



**Assessment of Wildlife Tourism Potential in Gunung
Stong State Park**

by

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DECLARATION

I declare that this thesis entitled “Assessment of Wildlife Tourism potential in Gunung Stong State Park” 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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Potential of Wildlife Tourism in Gunung Stong State Park

Abstract

The present study was used to identify potential attributes of Gunung Stong State Park (GSSP) to become a suitable place for wildlife tourism implementation as GSSP is honored with regular backwoods living spaces and rich with flora and faunas, amongst its attraction is natural wilderness. The objective of this study is to identify the flagship species of wildlife tourism and to determine the tourist's perception and expectations towards implementing wildlife tourism in the study area. List of potential flagship wildlife species were collected from Gunung Stong management plan and linked with the current IUCN status to show that this species have tendency to play their role as a flagship species. Next a convenience sampling and a planned questionnaire was applied in this study to evaluate the possibilities of wildlife tourism implementation interest. Besides, direct observations of the activities were carried out to recognize the existing activities in GSSP which able to support wildlife tourism. This study attempts to identify 12 flagship species which two were birds and the remaining 10 were mammals as the key potential for wildlife tourism. Based on tourists demographic profile obtained through survey instrument, majority of the tourists were Malaysian and only an 11% were foreign tourists and the analysis showed positive distribution of tourists perception in supporting wildlife tourism implementation, majority indicated that they do support for the introduction of wildlife tourism in Gunung Stong State Park, even their purpose for visiting Gunung Stong State Park is for adventure activities and not specifically to see wildlife. From direct observation two activities were observed which were hiking and events organized by Gunung Stong State Park authorities which participated by tourists. Based on this identification recommendations have been suggested to enable the wildlife tourism setting to be implemented. This may result an increase in tourists arrival at Gunung Stong State Park and ultimately improvise the socio-economic development of the state.

Potensi Pelancongan Hidupan liar di Gunung Stong State Park

Abstrak

Kajian ini telah digunakan untuk mengenal pasti sifat-sifat yang berpotensi di Taman Negeri Gunung Stong (GSSP) untuk menjadi tempat yang sesuai untuk pelaksanaan pelancongan hidupan liar di GSSP ini kerana tempat tersebut kaya dengan flora dan fauna yang hidup, di antara tarikkannya adalah hutan liar. Objektif kajian ini adalah untuk mengenal pasti spesies utama pelancongan hidupan liar dan untuk menentukan persepsi dan harapan ke arah melaksanakan pelancongan hidupan liar di kawasan tersebut. Senarai potensi spesies utama hidupan liar dikumpulkan daripada pelan pengurusan Gunung Stong dan dikaitkan dengan status IUCN semasa untuk menunjukkan bahawa spesies ini mempunyai kecenderungan untuk memainkan peranan mereka sebagai spesies utama. Seterusnya satu contoh mudah dan soal selidik yang dirancang telah digunakan dalam kajian ini untuk menilai kemungkinan kepentingan hidupan liar pelaksanaan pelancongan. Selain itu, pemerhatian langsung daripada aktiviti telah dijalankan untuk mengenal pasti aktiviti-aktiviti yang sedia ada di GSSP yang dapat menyokong pelancongan hidupan liar secara berterusan. Kajian ini telah mengenal pasti 12 spesies utama dimana dua spesies burung dan yang baki 10 species adalah mamalia yang boleh dijadikan sebagai potensi utama dalam pelancongan hidupan liar. Berdasarkan profil demografi yang diperolehi melalui kaedah tinjauan, majoriti pelancong adalah dari Malaysia dan hanya 11% adalah pelancong asing. Analisis menunjukkan taburan positif pelancong persepsi dalam menyokong pelaksanaan pelancongan hidupan liar, majoriti pelancong telah menyatakan bahawa mereka menyokong dalam pengenalan pelancongan hidupan liar di Taman Negeri Gunung Stong, walaupun tujuan utama mereka melancong di Taman Negeri Gunung Stong adalah untuk aktiviti pengembaraan dan bukan khusus untuk melihat hidupan liar. Daripada pemerhatian secara langsung, dua aktiviti telah diperhatikan iaitu aktiviti pendakian dan acara yang telah dianjurkan oleh pihak berkuasa Taman Negeri Gunung Stong yang disertai oleh kebanyakan pelancong. Berdasarkan kajian ini cadangan telah diajukan untuk meningkatkan pelaksanaan pelancongan hidupan liar di GSSP. Ini boleh menyumbang kepada peningkatan dalam kadar kemasukkan pelancong di Taman Negeri Gunung Stong serta menambah baik pembangunan sosio-ekonomi negara.

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LIST OF ABBREVIATIONS

| | |
|--------|--|
| GSSP | Gunung Stong State Park |
| SPSS | Software Package Used for Statistical Analysis |
| CRC | Cooperative Research Centre |
| UNTWO | World Tourism Organization |
| BAT | Baha Adventure Team |
| WWF | World Wide Fund for Nature |
| KGNECC | Kuala Gandah National Elephant Conservation Centre |
| DWNP | Department of Wildlife and National Park |
| NGOs | Non-Governmental organizations |
| ha | Hectare |
| m | Metre |
| km | Kilometre |
| a.s.l | Above Sea Level |

LIST OF SYMBOLS

| | |
|---|------------|
| % | Percentage |
| ° | Degree |
| N | North |
| E | East |



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CHAPTER 1

INTRODUCTION

1.1 Background of Study

Wildlife based tourism is growing and it is a large segment of nature-based tourism industry, in some forms can be regarded as a type of ecotourism (Kaltenborn et al., 2011). Complexity of wildlife tourism in motivating tourists either primarily based wildlife or not, visitor encountering wildlife watching either in wildlife sites or by tour operators determines their engagement from high involvement to casual and passing interest of the day. According to Blake et al. (2010), combination of a strong interest among visitors is experienced by wildlife operators in which other complementary activities do get support from the wildlife tourism for example activities such as walking, cycling, photography, sightseeing, history and visiting distilleries which might make up their primary purpose of visitation. It is often seen as an effective way in conservation of important species, habitats and sustainable development in developing countries, which improving the livelihood of local communities in wildlife-based tourism (Kaltenborn et al., 2011).

In wildlife-based tourism, the human-wildlife interaction experience is positive, and a better appreciation of wildlife and native could result due to the experience (Curtain & Kragh, 2014). Malaysia is one of the developing countries which gives important towards ecotourism implementation and has formulated a separate plan in sustainable development of the country (Bhuiyan et al., 2011). The aim of this research is to investigate the relationship between wildlife value, satisfaction and wildlife

conservation in Gunung Stong State Park and Gua Ikan. Wildlife tourism is established to overcome the global concerns about unpredictable political tensions, changing climate, receding wilderness and declining species. The relationship between people and nature is well understood with this wildlife tourism (Curtain & Kragh, 2014).

Gunung Stong State Park (GSSP) covers about 21950 ha which is an iconic place for fauna conservation and appeal to nature photographers, the place also suitable for a variety of recreational activities and it is one of the top ten special places to visit which has been listed in the 2006 Malaysian Ninth Plan (Malaysia Unit Perancang Ekonomi, 2006). Biodiversity in Gunung Stong State Park is relatively high with wildlife such as 56 species of mammals, 130 species of birds, 15 species of fishes and certain groups of invertebrates (Maseri, 2009). Besides that, Gua ikan is considered as a complementary or supporting attraction that associated with the travelling and visitation to Gunung Stong State Park (Kadir, 2011). Another tourism attraction component which can be related is the accessibility and regional infrastructure components which the distance between Gunung Stong State Park and Gua ikan is about five kilometers away and easy to access (Marzuki et al., 2011). Gua ikan also abundance with small mammal diversity likes fruit bats which exist in little number of species. This small mammal can also be used as another option to attract tourists to visit Gunung Stong State Park and it is included in the GSSP visitation packages (Climbs & Caves, 2012). The aim of the study is to identify the potential of wildlife tourism in GSSP and Gua ikan, on the basis of the experience and expectation of tourists in the area. Based on tourists current demand and expectation related to a visit in GSSP will be evaluated by carrying out an on-site survey research.

Primary interest of the visitors should be examined in order to relate the suitability of a wildlife tourism implementation.

This spectrum of wildlife tourism is tabulated to give a clear description about the setting preferences of human-wildlife encounters within confinement lines, where the balance between watching wildlife at natural setting and at the same time maintaining the safety and security of the tourists as Newsome et al., (2005) mentioned in his book. These types of settings are made to encounter wildlife in their natural environment. The Table 1.1 shows the list of selected wildlife setting in Malaysia which varies in viewing the wildlife.

Table 1.1: Examples wildlife tourism in Malaysia

| Animal group of interest principal interest | Tourism activity | Example of location | Citation |
|--|--|--|-------------------------|
| Mammals | Guided tour to observe deer cave and millions of bats | Mulu National Park, Sarawak | Abdullah et al. (2007) |
| Mammals | Overnight stay in forest hides in order to observe mammals attending a salt lick | Taman Negara National Park, Malaysia | Chui et al. (2010) |
| Mammals | Elephant viewing and take a very close look(bathe with them in river | Bukit Gandah National Park Sanctuary, Pahang | Daud et al. (2009) |
| Birds | Raptor watching from boat and views of hornbill migrations | Belum Temenggor, Perak | Chye. (2010) |
| Birds | Lodges catering for birdwatchers and offering guided tours | Parit Jawa, Johor | Lim, Yong & Kim. (2012) |
| Birds | Trails provided in viewing rare birds | Fraser's Hill, Pahang | Cheong (2013) |

1.2 Problem Statement

Based on previous studies, there are insufficient works focusing more on wildlife tourism and their sustainability in Malaysia. Most of the studies seem to be only limited to their specific field of research such as human-wildlife conflicts, biological and behavioral status of wildlife in GSSP and Gua Ikan, even though wildlife seems to be abundant in GSSP and Gua Ikan. There are studies reported on the abundance of wildlife which mostly includes several types of mammals and birds in the adjacent area surrounding GSSP, which eventually make GSSP a good spot to conduct this type of research. Moreover, GSSP is relatively rich in bird diversity and Gua Ikan also rich in small mammal species diversity and complex limestone cave system which attracts tourists to pay a visit to this area.

In GSSP and Gua Ikan, there are no visible wildlife tourism exposed but only limited to ecotourism exposure which is much wider and through this study the concept of ecotourism is narrowed and reveals the overlapping of wildlife tourism and ecotourism. Gua Ikan is conserved and maintained as tourism place which is managed by the local communities and it is part of the local community's income. Besides that, GSSP is a strategic location is the place which much of the local communities depending for their source of income, if the GSSP is improved by wildlife tourism additional income sources, economic benefits and environmental and social is increased and eventually protection of the surrounding GSSP and Gua Ikan were sustained. It is therefore, worthwhile to explore the potential of wildlife –based tourism in GSSP and Gua Ikan.

1.3 Significance of the Study

This study explores the potential of wildlife tourism in GSSP and Gua Ikan, based on the tourists' experience and expectations, and its applicability within the context of GSSP and Gua Ikan to enhance the place as a wildlife tourism spot. Sometimes the management authority generally overlooked the conservation of small mammals and bats but through this research the importance of conservation of this wildlife is considered and proper action plan were carried out accordingly as these small mammals and bats also do contribute economic contribution and aesthetic value to the tourists experience in a tourism destination. The viability of tourism industry dependent upon the quality of the visitor who experiences it which generates the condition of natural, cultural and social relies on it. Qualitative method was used in data collection. Introduction to wildlife tourism is still new to the area even though the place is declared as a state park and the knowledge of inducing sustainability of the area through wildlife management is still not sufficient.

Actions should be considered in wildlife management as the introduction to wildlife based tourism can enhance the conservation, economic benefits, and sustainability of the area. Wildlife tourism is a tool to secure economic benefits while supporting wildlife conservation and local communities. Moreover, the tourist influx, increased if the GSSP spot is managed properly in term of tourism management and Gua Ikan, shall considered to be declared as part of the protected area in future framework plan by the responsible authorities. Other than that, this study is useful to other researchers in educating people more about the importance of wildlife based tourism

and provide guidance to other related studies and might provide directions for its design, planning and management in future research.

1.4 Scope of the Study

This study mainly focus on mammals and birds in evaluating potential of wildlife tourism, this is due to the assessment in wildlife tourism of natural resource mainly focuses in investigating of bird watching and the mammal watching. Besides, birds and mammals are more observable and fascinating to many people which made them relatively easy to be seen. Similar analyses can be done at finer scale for other wildlife category but it depends on the abundance of species in the particular area. The focus of this study is to determine the potential of wildlife tourism in GSSP and Gua Ikan based on the survey to tourists and mountain guides. Based on the tourist's perception, this study leads in identifying the potential of wildlife tourism.

Mountain guides opinions are considered important as they able to give information regarding the types of tourist and their interest. They also have many experiences on ecologically sustainability of tourism activities in the surrounding area. Likert scale is used in order to evaluate the visitor's perception. In order to analysis the data based on descriptive analysis and chi-square analysis, SPSS tool is important in facilitate the analysis, In accordance, further analysis is conducted, to evaluate the possibilities of wildlife tourism implementation interest.

1.5 Research Question

- i. Do GSSP have the potential to be wildlife tourism?
- ii. What are the wildlife species that attractive to tourists?
- iii. How to determine the potential existence?

1.6 Objectives

- i. To identify the flagship species of wildlife tourism in GSSP.
- ii. To determine the tourists perceptions and expectation towards implementing wildlife tourism in GSSP.

CHAPTER 2

LITERATURE REVIEW

2.1 Wildlife Tourism

Wildlife is defined as all living organisms that are not under the control of humans essentially, undomesticated, free-ranging terrestrial vertebrates but in term of professional biologists the term wildlife mostly refers to mammals and birds (Higginbottom, 2004). According to Sinha (2001), wildlife has genetic and behavioral characteristics that developed after generations of adaptive evolution. In contrast to the wildlife which in contrast to its domesticated counterpart. Jones & Buckley (2001) defines wildlife tourism as tourism that involves concurrence with non-domesticated animals either in their natural environment settings or in captivity forms which includes a wide range of wildlife-based activities inclusions. Currently people interested in viewing and interacting with wild species in their natural setting.

Wildlife tourism is defined in many terms and definitions by number of writer and researchers. In Malaysia, wild animals and birds whether tamed or bred in captivity, protected or totally protected is stated as wildlife tourism in context of national conservancy (Fletcher, 2009). In another context, wildlife tourism is defined as tourism based on human-wildlife interactions, whether in natural environments or in captivity (Cui et al., 2012). Besides that, wildlife tourism definitions also includes wildlife watching holidays, wildlife boat trips, guided walks, visits to wildlife parks and sanctuaries and watching the wildlife from terrestrial viewpoints (Higginbottom, 2004).

2.2 Wildlife Tourism Position in Tourism

The position of wildlife tourism in the field of tourism is defined by Newsome et al. (2005), who stated that ecotourism indicates tourism for the environment and nature tourism is about the environment and adventure tourism takes place in the environment itself. Wildlife tourism is added in all of these three forms in Newsome et al. (2005), Figure 2.1. In his point of view, all forms of tourism however overlapping and the close relationship between this tourism able to be simplified based on the Figure 2.1. According to Newsome et al. (2005) statement, it describes that wildlife tourism is a component of wildlife tourism which comprises the adventure travel elements and poses some key characteristics of ecotourism. Wildlife tourism in his points of view embraces all the three types of natural area tourism. Wildlife based tourism may involve in many tourism forms due to its surrounding, activities and type of experiences it produced. Mass tourism involves large number of people seeking for many institutional setting based on replication of their own culture. Wildlife tourism, adventure tourism and ecotourism are interrelated to each other as in Figure 2.1. Nature area tourism is tourism based on natural environment and their attractiveness which does not engage in conservation ideas.

On the other hand, ecotourism plays a major role in conservation of natural environment, wildlife tourism is closely related with ecotourism as the concepts of conserving nature is similar in both concept, the next term that closely related to wildlife tourism is the adventure tourism, it is in generally described as the physical activities undertaken by tourists in unsecure and wild environments. Activities involved in

adventure tourism much related to wildlife tourism in terms of diving, cheetah watching, wildlife expeditions, mountain climbing, etc (Blake et al., 2010).

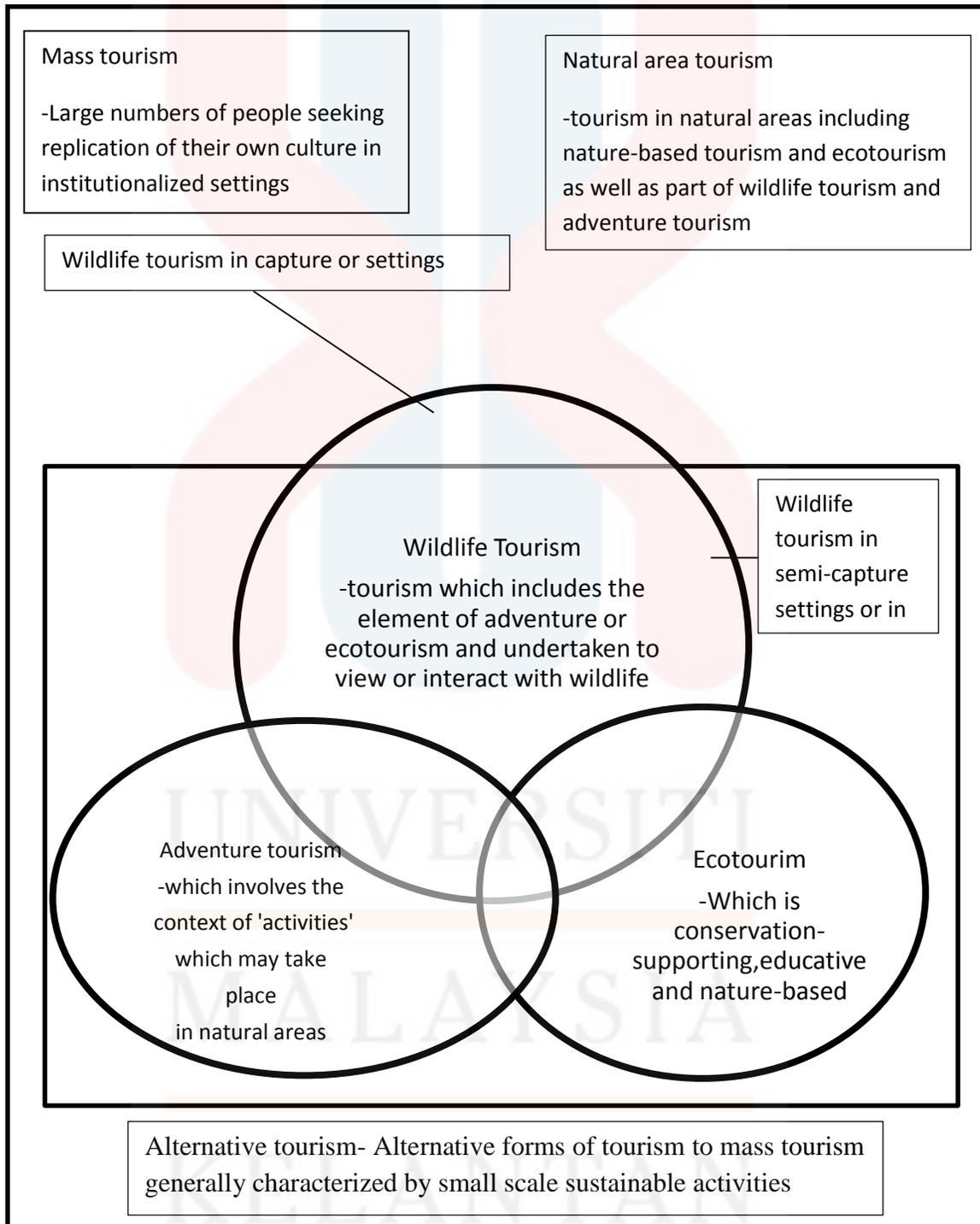


Figure 2.1: An overview of wildlife tourism's position within tourism (modification from Newsome et al., 2005).

2.3 Classification of Wildlife Tourism

According to Higginbottom (2004), wildlife tourism comprises many aspects set of experiences and there are four main distinguishable forms of wildlife tourism which are the wildlife-watching tourism, captive-wildlife tourism, hunting tourism and fishing tourism in general but in further research the further limitation for classification is linked in order to give a clear differentiation and non-overlapping between each classifications. Therefore, the classification of wildlife tourism branched out into :

- i.) Consumptive wildlife tourism which involves trapping, capturing, and killing of animals used for human consumption as food source, as part of competition and as source of commercial use and sales. Example of the activities are fishing and hunting.
- ii.) Non-consumptive wildlife tourism which does not involves capturing or killing of animals and generally action involved in watching, studying or for recording without hurting the specific targeted animal. Examples of activities are watching animals during hiking, bird watching, sketching and photography.
- iii.) Captive –free (range) continuum wildlife tourism
It involves the human made confinement for animal observation and watching. Example of activities is building a house tree to view animal's movements (Kaltenborn et al., 2011).
- iv.) Wildlife dependent wildlife tourism is the intention of tourists in visiting a place for the purpose of experience the presence of wildlife which they considered the wildlife as an extra input for their vacation.

v.) Wildlife independent is the intention of tourist does not influenced by the presence of wildlife. They enjoy their trip without the added value of wildlife.

Bulbeck (2005) presents a wildlife-tourist spectrum by Orams (1995) (Table 2.1). It categorizes wildlife-tourism by level of confinement: from captive to semi-captive and feeding wildlife to wild.

Table 2.1: Classification of animal encounter sites by Orams (1995)

| Wild | Semi-captive | Captive |
|--|-------------------------------------|---------------------------|
| National parks, migratory | Wildlife parks, rehabilitation | Zoos, aquaria, oceanaria, |
| Routes, breeding sites, natural | Centers and programmes, | Aviaries etc. |
| Feeding/drinking sites, whale | Dolphin pens, feeding wildlife etc. | |
| Watching sites, turtle watching sites etc. | | |

(Source: Bulbeck, 2005)

From the Table 2.1. Oram’s simplifies the differences between naturalness and level of confinement. Wild setting are the natural habitat which untouched by human intrusions while in semi captive settings have some artificial features included in the natural settings. Captive-settings are fully comprises of man-made and artificial.

These are described as setting preferences for human-wildlife encounters within confinement lines where the experience is mediated and the same time satisfying the viewers. An encounter is usually both natural and emotional for the viewers. However, the underlying principle of wildlife tourism is that it should fostering conservation of species and therefore, the hunting of wildlife as a tourism activity seems to be

incongruent, unjudicious and meaningless to the groups who oppose such consumptive activities altogether (Newsome et al., 2005).

According to Newsome et al., (2005), there are several cases which in order to cater for wildlife tourism and facilitate the viewing opportunities, tourists' shelters or accommodations were constructed in natural areas. However, negative impacts could have taken place if the management was ineffective or ignored by the visitors.

2.4 Perception on Wildlife Tourism

A tourist is defined as those people who travel outside their domicile, not for work, and are distinct from locals (Hughes et al., 2005). Tourist perception is the visitor's opinion about the destination which they travelled to, and depends on the quality of the environment, the landscapes and habitation of a spectacular wildlife species, the culture of its peoples, and cumulative experiences of a particular place, and local (Kaltenborn et al., 2011). Wildlife's reaction varies among individuals and depends on various factors such as type of wildlife, surrounding environmental factors and their attitudes (Blake et al., 2010).

In the following quote Hughes (2005), cit. in Shani & Pizan (2007) defines multiple roles of animals in tourism which they emphasis the location of wildlife observation with number of ways either watching in zoos, safaris or by using a system of transportation which could observe this wildlife in their natural environment without disturbing wildlife behavior and activities. Examples of place given by this researcher are camels in Mediterranean or kangaroos in Australia which satisfies both conservation and satisfaction of tourist's experience.

In one's trip animals can be a component of the travel product or be a main purpose of a trip. Places which have purely wildlife tourism destination is considered as the highest hierarchical level in wildlife tourism sector, there the main attraction is the wildlife without much competition from complementary attractions. In the classification of "wildlife-independent" and "wildlife dependent" tourism is seen as an equivalent concept for hierarchical scale.

The wildlife dependent is formed by the motivation of the tourists to see wildlife, it is considered as a value adding experience by unintentionally or with intention (Higginbottom, 2004). Orams (1995, cit. in Bulbeck 2005:10) classifies animal encounter sites into three main categories by the level of confinement as a fore mentioned on page 10. The animal encounter can occur vary by the environment. They can take place on land, underwater, on a boat etc. But all of them do include the level of confinement. Tourists are influenced by the setting which eventually influences their expectations and satisfaction level, for some tourists which does not have the intention or desire to meet animals in the wild can take captive settings or semi-captive settings as other options to deal with their holiday trip.

2.5 Tourism in Malaysia

Tourism is one of the biggest income sources for Malaysia after natural gas and oil palm production. According to Figure 2.2 that has been provided, it shows that Malaysia recorded a total of 25.72 million of tourists arrivals in 2015, indicating a decrease of 6.27% compared to the same previous year, during the year Visit Malaysia

2014. Nevertheless, there is slight increase of 0.5% if compared to the year 2013, which was a regular year (no special campaign). The decline in the year 2015 can be attributed to several reasons pointed out in tourism Malaysia. The air tragedies arise in the year 2014 affects most of the travelling destinations of tourists for holiday, as the safety and security is not sustained.

The decision is made suddenly during the winter travel seasons in relation to the tragedy took place. Moreover, the tourist arrival from neighboring country, i.e. Singapore, Thailand, Brunei and Indonesia which their entry point is through land transportation by using road were severely damaged by the floods that affected some parts of Malaysia in year 2014. In contrasting 2014, introducing Visit Malaysia Year and the investment trade in publicity and promotions have given positive results. The increase of the promotion of Malaysia have overcome the negative impact on travel and tourism and sustained the continued growth of the country tourist's arrival and receipts. In addition, collaborations with airlines to organize correspondence trips, effective and attractive advertising and promotional campaigns with specific motto to attract tourist influx, and trade seminars, also contributed to the increase of tourist arrivals from the long-haul markets in 2014.

According to Tourism and Culture Minister Datuk Seri Nazri Aziz (Choo, 2015), mentioned that the decrease in tourists arrival is at normal range as previous years after Visit Malaysia Year 2014. It is a common scenario happens after a special year. Like any other year the number of tourist arrival will decline as the year promotions and advertising is not like the year before. A steady flow of tourist's arrival is expected in

order to maintain the level of tourist's arrival in Malaysia for the following years. Based on World Tourism Organization (2016), Mr. Rifai, UNTWO perspective states that current environmental, focuses in particular manner issues of safety and security, as the tourism development rely on the collective capacity to promote safe, secure and seamless travel which made UNWTO urges governments to include tourism administrations in their national security planning to facilitate the tourists arrival.

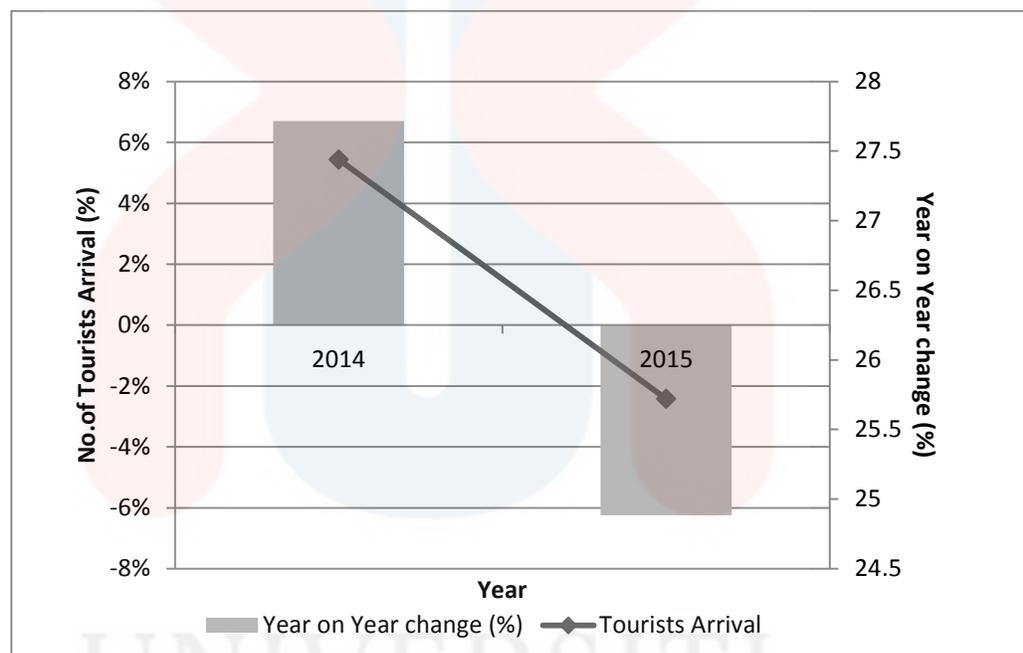


Figure 2.2: Number of tourist's arrival in Malaysia from the year (2014 -2015)
(Modified from: Tourism Malaysia, 2016)

Malaysia practices tourism based on ecotourism which induces development planning in the country is basis on sustainable development, in order to conserve the natural resources and cultural heritage (Fletcher, 2009). According to UNWTO (World Tourism Organization, 2016) report, showed that there were 1,184 million international tourists arrival globally, with a growth of 4.4 % in 2015. About 50 million more tourists which were (overnight visitors) travelled to international destinations around the world

as compared to 2014. Malaysia government has incorporated tourism as one of the important sector in generating income to the country. From these tourism sectors there are several benefits which strengthen the country economic through tourism sector, such as foreign exchanges, trading activities, job opportunities and upgrading the status of local community living cost. In 2015, the tourism receipts alone have generated around 69.12 billion to the Malaysia economy (Tourism Malaysia, 2016).

The income generated decreases from 72 billion to 69.12 billion which decreased about 4% from 2014 to 2015 is due to the special promotion is not held and if compared with the previous years this is normal growth rate that Malaysia sustains in tourism sectors. According to Tourism Malaysia (2016), Malaysia's concern in expanding the tourism destination is emerging and the main goal in developing tourism in this country is to increase the influx of foreign tourists to Malaysia, allows an extension of their staying for holiday trips which eventually will increase total tourism revenue of Malaysia. Number of domestic and international tourists plays major role in achieving Malaysia's goal. Major tourism practiced by Malaysia is the ecotourism destination which endowed with natural resources. Figure 2.3 below outlines the growth of tourism sector in Malaysia from the 2014 to 2015.



Figure 2.3: Growth of tourism sector in Malaysia from the year (2014-2015)
 (Modified from: Tourism Malaysia, 2016)

2.6 Tourism in Kelantan

Kelantan state is located in the east coast of the peninsular Malaysia with the adjacent country of Thailand and distribution of three states alongside which is the in the states of Perak, Terengganu and Pahang in the West and South. Kelantan is one of the states with beautiful natural attraction destination and due to the ecotourism concept the demand for the state to be transformed in fully a tourism destination is required (Suliadi et al., 2013). State of Kelantan comprises of lowland, highland and mountains with high diversity of flora and fauna, for example National Park, limestone hills of Gua Musang, Mountains forests of the Main Range, Virgin Jungles Reserve examples are area with

dipterocarp forest which endowed with diverse diversity which suitable for ecotourism (Kamaruzzam & Dahlan, 2006). Other than that, State of Kelantan have the potential to be development as the natural tourism destination this is because it comprises 15 destinations for ecotourism spot one of the destination area is the GSSP. The list of tourist influx in Kelantan from the time period from year of 2005 to 2015 was obtained from the tourist information centre in Kelantan. The rate of tourist influx is greater in 2012 and 2015. From 2013 to 2015, there are increasing rate of tourist influx both in local tourist and international tourists to Kelantan. About 5,136,460 tourists showed up in 2015. This is most probably that the increasing visibility of tourist destination in Kelantan. As well as the contribution of the many responsible authorities in providing better tourism spot and increase the satisfaction of tourists with reasonable price in order to attract more tourist arrival. This is evident from the data obtained which have been attached in Appendix D.

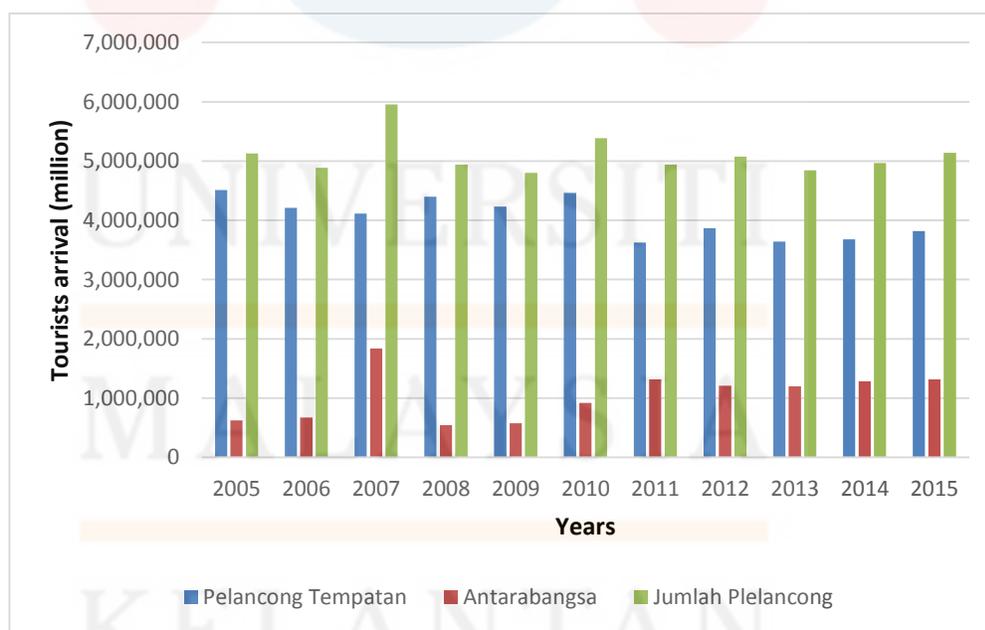


Figure 2.4 : Tourists Arrival to Kelantan from 2005 -2015

(Modified from: TIC Kelantan, 2016)

2.7 Tourism in GSSP and Gua ikan

GSSP was formerly known as the Gunung Stong Tengah Forest Reserve and is managed by the Kelantan State Forestry Department. GSSP is popular among most tourists who have interest in hiking since early 90's. The pathway to the peak of mountain and trails inside the GSSP is well known by the local guide who is known as the BAT (Baha Adventure Team). Formation of GSSP encourages ecotourism to be carried out in GSSP based on the activities involved such as rock climbing, limestone hill climbing, swimming, bird watching, boat trips and etc. The activity involved ensures the sustainability and fertility of the forest is preserved (Jusoff & Taha, 2006). Gua Ikan comprises of three caves which are the Gua Gelap, Gua Pagar, and Gua Keris that forms an impressive complex of cave system. Presence of Gua ikan also contributes to the visitor's interest to visit the surrounding area.

2.7.1 Diversity of Wildlife in GSSP and Gua Ikan

The diversity of wildlife in GSSP is abundance, hikers venturing deep inside forests might have encounter large mammals or have experienced the wildlife presence through their droppings, calls, footprints branches and trampled undergrowth. Based on the survey conducted by WWF-Malaysia in 2005, a checklist of 130 bird species was published (Jusoff & Taha, 2006). The surrounding of GSSP is rich in birdlife due to its natural habitats. GSSP forest involves extensions into the Titiwangsa range and adjacent protected area neighboring GSSP is the Royal Belum State park, Ulu Muda, Banglang and the Hala Bala Wildlife Sanctuary in Thailand. This connection encourages GSSP for its high wildlife diversity and enhancing its importance in maintain and developing as

tourism destination. Besides, Gua ikan is home for few unique species of bats such as the *Eonycteris spelaea* which is high in number in Gua Ikan and the presence of bat species like *Rhinolophus affinis* which is a common bat confined to caves and the existence of *Maxomys surifer* which is a bat species that is co-exist in Huai Kha Khaeng Wildlife Sanctuary in central Thailand provides the opportunity of wildlife tourism establishment. Based on a survey conducted of the small mammals species diversity around GSSP and Gua Ikan, there were records stated that about 11 species of bats and 6 species of non-volant small mammals found at the research area. Total small mammals recorded occurring surrounding the GSSP and Gua Ikan is 35 species (Jayaraj et al., 2012).

2.7.2 Gua Ikan as a Part of Tourism Area Associated With GSSP

Gua Ikan located seven km to the south of Dabong, which is located nearby the GSSP, most of the tourist eventually will visit Gua Ikan if they have planned to have a holiday trip in GSSP. The package to visit GSSP also involves the visitation to the caving system in Dabong. The package of 3 days and 2 nights at GSSP includes the caves exploration to Gua Ikan which creates an interesting and satisfying vacation in GSSP. The package is worthwhile as it comprises the camping, hiking and caves exploration at a reasonable price (Caves & Climbs Packages, 2012).

2.8 Wildlife Tourism Encourages Conservation

Wildlife tourism is a way to secure sustainable economic benefits while supporting communities and wildlife conservations. Besides, awareness within people enables the value of wildlife heritage to continue to prosper through activities

participation and involvement which eventually induces the conservation of the environment (Tisdell & Wilson, 2004). Wildlife tourism in Malaysia has been taken place at few states of Malaysia. Based on Kuala Gandah National Elephant Conservation Centre (KGNECC) in Pahang, there are studies of visitors participation in wildlife tourism based on wildlife-human interaction involving a particular elephant interactive program in their centre which primarily conducted for wildlife tourism site in Malaysia.

Based on the wildlife tourism the benefits of the state in tourism sector increased as the result of tourists interest visitation towards the animal, and at the place the elephant is seen a flagship attraction in order to attract tourist. As the tourist inflow increase the overall economic sector increases and the concern in protecting the wildlife and the surrounding environment is given attention and this eventually lead the stakeholder, government and more responsible authorities to conserve the surrounding habitats with more proper policies. This example is used in this study to show the importance of the wildlife tourism and how the tourism leads to wildlife conservation and providing a sustainable growth. Influx of tourists in a destination is not only depends on the attractions but also consists of facilities, services and infrastructure.

In general animal-based tourism can occur anywhere in this world but naturally wilderness area are considered as the richest for wildlife watching. According to Valentine & Birtles (2004), states that most of the high level of biodiversity distribution occur in most of the developing countries as they offer the world's most exciting wildlife watching destinations. Most of the wilderness area are not easily accessible and the level of facilities or infrastructure is not satisfy enough most of the international tourists. As have mentioned before, developing countries has the ability to have animal-based

tourism but sometimes the political atmosphere which is not suitable for the tourists arrival and the level of satisfaction is hardly to be fulfilled.

2.9 Advantage of Wildlife Based-Tourism

Wildlife tourism supports the growth of tourism industry; it creates employment and supports secondary commercial industry. Based from the implementation of wildlife based activities additional income is able to generate from the admission permits, hiring boat fees, land vehicles, services, and other tourism related income influx (Blake et al., 2010). The total revenue of tourism industry boosts up due to establishment of wildlife-based activities.

CHAPTER 3

MATERIALS & METHODS

3.1 Description of Study Area

Survey was carried at three sites, which are the entrance of GSSP where tourists arrival mostly can be seen here and registration to enter Gunung Stong State Park is located here, Baha Camp is the strategic location to stop and take rest before explore further to enter Gunung Ayam nearby, this location is set up for camping and enable tourists to explore the next day and Gua Ikan is the area is the arrival of tourists from Dabong train station.

3.2 Geographical Data

The geographical data shows the area of the study that plotted based on the GPS point. As can be observed from the Appendix B, the area of the tourist movement distributed, in a large number around these areas. The interview of the study was conducted at the entrance of the GSSP, and entrance of the Gua ikan for the convenience in obtaining data as many tourists will pass through these routes. Besides that, the slope of the study area also included in (Appendix B), which shows a deep illustration of the place. The landuse is shown clearly in Appendix B to reveal the plan of the land use. Other than that, the primary vegetation of GSSP also included which shows the diverse vegetation existence in and surrounding GSSP.

3.1.1 Gunung Stong State Park

Gunung Stong State Park covers an area of 21,950 ha, which is located in the State of Kelantan is managed fully by the Forestry Department of the West Kelantan Forestry District. As outlined in Figure 3.1 below there are several buffer zones surrounding the GSSP which is the Stong Utara (11,044ha), Balah (56,010ha), and Basor Forest Reserves in the north, the Gunung Stong Selatan Forest Reserve (28,134ha) and to the west, the Perias (60,355ha), Ulu Nenggiri (21,160ha) and the Betis Forest Reserve (55,953ha). Further west are the Titiwangsa Range that straddles the Perak-Kelantan border (Maseri & Mohd-Ros, 2005).

The GSSP is mainly a hill dipterocarp forest at elevations between 300 m a.s.l to 1500 m a.s.l. There are studies reported the abundance of wildlife and includes several species of mammals and birds in Gunung Basor, Jeli, Stong Tengah, Sungai Betis, Balah and Stong Utara (Ahmad et al., 2005). GSSP is relatively rich in bird diversity due to its lowland forests and lower montane forests. Previous studies have recorded a total of 57 bird species from 22 families, among the families are Timaliidae (babblers), Pycnonotidae (bulbuls), Dicaeidae (flowerpeckers) and Nectariniidae (sunbirds) (Shahrul Anuar et al., 2005). At GSSP encounters by mountain guides with bears, tigers and elephant have been recorded, and in nearby Jeli area (Maseri & Mohd-Ros, 2005).

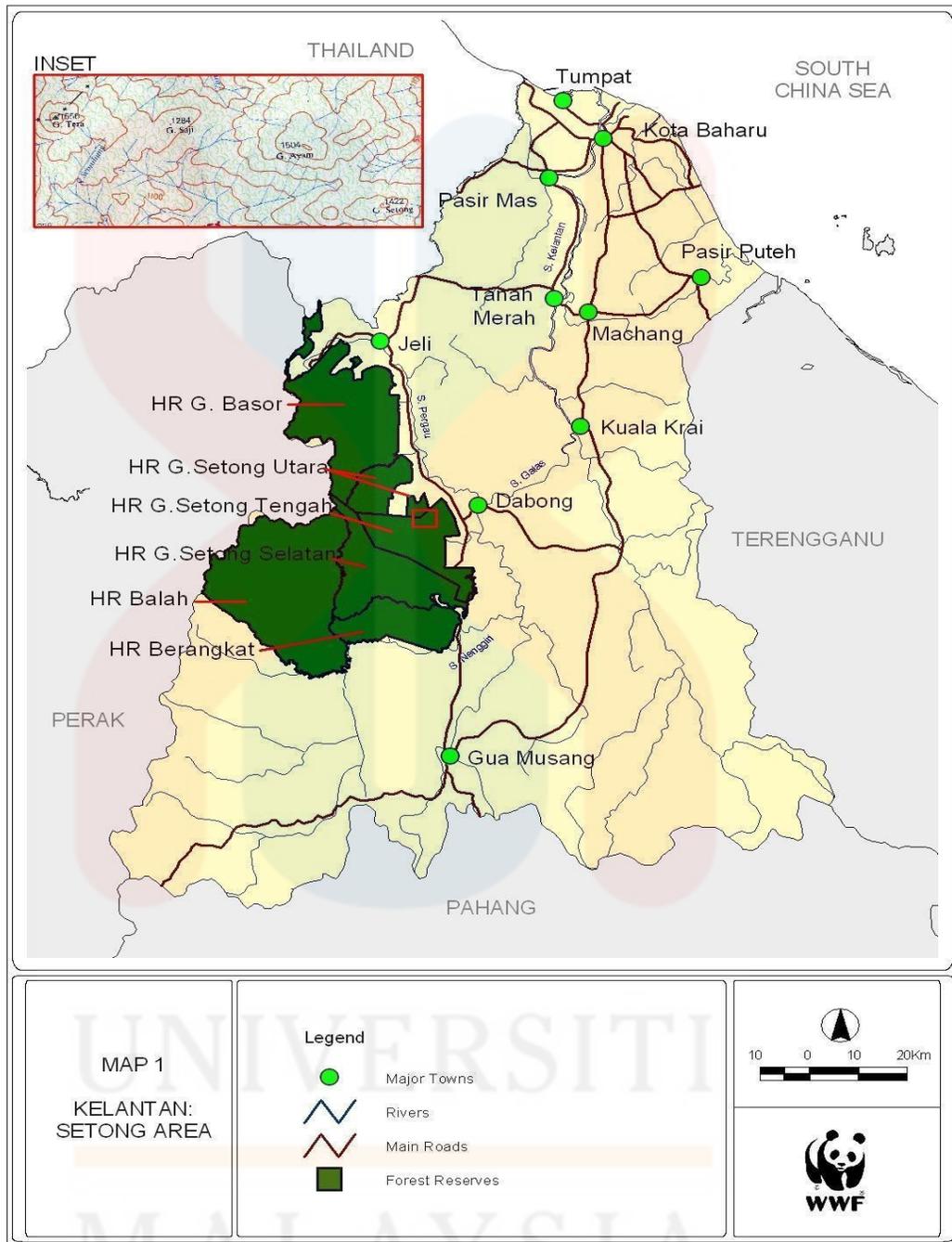


Figure 3.1: Location of the Gunung Stong area
 (Source: Gunung Stong State Park, 2004)

KELANTAN

3.1.2 Gua Ikan

Gua ikan is located in Kampung Slow Pak Long which is about 95 km far from Kuala Krai and 7 km from Dabong. Gua Ikan complex caving system is part of the Gua Musang limestone aggregates (Marzuki et al., 2011). Figure 3.2 shows the location of Gua Ikan in Kelantan District.



Figure 3.2: Location of Gua ikan in Kelantan district
(Source: Nenggiri River, 2005)

3.3 Data Collection

The data collection involving primary data and secondary data and is summarized in Figure 3.3

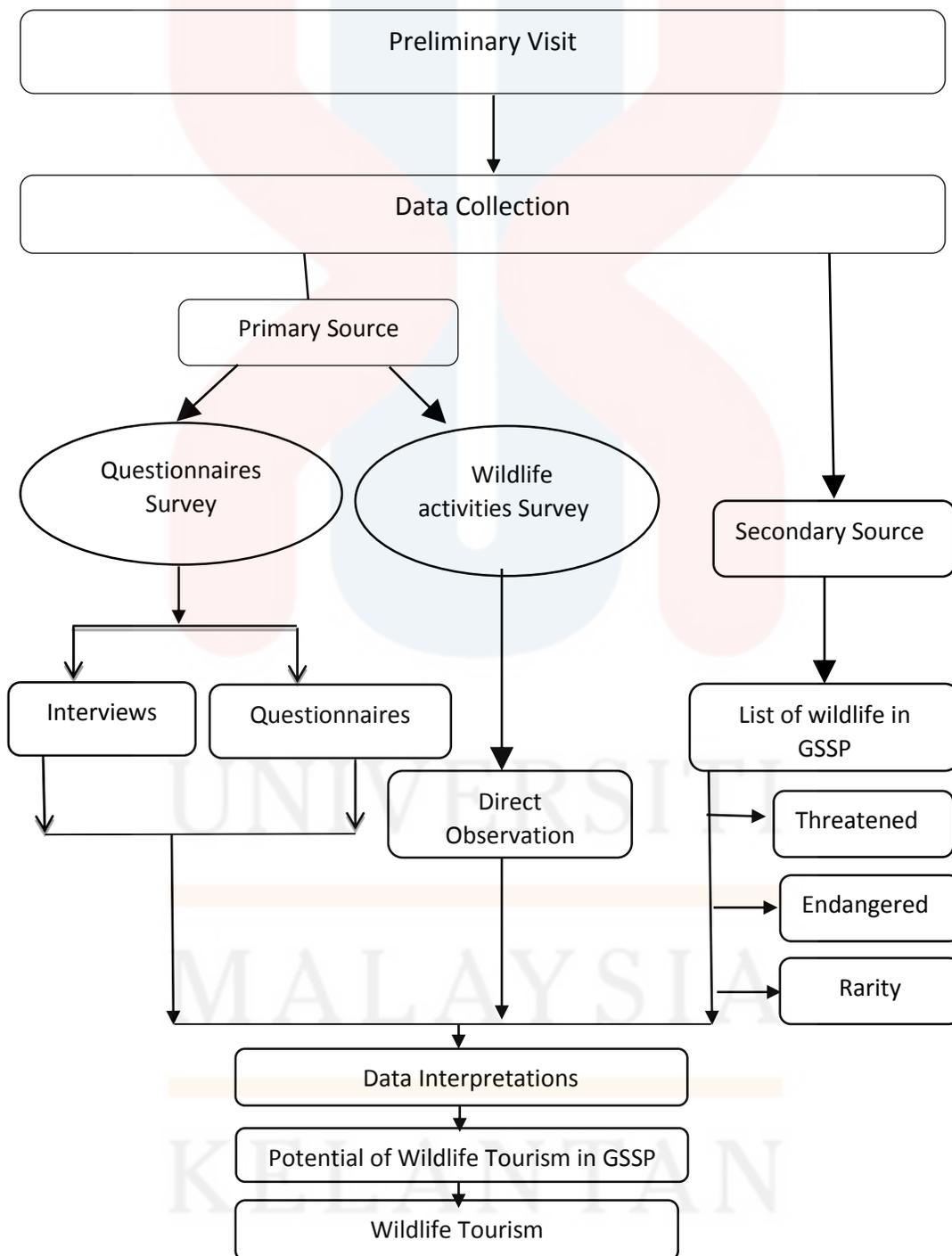


Figure 3.3: Flow diagram of study

3.4.1 Primary data

Primary data collections were involved questionnaire surveys, direct observations and interviews. Direct observation was carried out based on the researcher's observation on the surrounding of GSSP on the number and types of activities based on wildlife surrounding GSSP which one eventually can relate with. The number and types of activities were noted randomly at the research site. Questionnaire survey involves three sections which are the demographic, current tourist perception regarding GSSP and future development of wildlife tourism in GSSP as outlined in Appendix A. In current tourist perception regarding GSSP five main questions was arise which were the new environmental paradigms scale, visitor's interest in about learning special topics in GSSP, activities preference of GSSP visitors, reasons for visiting GSSP and satisfactions with different aspects to visit GSSP.

In future development of wildlife tourism in GSSP comprises two questions which were the criteria required for wildlife in implementation of wildlife tourism in GSSP to increase tourist influx and Implementation of new wildlife-based activities in GSSP and Gua ikan based on mammals and birds. Sample size for questionnaire distribution was approximately 100 individuals, questionnaires are prepared and distributed randomly among tourists and mountain guides. A five point and four point Likert scale were used accordingly in this questionnaires, this is due to time constraints the Likert scale was easy for the respondents to complete the questions.

3.4.2 Secondary data

Secondary data was collected from the other researchers who have conducted the research and collected the data, these secondary sources of data were collected through recorded data from universities, government agencies such as Department of Wildlife and National Park (DWNP), Forestry Department, and NGOs. The list of wildlife in GSSP was obtained based on the rarity, threatened and endangered, from this list further analysis have been carried out.

3.5 Data analysis

3.5.1 Key potential of wildlife tourism

A checklist of wildlife species mainly mammals and birds were obtained from the GSSP management plan. Species of mammals and birds were listed according to vulnerability, threatened and endangered. The list of species helps in determining the types of species which make as a flagship of the area. As flagship species can be stated as a key potential for the implementation of wildlife tourism. Based on the number of species, the mean number of species percent area, the percentage of species helps in identification of target species.

3.5.2 Tourists perception towards wildlife tourism

The distribution and collection of 110 questionnaires was collected from April 2016 to June 2016 (8 weeks). The questionnaires, focused on their activities and to assess their opinions on wildlife tourism in the area, as most tourists arrived and leave at these points. The first sample taken in GSSP consisted of local tourists with their family

members on picnics, walks and casual walks within GSSP. In Gua Ikan, the first samples from a group of local tourists who came to explore the cave formations. Tourists were given the options to complete the survey form either in English or Bahasa Malaysia, administered together with a covering letter.

The questionnaires addressed issues relating to demographic characteristics, current tourist perceptions regarding GSSP and Gua Ikan, and potential of wildlife tourism in GSSP and Gua ikan. A Pilot test was conducted among 10 tourists in GSSP and Gua Ikan to correct and examine their understanding of the survey form, and to refine it if difficulties arise in answering them in order to upgrade the survey form, leaving 100 forms subjected into data analysis. Out of 110 forms, 10 were rejected as unsuitable, subjected into data analysis representing the overall perception of tourists regarding wildlife tourism in GSSP and Gua Ikan.

The obtained data from questionnaires was examined through SPSS tool and carried out to obtain the result. Three types of analysis were carried out which is the descriptive analysis to compute the percentage, mean, standard deviation and identification of standard error, as the distribution of the tourists opinion controlled by the standard deviation. Moreover, the smaller the standard deviation, the more concentrated the data. Chi-square analysis was carried out to determine the distribution of tourist perception. The Chi Square statistic compares the tallies or counts of categorical responses between two (or more) independent groups, the chi square test can be thought of as a test of independence.

In a test of independence the null and alternative hypotheses were:

Ho: The two categorical variables are independent.

Ha: The two categorical variables are related.

Here f_o denotes the frequency of the observed data and f_e is the frequency of the expected values.

$$X^2 = \sum (\text{observed} - \text{expected outcome})^2 / \text{expected outcome}$$

Next, Inferential analysis is conducted to manipulate the perception level among tourists. Feedback on the perception and expectation of visitor experiences helps to determine the potential of GSSP as a wildlife tourism destination.

CHAPTER 4

RESULT AND DISCUSSION

4.1 RESULT

4.1.1 Flagship Species of Wildlife in GSSP and Gua Ikan

The list of endangered species was collected from the record produced by the GSSP management plan and verified it (Appendix C).

Table 4.1 Checklist of Wildlife Species in GSSP

| Common Name | Scientific Name | IUCN category | | |
|-------------------------------|-------------------------------------|---------------|------------|------------|
| | | Least Concern | Vulnerable | Endangered |
| Birds | | | | |
| Blue banded Kingfisher | <i>Alcedo euryzona</i> | | ✓ | |
| Crested serpent eagle | <i>Spilornis cheela</i> | | ✓ | |
| Mammals | | | | |
| Hollow faced bat | <i>Nycteris javanica</i> | | ✓ | |
| Pig tailed macaque | <i>Macaca nemestrina</i> | | ✓ | |
| Golden cat | <i>Catopuma temminckii</i> | | ✓ | |
| Clouded leopard | <i>Neofelis nebulosa</i> | | ✓ | |
| Malayan tapir | <i>Tapirus indicus</i> | | ✓ | |
| Malayan sun bear | <i>Helarctos malayanus</i> | | | ✓ |
| Malayan tiger | <i>Panthera tigris spp.jacksoni</i> | | | ✓ |
| Asian elephant | <i>Elephas maximus</i> | | | ✓ |
| Asiatic wild dog | <i>Cuon alpinus</i> | | | ✓ |
| Serow | <i>Capricornis sumatraensis</i> | | ✓ | |

(Source : GSSP Management Plan, 2008)

a) Mammals

Table 4.1 showed that Hollow faced bat species is under vulnerable category which their current population is decreasing due to habitat loss, logging and agriculture (Huston et al., 2008). The Pig Tailed Macaque, is under vulnerable category and is primarily affected by hunting and habitat loss (Richardson et al., 2008). Whereas, Malayan sun bear is reduced due to deforestation and uncontrolled exploitations (Fredrikson et al., 2008). Besides, Asiatic golden cat is near threatened as it is decreased due to increased level of poaching (McCarty et al., 2015). Besides, Clouded Leopard is declined due to habitat loss and direct exploitation (Grassman et al., 2016). Next, Serow population is believed to have a significant decline in populations due to unlimited hunting and habitat loss (Duckworth et al., 2008).

Malayan tiger is under critically endangered as these populations were lost due to poaching and habitat loss (Kawanishi, 2015). Another endangered which is Asian Elephant, about 50 % of the population is reduced since from past three decades. The population is affected by habitat loss and degradation of forests (Choudary et al., 2008). Another endangered species was Malayan tapir, and the population is declining due to habitat loss, road kills, snare hunters and conversion of their habitat into oil palm plantations (Traeholt et al., 2016)

b) Birds

Based from the checklist of wildlife from GSSP management plan, birds which are vulnerable are blue –banded kingfisher, crested serpent eagle. It can be conclude that, GSSP have potential for flagship attractions. Blue banded kingfisher is critically

endangered which undergoes a serious population decline based on IUCN red list (Birdlife International, 2016a). Crested serpent eagle, undergoes a stable population trend but in certain range of size criterion undergoes fluctuation in population size. However, the existence of this species does not consider in tourism involvement but do protect under forestry department. The tourists have been experience this wildlife sight-seeing during their trip to GSSP by chance. The obtained list of species shows the abundance of this species can be utilized for tourism and at the same contribute for conservation. The identification of the list succeeds to be determining in this study. (Birdlife International, 2016b).

4.2 Tourists perception towards wildlife tourism in GSSP

4.2.1 Section A (Tourists profile)

a) Demographic Profile

A total of 100 tourists were surveyed during this period of study. As data of tourist arrival approximately 500 tourists per annum in GSSP according to Police station Dabong, about 20% of the whole population is obtained to validate the data. The Table below shows the demographic profiles of local and foreign tourists who have visited GSSP from the time period of April to June which involves tourists approximately of more than 300 tourists.

From the Figure 4.1, 54% of tourists are from Kelantan, while the rest were from other states, this could indicate that the majority of Kelantanese give strong support to GSSP and Gua ikan. Kelantanese expresses their love towards nature by participating in activities in GSSP and Gua ikan this could be due to proximity, to the tourism destination spot and the minority Malaysian tourists are from Kedah, which is about 3%,

whilst the remaining 43% were from Terengganu, Selangor, Sarawak, Sabah, and Perak as in (Figure 4.1). This shows that people throughout Malaysia are willing to travel long distances to enjoy and experience GSSP and Gua ikan.

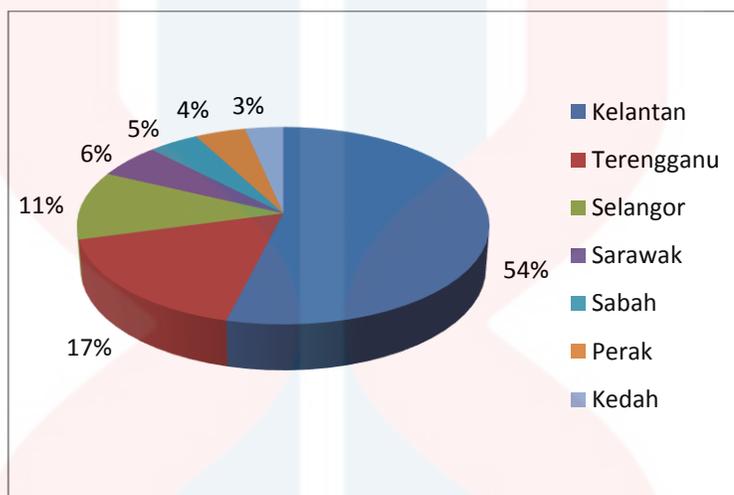


Figure 4.1: Malaysian Tourists Arrival According to State.

Meanwhile, data indicated that a total of 3 foreign nationalities who have contributed towards the revenue of the destination spot are from Asia who have visited the GSSP and Gua ikan, with majority 55% of Singaporean, and about 36% of foreign tourists from Kenya and the remaining was from China which consists of 9% as pointed out in (Figure 4.2). Almost half of tourists are from Singapore which eventually shows the destination spot attracts neighboring country like Singapore in contributing towards the revenue of the place, moreover, not forgetting china and Kenya also supports and contributes towards the activity formed by the responsible authorities in GSSP.

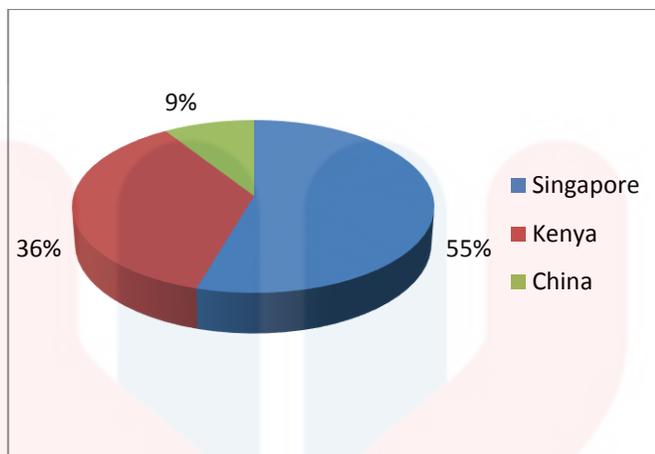


Figure 4.2: Foreign Tourists Arrival According to Country

From the report as in Figure 4.3, about 69% are males and are the remaining 31% were females. Based from the result, high number of the tourist involved in adventures activities and nature in GSSP is mostly male.

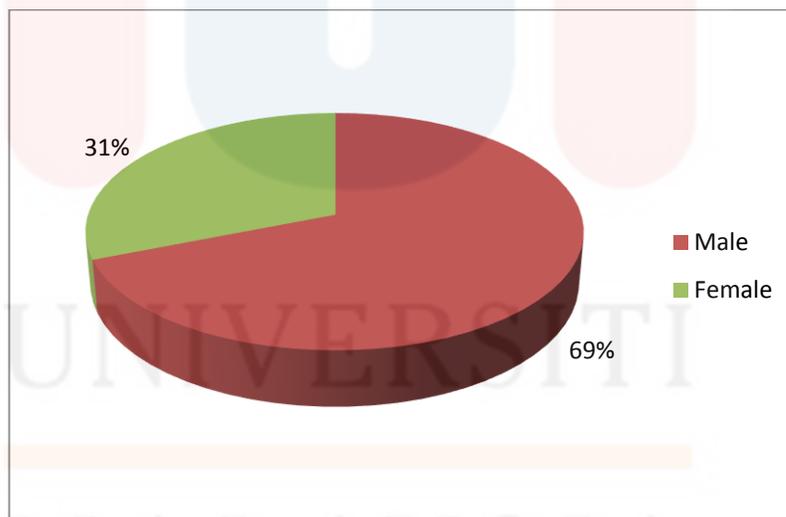


Figure 4.3: Tourist's gender

The sample of the survey comprised 48% of tourist's aged less than 20 years, 52% of visitors were above 20, but there were no tourists age above 60 years were reported. Tourists above age 20, travels more in GSSP.

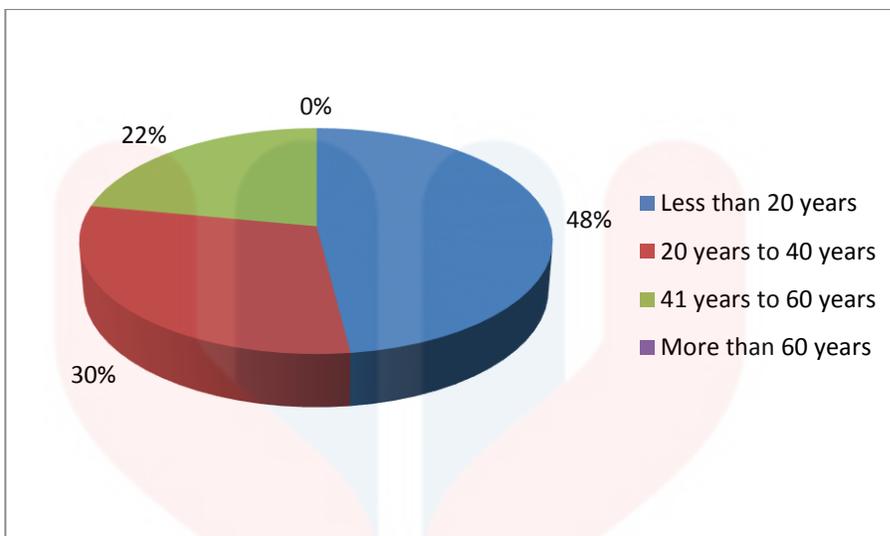


Figure 4.4: Tourist's Age

Roughly, 75% of tourists who travelled to GSSP and Gua Ikan were singles, 20% of tourists were married while the remaining 10% included in others, which might be divorced or widowed. Most singles preferred to seek adventures activities in GSSP.

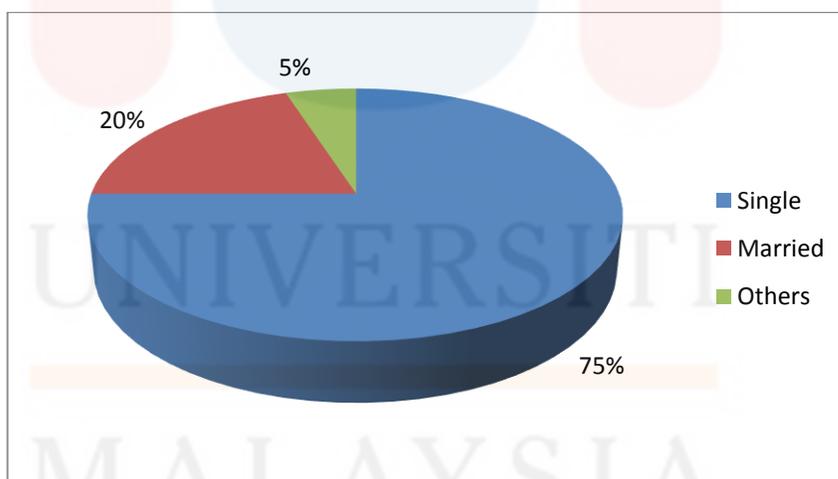


Figure 4.5: Marital status

Based from above Figure 4.6, 52% of respondents were students, 29% were employed, 11% were in business, and 8% retired. Students mostly visit GSSP through the arrangement done by their schools, colleagues and universities.

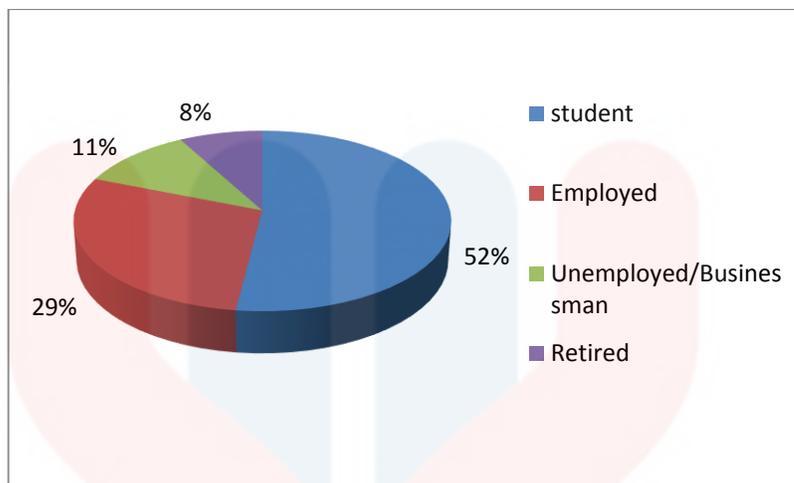


Figure 4.6: Job status

From Figure 4.7, 63% of respondents travelled to GSSP and Gua ikan, with friends, 40% alone, 23% with classmates, 8% families, while 2% stated others. A tourist travels with groups in enjoying the beauty of GSSP.

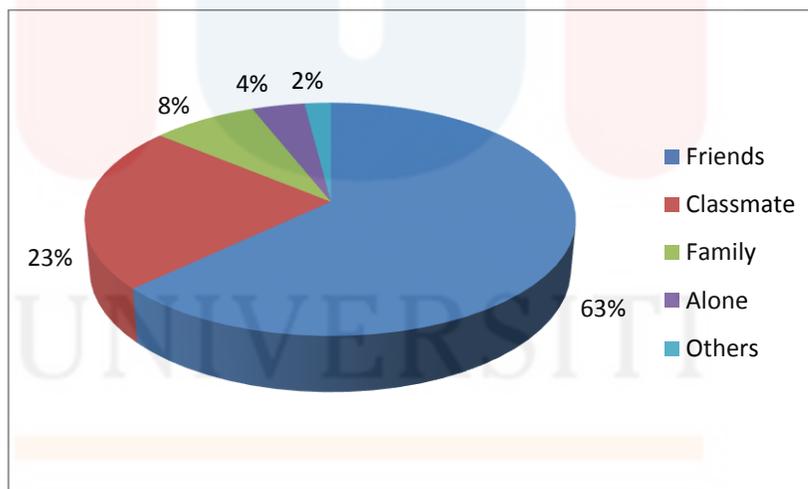


Figure 4.7: Tourist's accompanied by

In the salary range, 71% of tourist earned below RM 2000 per month, and with 22% of tourists poses salary range of RM 2000 to RM 5000, and 6% of RM 5001 to RM 10,000. Average income earned tourists do involve in adventures activities in GSSP.

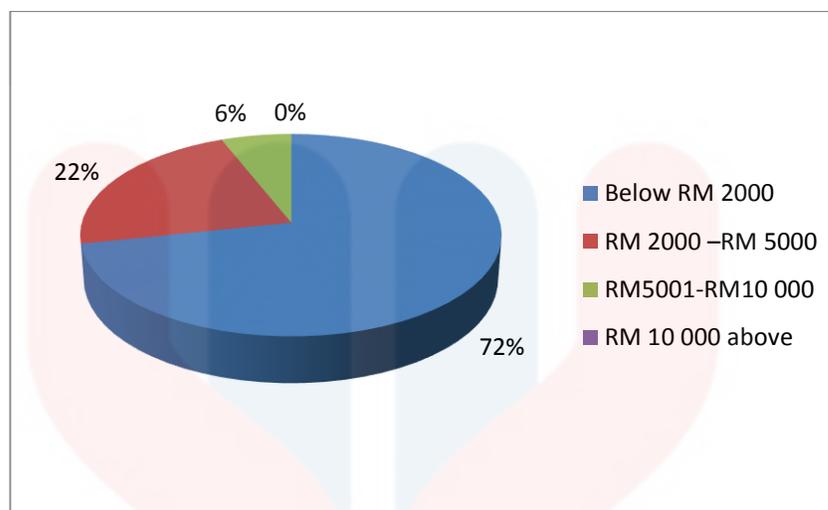


Figure 4.8: Tourist's Income

Implementation of wildlife tourism is influenced by demographic profile of tourists as tourists background influence their behavioral level (Mogindol & Bagul, 2016). For instance, an understanding tourist movement can help tourism policy makers, geographers, and the tourism industry itself provide better amenities and facilities to cater the requirements of the tourist (Kadir, 2011). The tourists distribution is identified to locate the interest people arrived from where most and who contributed to the most revenue at the area to ease the policy making, while age is one of the factor which is an important factor that promotes tourism and it is commonly believed that gender also contributes in the movement of people which in relation to tourism. Marital and Job status Travellers who are not married were found to spend more than the married travellers is most important factor for earning money and for human well-being. Tourism also depends on the earning members and the size of earning. Income is the base of human development and one of the major factors that promote tourism. Economic theory recommends that when an individual's income increases, his/her demand for travel is also possible to increase (Wang & Davidson, 2010). There were

different outcomes from respondents based on their characteristics which could made the betterment of the choices they made for future upgrading of the place.

b) Visitation Profile

Figure 4.9 shows the profile of the respondents purpose for visiting GSSP and Gua Ikan, frequency of their visitation, activities in the place, willingness in recommending GSSP to others (friends, family and others), the desired entrance fees for the area if wildlife observation is implemented and the potential of revisits to GSSP and Gua ikan if could observe wildlife in their natural habitat.

Fewer than 2% of respondents have intended to stay in GSSP for 3 days, while 7% of tourists have the intention to stay in GSSP for more than 4 days, and 22% of tourist willing to stay for one day at GSSP and 69% of tourist, have made their choices to stay in GSSP for two days and most tourists willing to stay in GSSP for more than one day.

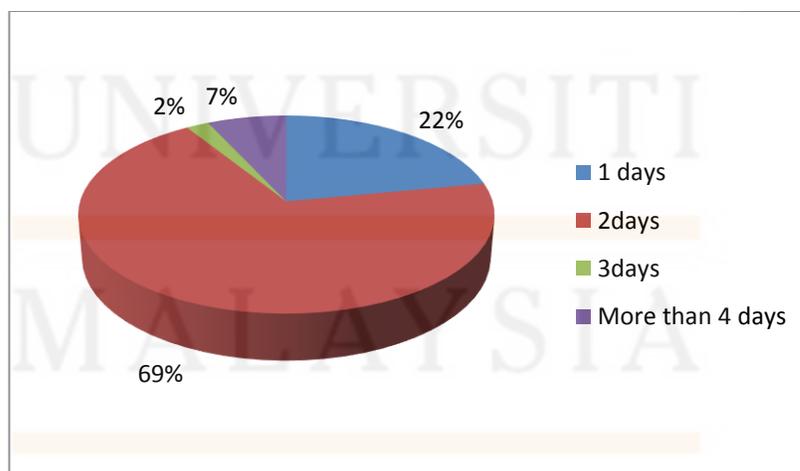


Figure 4.9: Intention to stay in GSSP

Leisure/vacation as the respondent's intention in visiting GSSP is half than respondents visiting GSSP for an academic trip, which is about 48%, while 21% agrees to have the intention in visiting GSSP for other activities like caving, hiking, research, competition and swimming and the remaining 7% have been in GSSP for business purposes.

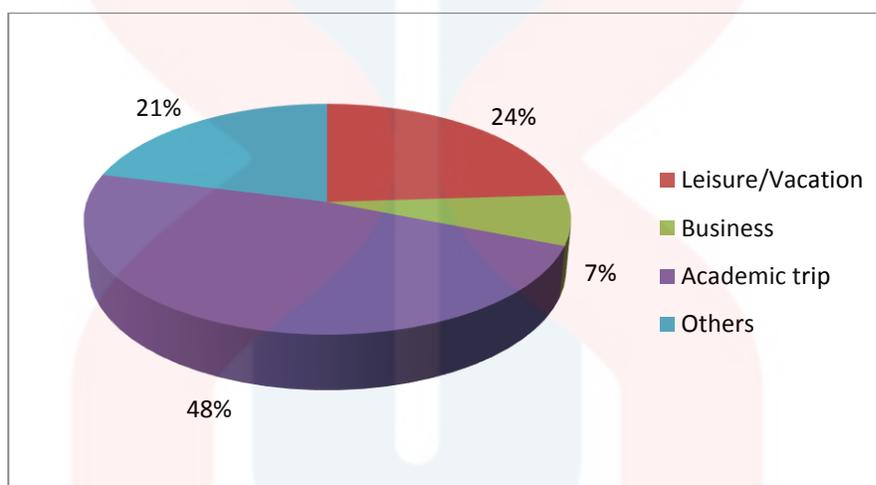


Figure 4.10: Reason for visiting GSSP

Figure 4.11 reports that, 80% of respondents have stated that they have been visited to GSSP for 1 times only, while 8% and 7% of respondents have been visited GSSP for 2 times and 3 times and remaining 3% and 2% were stated none and more than 3 times respectively.

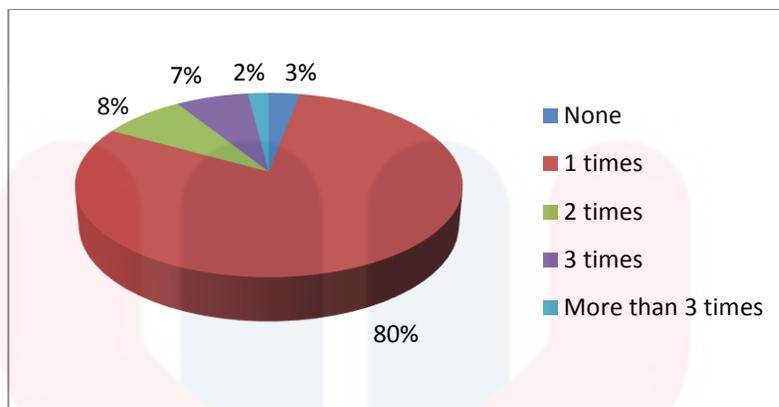


Figure 4.11: Frequency of visitation to GSSP

Mountain climbing is the most preferred activity carried out in GSSP which is about 37% of respondents following with 36% respondents reports carried out research activities in GSSP, while 17% and 10% of respondents reports that they have been carried out watching wildlife and hiking to Baha camp.

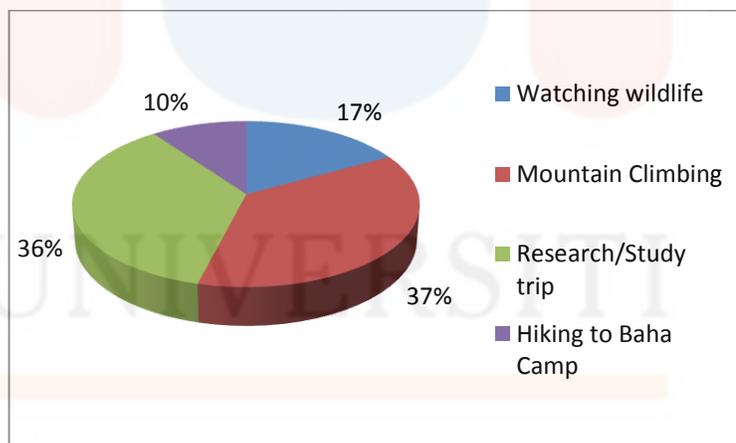


Figure 4.12: Activity carried out in GSSP

From Figure 4.13, majority of tourists which were about 91% agreed to recommend to other while only 9% of responded reports not agree with the recommendation this might due to poor services.

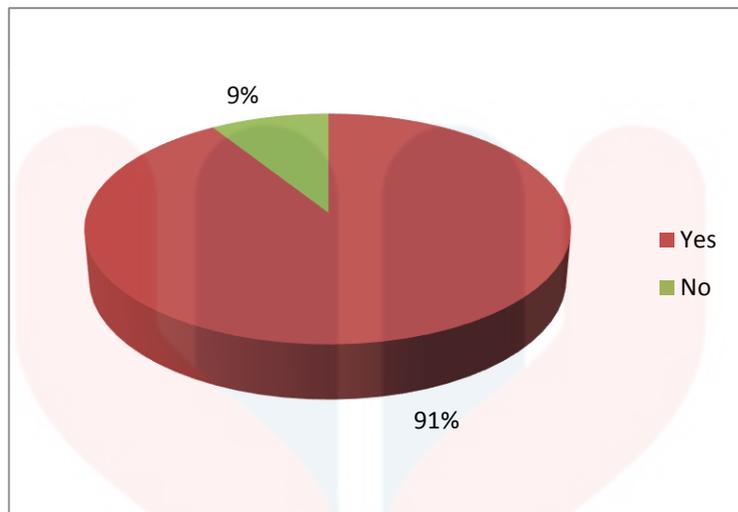


Figure 4.13: Recommendation to GSSP

From the Figure 4.14, 94% reveals that they agreed for entrance fees below than RM20 and the rest 6 % agreed for entrance fees between RM20 to RM50 and there are no responses towards the value of entrance of RM51 to RM100 and Above 150. This indicates that tourist willing to pay at a rate below RM 20, there are chances of tourist too willing to pay a higher rate if the maximum satisfaction among the tourist is attained by inducing more activities and services.

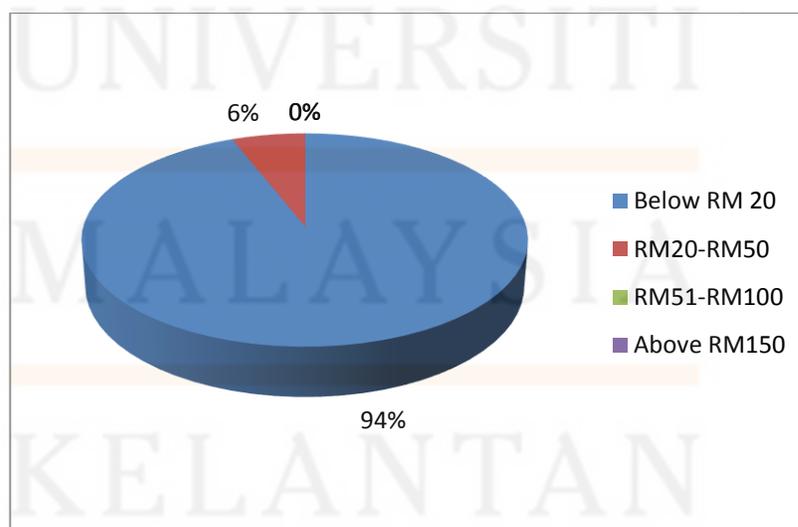


Figure 4.14: Willingness to pay entry fees if wildlife observation implemented

Surprisingly, based from Figure 4.15, 98% of respondents have reported that they will revisit GSSP and Gua ikan if they have the opportunity to observe wildlife in their natural habitat and while only 2% disagree with the option. This reveals that there are expectation of tourists exists to experience wildlife tourism in GSSP and Gua Ikan.

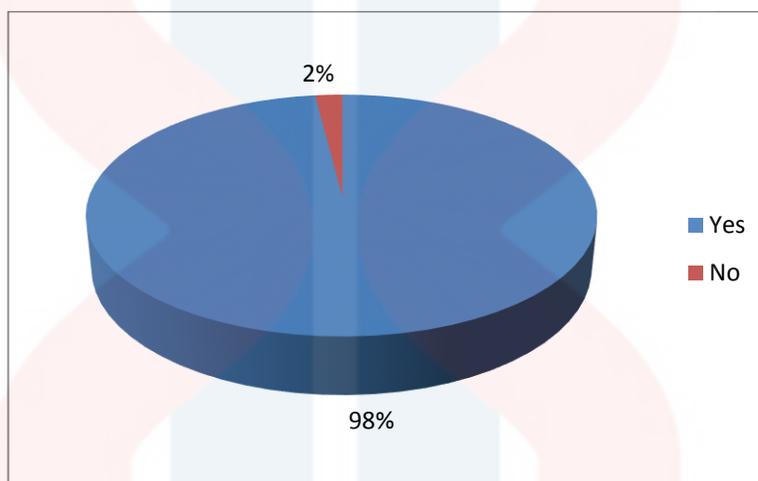


Figure 4.15: Revisitation to GSSP if Wildlife tourism is implemented

Visitation profile reveals that majority have an attachment towards the destination and attraction of the place and willing to explore in days to enjoy the natural resources within GSSP. Besides, implementation of wildlife tourism received a majority support from most of the tourists and reliable entrance fees for future wildlife tourism development policy could be derived from this analysis. GSSP is admired by most of the tourists for its current adventure activities (Maseri, 2009) and do obtains support in future activities implementation in GSSP. This reveals that there are expectation of tourists exists to experience wildlife tourism in GSSP and Gua Ikan.

4.2.2 Section B: Current tourist perceptions regarding GSSP and Gua Ikan

Table 4.2 shows that out of the sample size of 100 people, 99% of tourists give positive opinion and about 1% of tourists do not support with the statement that the balance of nature is very delicate and easily disturbed, the chi square test shows significantly different based in Appendix E. Therefore, we accept the null hypothesis that all tourists do not same opinion towards the statement.

In the Table 4.2, can be seen that 56% of tourists show agreed and no response in disagreeing with the statement humans must live in harmony with nature in order to survive. Based on Appendix E, the chi square shows no significant differences. We reject the null hypothesis, that all tourists have the same opinion towards the statement.

Table 4.2 indicates that all tourists do support the given statement, as 53% of tourist strongly agrees and the rest do agree. The chi square statistic shows not significantly different. We reject the null hypothesis. Therefore, all tourists have similar opinion towards environmental awareness.

About 89% of tourists do not support the statement given in question 11, based on chi square analysis, there is significant difference, since we accept the null hypothesis, and the tourist's opinion towards the statement is not similar.

It is noted from the chi square analysis based from Appendix E, There are significance difference in number of tourist responses towards question 12 statements. We accept the null hypothesis and the contributor to this difference are strongly disagreeing with 48% of tourists support. Therefore, few tourists do have economical point of view towards the environment.

From the Question 13, it is reported that 89% of tourists give does not support the given statement, majority of 48% of tourists in the category of disagreeing with the statement. According to chi square analysis in (Appendix E), there is significant difference, therefore, tourists do not have the same opinion towards the statement. However, all tourists do provide positive opinion towards the statement and shows they do have environmental awareness.

Table 4.2: The environmental paradigm scale

| Item | | Percentage | Mean | Std | Skewness |
|--|-------------------|------------|-------|--------|----------|
| Q8.The balance of nature is very delicate and easily disturbed | Strongly | 38 | 4.350 | 0.5925 | -1.476 |
| | Agree | | | | |
| | Agree | 61 | | | |
| | No opinion | 0 | | | |
| | Disagree | 0 | | | |
| | Strongly Disagree | 1 | | | |
| Q9.Humans must live in harmony with nature in order to survive | Strongly | 44 | 4.440 | 0.4989 | 0.245 |
| | Agree | | | | |
| | Agree | 56 | | | |
| | No opinion | 0 | | | |
| | Disagree | 0 | | | |
| | Strongly Disagree | 0 | | | |
| Q10.Human interference with nature it often produces disastrous results | Strongly | 53 | 4.530 | 0.5016 | -0.122 |
| | Agree | | | | |
| | Agree | 47 | | | |
| | No opinion | 0 | | | |
| | Disagree | 0 | | | |
| | Strongly Disagree | 0 | | | |
| Q11.Humans are destined to rule over the rest of nature | Strongly | 1 | 1.670 | 0.7661 | 1.332 |
| | Agree | | | | |
| | Agree | 1 | | | |
| | No opinion | 9 | | | |
| | Disagree | 42 | | | |
| | Strongly Disagree | 47 | | | |
| Q12.Plants and animals exist primarily to be used by humans | Strongly | 4 | 1.730 | 0.9413 | 1.829 |
| | Agree | | | | |
| | Agree | 1 | | | |
| | No opinion | 7 | | | |
| | Disagree | 40 | | | |

| | | | | | |
|--|-------------------|----|-------|--------|-------|
| | Strongly Disagree | 48 | | | |
| Q13.Humans have the right to modify the natural environment to suit their needs | Strongly Agree | 1 | 1.730 | 0.7502 | 1.223 |
| | Agree | 1 | | | |
| | No opinion | 9 | | | |
| | Disagree | 48 | | | |
| | Strongly Disagree | 41 | | | |
| | Disagree | | | | |

Table 4.3, Question 14 shows that a majority of respondents to be distributed towards interested categories based on the mean and standard deviation which is 4.460 and 0.5009 respectively, there are significance difference based on chi square analysis in (Appendix E). Which the greatest contributor to these differences was interested category which gives about 52% of support. Therefore, do not have the similar opinion, in relation to interest to fauna, however majority of tourists do show positive response towards their interest in fauna.

The mean value of tourist’s interest towards landscape distributed towards interested categories in relation with mean and standard deviation of 4.520 and 0.5021 respectively. There is no significant difference as in Appendix E. This shows their opinion is similar which 48% of tourists interested and 52% tourist very interested. Therefore all tourists do have interest towards landscape.

From Question 16, it shows that a majority of respondents to be distributed towards interested categories based on the mean and standard deviation which is 4.050 and 0.6571 respectively, there is significance difference (Appendix E), which 57% supported the interested category. Therefore, do not have the similar opinion, in relation to interest to fauna, however majority of tourists do show positive response towards their interest in flora.

It is reported that tourists interest in Question 17, also distributed in between interested and very interest in accordance with mean and standard deviation which is 3.850 and 0.4794 respectively. There is a significant difference (Appendix E). The least contributor for this difference is tourist response towards slightly interested, 4%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority do have their interest in social and environmental problems.

It is observed that tourists interest in Question 18, with mean and standard deviation which is 4.410 and 0.5702 respectively. The chi square analysis as in (Appendix E) shows significant difference, where tourist response towards interested is about 51%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority do show interest in cultural aspects.

Table 4.3: Visitors potential interest in learning new about GSSP

| Item | | Percentage | Mean | Std | Skewness |
|----------------------|-----------------------|------------|-------|--------|----------|
| Q14.Fauna | Very Interested | 47 | 4.450 | 0.5573 | -0.692 |
| | Interested | | | | |
| | Interested | 52 | | | |
| | Moderately Interested | 0 | | | |
| | Slightly Interested | 1 | | | |
| | Not Interested | 0 | | | |
| Q15.Landscape | Very Interested | 52 | 4.520 | 0.5021 | -0.081 |
| | Interested | | | | |
| | Interested | 48 | | | |
| | Moderately Interested | 0 | | | |
| | Not interested | 0 | | | |
| Q16.Flora | Very interested | 24 | 4.050 | 0.6571 | -0.052 |
| | Interested | 57 | | | |
| | Moderately Interested | 19 | | | |
| | Slightly interested | 0 | | | |
| | interested | | | | |

| | | | | | |
|--|-----------------------|----|-------|--------|--------|
| | Not interested | 0 | | | |
| Q17.Social and environmental Problems | Very interested | 4 | 3.850 | 0.4794 | -0.975 |
| | Interested | 78 | | | |
| | Moderately interested | 17 | | | |
| | Slightly interested | 1 | | | |
| | Not interested | 0 | | | |
| Q18.Culture | Very interested | 45 | 4.410 | 0.5702 | -0.305 |
| | Interested | 51 | | | |
| | Moderately interested | 4 | | | |
| | Slightly interested | 0 | | | |
| | Not interested | 0 | | | |

In Table 4.4, the mean and standard deviation of 4.460 and 0.5009 respectively and there are no significant difference in Chi square analysis (Appendix E), and shows their opinion is similar which 54% of tourists interested and 46% tourist very interested. Therefore all tourists do have interest towards landscape observation.

Table 4.4 below shows, Question 20 indicated with mean and standard deviation of 3.780 and 0.6448 respectively. The chi square analysis is significantly difference as in (Appendix E), as majority tourist response towards interested, which is about 57%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority do show their interest in observation of flora.

In Question 21, the sample distributed among interested and very interested categories in relation with mean and standard deviation of 4.580 and 0.4960 respectively. There are no significant difference based on chi square analysis (Appendix E), which majority shows their opinion are similar which 42% of tourists interested and

58% tourist very interested. Therefore all tourists do have interest towards observation of fauna.

In Question 22, the sample distributed from very interested to slightly interested in accordance with mean and standard deviation which is 3.980 and 0.4920 respectively. There are significance difference as in (Appendix E), least tourist response towards slightly interested, which is about 2%. Therefore, tourists have different opinion in showing their interest. Nevertheless, minority shows less interest towards casual walking but none of them express no interest in these activity.

Based on Question 23, the sample distributed from very interested to moderately interested in accordance with mean and standard deviation which is 4.190 and 0.6620 respectively. There are significance difference as in (Appendix E), majority tourist response are towards interested, which is about 53%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority shows interest towards boat trips but none of them express no interest in these activity.

From Question 24, also distributed from very interested to slightly interested in accordance with mean and standard deviation, which is 4.490 and 0.5773 respectively. Chi square analysis shows significantly different (Appendix E). Least tourist response falls towards slightly interested and moderately interest with 1 %, therefore, tourists have different opinion in showing their interest. Nevertheless, minority shows less interest towards photography but none of them express no interest in these activity.

From Question 25, the distributed sample falls from very interested to moderately interested in accordance with mean and standard deviation which is 4.580

and 0.5160 respectively. Chi square analysis shows significance difference as in (Appendix E), majority tourist response towards very interested, which is about 59%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority shows very interested towards boat trips but none of them express no interest in these activity.

It is obtained that tourists interest in Question 26, also distributed from very interested to moderately interested in accordance with mean and standard deviation which is 4.620 and 0.5993 respectively. In chi square analysis it shows significance difference as in (Appendix E), majority tourist response towards very interested, which is about 68%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority shows very interested towards participation of local activities, but none of them express no interest in these activity.

It is observed that tourists interest in Question 27, also distributed from very interested to moderately interested in accordance with mean and standard deviation which is 4.660 and 0.6067 respectively. The chi square analysis shows significance difference as in (Appendix E), which majority of tourist response towards very interested, which is about 73%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority shows very interested towards participation in research projects but none of them express no interest in these activity.

It is reported that tourists interest in Question 28, with a mean and standard deviation of 4.700 and 0.6590 respectively. The chi square analysis shows significant difference, (Appendix E), the least contributor for this difference is tourist response

towards not interested, which is about 1%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority shows very interested towards hard level hiking.

It is noted that tourists interest in Question 29, also distributed towards very interested in accordance with mean and standard deviation which is 4.630 and 0.6139 respectively. Chi square analysis shows significance difference as in (Appendix E). The greatest contributor for this difference is tourist response towards is about 70% which is very interested. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority shows very interested towards swimming but none of them express no interest or slightly interest in these activity.

It is observed that tourists interest in Question 30, in relation with mean and standard deviation which is 4.610 and 0.6801 respectively. Chi square test shows significance difference as in (Appendix E), where the tourist response towards is about 69% which is very interested. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority shows very interested towards day hike 1(up to 1day) but none of them express no interest in these activity.

It is reported that tourists interest in Question 31, with a mean and standard deviation of 4.000 and 1.1892 respectively. Chi square analysis shows significance difference as in (Appendix E), minority tourist response towards not interested, which is about 5%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority shows very interested towards fishing.

It is attained that tourists interest in Question 32, with a mean and standard deviation of 3.880 and 1.3801 respectively. The chi square analysis shows significance difference as in (Appendix E), least tourist response towards moderately interested, which is about 5%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority shows very interested towards hunting.

It is observed that tourists interest in Question 33, with a mean and standard deviation of 4.480 and 0.5770 respectively. Chi square analysis shows significance difference as in (Appendix E), where least tourist response towards slightly and moderately interested, which is about 1%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority shows very interested towards fishing.

Table 4.4 : Activity preferences of GSSP and Gua ikan

| Item | | Percentage | Mean | Std | Skewness |
|----------------------------------|-----------------------|------------|-------|--------|----------|
| Q19.Landscape observation | Very interested | 46 | 4.460 | 0.5009 | 0.163 |
| | interested | 54 | | | |
| | Moderately interested | 0 | | | |
| | Slightly interested | 0 | | | |
| | Not interested | 0 | | | |
| Q20.Observation of flora | Very interested | 11 | 3.780 | 0.6448 | 0.009 |
| | interested | 57 | | | |
| | Moderately interested | 31 | | | |
| | Slightly interested | 1 | | | |
| | Not interested | 0 | | | |
| Q21.Observation of fauna | Very interested | 58 | 4.580 | 0.4960 | -0.329 |
| | interested | 42 | | | |
| | Moderately interested | 0 | | | |
| | Slightly interested | 0 | | | |
| | Not interested | 0 | | | |
| Q22.Casual walking | Very interested | 9 | 3.980 | 0.4920 | -1.087 |
| | interested | 82 | | | |

| | | | | | |
|---|-----------------------|----|-------|--------|--------|
| | Moderately interested | 7 | | | |
| | Slightly interested | 2 | | | |
| | Not interested | 0 | | | |
| Q23.Boat trips | Very interested | 33 | 4.190 | 0.6620 | -0.228 |
| | interested | 53 | | | |
| | Moderately interested | 14 | | | |
| | Slightly interested | 0 | | | |
| | Not interested | 0 | | | |
| Q24.Photography | Very interested | 52 | 4.490 | 0.6620 | -0.925 |
| | interested | 46 | | | |
| | Moderately interested | 1 | | | |
| | Slightly interested | 1 | | | |
| | Not interested | 0 | | | |
| Q25.Bird Watching | Very interested | 59 | 4.580 | 0.5160 | -0.553 |
| | interested | 40 | | | |
| | Moderately interested | 1 | | | |
| | Slightly interested | 0 | | | |
| | Not interested | 0 | | | |
| Q26.Participation of local activities | Very interested | 68 | 4.620 | 0.5993 | -1.339 |
| | interested | 26 | | | |
| | Moderately interested | 6 | | | |
| | Slightly interested | 0 | | | |
| | Not interested | 0 | | | |
| Q27.Participation in research projects | Very interested | 73 | 4.660 | 0.6067 | -1.611 |
| | interested | 20 | | | |
| | Moderately interested | 7 | | | |
| | Slightly interested | 0 | | | |
| | Not interested | 0 | | | |
| Q28.Hard level hiking | Very interested | 78 | 4.700 | 0.6590 | -2.830 |
| | interested | 16 | | | |
| | Moderately interested | 5 | | | |
| | Slightly interested | 0 | | | |
| | Not interested | 1 | | | |
| Q29.Swimming | Very interested | 70 | 4.630 | 0.6139 | -1.449 |
| | interested | 23 | | | |

| | | | | | |
|-----------------------------------|-----------------------|----|-------|--------|--------|
| | Moderately interested | 7 | | | |
| | Slightly interested | 0 | | | |
| | Not interested | 0 | | | |
| Q30.Day hike (up to 1 day) | Very interested | 69 | 4.610 | 0.6801 | -2.080 |
| | interested | 26 | | | |
| | Moderately interested | 2 | | | |
| | Slightly interested | 3 | | | |
| | Not interested | 0 | | | |
| Q31.Fishing | Very interested | 45 | 4.000 | 1.1892 | -1.103 |
| | interested | 30 | | | |
| | Moderately interested | 10 | | | |
| | Slightly interested | 10 | | | |
| | Not interested | 5 | | | |
| Q32.Hunting | Very interested | 46 | 3.880 | 1.3801 | -1.051 |
| | interested | 28 | | | |
| | Moderately interested | 5 | | | |
| | Slightly interested | 10 | | | |
| | Not interested | 11 | | | |
| Q33.Camping | Very interested | 51 | 4.480 | 0.5770 | -0.886 |
| | interested | 47 | | | |
| | Moderately interested | 1 | | | |
| | Slightly interested | 1 | | | |
| | Not interested | 0 | | | |

From Table 4.5, mean and standard deviation, shows 4.570 and 0.5551 respectively for question 34, shows the distribution towards more important, Based on the chi square test, there are significant difference (Appendix E). Therefore tourist does not have the same opinion for Question 34. However, most of tourists shows very important about 60%.

It is observed that tourists interest in Question 35, with a mean and standard deviation of 4.540 and 0.5932 respectively. Chi square analysis shows significance difference as in (Appendix E), where least tourist response towards neutral, which is about 5%. Therefore, tourists have different opinion in showing their opinion. Nevertheless, majority of tourists support importance of large mammals in GSSP.

It is noted that tourists interest in Question 36, with a mean and standard deviation of 4.690 and 0.5449 respectively. Chi square analysis shows significance difference as in (Appendix E), where majority of tourist response towards very important, which is about 73%. Therefore, tourists have different opinion in showing their opinion. Nevertheless, majority support importance of birdlife for visiting GSSP

It is observed that tourists interest in Question 37, with a mean and standard deviation of the 4.300 and 0.6435 respectively. Chi square analysis shows significance difference as in (Appendix E). The major tourist response towards moderately important, which is about 50%. Therefore, tourists have different opinion in showing their opinion. Nevertheless, majority tourists support the importance of the physical landscape for visiting GSSP.

It is noted that tourists interest in Question 38, with a mean and standard deviation of the 4.360 and 0.5777 respectively. Chi square analysis shows significance difference as in (Appendix E), where tourist response towards moderately important, which is about 57%. Therefore, tourists have different opinion in showing their opinion. Nevertheless, majority of tourists support importance of the wildlife migration for visiting GSSP.

It is reported that tourists interest in Question 39, with a mean and standard deviation of the 4.600 and 0.6963 respectively. Chi square analysis shows significance difference as in (Appendix E), where is tourist response towards very important, which is about 72%. Therefore, tourists have different opinion in showing their opinion. Nevertheless, majority of tourists support the importance of the wilderness and ecosystem for visiting GSSP.

It is observed that tourists interest in Question 40, with a mean and standard deviation of the 4.650 and 0.5925 respectively. Chi square shows significance difference as in (Appendix E), where is tourist response towards very important, which is about 71%. Therefore, tourists have different opinion in showing their opinion. Nevertheless, majority tourists support importance of the local culture for visiting GSSP.

It is identified that tourists interest in Question 41, with a mean and standard deviation of the 4.770 and 0.4462 respectively. Chi square analysis shows significance difference as in (Appendix E), where tourist response towards neutral, which is about 1%. Therefore, tourists have different opinion in showing their opinion. Nevertheless, majority tourists support importance of the interaction with local people for visiting GSSP.

It is showed that tourists interest in Question 42, with a mean and standard deviation of the 4.770 and 0.4894 respectively. Chi square analysis shows significance difference as in (Appendix E), where is tourist response towards neutral, which is about 3%. Therefore, tourists have different opinion in showing their opinion. Nevertheless,

majority tourists support importance of the interaction with local people for visiting GSSP.

It is reported that tourists interest in Question 43, with a mean and standard deviation of the 2.950 and 0.8689 respectively. Chi square analysis shows significance difference as in (Appendix E), where is tourist response towards very important which is about 8%. Therefore, tourists have different opinion in showing their opinion. Nevertheless, majority tourists do not seem to give support to the importance of the exploring and discovering new places for visiting GSSP.

It is observed that tourists interest in Question 44, with a mean and standard deviation of the 3.330 and 0.8294 respectively. Chi square analysis shows significance difference as in (Appendix E), where difference is tourist response towards very satisfied, which is about 46%. Therefore, tourists have different opinion in showing their opinion towards the satisfaction rate in the experience of observing wildlife.

It is revealed that tourists interest in Question 45, with a mean and standard deviation of the 4.560 and 0.6247 respectively. Chi square analysis shows significance difference as in (Appendix E), where tourist response towards moderately satisfied, which is about 7%. Therefore, have different opinion in showing their opinion towards the satisfaction rate condition of the roads.

It is attained that tourists interest in Question 46, with a mean and standard deviation of the 4.620 and 0.5276 respectively. Chi square analysis variable shows significance difference as in (Appendix E), where tourist response towards moderately

satisfied, which is about 2%. Therefore, tourists have different opinion in showing their opinion towards the satisfaction rate of the local people.

It is revealed that tourists interest in Question 47, with a mean and standard deviation of the 4.580 and 0.5352 respectively. Chi square analysis shows significance difference as in (Appendix E), where tourist response towards extremely satisfied, which is about 66%. Therefore, tourists have different opinion in showing their opinion towards the quality of tour guides.

It is attained that tourists interest in Question 48, with a mean and standard deviation of the 4.150 and 0.9252 respectively. Chi square analysis shows significance difference as in (Appendix E), where tourist response towards extremely satisfied, which is about 60%. Therefore, tourists have different opinion in showing their opinion towards the condition of the camps.

It is observed that tourists interest in Question 49, with a mean and standard deviation of the 3.820 and 0.6572 respectively. Chi square analysis shows significance difference as in (Appendix E), where tourist response towards slightly satisfied, which is about 3%. Therefore, tourists have different opinion in showing their opinion towards the cost of entry fees and permits.

It is noted that tourists interest in Question 50, with a mean and standard deviation of the 3.610 and 0.6013 respectively. Chi square analysis shows significance difference as in (Appendix E), where tourist response towards slightly satisfied, which is about 2%. Therefore, tourists have different opinion in showing their opinion towards the cost of the packages of the trip.

It is observed that tourists interest in Question 51, with a mean and standard deviation of the 4.790 and 0.4560 respectively. Chi square analysis shows significance difference as in (Appendix E), where tourist response towards extremely and slightly satisfied, which is about 3%. Therefore, tourists have different opinion in showing their opinion towards the cost of the packages of the trip.

Table 4.5: Reasons for visiting GSSP and Gua Ikan

| Item | | Percentage | Mean | Std | Skewness |
|-----------------------------------|----------------------|------------|-------|--------|----------|
| Q34.Wildlife in general | Very important | 60 | 4.570 | 0.5551 | -0.825 |
| | Moderately important | 37 | | | |
| | Neutral | 3 | | | |
| | Slightly important | 0 | | | |
| | Not important | 0 | | | |
| Q35.Large mammals | Very important | 59 | 4.540 | 0.5932 | -0.898 |
| | Moderately important | 36 | | | |
| | Neutral | 5 | | | |
| | Slightly important | 0 | | | |
| | Not important | 0 | | | |
| Q36.Birdlife | Very important | 73 | 4.690 | 0.5449 | -1.573 |
| | Moderately important | 23 | | | |
| | Neutral | 4 | | | |
| | Slightly important | 0 | | | |
| | Not important | 0 | | | |
| Q37.The Physical landscape | Very important | 40 | 4.300 | 0.6435 | -0.371 |
| | Moderately important | 50 | | | |
| | Neutral | 10 | | | |
| | Slightly important | 0 | | | |
| | Not important | 0 | | | |
| Q38.Wilderness migration | Very important | 40 | 4.360 | 0.5777 | -0.553 |
| | Moderately important | 57 | | | |
| | Neutral | 2 | | | |
| | Slightly important | 1 | | | |
| | | | | | |

| | | | | | |
|--|----------------------|----|-------|--------|--------|
| | Not important | 0 | | | |
| Q39.Wilderness and ecosystem | Very important | 72 | 4.600 | 0.6963 | -1.465 |
| | Moderately important | 16 | | | |
| | Neutral | 12 | | | |
| | Slightly important | 0 | | | |
| | Not important | 0 | | | |
| Q40.Local culture | Very important | 71 | 4.650 | 0.5925 | -1.498 |
| | Moderately important | 23 | | | |
| | Neutral | 6 | | | |
| | Slightly important | 0 | | | |
| | Not important | 0 | | | |
| Q41.Interaction with local people | Very important | 78 | 4.770 | 0.4462 | -1.646 |
| | Moderately important | 21 | | | |
| | Neutral | 1 | | | |
| | Slightly important | 0 | | | |
| | Not important | 0 | | | |
| Q42.Experience new activities with friends and family | Very important | 80 | 4.770 | 0.4894 | -2.060 |
| | Moderately important | 17 | | | |
| | Neutral | 3 | | | |
| | Slightly important | 0 | | | |
| | Not important | 0 | | | |
| Q43.Exploring and discovering new places | Very important | 8 | 2.950 | 0.8689 | 0.852 |
| | Moderately important | 11 | | | |
| | Neutral | 49 | | | |
| | Slightly important | 32 | | | |
| | Not important | 0 | | | |

It is evident from the Table 4.2, that most of the respondents are either agreed or strongly agree with the statement the statement provided, this shows majority do have environmental awareness and the need to conserve the natural assets that requires protection from human activities. From Table 4.3, it can be indicated that visitors do have potential interest in learning new about GSSP and Gua Ikan in the aspects of fauna,

landscape, flora, social and environmental problems and culture. Interest towards fauna do perceived very interested and interested among 99% of tourists with the mean value of 4.450. According to Table 4.4, highest rank of interest influenced by tourists is landscape observation, observation of fauna, boat trips, photography, bird watching, participation of local activities, participation in research projects, hard level hiking, swimming, day hike up to 1 day, fishing and camping. The following interest showed by tourist are observation of flora, casual walking, and hunting. This possibly that majority of tourist prefer adventures type activities to be participated as most tourists do visit GSSP for adventure activities (Maseri, 2009). Table 4.5 reports that, dominant reason for tourist in visiting GSSP and Gua ikan were interaction with local people, experience new activities with friends and family, birdlife and local culture. Besides that, tourists showed intention in visiting GSSP and Gua Ikan for wildlife and large mammals viewing. As an overall, tourist's interest towards GSSP is sustained by several factors and they enjoys with the provided activities.

4.2.3 Section C: Future development of wildlife tourism in GSSP.

From Table 4.6, it is noted that tourists interest in Question 52, also distributed from very interested to slightly interested in accordance with mean and standard deviation which is 4.790 and 0.4560 respectively. The Chi square analysis shows significance difference as in (Appendix E), where $p < 0.005$, $P = 0.000$. The tourists response towards strongly agree, which is about 81%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority tourists do show their support towards the activity suggested in Question 52.

It is identified that tourists interest in Question 53, also distributed from very interested to slightly interested in accordance with mean and standard deviation which is 4.490 and 0.7035 respectively. The Chi square analysis shows significance difference as in (Appendix E), where $p < 0.005$, $P = 0.000$. The tourists response towards strongly agree, which is about 60%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority tourists do show their support towards the activity suggested in Question 53.

It is reported that tourists interest in Question 54, also distributed from very interested to slightly interested in accordance with mean and standard deviation which is 4.550 and 0.6723 respectively. The Chi square analysis shows significance difference as in (Appendix E), where $p < 0.005$, $P = 0.000$. The tourists response towards strongly agree, which is about 65%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority tourists do show their support towards the activity suggested in Question 54.

It is observed that tourists interest in Question 55, also distributed from very interested to slightly interested in accordance with mean and standard deviation which is 4.760 and 0.4522 respectively. The Chi square analysis shows significance difference as in (Appendix E), where $p < 0.005$, $P = 0.000$. The tourists response towards strongly agree, which is about 77%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority tourists do show their support towards the activity suggested in Question 55.

It is noted that tourists interest in Question 56, also distributed from very interested to slightly interested in accordance with mean and standard deviation which is 4.690 and 0.6308 respectively. The Chi square analysis shows significance difference as in (Appendix E), where $p < 0.005$, $P = 0.000$. The tourists response towards strongly agree, which is about 77%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority tourists do show their support towards the activity suggested in Question 56.

It is showed that tourists interest in Question 57, also distributed from very interested to slightly interested in accordance with mean and standard deviation which is 4.270 and 0.8147 respectively. The Chi square analysis shows significance difference as in (Appendix E), where $p < 0.005$, $P = 0.000$. The tourists response towards strongly agree, which is about 50%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority tourists do show their support towards the activity suggested in Question 57.

It is noted that tourists interest in Question 58, also distributed from very interested to slightly interested in accordance with mean and standard deviation which is 4.680 and 0.4688 respectively. The Chi square analysis shows significance difference as in (Appendix E), where $p < 0.005$, $P = 0.000$. The tourists response towards strongly agree, which is about 68%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority do show their support towards the activity suggested in Question 58.

It is reported that tourists interest in Question 59, also distributed from very interested to slightly interested in accordance with mean and standard deviation which is 4.710 and 0.5183 respectively. The Chi square analysis shows significance difference as in (Appendix E), where $p < 0.005$, $P = 0.000$. The tourists response towards strongly agree, which is about 74%. Therefore, tourists have different opinion in showing their interest. Nevertheless, majority tourists do show their support towards the activity suggested in Question 59.

Table 4.6: Potential of wildlife-based activities in GSSP and Gua ikan

| Item | | Percentage | Mean | Std | Skewness |
|---|-------------------|------------|-------|--------|----------|
| Q54.Boat trip to view Elephants in its natural setting | Strongly agree | 81 | 4.790 | 0.4560 | -2.076 |
| | Agree | 17 | | | |
| | No opinion | 2 | | | |
| | Disagree | 0 | | | |
| | Strongly disagree | 0 | | | |
| Q55.Watching Bats in Gua ikan | Strongly agree | 60 | 4.490 | 0.7035 | -1.207 |
| | Agree | 30 | | | |
| | No opinion | 9 | | | |
| | Disagree | 1 | | | |
| | Strongly disagree | 0 | | | |
| Q56.Watching large animals from hides | Strongly agree | 65 | 4.550 | 0.6723 | -1.203 |
| | Agree | 25 | | | |
| | No opinion | 10 | | | |
| | Disagree | 0 | | | |
| | Strongly disagree | 0 | | | |
| Q57.Photography and motions of mammals | Strongly agree | 77 | 4.760 | 0.4522 | 1.566 |
| | Agree | 22 | | | |
| | No opinion | 1 | | | |
| | Disagree | 0 | | | |
| | Strongly disagree | 0 | | | |
| Q56.Recording of bird sounds | Strongly agree | 77 | 4.690 | 0.6308 | -2.110 |
| | Agree | 16 | | | |
| | No opinion | 6 | | | |
| | Disagree | 1 | | | |
| | Strongly disagree | 0 | | | |

| | | | | | |
|---|-------------------|----|-------|--------|--------|
| Q57. Identification of fruiting plants for bird watching | Strongly agree | 50 | 4.270 | 0.8147 | -0.537 |
| | Agree | 27 | | | |
| | No opinion | 23 | | | |
| | Disagree | 0 | | | |
| | Strongly disagree | 0 | | | |
| Q58. Creating bird watching trails | Strongly agree | 68 | 4.680 | 0.4688 | -0.784 |
| | Agree | 32 | | | |
| | No opinion | 0 | | | |
| | Disagree | 0 | | | |
| | Strongly disagree | 0 | | | |
| Q59. Creating bird watching towers | Strongly agree | 74 | 4.710 | 0.5183 | -1.587 |
| | Agree | 23 | | | |
| | No opinion | 3 | | | |
| | Disagree | 0 | | | |
| | Strongly disagree | 0 | | | |

It reveals that, there are potential of wildlife-based activities which supported by all the tourists through their opinion proposed in this survey according to Table 4.6. From entire study of this research it can be discussed that most tourists pays visit to GSSP in engaging many adventure type activities, however they do shows their supports if introduction of wildlife tourism takes place in GSSP. The research on identification of flagship species and tourists perception in establishing wildlife tourism is taken in account as the visitor-wildlife encounter which encompasses the core of a wildlife tourism product is the wildlife and the associated habitat and the tourists is the level of individual contributor to the revenue of the area. The relationship between this two sets the wildlife tourism in an area. Based from this research, there is existence of 12 flagship species and most tourists show their support and interest in the implementation of the wildlife tourism. This wildlife tourism a platform in providing income for local people and the same time helps to conserve the valuable assets in GSSP, which is under threat by several human activities as pointed the flagship status according to their depletion in

their population rate. Therefore to clarify the different results to the implementation of wildlife tourism and to manage it sustainably we have to consider these components in an incorporated way before implementing the wildlife tourism in GSSP.



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CHAPTER 5

Conclusions & Recommendations

5.1 Conclusion

This study focuses on the potential of wildlife tourism in GSSP and Gua ikan, a Nature tourism destination in Kelantan, with GSSP protected area under the national Forestry Act (1984) in Category (x)(i) 'State Park'. The achievements of the objective, of the study have been briefly discussed below.

Objective 1: Potential wildlife species in wildlife tourism

There are diverse species of mammals and birds which has been listed and this 12 unseen species can be categorized as flagship species for visiting GSSP, as there are several mammals and birds under 9 vulnerable and 3 endangered categories:

Nine vulnerable species as follows:

- Hollow faced bat (*Nycteris javanica*)
- Pig tailed macaque (*Macaca nemestrina*)
- Golden cat (*Catopuma temminckii*)
- Clouded leopard (*Neofelis nebulosa*)
- Malayan tapir (*Tapirus indicus*)
- Serow (*Capricornis sumatraensis*)
- Malayan sun bear (*Helarctos malayanus*)
- Blue-banded kingfisher (*Alcedo euryzona*)
- Crested serpent eagle (*Spilornis cheela*)

Three Endangered species as follows:

- Malayan tiger (*Pantera tigris jacksoni*),
- Asian elephant (*Elephas maximus*),
- Asiatic wild dog (*Cuon alpinus*).

Objective 2: Perception of tourists towards wildlife tourism implementation in GSSP.

This objective was clarified with the perception and acceptance of tourist who pays their visit to the GSSP. The tourist expectations and support to the installation of wildlife tourism in GSSP do received strong supports. Most of respondents which is about 98% agree to the introduction of wildlife tourism in the study area, even though their purpose of visit is not specifically to see wildlife, but for adventure activities.

5.2 RECOMMENDATIONS

To ensure the potential of wildlife tourism to be utilized in a proper manner and establishment of wildlife tourism in Gunung Stong State Park needed certain requirements to enable the establishment of wildlife tourism in GSSP is a successful one and requires collaboration from responsible authorities to enhance the development and growth of the wildlife-based tourism in the proposed area.

1) Implementation of policy in wildlife-based tourism

Consideration of mindful powers, for example, national government, state government, common social orders, indigenous individuals and nearby groups, private division, research and training groups and society on the loose. Engagement with Ministry of Natural Resources and Environment whom ready to save the place and legitimate arranging will be built up. As Malaysia favored with tremendous biodiversity the dependable power ready to bolster the system into reality for example they have upheld diving tourism to be produced in Pulau Redang, Sipadan numerous other region as the present request was investigated diving tourism, same standard ought to be

improved in GSSP, and this rising untamed life based tourism potential ought not be disregarded.

2) Policy issues in tourist transport

The enjoyment in watching wildlife tourisms can also be done by providing coach tour which enables tourists obtains maximum satisfaction from the exploring their destination areas. Which provides transportation from their departure place till the end of the sessions as they are assisted all day long through the trip, which shows a follows a set of route over a period of time which are organized. Which eventually returns back to the point of departure, this system will be a supporting aspect in encouraging more tourists visits the place with an ease.

3) Tour guide operating role in tourism industry

The pleasure in watching untamed life tourisms should likewise be possible by giving mentor visit which empowers travelers acquires greatest fulfillment from the investigating their goal regions. This gives transportation from their takeoff put till the end of the sessions as they are helped throughout the day through the trek, which demonstrates a takes after an arrangement of course over a timeframe which are sorted out, which in the long run returns back to the purpose of flight. This framework will be a supporting perspective in empowering more travelers visits the place effortlessly.

4) Enhancing Visitors attraction: product consideration

Improvement of GSSP and Gua ikan in offering products and experience should be considered in term of three levels which is a core product as the central component

and comprises the main attraction that will be satisfied by the visitor as a motivation for visiting GSSP, example the introduction of flagship species. Moreover, the second layer of product is the tangible aspect which visitors able to purchase like handmade accessories in representing the place they visit and third aspect of product which they should include is the additional services a visitor receives and makes up the total product satisfaction during their visit to GSSP.

6) Promised guarantee in establishing the management system of Wildlife tourism

The efficient management system of wildlife tourism is the major promising assurance to the sustainable development of wildlife tourism. Therefore, before setting up the wildlife tourism the existing management system should be adjusted and the administration management should be tidy up together with industry management and setup comprehensive organization and management mechanism in term of principles of reasonable setting and scientific management. The bond of cooperation between different departments should be upgraded and at last the installation of wildlife tourism should be strictly examined with involvement of many responsible authorities.

7) Introduction of Scientific building layout of wildlife tourism

This scientific layout formation can help in eliminating blind exploitation and differentiate unrestricted development Carrying capacity aspects in wildlife tourism development should be concerned as any tourism development will lead to negative effects to the destination area. Therefore to limit the effects brought by this tourists

carrying capacity aspects must be included in order to balance the wildlife tourism introduction to the area.

8) Increase in number of activities in GSSP and Gua ikan

Currently, the most offered activities in GSSP are camping, swimming, hiking and jungle trekking. More activities is introduced will attract more visitors to visit GSSP and Gua ikan as they able to experience different types of activities in the exploration. Activities like boating, photography of birds and many other interesting activities should be implemented as visitors enable to enjoy in uppermost.

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APPENDIX A



Dear Respondent,

We are doing an academic research entitled:

**POTENTIAL OF WILDLIFE TOURISM IN GUNUNG STONG STATE PARK
AND GUA IKAN, KELANTAN**

Congratulations, you have been selected as a respondent for this study. Your sincere cooperation is crucial in determining the success of this study. In this study, we would like to access your perception about implementing wildlife tourism in GSSP and Gua Ikan. Please read carefully all the instructions pertaining to every section and answer every question sincerely. All responses provided will be treated with strict confidentiality and will be used for this academic research only. Thank you very much for your cooperation

Sincerely,

Students of Bachelor of Applied Science,

(Natural Resource Science) with Honours,

Universiti Malaysia Kelantan.

Section A: Demographic (Please tick (✓) your answer in the box provided)

1. Gender: Male Female

2. Age : Less than 20 years 20 years - 40years
 41 years- 60 years More than 60 years

3. Tourist: Foreigner Local (State: _____)
(Country: _____)

4. Marital Status: Single Married Other

5. Job Status: Student Employed
 Unemployed Retired

6. Who has accompanied you on this trip?

Alone Friends Family
 Colleague Classmate Others

7. Salary/Income Range

Below RM 2000
 RM 2000-Rm5000
 RM 5001-RM 10,000
 Above RM10,000

7. Do you intend to stay in GSSP? (days)

1 day 2 days 3 days More than 4 days

8. What is your intention for visiting GSSP?

Leisure/Vacation Business Academic Trip Others

9. How many times have you been visited GSSP?

None 1 times 2 times 3 times More than times

10. What was your activity in GSSP?

(Answer this question if you have answer more than 1times in Question 9)

Watching Wildlife Mountain Climbing Research/Study trip
 Hiking to Baha Camp

11. Will you recommend GSSP to others (Friends, Family, Colleagues).

Yes No, because _____

12. Value of entrance fees willing to pay if wildlife observation is Implemented?

Below RM 20 RM 20-50 RM 51-100 Above RM150

13. Will you revisit GSSP and Gua Ikan if could observe wildlife in their natural habitat

Yes No, because _____

Section B: Current tourist perceptions regarding GSSP and Gua Ikan

Table 1: The New Environmental Paradigm scale

| | Strongly agree | Agree | No opinion | Disagree | Strongly disagree |
|--|----------------|-------|------------|----------|-------------------|
| The balance of nature is very delicate and easily disturbed <i>Keseimbangan alam semula jadi adalah sangat halus and mudah terganggu</i> | 5 | 4 | 3 | 2 | 1 |
| Humans must live in harmony with nature in order to survive <i>Manusia mesti hidup dalam harmoni dengan alam semula jadi dalam usaha terus hidup</i> | 5 | 4 | 3 | 2 | 1 |
| Human interference with nature it often produces disastrous results. <i>Gangguan manusia dengan alam semula jadi is sering menghasilkan keputusan buruk</i> | 5 | 4 | 3 | 2 | 1 |
| Humans are destined to rule over the rest of nature <i>Manusia ditakdirkan untuk menguasai seluruh alam</i> | 5 | 4 | 3 | 2 | 1 |
| Plants and animals exist primarily to be used by humans <i>Tumbuhan dan haiwan wujud terutamanya untuk digunakan oleh manusia</i> | 5 | 4 | 3 | 2 | 1 |
| Humans have the right to modify the natural environment to suit their needs <i>Manusia mempunyai hak untuk mengubah suai persekitaran semula jadi untuk memenuhi keperluan mereka</i> | 5 | 4 | 3 | 2 | 1 |

(1 = strongly disagree; 5 = strongly agree)

Table 2: Visitor’s potential interest in learning new about GSSP and Gua Ikan

| | Very interested | Interested | Moderately interested | Slightly interested | Not interested |
|---|-----------------|------------|-----------------------|---------------------|----------------|
| Fauna <i>Haiwan</i> | 5 | 4 | 3 | 2 | 1 |
| Landscape <i>Landskap</i> | 5 | 4 | 3 | 2 | 1 |
| Flora <i>Tumbuhan</i> | 5 | 4 | 3 | 2 | 1 |
| Social and environmental problems <i>Masalah social and alam sekitar</i> | 5 | 4 | 3 | 2 | 1 |
| Culture <i>Budaya</i> | 5 | 4 | 3 | 2 | 1 |

Table 3: Activity preferences of GSSP and Gua Ikan visitors

| | Very Interested | Interested | Moderately interested | Slightly interested | Not interested |
|--|-----------------|------------|-----------------------|---------------------|----------------|
| Landscape observation <i>Pemerhatian landskap</i> | 5 | 4 | 3 | 2 | 1 |
| Observation of flora <i>Pemerhatian tumbuhan</i> | 5 | 4 | 3 | 2 | 1 |
| Observation of fauna <i>Pemerhatian haiwan</i> | 5 | 4 | 3 | 2 | 1 |
| Casual walking <i>Berjalan kasual</i> | 5 | 4 | 3 | 2 | 1 |
| Boat trips <i>Perjalanan bot</i> | 5 | 4 | 3 | 2 | 1 |
| Photography <i>Pengambilan gambar</i> | 5 | 4 | 3 | 2 | 1 |
| Bird watching <i>Pemerhatian burung</i> | 5 | 4 | 3 | 2 | 1 |
| Participation of local activities <i>Penyertaan aktiviti-aktiviti tempatan</i> | 5 | 4 | 3 | 2 | 1 |
| Participation in research projects <i>Penyertaan dalam projek-projek penyelidikan</i> | 5 | 4 | 3 | 2 | 1 |
| Hard level hiking <i>Mendaki dengan beberapa masalah</i> | 5 | 4 | 3 | 2 | 1 |
| Swimming <i>Berenang</i> | 5 | 4 | 3 | 2 | 1 |
| Day hike (up to 1 day) <i>Mendaki dalam masa 1 hari</i> | 5 | 4 | 3 | 2 | 1 |
| Fishing <i>Memancing</i> | 5 | 4 | 3 | 2 | 1 |
| Hunting <i>Memburu</i> | 5 | 4 | 3 | 2 | 1 |
| Camping <i>Berkhemah</i> | 5 | 4 | 3 | 2 | 1 |

(1 = Not interested; 5 = Very interested)

Table 4: Reasons for visiting GSSP and Gua Ikan

| | Very important | Moderately important | Neutral | Slightly important | Not important |
|---|----------------|----------------------|---------|--------------------|---------------|
| Wildlife in general <i>Hidupan liar secara umum</i> | 5 | 4 | 3 | 2 | 1 |
| Large mammals <i>Mamalia besar</i> | 5 | 4 | 3 | 2 | 1 |
| Birdlife <i>Hidupan burung</i> | 5 | 4 | 3 | 2 | 1 |
| The physical landscape <i>Landskap</i> | 5 | 4 | 3 | 2 | 1 |
| Wildlife migration <i>Penghijrahan haiwan liar</i> | 5 | 4 | 3 | 2 | 1 |
| Wilderness and ecosystem <i>Habitat liar and ekosistem</i> | 5 | 4 | 3 | 2 | 1 |
| Local culture <i>Budaya tempatan</i> | 5 | 4 | 3 | 2 | 1 |
| Interaction with local people <i>Berhubung dengan orang-orang tempatan</i> | 5 | 4 | 3 | 2 | 1 |
| Experience new activities with friends and family <i>Melakukan sesuatu yang baru dengan keluarga dan rakan-rakan</i> | 5 | 4 | 3 | 2 | 1 |
| Exploring and discovering new places <i>Melihat tempat-tempat baru yang saya tidak pernah melawat</i> | 5 | 4 | 3 | 2 | 1 |

(1 = Not important; 5 = Very important)

Table 5: Levels of Satisfaction related to different aspects of GSSP and Gua Ikan

| | Extremely satisfied | Very satisfied | Moderately satisfied | Slightly satisfied | Not at all satisfied |
|--|---------------------|----------------|----------------------|--------------------|----------------------|
| The experience of observing wildlife <i>Pengalaman melihat hidupan liar</i> | 5 | 4 | 3 | 2 | 1 |
| Condition of the roads <i>Keadaan jalan-jalan di tempat tersebut</i> | 5 | 4 | 3 | 2 | 1 |
| The local people <i>Penduduk setempat</i> | 5 | 4 | 3 | 2 | 1 |
| The quality of the natural environment <i>Kualiti alam semula jadi</i> | 5 | 4 | 3 | 2 | 1 |
| Quality of tour guides <i>Kualiti pemandu pelancongan</i> | 5 | 4 | 3 | 2 | 1 |
| Condition of campsites <i>Keadaan tapak perkhemahan</i> | 5 | 4 | 3 | 2 | 1 |
| Cost of entry fees and permits <i>Kos kemasukan dan permit</i> | 5 | 4 | 3 | 2 | 1 |
| The cost of the trip/package of the trip <i>Kos perjalanan</i> | 5 | 4 | 3 | 2 | 1 |

(1=Not at all satisfied; 5 = Extremely satisfied)

Section C: Future development of wildlife tourism in GSSP

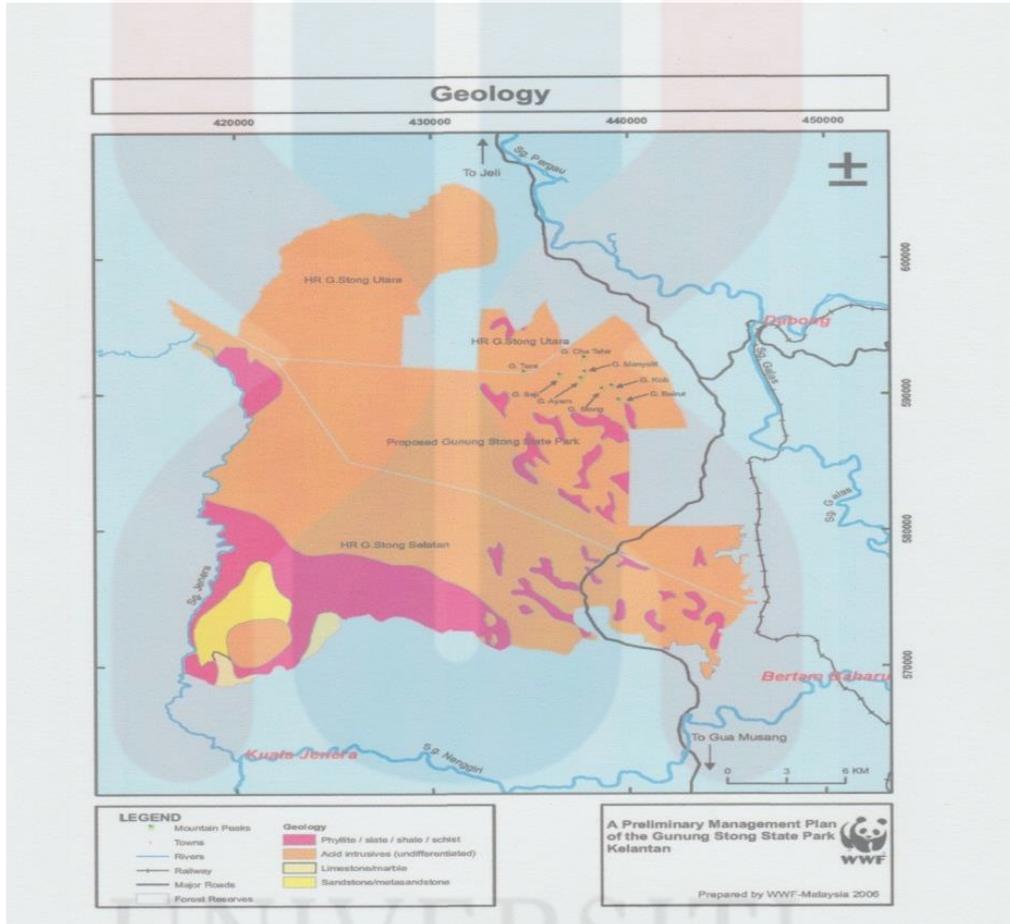
Table 6: Potential of wildlife-based activities in GSSP & Gua Ikan

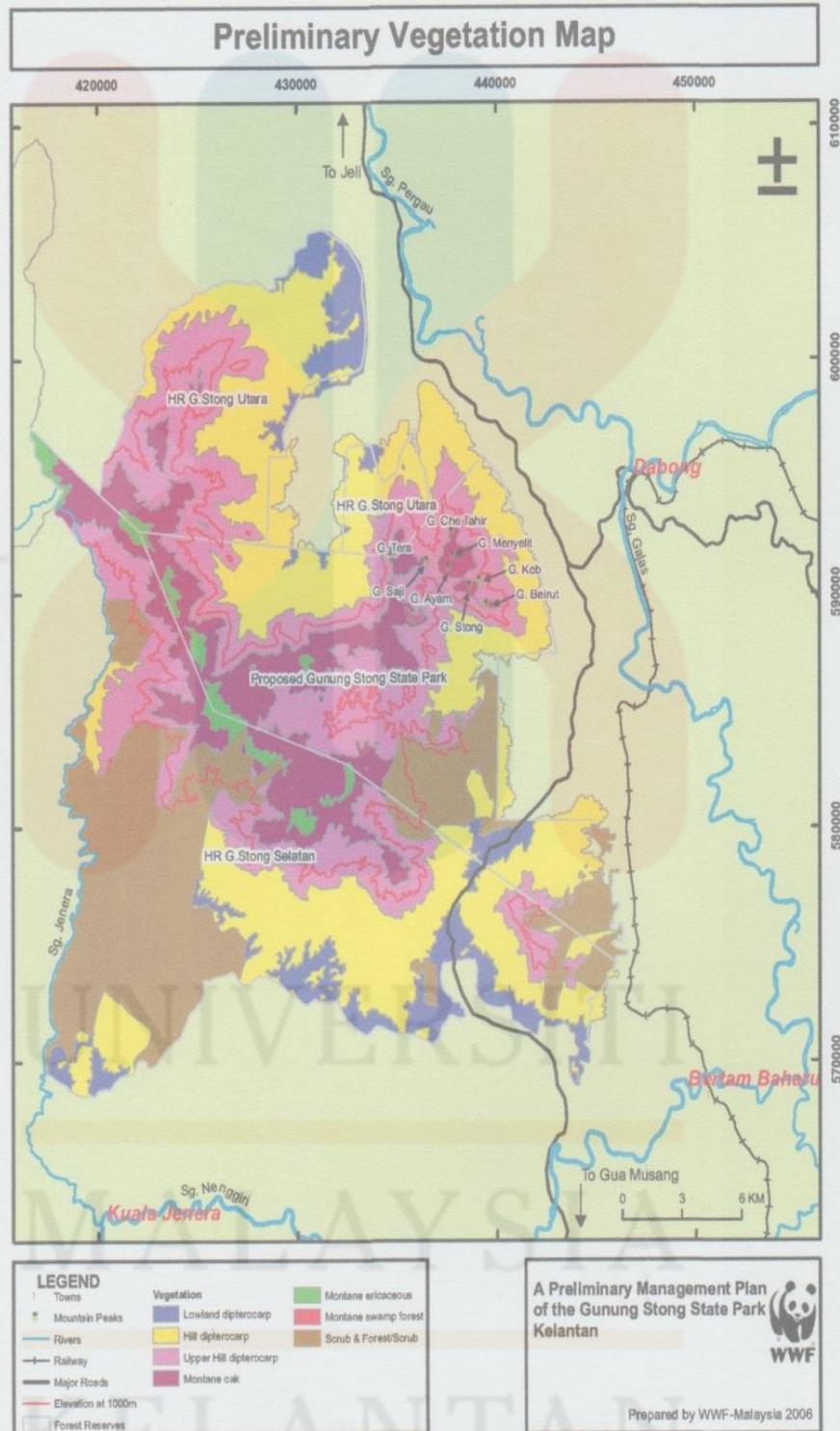
| | Strongly agree | Agree | No opinion | Disagree | Strongly disagree |
|--|----------------|-------|------------|----------|-------------------|
| Boat trip to view Elephants in its natural setting <i>Melihat Gajah di persekitarannya melalui perahu</i> | 5 | 4 | 3 | 2 | 1 |
| Watching Bats in Gua Ikan <i>Melihat kelawar di Gua Ikan</i> | 5 | 4 | 3 | 2 | 1 |
| Watching large animals from hides <i>Melihat haiwan besar dari bumbun diperbuat daripada manusia</i> | 5 | 4 | 3 | 2 | 1 |
| Photography and motions of mammals <i>Menangkap gambar-gambar pergerakan mamalia</i> | 5 | 4 | 3 | 2 | 1 |
| Recording of bird sounds <i>Aktiviti merekod bunyi burung</i> | 5 | 4 | 3 | 2 | 1 |
| Identification of fruiting plants for bird watching <i>Kenalpasti tempat tumbuhan yang berbuah dalam pemerhatian burung</i> | 5 | 4 | 3 | 2 | 1 |
| Creating bird watching trails <i>Penyediaan tempat melihat burung</i> | 5 | 4 | 3 | 2 | 1 |
| Creating bird watching towers <i>Penyediaan bumbun untuk melihat burung</i> | 5 | 4 | 3 | 2 | 1 |

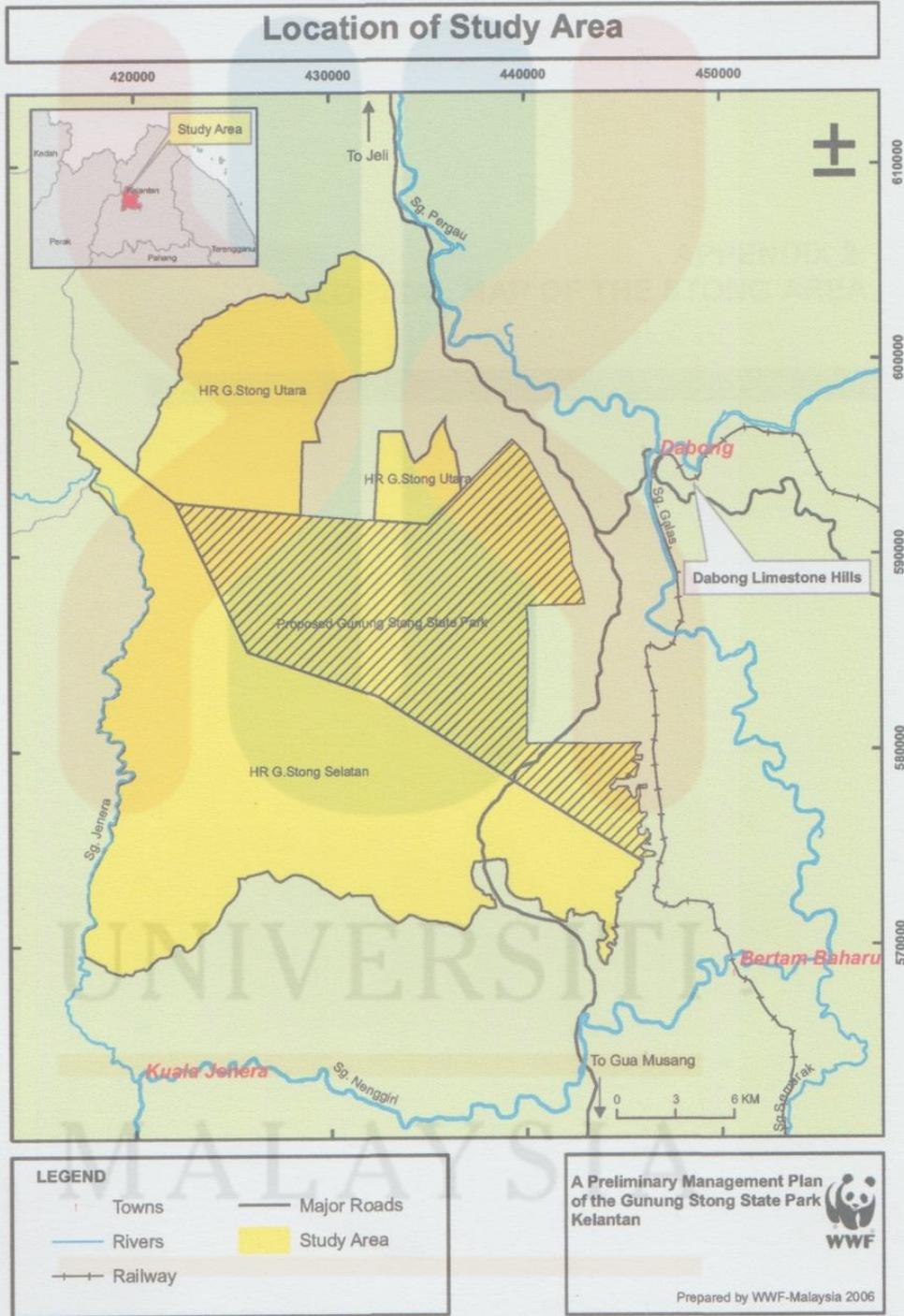
(1=strongly disagree;5=strongly agree)

APPENDIX B

Geographical area of GSSP







APPENDIX C

List of mammals and birds in GSSP

A PRELIMINARY CHECKLIST OF MAMMALS RECORDED IN THE GSSP AREA

| No | Common Name | Latin Name | Conservation Status* | Protection Status+ | Method of Detection | Source |
|--------------------------------------|----------------------------------|--------------------------------|----------------------|--------------------|---------------------|----------------------------------|
| Dermoptera: Cynocephalidae | | | | | | |
| 1. | Flying Lemur | <i>Cynocephalus variegatus</i> | LR/lc | TP | Direct observation | Ahmad Zafir <i>et al.</i> (2005) |
| Chiroptera: Pteropodidae | | | | | | |
| 2. | Spotted-winged fruit bat | <i>Balionycteris maculata</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| 3. | Lesser dog-faced fruit bat | <i>Cynopterus brachyotis</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| 4. | Hill long-tongued fruit bat | <i>Macroglossus sobrinus</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| 5. | Common long-tongued fruit bat | <i>Macroglossus minimus</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| Chiroptera: Nycteridae | | | | | | |
| 6. | Hollow-faced bat | <i>Nycteris javanica</i> | VU | - | Caught | Syukor <i>et al.</i> (2005) |
| Chiroptera: Rhinolophidae | | | | | | |
| 7. | Intermediate horseshoe bat | <i>Rhinolophus affinis</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| 8. | Glossy horseshoe bat | <i>Rhinolophus refulgens</i> | - | - | Caught | Syukor <i>et al.</i> (2005) |
| 9. | Lesser brown horseshoe bat | <i>Rhinolophus stheno</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| 10. | Trefoil horseshoe bat | <i>Rhinolophus trifoliatus</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| Chiroptera: Hipposideridae | | | | | | |
| 11. | Bicolour roundleaf horseshoe bat | <i>Hipposideros bicolor</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| 12. | Large roundleaf horseshoe bat | <i>Hipposideros larvatus</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| Chiroptera: Vespertilionidae: | | | | | | |
| 13. | Hardwicke's forest bat | <i>Kerivoula hardwickii</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| 14. | Least forest bat | <i>Kerivoula minuta</i> | LR/nt | - | Caught | Syukor <i>et al.</i> (2005) |
| 15. | Papillose bat | <i>Kerivoula papillosa</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |

| No | Common Name | Latin Name | Conservation Status* | Protection Status+ | Method of Detection | Source |
|----------------------------------|------------------------|-----------------------------------|----------------------|--------------------|-------------------------------------|----------------------------------|
| 16. | Clear-winged bat | <i>Kerivoula pellucida</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| 17. | Bronze tube-nosed bat | <i>Murina aenea</i> | LR/nt | - | Caught | Syukor <i>et al.</i> (2005) |
| 18. | Orange tube-nosed bat | <i>Murina cyclotis</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| 19. | Brown tube-nosed bat | <i>Murina suilla</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| 20. | Black myotis | <i>Myotis ater</i> | - | - | Caught | Syukor <i>et al.</i> (2005) |
| 21. | Lesser flat-headed bat | <i>Tylonycteris pachypus</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| 22. | Large flat-headed bat | <i>Tylonycteris robustula</i> | LR/lc | - | Caught | Syukor <i>et al.</i> (2005) |
| Primates: Lorisidae | | | | | | |
| 22. | Slow loris | <i>Nycticebus coucang</i> | LR/lc | TP | Direct observation | Ahmad Zafir <i>et al.</i> (2005) |
| Primates: Cercopithecidae | | | | | | |
| 23. | Pig-tailed macaque | <i>Macaca nemestrina</i> | VU | P | Camera-trapping, Direct observation | Ahmad Zafir <i>et al.</i> (2005) |
| 24. | Long-tailed macaque | <i>Macaca fascicularis</i> | LR/nt | P | Camera-trapping, Direct observation | Ahmad Zafir <i>et al.</i> (2005) |
| 25. | Banded leaf-monkey | <i>Presbytis melalophos</i> | LR/nt | P | Direct observation | Badrul & Melnick (2005) |
| 26. | Dusky leaf-monkey | <i>Trachypithecus obscurus</i> | LR/lc | P | Direct observation | Ahmad Zafir <i>et al.</i> (2005) |
| Primates: Hylobatidae | | | | | | |
| 27. | Siamang | <i>Symphalangus syndactylus</i> | LR/nt | P | Indirect observation | Ahmad Zafir <i>et al.</i> (2005) |
| Pholidota: Manidae | | | | | | |
| 29. | Malayan pangolin | <i>Manis javanica</i> | LR/lc | TP | Camera-trapping, Direct observation | Ahmad Zafir <i>et al.</i> (2005) |
| Rodentia: Scuridae | | | | | | |
| 30. | Grey-bellied squirrel | <i>Callosciurus caniceps</i> | LR/lc | - | Camera-trapping | Ahmad Zafir <i>et al.</i> (2005) |
| 31. | Black-banded squirrel | <i>Callosciurus nigrovittatus</i> | LR/lc | - | Caught | Shukor <i>et al.</i> (2005) |

| No | Common Name | Latin Name | Conservation Status* | Protection Status+ | Method of Detection | Source |
|--------------------------------|--------------------------|-----------------------------------|----------------------|--------------------|---------------------------------------|---|
| Rodentia: Muridae | | | | | | |
| 32. | Long-tailed giant rat | <i>Leopoldamys sabanus</i> | LR/lc | - | Camera-trapping, Caught | Ahmad Zafir <i>et al.</i> (2005), Shukor <i>et al.</i> (2005) |
| 33. | Brown spiny rat | <i>Maxomys rajah</i> | LR/lc | - | Caught | Shukor <i>et al.</i> (2005) |
| 34. | Red spiny rat | <i>Maxomys surifer</i> | LR/lc | - | Caught | Shukor <i>et al.</i> (2005) |
| 35. | Whitehead's rat | <i>Maxomys whiteheadi</i> | LR/lc | - | Caught | Shukor <i>et al.</i> (2005) |
| 36. | Dark-tailed tree rat | <i>Niviventer cremoriventer</i> | LR/lc | - | Caught | Shukor <i>et al.</i> (2005) |
| Rodentia: Hystricidae | | | | | | |
| 37. | Brush-tailed porcupine | <i>Atherurus macrourus</i> | LR/lc | P | Camera-trapping | Ahmad Zafir <i>et al.</i> (2005) |
| 38. | Malayan porcupine | <i>Hystrix brachyura</i> | - | P | Camera-trapping | Ahmad Zafir <i>et al.</i> (2005) |
| Rodentia: Petauristinae | | | | | | |
| 39. | Grey-bellied squirrel | <i>Callosciurus caniceps</i> | LR/lc | - | Camera-trapping | Ahmad Zafir <i>et al.</i> (2005) |
| 40. | Black-banded squirrel | <i>Callosciurus nigrovittatus</i> | - | - | Caught | Shukor <i>et al.</i> (2005) |
| Carnivora: Canidae | | | | | | |
| 41. | Asiatic wild dog | <i>Cuon alpinus</i> | EN | TP | Camera-trapping, Indirect observation | Ahmad Zafir <i>et al.</i> (2005) |
| Carnivora: Ursidae | | | | | | |
| 42. | Malayan sun bear | <i>Helarctos malayanus</i> | DD | TP | Camera-trapping, Indirect observation | Ahmad Zafir <i>et al.</i> (2005) |
| Carnivora: Mustelidae | | | | | | |
| 43. | Yellow-throated marten | <i>Martes flavigula</i> | LR/lc | - | Camera-trapping | Ahmad Zafir <i>et al.</i> (2005) |
| Carnivora: Viverridae | | | | | | |
| 44. | Binturong | <i>Artictis binturong</i> | LR/nt | TP | Camera-trapping, Direct observation | Ahmad Zafir <i>et al.</i> (2005). |
| 45. | Small-toothed palm civet | <i>Arctogalidia trivirgata</i> | LR/lc | TP | Direct observation | Ahmad Zafir <i>et al.</i> (2005). |

| No | Common Name | Latin Name | Conservation Status* | Protection Status+ | Method of Detection | Source |
|----------------------------------|------------------------|-----------------------------------|----------------------|--------------------|---|----------------------------------|
| 46. | Masked palm civet | <i>Paguma larvata</i> | LR/lc | TP | Camera-trapping | Ahmad Zafir <i>et al.</i> (2005) |
| 47. | Common palm civet | <i>Paradoxurus hermaphroditus</i> | LR/lc | P | Camera-trapping, Direct observation | Ahmad Zafir <i>et al.</i> (2005) |
| 48. | Banded linsang | <i>Prionodon linsang</i> | LR/lc | TP | Camera-trapping | Ahmad Zafir <i>et al.</i> (2005) |
| 49. | Large Indian civet | <i>Viverra zibetha</i> | LR/lc | TP | Camera-trapping, Indirect observation | Ahmad Zafir <i>et al.</i> (2005) |
| Carnivora: Felidae | | | | | | |
| 50. | Golden cat | <i>Catopuma temminckii</i> | VU | TP | Camera-trapping, Indirect observation | Ahmad Zafir <i>et al.</i> (2005) |
| 51. | Leopard cat | <i>Felis bengalensis</i> | - | TP | Camera-trapping, Direct observation, Indirect observation | Ahmad Zafir <i>et al.</i> (2005) |
| 52. | Clouded leopard | <i>Neofelis nebulosa</i> | VU | TP | Camera-trapping, Indirect observation | Ahmad Zafir <i>et al.</i> (2005) |
| 53. | Black panther/ Leopard | <i>Panthera pardus</i> | LC | TP | Camera-trapping, Direct observation, Indirect observation | Ahmad Zafir <i>et al.</i> (2005) |
| 54. | Malayan tiger | <i>Panthera tigris jacksoni</i> | EN | TP | Camera-trapping, prints | Ahmad Zafir <i>et al.</i> (2005) |
| Proboscidea: Elephantidae | | | | | | |
| 55. | Asian elephant | <i>Elephas maximus</i> | EN | P | Camera-trapping, Direct observation, Indirect observation | Ahmad Zafir <i>et al.</i> (2005) |
| Perissodactyla: Tapiridae | | | | | | |
| 56. | Malayan tapir | <i>Tapirus indicus</i> | VU | TP | Camera-trapping, Indirect observation | Ahmad Zafir <i>et al.</i> (2005) |



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| No | Common Name | Latin Name | Conservation Status* | Protection Status+ | Method of Detection | Source |
|---------------------------------|------------------|---------------------------------|----------------------|--------------------|--|----------------------------------|
| Artiodactyla: Suidae | | | | | | |
| 57. | Wild pig | <i>Sus scrofa</i> | LR/lc | TP | Camera-trapping, direct observation, indirect observation? | Ahmad Zafir <i>et al.</i> (2005) |
| Artiodactyla: Tragulidae | | | | | | |
| 58. | Lesser mousedeer | <i>Tragulus javanicus</i> | LR/lc | P | Camera-trapping | Ahmad Zafir <i>et al.</i> (2005) |
| Artiodactyla: Cervidae | | | | | | |
| 59. | Barking deer | <i>Muntiacus muntjak</i> | LR/lc | P | Camera-trapping, Direct observation, Indirect observation | Ahmad Zafir <i>et al.</i> (2005) |
| Artiodactyla: Bovidae | | | | | | |
| 60. | Scrow | <i>Capricornis sumatraensis</i> | VU | TP | Camera-trapping | Ahmad Zafir <i>et al.</i> (2005) |

Notes:* Following www.iucnredlist.org:

CR: Critically Endangered

EN: Endangered

VU: Vulnerable

DD: Data Deficient

LR/nt: Lower Risk/near threatened

LR/lc: Lower Risk/least concern

+ According to the Protection of Wild Life Act 1972:

TP = Totally Protected

P = Protected

| No. | Common name | Latin name | Conservation Status* | Protection Status+ | Method of Detection | Source |
|--------------------|------------------------------|--------------------------------------|----------------------|--------------------|---------------------|-----------------------------|
| 18. | White-crowned hornbill | <i>Aceros comatus</i> | LR/nt | TP | Observed | Chong (2005) |
| 19. | Wreathed hornbill | <i>Aceros undulatus</i> | - | TP | Observed | Chong (2005) |
| Trogonidae | | | | | | |
| 20. | Red-naped trogon | <i>Harpactes kasumba</i> | LR/nt | - | Observed | Chong (2005) |
| Alcedinidae | | | | | | |
| 21. | Blue-banded kingfisher | <i>Alcedo euryzonia</i> | VU | TP | Caught | Shahrul Anuar et al. (2005) |
| 22. | Blue-eared kingfisher | <i>Alcedo meninting</i> | - | TP | Caught | Shahrul Anuar et al. (2005) |
| Halcyonidae | | | | | | |
| 23. | Banded kingfisher | <i>Lacedo pulchella</i> | - | TP | Observed | Chong (2005) |
| Meropidae | | | | | | |
| 24. | Red-bearded bee-eater | <i>Nyctornis amictus</i> | - | TP | Observed | Chong (2005) |
| 25. | Chesnut-headed bee-eater | <i>Merops leschenaulti</i> | - | TP | Observed | Shahrul Anuar et al. (2005) |
| Cuculidae | | | | | | |
| 26. | Greater coucal | <i>Centropus sinensis</i> | - | - | Observed | Shahrul Anuar et al. (2005) |
| 27. | Rusty-breasted cuckoo | <i>Cacomantis sepulchralis</i> | - | - | Observed | Chong (2005) |
| 28. | Drongo cuckoo | <i>Surniculus lugubris</i> | - | TP | Observed | Chong (2005) |
| 29. | Green-billed malkoha | <i>Phaenicophaeus tristis</i> | - | TP | Observed | Chong (2005) |
| 30. | Raffle's malkoha | <i>Phaenicophaeus chlorophaeus</i> | - | TP | Observed | Chong (2005) |
| 31. | Red-billed malkoha | <i>Phaenicophaeus javanicus</i> | - | TP | Observed | Chong (2005) |
| Psittacidae | | | | | | |
| 32. | Blue-crowned hanging parrot | <i>Loriculus galgulus</i> | - | P | Observed | Chong (2005) |
| Apodidae | | | | | | |
| 33. | [Edible/Black-nest swiftlet] | <i>Collocalia fuciphaga / maxima</i> | - | TP | Observed | Chong (2005) |
| 34. | Brown-backed needletail | <i>Hirundapus giganteus</i> | - | - | Observed | Chong (2005) |

| No. | Common name | Latin name | Conservation Status* | Protection Status+ | Method of Detection | Source |
|---------------------|--------------------------|-----------------------------------|----------------------|--------------------|---------------------|--|
| Hemiprocidae | | | | | | |
| 35. | Grey-rumped treeswift | <i>Hemiprocne longipennis</i> | - | TP | Observed | Chong (2005) |
| 36. | Whiskered treeswift | <i>Hemiprocne comata</i> | - | TP | Observed | Chong (2005), Shahrul Anuar <i>et al.</i> (2005) |
| Columbidae | | | | | | |
| 37. | Little cuckoo-dove | <i>Macropygia ruficeps</i> | - | - | Observed | Chong (2005) |
| 38. | Emerald dove | <i>Chalcophaps indica</i> | LR/nt | P | Observed | Chong (2005), Shahrul Anuar <i>et al.</i> (2005) |
| 39. | Jambu fruit dove | <i>Ptilinopus jambu</i> | - | P | Observed | Shahrul Anuar <i>et al.</i> (2005) |
| 40. | Mountain imperial pigeon | <i>Ducula badia</i> | - | TP | Observed | Chong (2005) |
| Accipitridae | | | | | | |
| 41. | Oriental honey-buzzard | <i>Pernis ptilorhynchus</i> | - | TP | Observed | Chong (2005) |
| 42. | Crested serpent eagle | <i>Spilornis cheela</i> | VU | TP | Observed | Chong (2005), Shahrul Anuar <i>et al.</i> (2005) |
| 43. | Blyth's hawk eagle | <i>Spizaetus alboniger</i> | - | TP | Observed | Chong (2005) |
| Eurylaimidae | | | | | | |
| 44. | Green broadbill | <i>Calyptomena viridis</i> | LR/nt | TP | Observed, Caught | Chong (2005), Shahrul Anuar <i>et al.</i> (2005) |
| 45. | Long-tailed broadbill | <i>Psarisomus dalhousiae</i> | - | TP | Observed | Chong (2005) |
| 46. | Dusky broadbill | <i>Corydon sumatranus</i> | - | TP | Observed | Chong (2005) |
| Pardalotidae | | | | | | |
| 47. | Golden-bellied gerygone | <i>Gerygone sulphurea</i> | - | - | Observed | Chong (2005) |
| Irenidae | | | | | | |
| 48. | Asian fairy bluebird | <i>Irena puella</i> | - | TP | Observed | Chong (2005) |
| 49. | Lesser green leafbird | <i>Chloropsis cyanopogon</i> | LR/nt | TP | Observed | Shahrul Anuar <i>et al.</i> (2005) |
| 50. | Blue-winged leafbird | <i>Chloropsis cochinchinensis</i> | - | - | Observed | Chong (2005) |

APPENDIX D

Tourists arrival from year (2005-2015)

Jumlah Kemasukan Pelancong Tempatan dan Antarabangsa ke Kelantan Bagi tahun 2005 hingga 2015.

| Tahun | Pelancong Tempatan | Antarabangsa | Jumlah |
|-------|--------------------|--------------|-----------|
| 2005 | 4,509,162 | 621,705 | 5,130,867 |
| 2006 | 4,212,247 | 674,004 | 4,886,251 |
| 2007 | 4,114,007 | 1,839,675 | 5,953,682 |
| 2008 | 4,396,242 | 541,500 | 4,937,742 |
| 2009 | 4,229,392 | 573,649 | 4,803,041 |
| 2010 | 4,464,017 | 922,072 | 5,386,089 |
| 2011 | 3,627,272 | 1,314,155 | 4,941,427 |
| 2012 | 3,865,373 | 1,211,754 | 5,077,127 |
| 2013 | 3,643,727 | 1,198,881 | 4,842,608 |
| 2014 | 3,681,265 | 1,286,458 | 4,967,723 |
| 2015 | 3,820,563 | 1,315,897 | 5,136,460 |

APPENDIX E

Chi Square Test

Test Statistics

| | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 |
|-------------|---------------------|--------------------|-------------------|----------------------|---------------------|----------------------|
| Chi-Square | 54.980 ^a | 1.440 ^b | .360 ^b | 102.800 ^c | 98.500 ^c | 103.400 ^c |
| df | 2 | 1 | 1 | 4 | 4 | 4 |
| Asymp. Sig. | .000 | .230 | .549 | .000 | .000 | .000 |

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 33.3.

b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 50.0.

c. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 20.0.

| | Q19 | Q20 | Q21 | Q22 | Q23 | Q24 | Q25 | Q26 | Q27 | Q28 |
|-------------|-------------------|---------------------|--------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| Chi-Square | .640 ^a | 73.280 ^b | 2.560 ^a | 174.320 ^b | 22.820 ^c | 92.880 ^b | 52.460 ^c | 60.080 ^c | 73.340 ^c | 154.640 ^b |
| df | 1 | 3 | 1 | 3 | 2 | 3 | 2 | 2 | 2 | 3 |
| Asymp. Sig. | .424 | .000 | .110 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

| Q29 | Q30 | Q31 | Q32 | Q33 |
|---------------------|----------------------|---------------------|---------------------|---------------------|
| 64.340 ^c | 118.000 ^b | 57.500 ^d | 57.300 ^d | 92.480 ^b |
| 2 | 3 | 4 | 4 | 3 |
| .000 | .000 | .000 | .000 | .000 |

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 50.0.

b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 25.0.

c. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 33.3.

d. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 20.0.

Test Statistics

| | Q34 | Q35 | Q36 | Q37 | Q38 | Q39 | Q40 | Q41 | Q42 | Q43 |
|-------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|
| Chi-Square | 49.340 ^a | 44.060 ^a | 76.220 ^a | 26.000 ^a | 94.160 ^b | 67.520 ^a | 68.180 ^a | 95.780 ^a | 100.940 ^a | 44.400 ^b |
| df | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 3 |
| Asymp. Sig. | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 33.3.

b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 25.0.

Test Statistics

| | Q52 | Q53 | Q54 | Q55 | Q56 | Q57 | Q58 | Q59 |
|-------------|----------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|
| Chi-Square | 105.620 ^a | 83.280 ^b | 48.500 ^a | 92.420 ^a | 148.880 ^b | 12.740 ^a | 12.960 ^c | 80.420 ^a |
| df | 2 | 3 | 2 | 2 | 3 | 2 | 1 | 2 |
| Asymp. Sig. | .000 | .000 | .000 | .000 | .000 | .002 | .000 | .000 |

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 33.3.

b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 25.0.

c. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 50.0.

APPENDIX F

Data Collection in GSSP



Figure F1: This picture shows the tourist filling reached camp up the questionnaire form.



Figure F2: This picture show we have explored further till baha camp.



Figure F3: This picture shows the tourist guide area



Figure F4: This picture shows the camping giving brief explanation about the tourists.



Figure F5: This picture shows the tourists guide tourists start guiding the path to enter baha camp.



Figure F6: This picture shows group of their hiking journey.



Figure F7: This picture shows the groups of tourists' starts to exploring GSSP.



Figure F8: This picture shows the tourists settle down to have a break.