna.</li> </ul>

Jungle Trekking	<ul style="list-style-type: none"> <li>• The most famous trails are Ara trail and Sinar trail.</li> <li>• The longest trail is Kuala Pertang trail which takes 3 hours.</li> </ul>
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Source from District & Council (2016)

### 1.1.1 Tourism

In the levels of government agendas, tourism is a potential matter that involved the social, environmental and economic. While, Bhuiyan et al., (2013) stated that, tourism is a mentionable earning industry of Malaysia. According to Bhuiyan et al., (2013), in the adoption and formulation of various laws, Malaysia government has played a crucial role to ensure sustainable tourism where is, it has provided the appropriate institutional and legal framework. Other than that, from (Mosbah & Salleh, 2014), it stated that tourism is required for the inputs of economic, social, cultural and environmental nature. This sector has generated employment directly and indirectly of growth that related to industries.

According to Mosbah and Salleh (2014), it stated that in Southeast Asia, Malaysia is famous as multicultural and federal constitutional monarchy. Similar to other countries, Malaysia is well known for its delightful and authentic attraction. Kelantan is one of the states in Malaysia that famous for its natural attraction and beautiful destination. This is refer to natural resources that found in Kelantan is similar to the state of Pahang. Then, besides the agricultural sector, tourism is the second most important money spinner for Kelantan (Sufahani et al., 2013). Analyzing the tourist arrival data can define the tourism demand for the country.

Table 1.2 shows the percentage of Tourists Arrival in Malaysia. From year 2010 until 2014, the result shows that percentage of Tourists Arrival is increased while, in the next year, percentages become decrease. Then, from 2015 until 2016 the percentage is increased then from 2016 until 2017 the percentage is decreased.

**Table 1.2 : Tourists Arrival**

<b>Year</b>	<b>Destination</b>	<b>No. of Arrivals</b>	<b>Percentage Change Year on Year</b>
2010	Malaysia	24577196	11.93 %
2011	Malaysia	24714324	12.00 %
2012	Malaysia	25032708	12.16 %
2013	Malaysia	25715460	12.49 %
2014	Malaysia	27437315	13.33 %
2015	Malaysia	25721251	12.49 %
2016	Malaysia	26757392	13.00 %
2017	Malaysia	25948459	12.60 %
<b>Total</b>		<b>205904105</b>	<b>100</b>

Source from Tourism Malaysia (2017)

Table 1.3 shows data for visitors which is local and foreigner that were visited Taman Negara Kelantan from 2010 until 2017. The data from 2010 until 2013 shows that the number of visitors to TNKK is decreased but it can be seen that the number of foreign that visited TNKK is increased from 2010 to 2013. From 2013 to 2014, the data show that the number of visitors is increased than before. But then, the number of visitors was decreased in 2015 after the huge flood that happened at TNKK. In 2016, the number of visitors is increased, but in 2017, the number of visitors is decreased. This is due the problems that were faced by TNKK management where is all the facilities, activities, services, and accommodation cannot be recovered as before.

**Table 1.3** : Visitors (local and foreign) to Taman Negara Kelantan from 2010 to 2017

No.	Year	Visitors		Total
		Local	Foreign	
1	2010	6,683	251	6,934
2	2011	5,253	196	5,449
3	2012	4,796	238	5,034
4	2013	3,001	779	3,780
5	2014	5,079	257	5,336
6	2015	3,265	63	3,328
7	2016	4,242	37	4,279
8	2017	2,601	32	2,633
<b>Overall Total</b>				<b>36,803</b>

Source: Author's survey (2018)

### 1.1.2 Types of tourism

Tourism goals are promoted cultural awareness, tolerance and commitment for culture and the environment and preservation and betterment of local populations worldwide. There are many types of tourism that allowed participation from the local community, particularly in terms of the development and operations of tourism. The examples types of tourism are adventure tourism.

Adventure Tourism is a type of tourism that served visitors with fun and thrills activities. These activities really enjoy by tourists under the supervision of trained guide and adventurous is undertaking in the hills, sea, rivers and jungles where the involvement of life risks. Examples of these activities are hiking, rock climbing, river rafting, scuba diving, kayaking and so on (India, 2015). Besides Adventure Tourism, Agricultural Tourism is a type of tourism that famous among the visitors. This tourism is an activity that conducted tourists to agriculture, farm management and animal husbandry. Examples of activities for this tourism are tourists can visit the field in rural



areas and see how the grow crops of villagers. Then, they will get information about the usage of fertilizers in and get to know about harvesting process (Cooper & Shepherd, 1997).

Educational Tourism also types of tourism that really important for visitors. This is due to tourism that goes to educate the tourists especially when they are visiting other countries. For examples are they know about the lands, people, geography, culture, weather, eco system, economy, demography or general conditions of living of a foreign country. This research is discussed about ecotourism that provided in the world and it is focus on ecotourism in Malaysia.

### **1.1.3 Importance of Ecotourism in Malaysia**

Nowadays, tourism sector plays the role in realizing the communities on how important of resources at protected area to human and other living things. Ecotourism is very important in conserving environmental and socioeconomic development. When it is being implemented in many countries, it will help in increasing employment and entrepreneurship including at a local level. Ecotourism also will increase the income and expenditure of local people (Anup et al., 2015). This sector minimizes environmental degradation and improves the sustainability of the environment in ecotourism sites. Illegal activities at the protected area also will be eliminated and management of protected area will become more efficient.

## 1.2 Problem Statement

The problem statement of this study is facilities and services provided by TNKK are not fulling the visitor's expectation. For example, accommodation at TNKK is not in a good condition and was not operated as before. This is due to the flood that happened at TNKK during 2014. Other than that, all the facilities at TNKK cannot be covered as before and most activities at TNKK cannot be held. Besides that, the government also does not take part to improve facilities at TNKK. Even though facilities and services at TNKK are not proper as before, but there are visitors doing a visit at TNKK to join activities such as fishing and camping. Visitation from this kind of visitors can be estimated that, most of them still concern the natural beauty at TNKK. It can be seen that, the spirit of love for the environment still exist especially among people who are visited TNKK.

In order to identify whether they still care about the natural resources at national park, it is proved from how much the visitor's willingness to pay for conservation and enjoy nature at TNKK. Visitors are being asked for the best level entrance permit to be charged. The willingness to pay in this study not influenced by the visitor's satisfaction on services only, but it also influenced by the visitor's spirit to conserve the environment in the future. Other than that, it can improve management of TNKK and improve the visitor's knowledge that related to sustainable development.

### 1.3 Objectives

The objectives of the study are;

1. To determine the visitor's satisfaction based on ecotourism facilities and services of Taman Negara Kuala Koh.
2. To estimate the visitor's willingness to pay for conservation of the resources at Taman Negara Kuala Koh using conjoint analysis method.

### 1.4 Scope of Study

This study was conducted in TNKK. The reason for this site was chosen because it is one of the attractive parks in Kelantan after Gunung Stong National Park. The data for this research were collected by doing a survey and distribute a questionnaire among visitors in this site. The questionnaires were distributed to visitors that visited this site whether they are foreign or local visitors. The data that collected from the questionnaire was identified the visitor's satisfaction at TNKK and also it is influencing the willingness to pay among visitors.

Willingness to pay among visitors was influenced by the visitor's satisfaction towards services and facilities at TNKK. The data was collected by doing a survey and distributed questionnaire among visitors. The questionnaire consists of demographic info, the visitor's satisfaction and how much willingness to pay among visitors to conserve this protected area. The result is very important for the management for the future and to overcome the problems in this area.

### 1.5 Significance of Study

This study was carried out to find the benefit of ecotourism resources at TNKK. The finding of the research can be significant to identify a human's concern on resources in this park by revising the current entry rate for the natural attraction at TNKK. Then, this research was significant to identify which factors were threatening tourist's satisfaction towards ecotourism resources at TNKK. As far as is known, national park is very important in generating income where it is used for park management and support nature conservation. The entrance fees were used to conserve flora and fauna at this park from extinction for future generation. Other than that, by finding the threatening at this park, this study will help the TNKK management improve what is lacking on this site. Then, it also will increase knowledge that related to sustainability among tourists. The result is tourists could balance the relationship between social, economic and also environment.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Ecotourism

Generally, ecotourism illustrated by two criteria which are environmentally responsible and socially and culturally sound. In finance conservation and alternative livelihoods, ecotourism is an effective means under the right circumstances. In this concept, the important asset that involved in tourism promotion is natural beauty where is, it is known as “Green washing”

Principles of ecotourism that should be consider in protecting the resources are minimize negative impacts that could affected protected area, preservation of ecological carrying capacity and ecological balance, ensuring acceptance of tourism development and environmental friendly transport alternatives. The economic value of natural areas has being indicated by the development of ecotourism where is, it is related to recreation and tourism, local economic development and socio-cultural development.

From TIES (The International Ecotourism Society), ecotourism can be defined in conserving the environment and sustains the well-being of local people and it also known as travel to natural areas (The International Ecotourism Society, 2015). IUCN is famous as World Conservation Union states in 1996 and it has defined ecotourism as environmentally responsible travel and visitation to relatively undisturbed natural areas,

in order to enjoy and appreciate nature (including cultural features) that promotes conservation, has low negative visitor impact, and provides for beneficially active socio-economic involvement of local populations (Wood, 2002).

During its 1st World Conservation Congress that held in Montreal, International Union for Conservation of Nature (IUCN) officially has adopted ecotourism. According to (Ceballos-lascurain, 2006), ecotourism is defined environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature and any accompanying features whether in both past and present. It promotes conservation, has low negative visitor impact, and provides beneficially active socio-economic involvement of local populations.

## **2.2 Ecotourism resources and services**

In developing any economy, resources and facilities are important role in improving economic growth. According to Grimsley, (2018) economic resources is important factors that used in producing goods or providing services. This resource also known as input that creating and providing services. Other than that, parking lots, roadways, grounds and any tourism facilities are examples of ecotourism services that provided for visitors when they are in use as recreational or community center facilities. Regarding to Fallis, (2013), ecotourism services defined as performance of work that offering services to the visitors in response to the needs and demand. Other than that, it is designed to fulfill basic functions at this site such as information, transport, accommodation, food, safety and recreation (Fallis, 2013).

### **2.3 Protected Area**

Based on the Stolton, (2007), protected area is defined as protection and maintenance of biological diversity that focus on the area of land or sea. Other than that, this protection is managed through legal and is involved in protecting natural and associated cultural resources. While according to IUCN et al., (2015), protected areas are places where a lot of efforts are made for preservation. The preservation not only wild species, but also involved the ecosystems in which species live. In parts of the world natural ecosystems maintained large areas regarding to the resources that being protected tightly while most of another landscape has been transformed for agriculture and industry.

### **2.4 Conjoint Analysis Method**

Form the previous article, it is stated that on the overall benefit that obtained from a particular good or service can be defined from conjoint analysis. This technique is specifically designed to look at the impact of different attributes on the overall benefits. Besides that, the importance of different attribute can be established from this analysis where is it involved service or intervention and the trade-offs individuals (Ryan et al., 1998). Other than that, the judgements of goods and scenario are determined as structure of preferences for primary purpose of CJ. Presenting the individual with a set of alternative goods or by presenting attributes of goods is a choice that can be used to accomplish the analysis. The example that preference data for this analysis is comprised of the attributes money, horsepower, and color. Other than that, CJ is being used to establish the relative importance of these independent attributes (Farber & Griner, 2000).



## 2.5 Comparison between CVM and CJ

A few of studies have running a comparison between Contingent Valuation Method (CVM) and with other types of stated preference techniques. Contingent valuation method (CVM), is one of the method that being presented with a hypothetical contingency scenario. This method will ask people to explicit the scenario for example like improved air quality. Other than that, there is also another method that can be used to explicit the scenario where is by using Conjoint analysis (CJ) method. This method is presented with a set of hypothetical scenarios where is it involved various levels of two or more attributes and are asked people to choose. Besides that, people can rate, or rank structure of their preferences toward these attributes and it is based on their choices (Farber & Griner, 2000).

Method that used in this study is Conjoint Analysis Method (CJ). According to (Boxall et al., (1996), the empirical evidence suggests that WTP estimates derived from CJ (or choice) studies is more preferred rather than CV method because it is significantly larger than those obtained from the CV method. For example, Stevens et al., (2000) concluded that estimates for two types of water purification programs for CJ Willingness to Pay were four to five times larger than the corresponding CV estimates. Other than that, Farber & Griner, (2000) found that CJ is most referred rather than CVM method because CJ method will determine the structure that underlie the judgement of goods scenario while, CVM method will elicit people's preference for public goods of willing to pay for specific improvement. Then, CJ method is preferred in this research because this method can elicit willingness to pay among visitors at TNKK. Example of experiment that used this CJ method are study of water quality by quantifying



environmental preferences (Evans & Lindner, 2012). Then, Johannesson & Jönsson, (1991) uses CJ for a river in Pennsylvania where is to estimate the valuation of water quality improvements.

## **2.6 Logistic Regression Analysis**

According to Fang, (2013), the methods that employed in logistic regression is followed the same general principles in linear regression. Regression analysis was used in this study to estimate the result of logit regression model for willingness to pay among visitors at TNKK. This analysis aims to identify the significant level of the variables that influenced willingness to pay. Education level and income level is an independent variable in this study. According to Güler, (2013), it stated that univariate regression analysis is a regression that consists of one single independent variable while, multivariate regression analysis is a regression that consists of more than one independent variable.

## **2.7 Economic Valuation**

Functional tools that being used to conserve and manage natural ecosystems is a definition for economic valuation of ecosystem services (de Groot et al., 2012 ; Costanza et al., 2014) . In allocating the resources, the main purpose of economic valuation is to identify socially desirable improvements.

From the application of economic evaluation, it can be used to determine damages and compensation that contribute to injured parties and in the used of environment and natural resources, it can improve social management. The problem that always faced by environmental resources is limited information of price, costs and quantity that consumed. Other than that, these resources are difficult to determine benefits and resources. However, Nuva et al., (2009) found that economic valuation can be used to solve the problems that related to Willingness to Pay (WTP). This finding is involved non-market values where it can be categorized into two types where is use values and non-use value. Use value is a value of asset that will supply to society from the active use of asset, while, non-use value is a value that never intend by society to use this asset directly.

Based on previous study, Nuva et al., (2009) stated that non-market valuation is one of the economic valuation technique that can be used to rate the environmental goods and services. This technique can identify the impact of economic decisions and it can estimate all the economic benefits from environmental resources (Nuva et al., 2009). According to Costanza et al., (2014), economics and ecology important used in conjunction while, economic valuation of environmental changes is influenced by people's preferences. Other than that, Barbie et al., (1997) stated that quantitative values toe the goods and services that provided by environment resources is defined as economic valuation whether not market prices are available. This method can be divided into two methods which are direct and indirect methods. As mentioned before, this study used CJ method to collect the data. CJ method is categorized as direct method where is, consumers will be asked about willingness to pay and acceptance for an alteration in

ecological amenity. Individual do not actually make any a\changes and it is called as stated preference technique (Yadav & Sahu, 2015).

## **2.8 Willingness to Pay (WTP)**

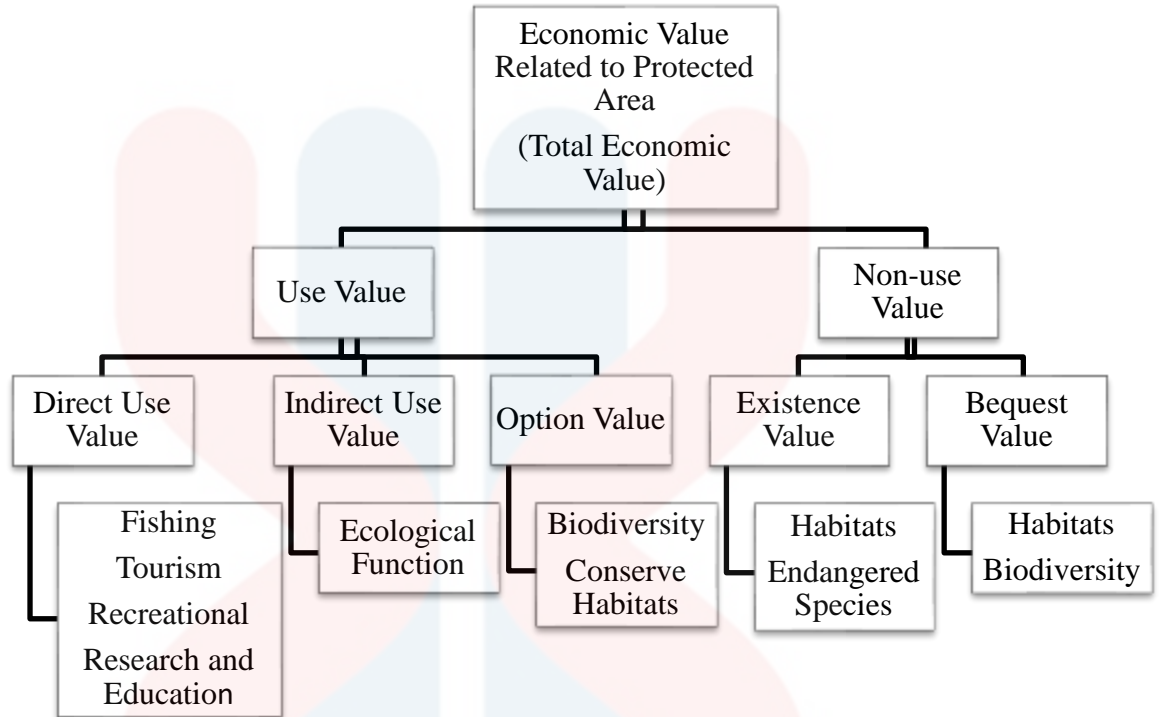
Based on previous study, Kamri et al., (2017) stated that level of satisfaction will influence Willingness to pay among people and it refers to the intention of people whether they are able and want to make any changes. Other than that, based on the welfare theory by Dupuit changes in price and quantity or quality of goods and services provided is influenced by welfare economics that was dealing on how to derive the measures of a change in individual satisfaction (Markandya et al., 2002).

## **2.9 Total Economic Value**

Human societies mostly depend on biodiversity. The improvement of productivity and resilience of ecosystems, both natural and human-managed, and enhances their capacity to provide services to human is a proof when biodiversity provide the services. Biologists doubt that humans could survive the loss of a really major fraction of the world's biodiversity because of the importance of these services (Myers, 1997). Many of the services provided by biodiversity are public goods this economic perspective conserving biodiversity provides one very sharp challenge The quintessential public good is example of knowledge and it is one of the most important goods that come from biodiversity. Besides that, the problem can be seen from economic valuation, market economies do not normally work well for public goods. The inability of producers to

exclude those who do not pay implies that the return to providing public goods is small, and the free rider problem also suggests that even in a non-market context governments will have trouble in providing public goods at an efficient level. So the importance of biodiversity provides a challenge to economist need to invent mechanisms for conserving this at an economically proficient level in spite of the fact that it is providing a number of services that are public goods (Ny, 2002).

Figure 2.1 showed components of Total Economic Value. This value consists of use value and non-use value. Use value consists of three value which are direct use value, indirect use value and option. Direct use value represents fishing, tourism, recreational, research and education. Indirect use value represents ecological function while option value represents biodiversity and conservation of habitat. Other than that, non-use value consists of existence value and bequest value. Existence value represents habitats and endangered species while bequest value represents habitats and biodiversity.



**Figure 2.1:** Components of Total Economic Value  
(Source : Salcone, Brander and Seidl, 2016)

## CHAPTER 3

### MATERIALS AND METHODS

#### 3.1 Data Source

In this research, the primary and secondary data was chose as a source of data to achieve the objectives. For primary data, the data was collected from study area while for secondary data, the data was provided from previous study such as journal articles.

##### 3.1.1 Primary Data Collection

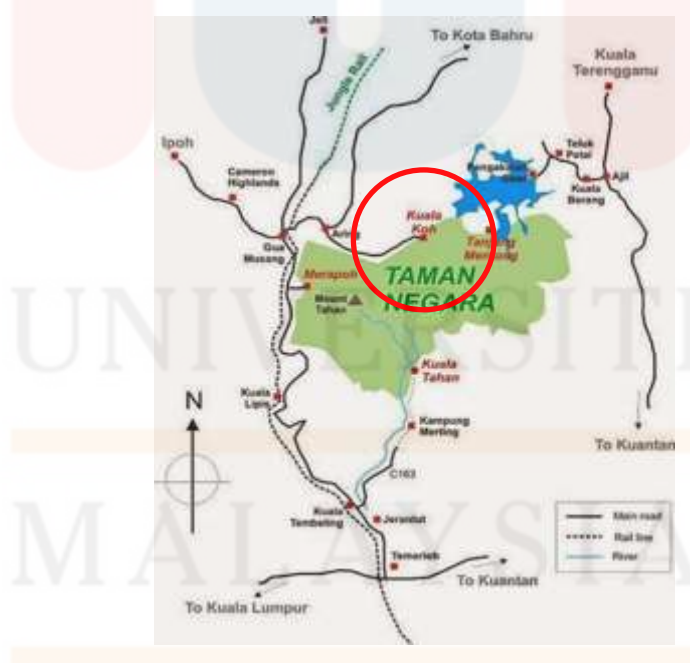
The primary data was collected based on survey in this study area. The parameter for this survey is willingness to pay among visitors that visited TNKK. The survey was held to elicit willingness to pay among visitors and determine the visitor's satisfaction based on ecotourism facilities and services at Taman Negara Kuala Koh.

##### 3.1.2 Secondary Data Collection

For secondary data collection, all the data was collected based on previous study. This data was recorded based on data that was collected by someone and the information is about TNKK. The resources are from internet search, website, articles, journals, books, and other published.

### 3.2 Study Location

Taman Negara Kuala Koh is situated in the Territory of Gua Musang, Kelantan, near borderlines Pahang and Terengganu. It is located within the Reserves forest of Bukit Hantu and Lebir. This national park is the biggest attraction among tourists where it is known as the perfect ecotourism destination and being part of R&D work. The diversity of flora and fauna and tropical rainforest are types of attraction that are having in this park. This site is easily accessible via the Gua Musang-Kuala Krai road and the journey from Gua Musang town to this park is 96 kilometers. While the journey from Kuala Lumpur and Kota Bharu is 290 km and 96 kilometers respectively. Aring junction which is located on the Gua Musang to Kota Bharu road is a park entrance for this site. From here, the journey is 45 km via paved road it passes through Felda oil palm estates.



**Figure 3.1** : Location of Taman Negara Kuala Koh  
(Source : Simonox 2012)

### 3.3 Sample Size

In this research, 113 respondents were chosen in this survey. These respondents were given questionnaire and answer the question that being asked. All the visitors were chosen as respondents while for grouping visitors only the leader of group was chosen as respondents to avoid redundancy. The questionnaire is focus on satisfaction towards facilities and services at TNKK and to elicit willingness to pay among visitors in this area. The Slovin's formula (1960) is used to calculate sample size in this study. The formula is as follows;

$$n = \frac{N}{1 + Ne^2}$$

In the formula above indicate that n is the sample size, N is the population size, e is the margin error and 1 is a constant value.

### 3.4 Questionnaire design

In this research, the questionnaire was distributed among visitors and all the data was collected from respondents. This method is being used because it is one of the ways that can analyze what kind of people they are besides knowing their personal background. Other than that, questionnaire also does not require as much effort and a lot of money for the information. This questionnaire divided into three categories which are section A, section B and section C. The section A, it was target to collect data about demographic info: income, evaluation, age, education, gender, nationality and so on. Then for section B, questionnaire was designed to elicit information on the visitor's satisfaction on facilities and services that provided by TNKK. For the last section which



is section C, it was designed to obtain the visitors willingness to pay (WTP) of the visitors for the entrance permit to TNKK. This questionnaire also related to sustainability development especially on how to protect this area. The results show that different gender, age, education level will show a different type of opinions and demands.

Visitor's rating on these facilities and services were influencing willingness to pay among the visitors. WTP of this questionnaire showed that how many visitors that willing to pay to enter this protected area especially the permit was quite expensive. The permits were used to improve this protected area and become better than before and can improve public goods. Two languages were prepared in this questionnaire which is English and Bahasa Malaysia. In order to reduce the language barrier and to allow the respondents to fully understand the questions the questionnaire was prepared in two languages.

### **3.5 Reliability Test**

Reliability test was conducted to determine whether respondents can understand the questionnaire, to estimate the time to complete the survey and to identify the problem in completing this research. Other than that, preliminary test also to improve validity of CJ results. Visitors were chosen as respondents. They answered a question about this area and also related to sustainable development. Then, the question also focuses about willingness to pay among visitors in this area. The reliability test was conducted in June 2018. Cronbach Alpha is a reliability test that conducted within SPSS.

This test was obtained to measure the internal consistency. For example reliability of the measuring instrument was questionnaire. The acceptable reliability value for this test is 0.7. This questionnaire considered as reliable and significant when questionnaire of reliability result is higher than 0.7. Multiple Likert scale statements are a type of scale that commonly used when the questionnaire is developed. This test was determined whether the scale is reliable or not (Priya Chetty and Shruti Datt, 2017).

In this study, Cronbach's alpha was used to test reliability of visitor's satisfaction on facilities and services that provided by TNKK. 30 of visitors were chose as respondents to identify validity of the questionnaires. 46 variables were used in the factor analysis and Cronbach's alpha ranged between 0.812 till 0.957. Table 3.6 showed that Cronbach's alpha for appreciate the resources is 0.812, while level satisfaction on resources is 0.860. Level satisfaction on facilities and services showed the highest value of Cronbach's alpha it is 0.957. Next, the total Cronbach's alpha for whole items is 0.947. Acceptable and significant value for Cronbach's alpha is 0.7 and above. The results showed that all the factors value were acceptable.

**Table 3.6** : The results for Reliability Test for visitor's satisfaction on resources and facilities

<b>Factor</b>	<b>Number of Items</b>	<b>Cronbach's alpha (<math>\alpha</math>)</b>	<b>Cronbach's alpha for whole items</b>
Appreciate the resources	7	0.812	
Level satisfaction on resources and activities	9	0.860	0.947
Level satisfaction on facilities and services	30	0.957	

Source : Author's survey (2018)

### 3.6 Data Analysis

IBM's Statistical Package for Social Sciences (SPSS) was performed to analyze the data and the data were collected from descriptive analysis, logistic regression analysis and Conjoint Analysis Method (CJ).

#### 3.6.1 Descriptive Analysis

Descriptive analysis was used to get information of frequency, percentage and mean on socioeconomics variables. The variables that being analyzed such as ages, education level, level of income, gender of the respondents and level satisfaction of visitors towards facilities and services at TNKK.

#### 3.6.2 Regression Analysis

Regression analysis employs a linear junction of two or more variables. This analysis explained the variation in a dependent variable. This analysis was predict the observed values of the dependent variable using a linear function of the observed values of independent variable (Campbell & Campbell, 2008). The formula as below:

$$Y = \beta_0 + \beta_1 X + u$$

The slope parameter ( $\beta_1$ ) refers to magnitude and direction of that relation, and the when the independent variable is absent, status of the dependent variable is given by the intercept parameter ( $\beta_0$ ). The amount of variation captured by an error term ( $u$ ) and it is not predicted by the slope and intercept terms. The regression coefficient ( $R^2$ ) shows how well the values fit the data.

### 3.6.3 Logistic Regression Analysis

According to (Ae, 2013), Logistic Regression Analysis is known as logistic model or logit model. This model will analyze the relationship between independent variables and dependent variables. Independent variable can be formed in a multiple independent variables. Binary logistic regression is model that being used when the dependent variable is dichotomous choice while independent variable either is continuous or categorical (Ae, 2013). In this research, the model that being used to analyze the data is binary logistic regression. The formula as below;

$$\hat{p} = \frac{\exp(B_0 + B_1 X)}{1 + \exp(B_0 + B_1 X)} = \frac{e^{B_0 + B_1 X}}{1 + e^{B_0 + B_1 X}}$$

$B_0 + B_1 X$  is familiar equation for the regression line. *Exp* or sometimes is written as  $e$  is a exponent function. P is computed from the regression equation.

### 3.6.4 Conjoint Analysis Method

Conjoint analysis used survey question to obtain the society's preference for public good. Conjoint analysis questionnaire was designed to elicit WTP and estimate for change in the level of provision of a public good. The questionnaire for this research was gathered secondary information such as visitor's willingness to pay for ecotourism resources at TNKK.

This dichotomous choice included in the questionnaire which is Yes or No answers. The main questionnaire of this research was rate based on their satisfaction of facilities and services that provided at TNKK. Then it also related to utility of satisfaction among visitors.

To elicit willingness to pay among visitors, the discrete choice was used to approach respondents. These parts were presented with a series of 'A or B' style choices. Respondents were being asked to indicate which they prefer for each series. Besides that, this questionnaire were used the rating approach for satisfaction level. Respondents were presented with various question and situation from the Orthoplan design (SPSS) and they were asked to state their level of preference for each situation on a scale of one to five. One indicated 'strongly disagree', and five indicated 'strongly agree' (Ryan et al., 1998). This method is based on five Point Likert-type scales which are to indicate the respondent's satisfaction in this research area. Other than that, nominal was used to analyze gender, visitor's background, education level, occupation and so on.

Furthermore, CJ was used to discover how much the respondent's willing to pay for conservation of the park and it is called an open ended question. The respondents were asked generally how much they are willing to pay for conservation fee and also the question was related on how to sustain the environment by showing their willingness to pay in conserving this protected area.

## CHAPTER 4

### RESULTS AND DISCUSSION

#### 4.1 Sample characteristics

In this study, questionnaire had being distributed to visitors that considered as respondents and their background was collected by comprising the gender, race, age, marital status, education level, occupation, citizenship, monthly income level and environmental group or NGO. Table 4.1 shows demographic info of respondents that were visited Taman Negara Kuala Koh. It indicates that 77.9% of male and 22.1% were visited Taman Negara Kuala Koh. The race showed that most of respondents were consisted of 99.1% Malay and only 0.90% of Chinese. The range age of respondents consisted of 9.70% below 20 years old, 38.9% of 21 till 29 years old, 33.6% of 30 till 39 years old and 17.7% for 40 years old and above. This result showed that different pattern of ages were visited TNKK. For marital status, it was 41.6% for single while 58.4% for married. Education level of respondents that visited TNKK obtained from different level of education which is 1.80% was from primary school, 45.1% from secondary school, 9.70% from college, 41.6% from university and 1.80% were others. While for occupation, most of them were from private employee which is 36.3%. They also came from another sector which were 25.7% from government sector, 21.2% from self-employee, 11.5% were students and 5.30% were unemployed. All the respondents were local people. Then, monthly income level has been collected from the survey where is,

respondents with a monthly income level for RM 1000-2000 was 45.1%, RM 2001-3000 was 21.2%, RM 3001-4000 was 15.9% and for RM 4001 and above was 17.7%. Besides that, respondents also being asked about their membership in any environmental organization either it is government or non-government. The results showed that only 5.3% of them were in environmental organization such as Krai Outdoor Team, Persatuan Pencinta Alam, Rimba, MAEH and Perikanan Kajian Kelah. While majority of them which is 94.7% was not in any environmental organization.

**Table 4.1:** Demographic Info

<b>Variable</b>	<b>Frequency</b>	<b>Percent (%)</b>
<b>Gender</b>		
Male	88	77.9
Female	25	22.1
<b>Race</b>		
Malay	112	99.1
Chinese	1	0.90
<b>Age</b>		
<20	11	9.70
21-29	44	38.9
30-39	38	33.6
>40	20	17.7
<b>Marital status</b>		
Single	47	41.6
Married	66	58.4
<b>Education level</b>		
Primary	2	1.80
Secondary	51	45.1
College	11	9.70
University	47	41.6
Never been to school	2	1.80
<b>Occupation</b>		
Government	29	25.7
Private employee	41	36.3
Self-employee	24	21.2
Student	13	11.5
Unemployed	6	5.30



<b>Citizenship</b>		
Local	113	100.0
<b>Monthly income</b>		
1000-2000	51	45.1
2001-3000	24	21.2
3001-4000	18	15.9
>4001	20	17.7
<b>Environment group or NGO</b>		
Yes	6	5.3
No	107	94.7

Source : Author's survey (2018)

#### **4.2 Visitor's satisfaction on resources and facilities that provided by Taman Negara Kuala Koh (TNKK)**

The table 4.2 shows visitor's satisfaction on resources and facilities that provided by Taman Negara Kuala Koh (TNKK) and it indicated that it was a first time for 35.4% from them to visit TNKK, 29.2% was second time for them, 6.2% was third time for them and 29.2% of them had visited TNKK more than fourth time visit. For distance from destination, it showed that 61.1% of respondents were visited TNKK with distance 0-150km. Mostly respondents that visited TNKK with 0-150km were came from Kelantan state. While, 15.0% of respondents travelled a distance of 151-250km from their homes, while 19.5% for a distance 251-350km and 4.4% for 351-450km to TNKK. Most of respondents were come from Selangor, Kuala Lumpur, Seremban, Perak, Pahang, Terengganu and also Melaka. All of them were not from Kelantan and it can be seen that most of them more interested to the nature and ecotourism environment. Meanwhile, it is about 10.6% of respondents visited TNKK to escape from city, 40.7% to enjoy the nature and 61.9% are others by joining another activities such fishing and vacation.



Besides that, 85.8% of respondents got the information on TNKK from family and friends, 8.0% from newspaper, 47.8% from internet, and 6.2% from another sources such as flyers.

**Table 4.2** : Visitor's satisfaction on resources and facilities that provided by Taman Negara Kuala Koh (TNKK)

<b>Variable</b>	<b>Frequency</b>	<b>Percent (%)</b>
<b>Number of times visited</b>		
First time visit	40	35.4
Second time visit	33	29.2
Third time visit	7	6.2
More than forth time visit	33	29.2
<b>Distance from destination</b>		
0-150	69	61.1
151-250	17	15.0
251-350	22	19.5
351-450	5	4.4
<b>Reason for visiting TNKK</b>		
Escape from city	12	10.6
To enjoy the beauty	46	40.7
Others	70	61.9
<b>Source of information on TNKK</b>		
Family and friends	97	85.8
Newspaper	9	8.0
Internet	54	47.8
Others	7	6.2

Source : Author's survey (2018)

MALAYSIA

KELANTAN

This questionnaire had being asked on how they appreciated the resources when they were visited protected area. 49.6% of respondents were agreed to know that there were many types of species can be found at protected area. It can be seen that most of respondents knew that protected area is an area that still provided rare species and extinct habitat. Other than that, 61% of respondents were agreed to know types of trees at protected area. It showed that respondents alerted that protected area is a place that rich with different types of trees and it cannot be found at urban area. 63% of respondents were agreed that surrounding of protected area is closed to nature and 60% of them were agreed that maintaining the natural view is a way to appreciate the resources. Other than that, 37.2% of respondents agreed that when water is cleaned and can be drunk, it also can be classified as appreciating the resources because the sources were not being polluted by any pollution.

**Table 4.3** : Appreciate the resources

<b>Characteristics</b>	<b>Mean</b>	<b>1 Freq (%)</b>	<b>2 Freq (%)</b>	<b>3 Freq (%)</b>	<b>4 Freq (%)</b>	<b>5 Freq (%)</b>
Many types of species can be found	3.83	1 (0.9)	4 (3.5)	30 (26.5)	56 (49.6)	22 (19.5)
Different types of tress on that area	3.79	1 (0.9)	4 (3.5)	30 (26.5)	61 (54.0)	17 (15.0)
Surrounding area that closed to nature	4.06	0 (0)	5 (4.4)	14 (12.4)	63 (55.8)	31 (27.4)
The natural view is maintained	3.96	1 (0.9)	4 (3.5)	21 (18.6)	60 (53.1)	27 (23.9)
The water is cleaned and can be drunk	3.54	6 (5.3)	7 (6.2)	39 (34.5)	42 (37.2)	19 (16.8)

It is suitable for swimming and other activities	3.62	4 (3.5)	7 (6.2)	37 (32.7)	45 (39.8)	20 (17.7)
Fishing activity	4.20	2 (1.8)	2 (1.8)	13 (11.5)	50 (44.2)	46 (40.7)

1 : strongly disagree, 2 : disagree, 3 : neutral, 4 : agree, 5 : strongly agree  
Source; Author's survey (2018)

Table 4.4 shows level satisfactions on resources and activities at TNKK. It showed that 66.4% of respondents were interested with the diversity flora and fauna. 66.4% of respondents were agreed that TNKK's forest can be classified as tropical rainforest. Other than that, 68.1% of respondents were agreed that natural view at TNKK was maintained and 58.4% for air while 50.4% for river. Based on the results, it showed that level satisfaction of river is lower rather than flora fauna and tropical forests because it has low water clarity. Meanwhile, flora fauna and tropical forests showed the highest level satisfaction because the natural resources were being protected at this area. For activities at TNKK, most of respondents were attracted with fishing activity at TNKK which is 62.8%. Most of respondents stated that, TNKK provided different types of fish and cannot be found at another area. Other than that, TNKK also allowed the visitors to catch the fish and brought to home. The second highest activity that attracted by respondents is jungle trekking which is 56.6%. Besides that, camping and sightseeing also being attracted by visitors which is 50.4% and 43.4% respectively.

**Table 4.4** : Level satisfaction on resources and activities

Characteristics	Mean	1	2	3	4	5
		Freq (%)	Freq (%)	Freq (%)	Freq (%)	Freq (%)
The diversity flora and fauna	4.09	0 (0)	0 (0)	14 (12.4)	75 (66.4)	24 (21.2)
Tropical forest	4.16	0 (0)	0 (0)	10 (8.8)	75 (66.4)	28 (24.8)
Natural view	4.15	0 (0)	1 (0.9)	8 (7.1)	77 (68.1)	27 (23.9)
Air	3.98	0 (0)	1 (0.9)	23 (20.4)	66 (58.4)	23 (20.4)
River	3.68	0 (0)	6 (5.3)	37 (32.7)	7 (50.4)	13 (11.5)
Jungle trekking	3.76	0 (0)	8 (7.1)	26 (23.0)	64 (56.6)	15 (13.3)
Camping	4.08	0 (0)	5 (4.4)	16 (14.2)	57 (50.4)	35 (31.0)
Sightseeing	3.81	1 (0.9)	3 (2.7)	13 (11.5)	47 (41.6)	49 (43.4)
Fishing	4.24	0 (0)	4 (3.5)	26 (23.0)	71 (62.8)	12 (10.6)

1 : strongly disagree, 2 : disagree, 3 : neutral, 4 : agree, 5 : strongly agree  
Source : Author's survey (2018)

Based on Table 4.5, most of respondents stated that it is quite difficult to reach at TNKK and 39.8% of respondents were not satisfied with the road to TNKK. The results suggested repairing the main road to TNNK so it will be easy for visitors to visit TNKK and 68.1% of them agreed that TNKK is suitable as recreation area. 62.8% of them agreed that this national park is suitable for recreational activity. 67.3% of visitors agreed that TNKK has a wide area and many activities can be done at this area such as

camping, teambuilding and so on. Even though TNKK has a good area for activities, but in term of accommodation, 35.4% of respondents were not satisfied with accommodation. This is due to flood during 2014 and accommodation cannot be implemented as before. The chalet was not operated until now. 39.8% of respondents were not satisfied with chalets because it was not in a good condition. 48.7% of respondents were agreed that information center provided good information such as the price for entrance permit, activities that provided location for fishing activity, jungle trekking trail and so on. 40.7% of respondents were not satisfied with Surau because it was quite messy and 41.6% of respondents were not comfortable to perform their prayer especially for Muslim. 44.2% of respondents not satisfied with signage to TNKK because it was not in a good condition and not giving direction to them. Then, 42.5% of them not satisfied with public toilets because it was not cleaned and not comfortable.

**Table 4.5** : Level satisfaction on facilities

<b>Characteristics</b>	<b>Mean</b>	<b>1 Freq (%)</b>	<b>2 Freq (%)</b>	<b>3 Freq (%)</b>	<b>4 Freq (%)</b>	<b>5 Freq (%)</b>
Accessible to reach	2.66	11 (9.7)	45 (39.8)	33 (29.2)	19 (16.8)	5 (4.4)
Recreation area	3.65	1 (0.9)	5 (4.4)	28 (24.8)	77 (68.1)	2 (1.8)
Suitable for recreational activity	3.70	2 (1.8)	6 (5.3)	25 (22.1)	71 (62.8)	9 (8.0)
Wide area	3.85	0 (0)	4 (3.5)	21 (18.6)	76 (67.3)	12 (10.6)
Campsite	3.71	0 (0)	8 (7.1)	22 (19.5)	78 (69.0)	5 (4.4)
Wide area	3.81	0 (0)	4 (3.5)	23 (20.4)	77 (68.1)	9 (8.0)

Suitable for camping	3.80	0 (0)	6 (5.3)	18 (15.9)	82 (72.6)	7 (6.2)
Accommodation	2.82	7 (6.2)	40 (35.4)	38 (33.6)	22 (19.5)	6 (5.3)
Chalet in a good condition	2.59	13 (11.5)	45 (39.8)	34 (30.1)	17 (15.0)	4 (3.5)
Safety level is good	2.65	17 (15.0)	30 (26.5)	42 (37.2)	23 (20.4)	1 (0.9)
Information center	3.42	8 (7.1)	3 (2.7)	41 (36.3)	55 (48.7)	6 (5.3)
Provide good information	3.48	1 (0.9)	10 (8.8)	41 (36.3)	56 (49.6)	5 (4.4)
Surau	2.79	3 (2.7)	46 (40.7)	39 (34.5)	22 (19.5)	3 (2.7)
Comfortable	2.77	2 (1.8)	47 (41.6)	42 (37.2)	19 (16.8)	3 (2.7)
Signage	3.35	3 (2.7)	50 (44.2)	44 (38.9)	12 (10.6)	4 (3.5)
Give direction to visitors	3.31	4 (3.5)	48 (42.5)	44 (38.9)	13 (11.5)	4 (3.5)
Public toilets	2.50	16 (14.2)	48 (42.5)	27 (23.9)	20 (17.7)	2 (1.8)
Toilet is cleaned and comfortable	2.53	15 (13.3)	49 (43.4)	24 (21.2)	24 (21.2)	1 (0.9)

1 : strongly disagree, 2 : disagree, 3 : neutral, 4 : agree, 5 : strongly agree

Source : Author's survey (2018)

Table 4.6 shows level satisfaction on services. 57.5% of respondents stated that safety level at TNKK is quite good because the staff give a good cooperation especially when it involved Monsoon season. Staff will inform the visitors about the season before proceed with any activities. 61.1% of them agreed that safety level during activity was good because the guider gives a good cooperation. 55.8% of respondents agreed that the boatman expert in handling the boat during activity and they were good in guiding the visitors along the road. 41.6% of respondents agreed that staff guide services at TNKK is good because most of guiders always give a help and guide in doing activity. Cleanliness at TNKK, 65.5% of respondents agreed that cleanliness along the trail for jungle trekking at TNKK is quite good and campsite area also cleaned. 60.2% of respondents agreed that staff were friendly and respectful. 59.3% of them agreed that, staff always give help when needed but the number of staff at TNKK is small and they suggested adding more staff at TNKK. 46.9% of respondents agreed that signal phone at TNKK is good compare to other National Park.

**Table 4.6:** Level satisfaction on services

<b>Characteristics</b>	<b>Mean</b>	<b>1 Freq (%)</b>	<b>2 Freq (%)</b>	<b>3 Freq (%)</b>	<b>4 Freq (%)</b>	<b>5 Freq (%)</b>
Safety level	3.50	0 (0.00)	14 (12.4)	31 (27.4)	65 (57.5)	3 (2.7)
During activity	3.52	1 (0.9)	10 (8.8)	32 (28.3)	69 (61.1)	1 (0.9)
In handling the boat during activity	3.89	0 (0)	2 (1.8)	28 (24.8)	63 (55.8)	20 (17.7)

Trail along the road	3.64	4 (3.5)	6 (5.3)	30 (26.5)	60 (53.1)	13 (11.5)
Staff guide service	3.99	3 (2.7)	5 (4.4)	20 (17.7)	47 (41.6)	38 (33.6)
Always guide in doing activity	4.01	3 (2.7)	4 (3.5)	17 (15.0)	54 (47.8)	35 (31.0)
Cleanliness level	3.53	2 (1.8)	12 (10.6)	24 (21.2)	74 (65.5)	1 (0.9)
At campsite area	3.63	1 (0.9)	9 (8.0)	22 (19.5)	80 (70.8)	1 (0.9)
Along the trek	3.64	1 (0.9)	5 (4.4)	31 (27.4)	73 (64.6)	3 (2.7)
Staff were friendly and respectful	3.75	0 (0)	5 (4.4)	29 (25.7)	68 (60.2)	11 (9.7)
Always give help when needed	3.80	0 (0)	3 (2.7)	30 (26.5)	67 (59.3)	13 (11.5)
Signal at this area is good	3.64	4 (3.5)	5 (4.4)	35 (31.0)	53 (46.9)	16 (14.2)

1 : strongly disagree, 2 : disagree, 3 : neutral, 4 : agree, 5 : strongly agree

Source : Author's survey (2018)



### 4.3 Visitors Willingness to Pay (WTP) for the entrance permit to TNKK

In this study, questionnaires were distributed among visitors and one of the questionnaires section involved Willingness to pay for conservation at TNKK. Respondents needed to choose either Option A or Option B to complete the question. For Option A, it represented the current permit at TNKK which is RM 1. This option means all the facilities and services would not be improved in the future. Management of this area might not give attention to improve this protected area. For Option B, it is different from Option A where is, all the facilities and services at TNKK will be improved in the future. For examples is safety level at TNKK will be improved and activities will be upgraded from time to time. Other than that, TNKK will enhance environmental education elements among visitors and staffs. Also flora fauna and other habitats will be preserved. Besides that, entrance permit to TNKK will be increased from current permit. As suggested in questionnaire is RM 2, RM4 and RM 6. The result proved that 80.5% of respondents were chose Option B while 19.5% of them were chose Option A.

Besides distributed questionnaire to respondents, face to face techniques were applied to collect the data and also can record visitor's opinion about TNKK. Based on interview techniques, when it comes to willingness to pay for the entrance permit to TNKK, it found that 79.6% of respondents were willing to pay for conservation while 20.4% of respondents were not willing to pay. It can be seen that the number of respondents who are not willing to pay is increased than before but the result can prove that majority of respondents still concern and want to protect this protected area. Table 4.9 showed prices suggested for entrance permit in future. It can be seen that 20.4% of

respondents were not willing to pay when the permit is more than RM 1. The reason for this result is respondents stated that conservation should be funded by government and some of them were not afford to pay for higher amount for entrance fee. Besides that, they stated that the current entrance fee is enough for the service that provided by TNKK. Other than that, they agreed with the current fee RM 1, it will attract more visitors to visit this protected area.

**Table 4.7** : Options A and B

<b>Option</b>	<b>Frequency</b>	<b>Percent (%)</b>
A	22	19.5
B	91	80.5
<b>Total</b>	113	100

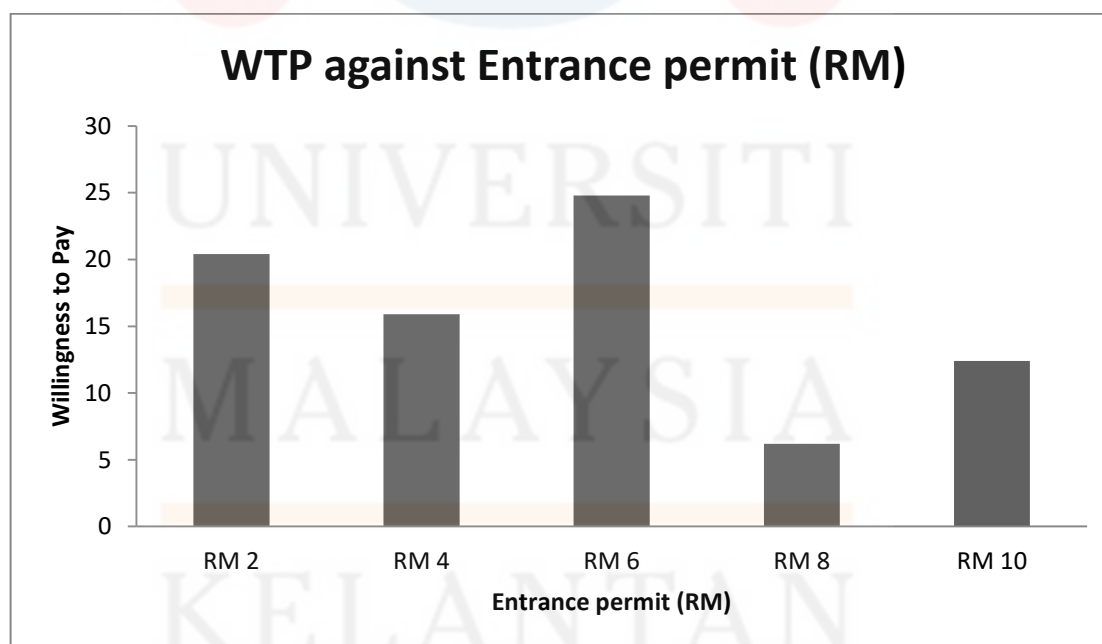
**Table 4.8** : Visitors Willingness to Pay (WTP) for Entrance permit to TNKK

<b>Willingness to Pay</b>	<b>Frequency</b>	<b>Percent %</b>
Yes	90	79.6
No	23	20.4
<b>Total</b>	113	100

**Table 4.9** : Prices suggested

<b>Price</b>	<b>Frequency</b>	<b>Percent (%)</b>
Not willing to pay	23	20.4
RM 2	23	20.4
RM 4	18	15.9
RM 6	28	24.8
RM 8	7	6.2
RM 10	14	12.4
<b>Total</b>	113	100

Figure 4.1 showed that RM 6 with 24.8% is the highest value for willingness to pay among visitors while RM 2 (20.4%) is the second highest for willingness to pay followed by RM 4 (15.9%) and RM 10 (12.4%). RM 8 with 6.2% is lowest value for willingness to pay among visitors. This result showed that most of respondents still concern to conserve the protected area by showing their willingness to pay. Other than that, based on income level with a different background, the result is quite positive because willingness to pay among visitors is high. The mean willingness to pay was RM 5.94. It was calculated from the average of their income. This value was recorded by interviewing the visitors and asked their willingness to pay based on their income. Respondents stated that this national park has potential to become famous and being attracted area among visitors either local people or foreigner. Due to the specialty that provided at this area, they suggested to upgrade and improve what is lacking at TNKK.



**Figure 4.1** : WTP against entrance permit  
(Source : Author's survey 2018)

#### 4.4 Logistic Regression analysis

In this study, to get a fit value for logistic regression, Pseudo R-Squared was used. When R-Squared is equal to 1, relationship between dependent variable and independent variable is assumed as perfect line (Wahab & Associate Professor, 2014). Pseudo R-Squared value in Table 4.10 is 0.162. It indicates 16.2% of variation in the probability of willing to pay. The coefficient for education level that showed in table 4.10 is -0.660 while 0.464 is coefficient for constant. Variable constant showed positive value while education level showed negative value.

The result showed that education level is highly significant in this study compared to another variable. Significant level for education is 0.012. Education level is significant to 1% level and the analysis showed that the result was satisfied. Based on the previous study H & Y, (2014), the study showed that educational level is significant to WTP.

According to logit regression result, education level is significant variable in this study where it is significant to 0.01. It can be concluded that, when education level is high, willingness to pay among visitors also being positive which mean they are willing to pay for conservation when the entrance permit is higher from current permit (Blomquist et al., 2009). Besides that, percentage of right prediction in this study is 79.6 percent while -2 Log-Likelihood is 107.112<sup>a</sup>.

**Table 4.10** : Result of the Logit Regression Model

<b>Variable</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>Sig.</b>
Constant	0.464	0.722	0.521
Education level	-0.660	0.263	0.012
Pseudo R-squared	0.162		
-2 Log-Likelihood	107.112 <sup>a</sup>		
Percentage of Right Prediction	79.6		

a. Variable(s): Education, Income

#### 4.4.1 Mean Value for WTP

Mean value for WTP in this study was measured by using logit regression model. This model was used to find the mean value of education level and income level. Table 4.11 showed the result for mean WTP based on education level. It is RM 1.20 per visit for all visitors.

Table 4.11 shows that WTP based on education level of primary school is RM 1.50 while for secondary school is RM 1.29. Besides that, education level for college and university are RM 1.18 and RM 1.11 respectively. Meanwhile, respondents who are never been to school showed the lowest amount for entrance permit which is RM 1.20.

**Table 4.11** : WTP based on Education level

<b>Education level</b>	<b>Entrance Permit (RM)</b>
Primary school	RM 1.50
Secondary school	RM 1.29
College	RM 1.18
University	RM 1.11
Never been to school	RM 1.00
<b>Total</b>	<b>RM 1.20</b>

## CHAPTER 5

### CONCLUSION AND RECOMMENDATION

#### 5.1 Conclusion

National park is really important to protect the resources. It can be concluded that, visitor's willingness to pay gives benefits to conserve ecotourism resources at TNKK. Objectives of this study to determine the visitor's satisfaction based on ecotourism facilities and services of Taman Negara Kuala Koh and to estimate the visitor's willingness to pay for conservation of the resources at Taman Negara Kuala Koh. Even though the level satisfaction at this area is quite negative but based on willingness to pay result, it can be seen that most of visitors still concern and care about natural resources at protected area. It is based on result of willingness to pay where is, it showed that the amount that they are willing to pay for entrance permit is RM 1.20. The value is small because the number of visitors at TNKK is small. This value is considered as minimum value that they are willing to pay for entrance permit, while the maximum value that they are willing to pay is RM 5.94. The result proves that visitors are willing to pay more than current charges for the entrance permit which is currently only RM 1 per entry. Most of them knew that protected area is an important area to maintain the nature for future generation. To improve facilities and services at TNKK, management of TNKK could apply sustainable management to protect this protected area. TNKK management should enhance environment education elements among visitors and staffs.

For example is managing solid waste at protected area to reduce pollution at protected area. Then, department that involve to protect this national should be alert with all the suggestion and find another alternative to improve this park as a better one.

## **5.2 Recommendation**

The result of this study had shown that most of the visitors arriving at TNKK are from local visitors rather than international visitors. It was influenced by friends and family based on result above. From the result above, even though TNKK's facilities was not in a good condition but number of visitors that visited to TNKK is quite positive. Due to visitation from visitors, TNKK management should repair what is lacking at TNKK. One of the problems that can be seen is signboard to TNKK. The board was not in a good condition and it quite difficult for visitors to find TNKK. It will be easy for visitors to find TNKK and they will know TNKK's location when the board is being repaired. Then signboard should be cleared and in a good condition. It will attract more people to come and also can attract international visitors to TNKK.

Besides that, TNKK should update the latest activity at online website because most of visitors want to know the update through online site. TNKK should update what kind of activities that provided and also state the activities provided based on season. This way could be done to prevent risk to any activity that being carried out. Next, TNKK should provide something new at TNKK where is, it could attract more visitors to visit TNKK. For examples are, highlight rare species that can be found, extinction species, Kelah Sanctuary, mini zoo and so on.



The results of the study suggest that TNKK should involve the Batek in co-management of TNKK followed the ICCA. ICCA refers to territories and areas conserved by indigenous peoples and local communities. This is due to natural resources that provided at TNKK surrounding area and indigenous people in this area were expert in producing a craft. One of activities could be organized by TNKK is selling Batek craft. By selling Batek handcrafts, it could attract more visitors to come to TNKK besides generate income to Batek.

Other than that, TNKK management should repair facilities that provided even it would not be same as before 2014. Accommodation is a main facility should be repaired by TNKK. This is due to most of visitors that visited this site would choose to stay in chalet rather than camping. Cleanliness level at TNKK should be improved especially related to toilet. Next, TNKK management should consider the main road to TNKK. Most of visitors that visited to TNKK complained that the main road should be repaired because the road could give risk to visitors.

Lastly, the result of the study suggest to multiple activities at TNKK. This is due to most of visitors were expected to join many activities at TNKK. Then, TNKK should improve services by improve the number of staff. The number of current staff at TNKK is small and limited. It found that not all the visitors get perfect services. TNKK management also could tag all the resources that provided at TNKK such Tongkat Ali species, Misai Kucing species and so on.



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## APPENDIX I

Date / Tarikh : \_\_\_\_\_  
Time Begin / Masa Mula : \_\_\_\_\_  
Time Finish / Masa Tamat : \_\_\_\_\_



### VISITOR SURVEY FORM

#### WILLINGNESS TO PAY FOR THE ECOTOURISM RESOURCES AND FACILITIES IN TAMAN NEGARA KUALA KOH, KELANTAN

All your answer will be kept strictly confidential

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The main objective of this study to determine the visitor's satisfaction based on ecotourism facilities and services of Taman Negara Kuala Koh (TNKK). This questionnaire will be asked about the satisfaction, opinion and willingness to pay. The finding of this study will provide more information on conservation and preservation issue of Taman Negara Kuala Koh. Your answer will be kept completely confidential and I really appreciate your cooperation.

*Objektif utama kajian ini adalah untuk menentukan kepuasan pengunjung berdasarkan kemudahan dan perkhidmatan ekopelancongan Taman Negara Kuala Koh (TNKK). Soal selidik ini akan ditanya mengenai kepuasan, pendapat dan kesanggupan untuk membayar. Penemuan kajian ini akan memberi lebih banyak maklumat mengenai isu pemuliharaan dan pemeliharaan Taman Negara Kuala Koh. Jawapan anda akan disimpan sepenuhnya dan saya benar-benar menghargai kerjasama anda.*

---

For information please contact;  
NOR HIZAMI BIN HASSIN  
013-3114458

FATIN NADIAH BINTI ZAMRI  
011-25694254

**Section A : Demographic info**  
**Bahagian A : Maklumat demografik**

1. Gender / *Jantina* :

<input type="checkbox"/>	Male / <i>Lelaki</i>
<input type="checkbox"/>	Female / <i>Perempuan</i>

2. Race / *Bangsa*

<input type="checkbox"/>	Malay / <i>Melayu</i>
<input type="checkbox"/>	Chinese / <i>Cina</i>
<input type="checkbox"/>	Indian / <i>India</i>
<input type="checkbox"/>	Others / <i>Lain- lain</i> _____

3. Age / *Umur* : \_\_\_\_\_

4. Marital status / *Status perkahwinan*

<input type="checkbox"/>	Single / <i>Bujang</i>
<input type="checkbox"/>	Married / <i>Berkahwin</i>

5. Education level / *Tahap pendidikan*

<input type="checkbox"/>	Primary school / <i>Sekolah Rendah</i>
<input type="checkbox"/>	Secondary school / <i>Sekolah Menengah</i>
<input type="checkbox"/>	College / <i>Kolej</i>
<input type="checkbox"/>	University / <i>Universiti</i>
<input type="checkbox"/>	Never been to school / <i>Tidak bersekolah</i>

6. Occupation / *Pekerjaan*

<input type="checkbox"/>	Government / <i>Pekerja Kerajaan</i>
<input type="checkbox"/>	Private employee / <i>Pekerja Swasta</i>
<input type="checkbox"/>	Self - employee / <i>Bekerja sendiri</i>
<input type="checkbox"/>	Pensioner / <i>Bersara</i>
<input type="checkbox"/>	Student / <i>Pelajar</i>
<input type="checkbox"/>	Unemployed / <i>Tidak bekerja</i>

7. What is your citizenship / *Apakah kewarganegaraan anda ?*

<input type="checkbox"/>	Local (state your state) / <i>Penduduk tempatan ( nyatakan tempat)</i> _____
<input type="checkbox"/>	Foreigner (please state your country) / <i>Warga asing (nyatakan tempat)</i> _____

8. How much your gross monthly income ? / *Berapakah pendapatan bulanan kasar anda?*  
 RM \_\_\_\_\_

9. Are you a member of any environmental group / Non-Government Organization (NGO) ?  
*Adakah anda ahli kumpulan alam sekitar / Pertubuhan Bukan Kerajaan (NGO)?*

<input type="checkbox"/>	Yes / <i>Ya</i>
<input type="checkbox"/>	No / <i>Tidak</i>

10. If **Yes**, please state the name of the group / *Jika **Ya**, sila nyatakan nama kumpulan*

\_\_\_\_\_



**Section B : Visitor's satisfaction on resources and facilities that provided by Taman Negara Kuala Koh (TNKK)**

**Bahagian B : Kepuasan pengunjung terhadap sumber dan kemudahan yang disediakan oleh TNKK.**

1. How many time have you been here ?/ *Berapa kali anda pernah ke sini ?*  
 \_\_\_\_\_ times

2. Distance from your destination ? / *Jarak dari destinasi anda?*  
 \_\_\_\_\_ km

3. What is the reason you come to TNKK / *Apakah sebab anda datang ke TNKK?*

	Escape from city / <i>Keluar dari bandar</i>
	To enjoy the beautiful scenery and landscape / <i>Untuk menikmati keindahan alam</i>
	Others / <i>Lain-lain</i> _____

4. How do you know the existence of TNKK ? / *Bagaimana anda tahu kewujudan TNKK ?*

	Friends and family / <i>Kawan dan keluarga</i>
	Newspaper / <i>Akhbar</i>
	Internet / <i>internet</i>
	Others / <i>Lain-lain</i>

5. Based on your own experience, how do you **appreciate the resources** when you are visiting protected area ? / *Berdasarkan pengalaman anda, bagaimanakah anda menghargai sumber alam semula jadi apabila mengunjungi kawasan terlindung ?*

1	2	3	4	5
Strongly disagree / <i>sangat tidak setuju</i>	Disagree / <i>tidak setuju</i>	Neutral / <i>neutral</i>	Agree / <i>setuju</i>	Strongly agree / <i>sangat setuju</i>

No.	Statement	1	2	3	4	5
a.	You know that there are many types of species can be found / <i>Anda mengetahui bahawa terdapat banyak jenis spesis. boleh ditemui</i>					
b.	Types of trees on that area / <i>Jenis pokok di kawasan tersebut</i>					
c.	Surrounding area that closed to nature / <i>Persekitaran yang dekat dengan alam semula jadi</i>					
d.	The natural view is maintained / <i>Pemandangan semula jadi yang masih terjaga</i>					
e.	The water is cleaned and can be drunk / <i>Air yang bersih dan boleh diminum</i>					
f.	It is suitable for swimming and other activities/ <i>Sesuai untuk berenang dan aktiviti lain</i>					
g.	Fishing activity/ <i>Aktiviti memancing</i>					

6. The statements below are about **level of satisfaction on resources and activities** provided in TNKK. Please state your opinion / *Kenyataan di bawah adalah tentang tahap kepuasan terhadap sumber dan aktiviti yang disediakan di TNKK. Sila nyatakan pendapat anda.*

1	2	3	4	5
Strongly disagree / <i>sangat tidak setuju</i>	Disagree / <i>tidak setuju</i>	Neutral / <i>neutral</i>	Agree / <i>setuju</i>	Strongly agree / <i>sangat setuju</i>

No.	Statement	1	2	3	4	5
<b>7 (i) Resources / Sumber</b>						
a.	The diversity of flora and fauna / <i>Kepelbagaian flora dan fauna</i>					
b.	Tropical rainforest / <i>Hutan hujan tropika</i>					
c.	Natural view / <i>Permandangan semula jadi</i>					
d.	Air / <i>Udara</i>					
e.	River / <i>Sungai</i>					
<b>7 (ii) Activities / Aktiviti</b>						
a.	Jungle treks / <i>Trekking hutan</i>					
b.	Camping / <i>Berkhemah</i>					
c.	Sightseeing / <i>Bersiar-siar</i>					
d.	Fishing / <i>Memancing</i>					

7. The statements below are about **level of satisfaction on facilities and services** provided in TNKK. Please state your opinion / *Kenyataan di bawah adalah tentang tahap kepuasan terhadap kemudahan dan perkhidmatan yang disediakan di TNKK. Sila nyatakan pendapat anda.*

1	2	3	4	5
Strongly disagree / <i>sangat tidak setuju</i>	Disagree / <i>tidak setuju</i>	Neutral / <i>neutral</i>	Agree / <i>setuju</i>	Strongly agree / <i>sangat setuju</i>

No.	Statement	1	2	3	4	5
<b>8(i) Facilities /Kemudahan</b>						
a.	Accessible to reach TNKK / <i>Mudah untuk sampai ke TNKK</i>					
b.	Recreation area / <i>Kawasan rekreasi</i>					
	Suitable for recreational activity / <i>Sesuai untuk aktiviti rekreasi</i>					
c.	Wide area / <i>Kawasan yang luas</i>					
	Campsite/ <i>Tapak perkhemahan</i>					
d.	Wide area / <i>Kawasan yang luas</i>					
	Suitable for camping / <i>Sesuai untuk berkhemah</i>					
	Accommodation / <i>Penginapan</i>					
e.	Chalet in a good condition / <i>Chalet dalam keadaan baik</i>					
	Safety level is good / <i>Tahap keselamatan yang baik</i>					
f.	Information center / <i>Kaunter infomasi</i>					
	Provide good information / <i>Menyediakan infomasi yang baik</i>					
g.	Surau / <i>Surau</i>					
	Comfortable / <i>Selesa</i>					
g.	Signage / <i>Papan tanda</i>					
	Give direction to visitors / <i>Petunjuk arah untuk pengunjung</i>					



h.	Public toilets / <i>Tandas awam</i>					
	Toilet is cleaned and comfortable / <i>Tandas yang bersih dan selesa</i>					
<b>8(ii) Services / Servis</b>						
a.	Safety level / <i>Tahap keselamatan</i>					
	During activity / <i>Semasa aktiviti dijalankan</i>					
	In handling the bot during activity / <i>Mengendalikan bot semasa aktiviti dijalankan</i>					
	Trail along the road / <i>Laluan di sepanjang jalan</i>					
b.	Staff guide services / <i>Servis pemandu pelancong</i>					
	Always guide in doing activity / <i>Memberi tunjuk ajar sepanjang aktiviti</i>					
c.	Cleanliness level / <i>Tahap kebersihan</i>					
	At campsite area / <i>Di kawasan tapak perkhemahan</i>					
	Along the trek / <i>Sepanjang laluan</i>					
d.	Staff were friendly and respectful / <i>Pekerja yang mesra dan sangat menghormati</i>					
	Always give help when needed / <i>Sentiasa memberi bantuan apabila memerlukan</i>					
	Signal at this area is good / <i>Isyarat telefon di kawasan ini baik</i>					

**Section C : Visitors willingness to pay (WTP) for the entrance permit to TNKK.**



**Bahagian C : Kesanggupan pengunjung untuk membayar (WTP) permit masuk ke TNKK.**




<p><b><u>SCENARIO AT TAMAN NEGARA KUALA KOH (TNKK)</u></b>  <b><u>SENARIO DI TAMAN NEGARA KUALA KOH (TNKK)</u></b></p>
<p>Taman Negara Kuala Koh (TNKK) is the official entrance of the Kelantan State to Taman Negara. It is located at the end of oil palm estates where is opposite the Lebir River and Koh River and quite unique compared to the Kuala Tahan National Park. There are variety of unique species of flora and fauna in this area. Then, it is filled with animal and plant wildlife, river ecosystem and tropical rainforest. In additional, visitors can enjoy the beauty of nature and this area is suitable for ecotourism, education and research, and also for geological discoveries. However, the specialty above has disturbed the beautiful and endangered flora and fauna, where is, this area has been degraded because of pollution, depletion of natural resources and destroyed of natural habitats.</p> <p>Because of too many activities in this area, a few steps should be taken to improve the sustainability of ecotourism resource at TNKK. Then flora fauna and other habitats need to be preserved. The entrance fee for this area should be increased. The fee will be used to protect TNKK from further degradation. The current entrance fee is RM 1. Then, fund that allocated by government is not enough to cover the cost maintenance. Thus management would like to appeal to visitor to participate in preserving this protected area by paying more.</p>

Taman Negara Kuala Koh (TNKK) adalah pintu masuk rasmi Negeri Kelantan ke Taman Negara. Ia terletak di hujung ladang kelapa sawit di mana bertentangan dengan Sungai Lebir dan Sungai Koh dan agak unik berbanding dengan Taman Negara Kuala Tahan. Terdapat pelbagai jenis flora dan fauna yang unik di kawasan ini. Terdapat hidupan liar haiwan dan tumbuhan, ekosistem sungai dan hutan hujan tropika di kawasan ini. Di samping itu, pelawat dapat menikmati keindahan alam semula jadi dan kawasan ini sesuai untuk ekopelancongan, pendidikan dan penyelidikan, dan juga penemuan geologi. Bagaimanapun, keistimewaan di atas telah mengganggu flora dan fauna yang terancam, di mana, kawasan ini telah termusnah kerana pencemaran, kekurangan sumber asli dan memusnahkan habitat semulajadi.

Oleh sebab terlalu banyak kegiatan di kawasan ini, beberapa langkah perlu diambil untuk meningkatkan kelestarian sumber ekopelancongan di TNKK. Kemudian flora fauna dan habitat perlu dipelihara. Yuran masuk di kawasan ini perlu ditingkatkan. Yuran ini akan digunakan untuk melindungi TNKK dari kemerosotan selanjutnya. Yuran masuk semasa adalah RM 1. Kemudian, dana yang diperuntukkan oleh kerajaan tidak mencukupi untuk menampung penyelenggaraan kos. Oleh itu pihak pengurusan ingin menyeru pengunjung untuk mengambil bahagian dalam memelihara kawasan perlindungan ini dengan membayar lebih.

Table 1 Comparison between Option A and B  
 Jadual 1 Perbandingan antara Pilihan A dan B

Option / Pilihan	A	B
Entrance permit Permit masuk	RM 1	RM 2 / RM 4 / RM 6
Facilities Kemudahan	Recreation area Campsite Accommodation Information center Surau Signage Public toilets Kawasan rekreasi Tapak perkhemahan Penginapan Pusat maklumat Surau Papan tanda Tandas awam	-Recreation area, Campsite, Surau,, Public toilets , Public phone, Playground, Accommodation will be upgraded from time to tome -Put the latest info at information center -Put the signage along the roads -Improve Parking lot -Kawasan rekreasi, Tapak perkhemahan, Surau, Tandas awam Telefon awam, Penginapan akan tingkatkan dari masa ke semasa -Letakkan info terkini di pusat maklumat -Papan tanda akan diletakkan di sepanjang jalan -Tingkatkan tempat letak kenderaan Taman permainan
		
		-Will improve facilities / Akan pertingkatkan kemudahan

		 <p>-Will provide wifi at this area / Akan menyediakan wifi di kawasan ini</p>
Services / servis	<p>Safety level / Tahap keselamatan</p> 	<p>-Safety level will be improved / Tahap keselamatan akan ditingkatkan</p>  <p>Will put grill gate / Akan memasang pintu grill</p>
Activities <i>Aktiviti</i>	<p>Birds watching Jungle treks Bamboo rafting Photography Fishing <i>Memerhati burung</i> <i>Trek hutan</i> <i>Kayu buluh</i> <i>Fotografi</i> <i>Memancing</i></p>	<p>-All the activities will be upgraded from time to time -Organize competition to visitors for examples are fishing, photography, water tubing etc. -Another activities that will be upgraded are planting the trees and feed extinction habitats -Aktiviti akan di naik taraf dari masa ke semasa -Menganjurkan pertandingan kepada pengunjung contohnya pertandingan memancing, fotografi dll. -Antara aktiviti lain yang akan di naik taraf adalah menanam pokok dan memberi makan kepada habitat kepupusan</p>
Environmental management <i>Pengurusan alam sekitar</i>	<p>Not satisfied <i>Tidak memuaskan</i></p>	<p>Improving environmental management that, for example in managing solid waste <i>Meningkatkan pengurusan alam sekitar contohnya pengurusan sisa pepejal</i></p>
Environment educational elements <i>Unsur pendidikan alam sekitar</i>	<p>Do not give attention by the park management <i>tidak dititikberatkan oleh pihak pengurusan</i></p>	<p>Enhancing environmental education elements among visitors and staffs <i>Meningkatkan elemen pendidikan alam sekitar di kalangan pelawat dan kakitangan</i></p>
Preservation <i>Pemeliharaan</i>	-	<p>Preserve flora fauna and other habitats <i>Memelihara flora dan fauna</i></p>

1. Based on option above which one do you preferred ?  
 Berdasarkan pilihan di atas yang mana anda pilih ?

<input type="checkbox"/>	A ( go to question 4 ) / ( terus ke soalan 4 )
<input type="checkbox"/>	B ( go to question 2 ) / ( terus ke soalan 2 )

2. Based on scenario and considering your current income and expenses would you agree if TNKK management increase 'The Current Entrance Permit of RM 1' ?  
 Berdasarkan senario dan mempertimbangkan pendapatan dan perbelanjaan semasa anda, anda bersetuju jika pengurusan TNKK meningkatkan 'Permit Masuk Semasa RM1'?

<input type="checkbox"/>	Yes ( go to question 3 ) / Ya ( terus ke soalan 3 )
<input type="checkbox"/>	No ( go to question 5 ) / Tidak ( terus ke soalan 5 )

3. If you said **yes** for the **question 2**, how much are you willing to pay for entrance permit ?  
 Choose one and go to **question 5** / Sekiranya anda menjawab **ya** untuk **soalan 2**, berapakah anda sanggup membayar untuk permit masuk? Pilih satu dan terus ke **soalan 5**.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RM 2	RM 4	RM 6	RM 8	RM 10

4. For the previous question, please state the reason why you choose option A ?  
 Untuk soalan di atas, nyatakan sebab mengapa anda memilih pilihan A?

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5. Consider your current income and expenses, what is the maximum amount that you are willing to pay for entrance permit?  
 Pertimbangkan pendapatan dan perbelanjaan semasa anda, berapakah jumlah maksimum yang anda sanggup bayar untuk permit masuk ?  
 RM \_\_\_\_\_

6. Please state one reason for not willing to pay ?  
 Sila nyatakan satu sebab untuk tidak sanggup membayar?

<input type="checkbox"/>	Cannot afford to pay / Tidak mampu untuk membayar
<input type="checkbox"/>	Conservation should be funded by government / Pemuliharaan perlu dibiayai oleh kerajaan
<input type="checkbox"/>	Others (specify) / Lain-lain (nyatakan) _____

7. What needs to be improved by TNKK management ? / Apakah yang perlu diperbaiki oleh pengurusan TNKK ?

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8. What products can be highlighted to attract more visitors ? / Apakah produk yang boleh ditonjolkan untuk menarik ramai pengunjung ?

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9. Do you have any comment or recommendation for TNKK management?  
 Adakah anda mempunyai sebarang komen atau cadangan untuk pengurusan TNKK?

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## APPENDIX II

### a) Reliability for Resources Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.812	.832	7

#### Item Statistics

	Mean	Std. Deviation	N
Many sp.	3.77	.817	30
Types of trees	3.73	.740	30
Closed to nature	3.97	.765	30
Natural view	3.90	.803	30
Water is cleaned	3.30	1.022	30
Swimming activities	3.30	1.119	30
Fishing activity	4.00	.910	30

### b) Level Satisfaction on Resources And Activities Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.860	.868	9

#### Item Statistics

	Mean	Std. Deviation	N
Flora fauna	4.20	.714	30
Tropical rainforest	4.20	.664	30
Natural	4.20	.664	30
Air	4.17	.699	30
River	3.60	.932	30
Jungle treks	3.67	.802	30
Camping	3.70	.837	30
Sightseeing	3.57	.774	30
Fishing	3.90	.960	30



**c) Level Satisfaction on Facilities And Services**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.957	.957	30

**Item Statistics**

	Mean	Std. Deviation	N
Accessible to reach	2.93	1.202	30
Recreation area	3.53	.730	30
Suitable for activity	3.77	.774	30
Wide area	3.87	.681	30
Campsite	3.47	.819	30
Wide	3.60	.770	30
Suitable for camping	3.70	.750	30
Accommodation	3.07	1.172	30
Chalet good condition	2.73	1.311	30
Safety level good	3.00	1.017	30
Information center	3.40	1.102	30
Good information	3.53	.819	30
Surau	3.17	1.020	30
Comfortable	3.03	.928	30
Signage	3.27	.868	30
Give direction	3.37	.928	30
Public toilets	2.87	1.137	30
Cleaned comfortable	2.80	1.126	30
Safety level	3.20	.847	30
During activity	3.30	.750	30
Handling boat	3.50	.682	30
Trail along road	3.20	.925	30
Staff guide services	3.37	.850	30
Guide doing activity	3.50	.777	30
Cleanliness level	3.27	.907	30
Campsite area	3.50	.777	30
Along trek	3.43	.858	30
Staff friendly	3.80	.664	30
Always give help	3.87	.730	30
Signal good	4.00	.788	30

KELANTAN

### APPENDIX III

#### a) Mean Value for WTP based on Education Level

Education Level	Mean	N	Std. Deviation
primary	1.50	2	.707
secondary	1.29	51	.460
college	1.18	11	.405
university	1.11	47	.312
never been to school	1.00	2	.000
Total	1.20	113	.404