



**THE CONSERVATION VALUE OF  
ANNAH RAIS LONGHOUSE AND HOT SPRINGS,  
AT KOTA PADAWAN, SARAWAK**

**JUSTINA ANAK KUTOK**

**2014725755**

**FACULTY OF MANAGEMENT AND BUSINESS**

**UNIVERSITI TEKNOLOGI MARA**

**SARAWAK**

**JANUARY 2018**

# TABLE OF CONTENTS

## CHAPTER 1: INTRODUCTION

1.0 Preamble.....	4
1.1 Introduction of Study.....	4
1.2 Research Background.....	6
1.3 Research Problem.....	8
1.4 Research Questions.....	8
1.5 Research Objectives.....	9
1.6 Significant of Study.....	9
1.7 Scope of Study.....	10
1.8 Limitations.....	10
1.7.1 Time Requirement.....	10
1.7.2 Limited Information.....	10
1.7.3 Communication Barrier.....	10
1.9 Definition of Term.....	11
1.8.1 Tourism.....	11
1.8.2 Willingness to Pay.....	11
1.8.3 Protected Areas.....	11

## CHAPTER 2: LITERATURE REVIEW

2.0 Preamble.....	12
2.1 Literature Review.....	12

## CHAPTER 3: METHODOLOGY

3.0 Preamble.....	18
3.1 Research Design.....	18
3.2 Sampling Design.....	18
3.2.1 Population.....	18

3.2.2	Respondent.....	19
3.3	Data collection method and instruments.....	19
3.4.1	Primary Data.....	19
3.4	Data preparation and analysis.....	20
<b>CHAPTER 4: DATA ANALYSIS AND FINDINGS</b>		
4.0	Preamble.....	21
4.1	Descriptive Analysis.....	21
4.1.1	Visitor’s Demographic Profile.....	21
4.1.2.1	Gender.....	23
4.1.2.2	Age.....	23
4.1.2.3	Nationality.....	23
4.1.2.4	Education.....	23
4.1.2.5	Monthly Income.....	23
4.1.2.6	Occupation.....	23
4.1.2	Characteristics of Visits.....	24
4.2	Exploratory Factor Analysis.....	25
4.2.1	Reliability Test.....	27
4.2.2	Research Objective 1.....	28
4.2.3	Research Objective 2.....	29
4.2.4	Research Objective 3.....	30
<b>CHAPTER 5: CONCLUSION AND RECOMMENDATION</b>		
5.0	Preamble.....	32
5.1	Conclusion.....	32
5.2	Recommendation.....	33
	Appendices.....	34

## **LIST OF TABLES**

- 2.1 Summary of Visitors Profiles
- 2.2 Summary of Visitor's characteristics
- 2.3 KMO and Bartlett's Test
- 2.4 Factor loading In the Rotated Component Matrix Visitor's reason to visit
- 2.5 Reliability Test
- 2.6 Factor Analysis on Reason to Visit
- 2.7 Visitors' Willingness to Pay
- 2.8 Estimated additional revenue (RM)

# CHAPTER 1

## INTRODUCTION

### 1.0 Preamble

In Chapter 1, it introduces the research area of the project. In this chapter, research background, research problem, research questions, research objectives, research significance, research scope, and research limitation will be highlighted in order to provide an overall overview on research.

### 1.1 Introduction of Study

The tourism industry has become the biggest service industry in the global economy (Ferreira, 2009; Som and Badarneh, 2011). Malaysia is known as one of the most popular tourist destinations in the world. In Malaysia, tourism is the second largest foreign exchange earning sector Hanafiah (2010). According to Bhatia (1986), tourism is a smokeless industry because there is no production process in a factory where the source of income is generated through a variety of services that provided to tourists. Tourism consists of people who travelling and staying at one place their usual environment for not more than one consecutive year for recreation, business and other irrelevant purposes to carry out paid activities from places visited. Tourism is a combination of a variety of activities, services and industries that provide a travel experience encompassing transportation, accommodation, food and beverages, shopping, entertainment, activities and other hospitality services which are provided to an individual or groups of tourists who is in vacation (Goeldner and Ritchie, 2006). The Annah Rais Longhouse has become an important part of tourism industry in Sarawak that can bring foreign exchange earnings.

Protected areas are recognized as an appliance to conserve biodiversity and preserve ecological processes (Dudley, 2008). The natural environment also plays an important role in tourism industry. It is because the nature-based tourism has become the fastest growing tourism in the past decades or more. Thus, protected areas are important for the conservation of natural habitats, species, and genetic diversity. The protection of the natural environment is a basic part of tourism development. The total forested area of the Malaysia in 2011 is estimated as 17.98 million hectares (MTIB, 2012). Nevertheless, most are still not proclaimed as protected area. There are 14 protected areas in Sarawak. However, Hot Springs is not included in the list. The protected areas in Sarawak have attracted increase in the numbers of local and foreigner visitors, helping to develop tourism as a source of foreign exchange earnings. The Hot Springs has potential to become a tourism destination that can contribute to Malaysian Economy.

Thus, this study was undertaken to determine how much the local and foreigner visitors' willing to pay for entry fees at Annah Rais Longhouse and Hot Springs. The objective was to derive quantitative data on their willingness to pay for entry and eagerness to support for nature conservation. The Annah Rais Longhouse and Hot Springs, potentially attract either local or foreigner visitors to visit this place. This place is ideal for recreation as well as homestay. Additionally the Annah Rais Longhouse and Hot Springs also perform tourism functions. The Annah Rais Longhouse and Hot Springs have beautiful natural assets such as hot springs and a popular tourist destination.

## 1.2 Research Background

Borneo is the third largest island in the world with total area 287,001 sq mi or 743,330 km sq which makes it almost the same to the size of New Guinea. Sarawak is the largest state in Malaysia with a total area of 124,450 km<sup>2</sup> that is 37.5% of Malaysia area. Sarawak is separated from Kalimantan Borneo by ranges of high hills and mountains that are part of the central mountains range of Borneo. In 2016, there are 26.76 million of visitor who visited to Malaysia, while in Sarawak there are 17% (4.66 million) of visitors.

In Sarawak, it has the oldest of Bidayuh's longhouse known as Annah Rais Longhouse which located in Kota Padawan at about 70km away from Kuching City. The Annah Rais Longhouse is at the foothill of Borneo Highlands near the mountains marking the border to Kalimantan. It is an old Annah Rais Longhouse and the houses over 80 families. The villager still practice the way of longhouse's living. The villagers carry out daily activities such as plant paddy, pepper, rubber and other for the purpose of self-sufficiency. Annah Rais Longhouse has become a homestay and it is the only one of the remaining bidayuh longhouse in Kuching where the visitors can stay and experience the way Bidayuh living. The total of visitors that visited to Annah Rais Longhouse in 2016 is 12,870. All the visitors who visit or stay at Annah Rais Longhouse will be greet with their traditional drink namely 'Tuak' or known as rice wine. This traditional drink is a type of alcohol which is made from distilled rice.

The unique of Annah Rais Longhouse is the Head House which is that house contains a lot of enemy head skulls. The Bidayuh Community will organize outdoor activities for visitors who stay at Annah Rais Longhouse. The visitors will go for jungle trekking in the tropical rainforest, hunting with blowgun, bamboo rafting, BBQ lunch at river or waterfall, soaking in the natural Hot Springs, swimming at the untouched

natural 3-tier waterfall, and rice harvesting. While Annah Rais Longhouse indoor activities, the visitors will learn how to cook Bamboo rice and Bamboo chicken, blowgun skill competition, watch Bidayuh traditional cultural dance performance, will learn how to play Bidayuh musical instruments, learn how to weaving basket and crafting, and exploring the Annah Rais Longhouse. Currently the longhouse's committee charged the entrance fee to visitors, whereby the fund that collected will be used for maintenance and to preserve the Bidayuh's cultures. The entrance fee for Annah Rais Longhouse is RM8 for adult and RM5 for children.

At Annah Rais also have a natural jungle spa called Hot Springs which is about 10 minutes drive from Annah Rais Longhouse. It is located in the river with running crystal clear mountain water, and colourful small pebble stones on the riverbeds. In the past, the early settler in Annah Rais longhouse has kept secret about hot springs for 250 years, but now it is open to the public. In Bidayuh beliefs, it is a holy place to seek blessings and cures for sickness. Annah Rais Hot Springs is protected from pollution. The place was quiet and very peaceful. It has two different rivers, which is cold water and hot water. The hot water is a natural feature caused by underground water being heated by geothermal forces brought to the surface. In 2016, the total of visitors that visited to Hot Springs is 6,668. The entrance for adult is RM 5 per person and RM3 for children.



### **1.3 Research Problem**

The role of nature conservation is to protect a natural resource which is so important to nature-based tourism and recreation destination. However, establishing and managing protected areas is an expensive business that requires funds to achieve a balance between conservation and recreation or tourism parks. As stated by Eagles, Paul F.J., McCool, Stephen F. and Haynes, Christopher D.A., (2002), tourism based on protected areas can be a primary factor in supporting the conservation of the natural and cultural heritage. Since Annah Rais Longhouse and Hot Springs is far from city and not well known by local and international visitors, the place is not well conserved. Therefore, it is important to protect the Annah Rais Longhouse and the natural resources of Hot Springs. Hence, the awareness to protect can be initiated through the visitor's willingness to pay for conservation of Annah Rais Longhouse to maintain the original structure and natural resources of Hot Springs. The aim of this study is to determine how much the visitor is willing to pay for conservation the Annah Rais Longhouse and natural resources of Hot Springs.

### **1.4 Research Questions**

The research is to determine how much the visitor is willing to pay for conservation the Annah Rais Longhouse and natural resources of Hot Springs. There are a few research questions that need to be study.

RQ 1: What are the factors that influence visitors to visit Annah Rais Longhouse and Hot Springs?

RQ 2: What is the price that visitors are willing to pay for conservation of Annah Rais Longhouse and Hot Springs?

RQ 3: What is the value of conservation for Annah Rais Longhouse and Hot Springs?

## **1.5 Research Objectives**

The research is to determine how much the visitor is willing to pay for conservation the Annah Rais Longhouse and natural resources of Hot Springs. There are a few research objectives that need to be study.

RO 1: To identify the factors that influence visitors to visit Annah Rais Longhouse and Hot Springs.

RO 2: To identify the price that visitors are willing to pay for conservation of Annah Rais Longhouse and Hot Springs.

RO 3: To identify the value of conservation for Annah Rais Longhouse and Hot Springs.

## **1.6 Significant of Study**

In general, this study is important to analyze how much visitor is willing to pay to conserving the Annah Rais Longhouse and the natural resources of Hot Springs that can help Bidayuh Community to managing and conserving the longhouse and hot springs. Adventure is an international activity with high number of visitor coming in and out of Malaysia which can contributes to Malaysian Economy. Hence, it is important to conduct this study because the mutual advantages it provides towards the Bidayuh Community of Annah Rais Longhouse and Hot Springs and the visitors too. Furthermore, these study also significant to get the feedback and suggestion from the visitors which are using an open-ended question which allows the visitors to give their suggestion in improving the facilities and services. The information that was gathered from this study is to find how much the visitor is willing to pay for conservation of Annah Rais Longhouse and natural resources of Hot Springs.

## **1.7 Scope of Study**

This study is focus on how much visitors willing to pay for conservation of Annah Rais Longhouse and Hot Springs. The data were collected from Annah Rais Longhouse as well as Hot Springs in Kota Padawan, Sarawak. The target respondents are Malaysian and non Malaysian and the respondent's age is from 18 and above. This study will focus on the visitors in Annah Rais Longhouse and Hot Springs.

## **1.8 Limitations**

### **1.8.1 Time Requirement**

The amount of time needed to do this research is limited as it is the research university's requirement for the research must be done within one semester together with internship that is required being taken during particular semester. Hence, the information collected is not enough to investigate the reasons of visitors wanting to pay for conserve towards Annah Rais Longhouse and Hot Springs. Besides, the time is limited to do the fieldwork because the commitment in internship programme at an organization.

### **1.8.2 Limited Information**

To get the information for this research is limited due to previous research topic is not related to this study. Due to the lack of information, it is difficult to find the related topic that can assist to done this research.

### **1.8.3 Communication Barrier**

The villager at Annah Rais Longhouse and Hot Springs may not able to speak fluently in English and Malay. This is a serious problem as

miscommunication can provide inaccurate information. Because of this problem, it takes time for the villagers to understanding the need of research questions.

## **1.9 Definition of Term**

### **1.9.1 Tourism**

Tourism defined as an activities of persons travelling to and who is staying in places outside their usual environment for leisure or business purposes (ABS, 2004).

### **1.9.2 Willingness to Pay**

Willingness to pay is defined as the maximum price a customer is likely to pay for a product or service under the given conditions of time and place (Smith and Nagle 2002; Wertenbroch and Skiera 2002).

### **1.9.3 Protected Areas**

A protected area is a geographical space, recognised, dedicated and managed, through legal or other effective means, to accomplish the long term conservation of nature with associated ecosystem services and cultural values (Dudley, 2008).

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.0 Preamble**

In this chapter 2, the journals, books, and published articles were collected to explore the theories and past empirical studies which are relevant to this study. It illuminates how the inquiry is conducted based on previous studies and may give answers to the inquiries of the exploration. This chapter consists of literature review, and review of related information from other researcher.

#### **2.1 Literature Review**

Malaysia has many unique features and attractions that can be developed as a world-famous tourist destination. The main asset of the nation apart from the beauty of nature and the historical place is its cultural diversity. In the context of culture based tourism, the country has its own strengths due to the unique and potentially diverse cultures being developed as a country tourism product. Tourism plays an important role for Malaysia where it can contribute to Malaysia economy through foreign exchange earnings.

Generally, tourism is the largest economic sector in the world which also involves several related sectors such as food, transportation, place, location attractions and other services. This sector is one of the major contributors to the country's economic development. Tourist developments are caused by human movements to find something they have not yet known, to explore new areas, to look for mood changes or to get new trips alongside improving the quality of life of the world's population. This situation shows that tourism is a thriving sector in the world including Malaysia. Tourism also is a social, cultural and financial phenomenon that includes the movements of people to

national locations or place outside the ordinary environment for personal, business or professional needs. The establishment of tourism industry can attract a lot of people where most of them from government servant and private sector which have potential to contribute to Malaysia economy and sociocultural. As claimed by Fawaz and Rahnama (2014), tourists can help in increase the sales, profits, tax revenue, and therefore leads to general revenue growth in the host country.

In addition, tourism can bring in a lot of foreign exchange and offer more occupation to people. According to Badaruddin (2008), tourism can increases a nation's profit as well as creating employment chance as many as 10% from the world's occupation account and as many as 11% from the Gross Domestic Product (GDP). In other research stated by Mansfeld and Winckler (2008), they also said that tourism has potential as a contributor through tourism industry in economic sector based on many of nations that survive and improve the national economy. The tourism industry impacts positively on economy as well as increasing in foreign exchange in the country which would help promote new investment in the country, and increase job opportunities.

Besides of tourism industry, protected areas also have an important role in order to improve Malaysia's economy. Protected areas are considered as the basic of biodiversity conservation in worldwide. The motive of establishing protected areas is to protection of ecosystems, the preservation of ecological processes and also conservation of biodiversity (Baral, Stern, and Bhattarai, 2008). According to Eagles *et al.*, (2002), they claimed that protected areas are established primarily to preserve some type of biophysical process or condition such as a wildlife population, habitat, natural landscape, or cultural heritage such as a community's cultural tradition.

In Malaysia, there are Sarawak is one of the states that is a tourist attraction due to its rich diversity of cultures. The diversity of ethnic cultures in Sarawak also has

become one of the major factors for tourists to make Sarawak a tourist destination. Apart from the Malays, Melanau, Iban and Bidayuh, there are other small groups such as Kayan, Kenyah, Lun Bawang, Tagal, Kelabit, Penan, Kajang, Bisaya, Tabun, Saban, and Bukitan. Each group of these societies has a difference in each other. They are small society of the Sarawak population.

One of this place at Sarawak which is at rural area that has potential to become a tourism destination that can contribute to Malaysian Economy which is Annah Rais Longhouse and Hot Springs located at Kota Padawan, Sarawak. Rural tourism is a rapidly growing service industry in our country. This scenario makes Malaysia the third most widely accepted Asian East Asian tourist destination after China and Hong Kong. The rural tourism can provide travellers with the experience of appreciating the life of the village and experiencing culture and customs. According to Inskep (1991), rural tourism is not just farm-based tourism but including special importance and ecotourism, walking, climbing and riding, doing adventure, sports and health tourism, hunting and fishing, tourism education, tourism and tourism heritage some ethnic tourism areas.

The state of Sarawak is a state inhabited by several ethnic groups who have different customs and languages and ways of life. Even their place of residence also seems to have been a division and separation. At Annah Rais Longhouse and Hot Springs areas are one of the areas which are dominated by the Bidayuh. The Bidayuh community is a native ethnic group inhabit the south-western part of Borneo and in Sarawak is only in the first part, settling ahead of other ethnic natives. The Bidayuh are ethnic in Sarawak. The largest population is in the first part, namely Kuching. Bidayuh are found in Bau, Lundu, Penrissen, Padawan and Serian areas. 'Bidayuh' or in the language of the race itself means 'land people'. The 'Bi' means Dayak or people, while 'Dayuh' means land. In addition to being known as 'Bidayuh', this tribe is also known as 'Land Dayaks'. At different areas will be different dialects. The dialectic tribes from the Serian or

Samarahan district will identify themselves as Dayak Bibir or Bisadong by calling themselves as Bibingan, Bitapuh, Bitaup, Bitutoi and so on when interacting with fellow dialects as well as ethnic Bidayuh dialects in Penrissen, Padawan and Kuching areas. They will identify themselves as Biaatah, Bipuruh, Biannah and Bibengoh. While in the Bau and Lundu districts they call themselves the Bijagoi, Bisalui, Biselako, Bilara, Bipueh and so forth which refer to the boundary of the district or the place of origin.

In Annah Rais, the group of Bidayuh who live here is Biannah. The meaning of word 'Biannah' is people of Annah Rais. The word "Biannah" is actually derived from the word Bidayuh 'bi' which means the people and 'Annah' is the name of the village (Rais) and the name of the river. Therefore, "Biannah" means "Annah Rais People". At Annah Rais, there is a 12 hectare longhouse belonging to the Bidayuh community that still exists in this country. The longhouse which still retains some of its original features despite the rapid economic and physical development in the vicinity, still maintains the harmony of the Bidayuh community. Annah Rais longhouse was built in 1818 and starts with three houses and now it has expanded to 146 houses with 1,228 people registered. Because the Annah Rais longhouse is no longer able to accommodate the growing population, many new generations build their homes around the longhouse. This longhouse is about 200 years old. Other than that, people at Annah Rais Longhouse have kept secret about Hot Springs for 250 years but know this place is open to the public. Since this place has a good nature and environment, it is important to protect this place through conservation program or impose conservation fee to maintain the original structure of Annah Rais Longhouse and natural resources of Hot Spring.

In numerous nations of the world, especially developing nation, protected areas used to be the only natural places where the natural resources could be found and nowhere else in the world (Pettorelli, 2012) and a protected area were charges an entrance fee to generate a fund to meet its management cost. The majority of protected areas



throughout the world, however, majority are not financially self-sufficient and consequently are unable to meet the conservation objectives (IUCN, 2005). It means an entrance fee is not enough to fulfil the conservation objectives. Thus, the 'Conservation Fee' also important in achieving the conservation objectives.

To estimate the value or a person's willingness to pay, the contingent valuation is a suitable method for estimating the value that a person places on a good. The contingent valuation method is based on the concepts of the willingness to pay a certain amount in order for the individual to maximize his or her utility or willingness to accept compensation so as to improve his utility as a result of damage, or absence of the public good (Adamu, A., Yacob, M.R., Radam, A., and Hashim, R., 2015). The first introducer of contingent valuation method is Ciriacy and Wantrup in 1947 where they it used to estimating the side effects of soil erosion (Venkatachalam, 2004). The attention of contingent valuation method studies has in the recent past shifted from valuation of the environmental damage to the valuation of environmental protection. It is generally used as an effective policy tool in protected area management and biodiversity conservation (Baral *et al.*, 2008).

In economics, willingness to pay is the base aggregate of cash that individual will acknowledge to leave or to carry on something negative. As defined by Pearce and Turner (1990), the willingness to pay is a tool that used to measure of the direct economic use of nature. In previous literature review, willingness to pay method has been used to estimate the value of non-market goods (Reynisdottir, 2008) and various experience of willingness to pay have been recognized. According to Bhandari and Heshmati (2010), there are some socio-demographic and other variables found to be important determinants of willingness to pay such as the past disbursement history, period of stay, visitor satisfaction, and attitudes toward the environment. Among the

demographic variables age is an important determinant of holiday behaviour of a tourist and their choice of tourist spots (Weaver et al., 1994 and Cottrell, 2003).

The most variable that influence is age where an older people tend to be particularly attracted to the outdoor activities. An older people are tend to be more attracted in the kinds of experience offered by protected areas, have more disposable income, and are thus more willing to pay for higher levels of interpretation, guiding and other services (Eagles *et al.*, 2002). As found by Barat *et al.*, (2008), age is most always positively related to the willingness to pay for conservation. Lastly, as found by previous studies, the education also influenced determinant of willingness to pay (Barat *et al.*, 2008). The visitors with higher education level can increase the demand for outdoor recreation activities, and lead to changes in the patterns of recreation and tourism as found by Eagles *et al.*, (2002).

## CHAPTER 3

### METHODOLOGY

#### 3.0 Preamble

*“Research methodology is the systematic, theoretical analysis of the procedures applied to a field of study” by Kothari, (2004).*

Research methodology is a method to systematically solve the research problem. In this chapter three (3), it will discuss the research methods that were used by researcher to collect the data from respondents which is research design.

#### 3.1 Research Design

In the opinion of Burns and Grove (2003), research design as a blueprint for conducting a study with maximum control over factors that may relate with the validity of the findings. As stated by Malhotra (2004), the detailed procedures necessary for getting the information needed to construct a structure and solve the problems. The main purpose of research design is to answer the research question.

#### 3.2 Sampling Design

##### 3.2.1 Population

Sampling design begins by specifying the target population. Target population is a population or universe as a group which the researcher is interested in gaining information upon which generalization and conclusions can be drawn subsequently (Kothari, 2009). While Burns *et al.*, (2003) define population as all the elements that meet the criteria for inclusion in study. This is the group from which the sample that will be drawn (Tustin, 2005). The idea behind sampling is that by selecting certain elements of that population, a researcher may draw conclusions about the entire

population (Cooper and Schindler, 2003). The target population is Malaysian and non Malaysian visitors and age 18 above that were visited Annah Rais Longhouse and Hot Springs.

### **3.2.2 Respondent**

Respondent has been used by researchers for many years the common term for an individual who takes part in a market research project. The questionnaire will distribute to 150 visitors which is Malaysian and non Malaysian at Annah Rais Longhouse and Hot Springs. Researchers only distribute questionnaire to Malaysian and non Malaysian visitors who visit Annah Rais Longhouse and Hot Springs.

### **3.3 Data Collection Method and Instruments**

For this research, the researcher has used different sources to collect all the data that researcher need which is related to this research. A research instrument is a tool that used to collect data (Parahoo, 1997). The main sources that had been used by researcher are primary data where the researcher used questionnaire. The questionnaire will distribute randomly to visitors who visit Annah Rais Longhouse and Hot Springs. Data collection will be conducted on Saturdays and Sundays when the respondents are more likely to visit Annah Rais Longhouse and Hot Springs on weekends than weekdays. Respondents are willing to take part in the survey and the questionnaire will be given to researchers.

#### **3.3.1 Primary Data**

Primary data is a type of data that collected by researcher for a specific purpose. As claimed by Wiid and Diggines, (2009), during the formal marketing research exploration, the primary data will be collected. Furthermore, Malhotra (2010) explains that primary data can be together in either a qualitative or quantitative way. For this

study, the researcher was carried out quantitative where the questionnaire will be used to obtain information. A structured questionnaire will be developed to get information on the willingness to pay for the conservation value at Annah Rais Longhouse and Hot Springs in Sarawak. The questionnaire is divided into four sections. The first section (Section A), measure the frequency of respondents' visits to Annah Rais Longhouse and Hot Springs either for the first time or more than one time. The second section (Section B), measure the reason of respondents visit Annah Rais Longhouse and Annah Rais Hot Springs. This section used 5-point Likert scaled to represent whether they agreed or disagreed with each statement. This section has 20 reason of visit for respondents to rate. The third section (Section C), measuring the visitors' willingness to pay for the conservation value. The respondents has to state their answer whether they agreed or disagreed for conservation fee. The respondents also have to state what maximum price if they agreed, the minimum price if they disagreed, and their feedback and suggestions. The fifth section (Section D), respondent ask to give their personal information. The respondent must answer the question covering gender, age, nationality, education level, monthly income, and occupation.

### **3.4 Data Preparation and Analysis**

In this study, the questionnaire will be analyzed by using the Statistical Package for Social Science (SPSS) software for Window, version 22. This software often used by researcher which is can aid in quantitative data handling. Hence, researcher analyzes and interprets the data by using some tools of data analysis.

## **CHAPTER 4**

### **FINDING AND DISCUSSION**

#### **4.0 Preamble**

In this chapter, it will describe the result of the questionnaires surveyed from the respondents. Statically Package for Society Science (SPSS) software was used to analyze the data that collected from 150 respondents. Nevertheless, only 147 of questionnaires are considered valid while another 3 are invalid and missing. In this chapter, the statistic tests that used are descriptive analysis which included the respondents demographic, factor through exploratory factor analysis and scale measurement through reliability test.

#### **4.1 Descriptive Analysis**

##### **4.1.1 Visitors Demographic Profile**

In this survey, visitors' demographic had been asked in Section D which included gender, age, nationality, education level, monthly income, and occupation. Table 2.1 below shows the summary of visitors' profile.

Table 2.1 Summary of Visitors Profiles

<b>Characteristics</b>	<b>n</b>	<b>Percentage (%)</b>
<b>Gender</b>		
Male	51	34.7
Female	<b>96</b>	<b>65.3</b>
<b>Age</b>		
18-20 years	6	4.1
21-30 years	<b>98</b>	<b>66.7</b>
31-40 years	28	19.0
41-50 years	8	5.4
51 and above	7	4.8
<b>Nationality</b>		
Malaysian	<b>134</b>	<b>91.2</b>
Non Malaysian	13	8.8
<b>Education Level</b>		
Doctorate	2	1.4
Master Degree	10	6.8
Bachelor Degree	<b>77</b>	<b>52.4</b>
Diploma	44	29.9
SPM	14	9.5
<b>Monthly Income</b>		
Below RM1000	<b>77</b>	<b>52.4</b>
RM1001-1500	10	6.8
RM1501-2000	10	6.8
RM2001-2500	16	10.9
RM2501-3000	10	6.8
RM3001-3500	3	2.0
RM3501-4000	4	2.7
RM4001 and above	17	11.6
<b>Occupation</b>		
Government servant	25	17.0
Private employee	44	29.9
Retiree	4	2.7
Student	<b>74</b>	<b>50.3</b>

#### **4.1.1.1 Gender**

Based on Table 2.1, the majority of visitors are female which 65.3%. While for male, there are only 34.7% of male visitors.

#### **4.1.1.2 Age**

Based on Table 2.1, most of visitors are between 21 to 30 years old representing 66.7%, followed by 31 to 40 years old, 41 to 50 years old, 51 years old and above, and 18 to 20 years which is 19.0%, 5.4%, 4.8%, and 4.1% respectively.

#### **4.1.1.3 Nationality**

Based on Table 2.1, the majority of visitors were Malaysian with total percentage 91.2%, while Non Malaysian visitors with total percentage 8.8%.

#### **4.1.1.4 Visitors Education Level**

Based on Table 2.1, the majority of visitors had bachelor degree which is 52.4%, followed by Diploma, SPM, Master Degree and Doctorate which is 29.9%, 9.5%, 6.8%, and 1.4% respectively.

#### **4.1.1.5 Monthly Income**

Based on Table 2.1, majority of visitors were received their monthly income below RM1000 per month with total percentage 52.4%. Next, 11.6% of visitors received a monthly income RM4001 and above, followed by 10.9% visitors received a monthly income of RM2001 to RM2500, followed by RM1001 to RM1500, RM1501 to RM2000 and RM2501 to RM3000 with same total percentage 6.8%, and followed by RM3501 to RM4000 and RM3001 to RM3500 which is 2.7% and 2.0% correspondingly.

#### **4.1.1.6 Occupation**

Based on Table 2.1, more than half were student with total percentage 50.3%. It continuous with 29.9% of visitors was private employee, 17.0% were government servant, and 4% were retiree.



#### 4.1.2 Characteristics of Visits

Based on Table 2.2, the visitors that come for the first time to Annah Rais Longhouse and Annah Rais Hot Springs is about 60.5%. While the rest is 39.5% who visited many times which is 17.0% visited more than 3 times, followed by 14.3% for 2 times, and 8.2% for 3 times. Majority of visitors with total percent 76.9% are agreed that conservation fee should be charge. Most of visitors with total percentage 48.3% are complaints towards the services, cleanliness, and facilities that provided by Annah Rais Longhouse and Hot Springs, followed by 17.0% of visitors suggested that Annah Rais Longhouse and Hot Springs should add more activities, 12.9% of visitors suggested should provide adequate parking space, 6.8% visitors suggested should provide more place for BBQ and variety of foods, 6.1% of visitors suggested the size of Hot Springs pool should be expand, and 2.0% of visitors suggested should provide more available room at Annah Rais Longhouse.

*Table 2.2 Summary of Visitor's characteristics*

Characteristics	n	Percentage (%)
First time visit		
Yes	89	60.5
No	58	39.5
If 'No', how many times visited this place		
2 times	21	14.3
3 times	12	8.2
More than 3 times	25	17.0
Conservation should be charge		
Yes	113	76.9
No	34	23.1
Suggestion by visitors		
Improve the services, cleanliness, and facilities	71	48.3
Expand the pool size	9	6.1
Provide adequate parking	19	12.9
Add more available room at Annah Rais Longhouse	3	2.0
Add more activities at Annah Rais Longhouse and Hot Springs	25	17.0
Provide more place for BBQ		
Provide a variety of foods	10	6.8
	10	6.8

## 4.2 Exploratory Factor Analysis

Factor analysis was conducted on Section B which is factors that influence visitors to visit Annah Rais Longhouse and Annah Rais Hot Springs. The Kaiser-Meyer-Olkin's (KMO) and Bartlett's Test was used to test the appropriateness of Factor Analysis. Based on Table 2.3, the result of the factor analysis also indicated that the measure for Kaiser-Meyer-Olkin's (KMO) measure of sampling adequacy (MSA) was 0.804 (greater than 0.50). These test indicated that there is adequate number of significant intercorrelation required of variable. The approximate of Chi-square is 1602.858 with 190 degrees of freedom, which is significant at <0.05 level of significance. Hence, Factor Analysis is considered as an appropriate technique for further analysis of the data.

*Table 2.3 KMO and Bartlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.804
Bartlett's Test of	Approx. Chi-Square	1602.858
Sphericity	df	190
	Sig.	.000

Table 2.4 shows the correlation of the variable with each of the extracted factors. The values that have been highlighted was show the maximum value in each of the rows to group the 10 variables into 3 core factors. As suggested by Nunally (1967), that the reliability of 0.50 to 0.60 is sufficient, even a coefficient more than 0.7 is necessary (Hair et al. 1998). For this study, the suitable coefficient alpha is more than 0.60.

Table 2.4 Factor loading In the Rotated Component Matrix Visitor's reason to visit

	Component Matrix <sup>a</sup>					
	Component					
	1	2	3	4	5	6
To challenge my skills and abilities	<b>.675</b>					
To develop my skills	<b>.605</b>					
To be in charge of a situation	<b>.704</b>					
To feel independent	<b>.645</b>					
To feel free from society's restrictions	.587					
To challenge nature	<b>.715</b>					
To be alone	.501				.443	
To feel close to nature	.551			-.458		
To observe the beauty of nature	.537	.440				
To obtain a feeling of harmony with nature	.579	.458		-.407		
To find quiet places	.525				.418	
To enjoy the sights, sounds, and smells of nature	<b>.615</b>	.440				
To be with my friends or family		<b>.643</b>		.481		
To strengthen relationship with friends or family		<b>.667</b>		.496		
To do things with other people	.494			.421		-.558
To be with people with similar interests	.536					-.555
To escape from the pressure of work	.501		<b>.616</b>			
To relieve my tensions	.558		.579			
To get away from my everyday routine	.497		<b>.664</b>			
To be away from other people	.445					

#### 4.2.1 Reliability Test

Table 2.5 Reliability Test

Name of Construct	Number of items	Coefficient Alpha (0.803)
<b>More appreciation to nature</b>	<b>6</b>	<b>0.870</b>
To challenge my skills and abilities		
To develop my skills		
To be in charge of a situation		
To feel independent		
To challenge nature		
To enjoy the sights, sounds, and smells of nature		
<b>Spend quality time with people</b>	<b>2</b>	<b>0.895</b>
To be with my friends or family		
To strengthen relationship with friends or family		
<b>To enjoy vacation</b>	<b>2</b>	<b>0.771</b>
To escape from the pressure of work		
To get away from my everyday routine		

Reliability test was assessed by employing Cronbach Alpha. Cronbach Alpha allows us to measure the reliability of different variables. According to Nunally, (1978), in the estimation, a coefficient more than or equal to 0.7 is considered acceptable and a good indication of reliability. Cronbach Alpha applied to the each tested variable of reasons of visiting Annah Rais Longhouse and Hot Springs such as more appreciation to nature, spend quality time with people, and to enjoy vacation. In this study, Cronbach's alpha was used to test the reliability. Based on Table 2.5, the overall Cronbach's alpha for all variable that influence the visitor to visit Annah Rais Longhouse and Hot Springs is 0.803.

#### 4.2.2 Research Objective 1

ROI: To identify the factors that influence visitors to visit Annah Rais Longhouse and Hot Springs.

As a result of that, the factor analysis has thus identified 3 core factors that influence visitors to visit Annah Rais Longhouse and Hot Springs with total variance of 53.952 percent. They can be categorized as more appreciating to nature, spend quality time with people, and to enjoy vacation as shown in Table 2.6 below. All the items in these three factors were found have high factor loading of more than 0.6. The loading factors for the three new components range from 0.605 to 0.715. While the communalities were ranging from 0.608 to 0.887

*Table 2.6 Factor Analysis on Reason to Visit*

<b>Factor</b>	<b>Variables Included</b>	<b>Loading</b>	<b>Communalities</b>
More appreciation to nature	• To challenge my skills and abilities	0.675	0.846
	• To develop my skills	0.605	0.820
	• To be in charge of a situation	0.704	0.785
	• To feel independent	0.645	0.713
	• To challenge nature	0.715	0.608
	• To enjoy the sights, sounds, and smells of nature	0.615	0.705
Spend quality time with people	• To be with my friends or family	0.643	0.862
	• To strengthen relationship with friends or family	0.667	0.887
To enjoy vacation	• To escape from the pressure of work	0.616	0.701
	• To get away from my everyday routine	0.664	0.813

**i. Factor 1 – More Appreciation to Nature**

This first factor characterizes as more appreciation to nature. This factor explains 30.43% of the variability that influence visitors to visit Annah Rais Longhouse and Annah Rais Hot Springs.

**ii. Factor 2 – Spend Quality Time with People**

This second factor characterizes as spend quality time with people. This factor explains 12.95% of the variability that influence visitors to visit Annah Rais Longhouse and Annah Rais Hot Springs.

**iii. Factor 3 – To Enjoy Vacation**

This third factor characterizes as to enjoy vacation. This factor explains 10.57% of the variability that influence visitors to visit Annah Rais Longhouse and Annah Rais Hot Springs.

**4.2.3 Research Objective 2**

RO2: To identify the price that visitors are willing to pay for conservation of Annah Rais Longhouse and Hot Springs.

Overall, all the visitors stated out their willingness to pay for conservation fee in different price. Besides from entrance fee, the conservation fee should be charged for maintenance, to preserve the Bidayuh's cultures, and to protect nature. It is needed for people to be concern about the protection of natural resources. In Table 6, it shows the visitors' mean willingness to pay for conservation fee was RM6.25. The finding also revealed that non Malaysian were willing to pay RM14.12 which is higher than Malaysian at RM5.49.

*Table 2.7 Visitors' Willingness to Pay*

<b>Respondents</b>	<b>Conservation fee (RM)</b>	<b>n</b>
Visitors	6.25	147
Malaysian	5.49	134
Non Malaysian	14.12	13

#### **4.2.4 Research Objective 3**

RO 3: To identify the value of conservation for Annah Rais Longhouse and Hot Springs.

*Table 2.8 Estimated additional revenue (RM)*

<b>Respondents</b>	<b>Conservation fee (RM)</b>
2016	
Visitors	122,112.50
Malaysian	65,605.50
Non Malaysian	107,142.56
2017	
Visitors	158,937.50
Malaysian	80,313,21
Non Malaysian	152,510.10

From these values of visitors' willingness to pay for conservation of Annah Rais Longhouse and Annah Rais Hot Springs, the extra net benefit of the place can be computed as shown in Table 2.8. The estimated additional revenue from conservation fee is the additional benefit that Annah Rais Longhouse and Annah Rais Hot Springs would gain besides the current entrance fee charges. The estimated number of visitors that visited to Annah Rais Longhouse and Hot Springs for 2016 is 19,538 visitors. The estimated number of Malaysian visitor in 2017 is 11,950 and a non Malaysian visitor is

7,588. While the total number that expected for 2017 is 25,430 visitors. The expected number of Malaysian visitor who visited in 2017 is 14,629 and while non Malaysian visitor is 10,801. The result in Table 2.8 show the Annah Rais Longhouse and Hot Springs can gain revenue through non Malaysian visitors since they are willing to pay higher fee which is RM14.12 compared to Malaysian visitors with amount RM5.49.



## CHAPTER 5

### CONCLUSION AND RECOMMENDATION

#### 5.0 Preamble

In this chapter, the researcher has obtained the results from data collected and some interpretations and explanations for each finding are provided to give more insight about the result. This chapter will conclude the overall findings from Chapter 4 and it contains two parts which are the first part section present the conclusion and the second part is recommendations for future research.

#### 5.1 Conclusions

The main objective of this study is to determine the visitor's willingness to pay for conservation of Annah Rais Longhouse and Hot Springs. The results of this study can benefit the Tourism Board of Sarawak to determine the appropriate entrance fee at Annah Rais Longhouse and Hot Springs and to taking adequate conservation activities to protect the environment and also the cultural of Bidayuh.

The visitors were asked about their willingness to pay more than current fees for a better conservation practices. This study found evidence that both Malaysian visitors and non Malaysian visitors play an important role in contributing for the purpose of Annah Rais Longhouse and Hot Springs. Majority of the visitors are ready to pay additional fees for a better conservation practices in Annah Rais Longhouse and Hot Springs. The mean of non Malaysian's willingness to pay per visit was higher compared to Malaysian visitors. Thereby, the results of mean found that non Malaysian is more concern on the conservation of Annah Rais Longhouse and Hot Springs compared to the Malaysian visitors. The Tourism Board of Malaysia should increase the level of awareness among visitor especially Malaysian visitors. The awareness campaign, mass

media propagation, distribution of brochures, explaining the importance of the conservation of natural resources should be made to Malaysian visitors as well as Non Malaysian visitors. When visitors have knowledge about conservation programme, it can cause visitors to feel pay extra money for conservation of Annah Rais Longhouse and Hot Springs. The increasing aggregated benefit could help Bidayuh Community or Tourism Board of Sarawak to solve the arising various problems or issues of Annah Rais Longhouse and Hot Springs such as lack of financial constraint to maintain the activities at these two places. Besides that, when the place is conserved, it can help our young or future generation enjoy the beauty of nature and get to know Bidayuh cultural. Therefore, it is important to impose conservation fee in order to maintain the original structure of Annah Rais Longhouse and natural resources of Hot Spring.

## **5.2 Recommendations**

After completing this research, there are some recommendations that can be done by future research. This study was conducted at Annah Rais Longhouse and Hot Springs. The researcher would like to suggest the future researcher should enlarge the sample size of the respondents. In order to set a larger population, the sample must draw from different races, age, and income should be taken into consideration. Besides that, since this research area are far from Kuching City, the researcher suggest future researcher to stay at study area cause it might help future researcher to get response easy to collect data from their target respondents.

## APPENDICES



اُونِيُوَرْسِيْتِي تِيكْنُوْلُوْجِي مَارَا  
UNIVERSITI  
TEKNOLOGI  
MARA

*THE CONSERVATION VALUE*

*OF*

*ANNAH RAIS LONGHOUSE AND HOT SPRINGS*

Dear Respondents,

This survey is to get the information on the **willingness to pay for the conservation value** at Annah Rais Longhouse and Hot Springs in Sarawak. Kindly answer this entire questionnaire. Please read the instruction carefully. This survey will only take 10 minutes to complete. All responses will be kept **confidential** and for academic purposes. Your participation is highly appreciated. Thank you for spending your time to answer the questions.

### **SECTION A:**

1. Is this your first visit to Annah Rais Longhouse and Hot Springs?

*Adakah ini lawatan pertama anda ke Annah Rais Longhouse dan Hot Springs?*

Yes/*Ya*

No/*Tidak*

2. If "No", how many times have you visited this place?

*Jika "Tidak", berapa kali anda melawat tempat ini?*

2 times/*2 kali*

3 times/*3 kali*

More than 3 times/*Lebih daripada 3kali*

**SECTION B:**

The reason I visit this Annah Rais Longhouse and Hot Springs is.

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
a.	To challenge my skills and abilities <i>Untuk mencabar kemahiran dan kebolehan saya</i>					
b.	To develop my skills <i>Untuk mengembangkan kemahiran saya</i>					
c.	To be in charge of a situation <i>Untuk menjaga keadaan</i>					
d.	To feel independent <i>Untuk berasa bebas</i>					
e.	To feel free from society's restrictions <i>Untuk merasa bebas dari sekatan masyarakat</i>					
f.	To challenge nature <i>Untuk mencabar alam semula jadi</i>					
g.	To be alone <i>Untuk bersendirian</i>					
h.	To feel close to nature <i>Untuk berasa dekat dengan alam semula jadi</i>					
i.	To observe the beauty of nature <i>Untuk melihat keindahan alam semula jadi</i>					
j.	To obtain a feeling of harmony with nature <i>Untuk mendapatkan perasaan harmoni dengan alam semula jadi</i>					
k.	To find quiet places <i>Untuk mencari tempat yang tenang</i>					
l.	To enjoy the sights, sounds, and smells of nature <i>Untuk menikmati pemandangan, bunyi, dan bau alam</i>					
m.	To be with my friends or family <i>Untuk bersama kawan atau keluarga saya</i>					
n.	To strengthen relationship with friends or family <i>Untuk memperkukuhkan hubungan dengan rakan atau keluarga</i>					
o.	To do things with other people <i>Untuk melakukan perkara dengan orang lain</i>					
p.	To be with people with similar interests <i>Untuk bersama dengan orang yang mempunyai minat yang sama</i>					
q.	To escape from the pressure of work <i>Untuk melarikan diri dari tekanan kerja</i>					
r.	To relieve my tensions <i>Untuk melegakan ketegangan saya</i>					
s.	To get away from my everyday routine <i>Untuk melepaskan diri daripada rutin harian saya</i>					
t.	To be away from other people <i>Untuk berada jauh dari orang lain</i>					

**SECTION C: CONTINGENT VALUATION QUESTION**

a) Do you agree if the conservation fee should be charge?

*Adakah anda bersetuju jika yuran pemuliharaan itu dikenakan?*

Yes/Ya

No/Tidak

b) What is the maximum price you would be willing to pay for conservation fee?

*Apakah harga maksimum yang anda sanggup bayar untuk yuran pemuliharaan?*

RM \_\_\_\_\_

c) What is the minimum price you would be willing to pay for conservation fee?

*Apakah harga minimum yang anda sanggup membayar yuran pemuliharaan?*

RM \_\_\_\_\_

d) Please give your comments and suggestion for this place. (e.g improving the services, facilities, activities etc)

*Sila berikan komen dan cadangan anda untuk tempat ini. (Cth. meningkatkan perkhidmatan, kemudahan, aktiviti dan sebagainya)*

---

---

---

**SECTION D:**

**1. Gender/Jantina**

Male

  

Female

**2. Age/Umur**

18-20 years/18-20 tahun

  
  

21-30 years/21-30 tahun

31-40 years/31-40 tahun

41-50 years/41-50 tahun

  

51 and above/51 dan ke atas

**3. Nationality/Kewarganegaraan**

Malaysian/Malaysia

  

Non Malaysian/Bukan Malaysia

**4. Education Level/Peringkat Pendidikan**

Doctorate/Doktor

Master Degree/Ijazah Sarjana

Bachelor Degree/Ijazah Sarjana Muda

Diploma/Diploma

SPM

  
  
  
  

**5. Monthly Income/Pendapatan Bulanan**

Below RM1000/Bawah RM1000

  
  
  

RM1001-1500

RM1501-2000

RM2001-2500

RM2501-3000

RM3001-3500

RM3501-4000

RM4001 and above/ RM4001 dan ke atas

  
  
  

*Exchange rate:*

- *1 US Dollar = RM4.27*
- *1 Australian Dollar = RM3.39*
- *1 Euro = RM5.11*
- *1 Sterling Pound = RM5.51*
- *1 Swiss Franc = RM4.47*
- *100 Japanese Yen = RM3.88*
- *100 Chinese Yuan Renminbi = RM64.67*

**6. Occupation**

Government servant

Private employee

Retiree

Student

  
  
  

**Thank you for your time.**