



THE POTENTIAL OF NATURE TOURISM ACTIVITIES AT MANGROVE AREAS IN TUMPAT, KELANTAN

by

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DECLARATION

I declare that this thesis entitled “The Potential of Nature Tourism Activities at Mangrove Areas in Tumpat, Kelantan” is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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The Potential of Nature Tourism Activities at Mangrove Areas in Tumpat, Kelantan

ABSTRACT

Kelantan consists of 744 ha of mangrove forest, where there are patches of mangrove forests located at estuaries and river banks in Tumpat and Bachok. Tumpat is the most unique because of the plain, hundreds of river islands and has potential to be developed as international tourism attraction. There were three objectives in this study, which were; (i) Identify the nature attractions in mangrove of Tumpat, (ii) Access the nature tourism activities in mangrove of Tumpat and (iii) Assess the perceptions of respondents towards tourism development in mangrove of Tumpat. The study was conducted in Tumpat areas, Kelantan by using questionnaires. 100 sets of survey form were randomly distributed at Bandar Tumpat, Kok Majid, Pulau Beluru, Pulau Suri and Pantai Sri Tujuh. The result shows the nature attractions in Tumpat are mangrove forests (42.8%), diversity of flora and fauna (30.3%) and delta areas (26.9%). The suggested potential nature tourism activities in this mangrove were boat ride (37%), mangrove tour (32%) and bird watching (31%). From this study, there are 71% of the respondents agreed to develop Tumpat as tourism destination. Therefore, a mangrove area at Tumpat ability to become as tourism destination due to activities those visitors able to do at mangrove areas.

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Potensi Aktiviti Pelancongan Alam Semulajadi di Kawasan Bakau di Tumpat, Kelantan

ABSTRAK

Kelantan terdiri daripada 744 hektar hutan bakau, di mana terdapat kawasan hutan bakau di muara sungai dan tebing sungai di Tumpat dan Bachok. Tumpat adalah kawasan yang paling unik kerana mempunyai dataran, ratusan sungai pulau dan mempunyai potensi untuk dimajukan sebagai tarikan pelancongan antarabangsa. Terdapat tiga objektif dalam kajian ini, iaitu; (i) Mengenalpasti tarikan semulajadi dalam bakau Tumpat, (ii) Mengakses aktiviti pelancongan alam semulajadi dalam bakau Tumpat dan (iii) Menilai persepsi responden terhadap pembangunan pelancongan di kawasan bakau di Tumpat. Kajian ini telah dijalankan di kawasan Tumpat, Kelantan dengan menggunakan soal selidik. 100 set borang soal selidik telah diedarkan secara rawak di Bandar Tumpat, Kok Majid, Pulau Beluru, Pulau Suri dan Pantai Sri Tujuh. Hasil kajian menunjukkan tarikan semulajadi di Tumpat adalah hutan bakau (42.8%), kepelbagaian flora dan fauna (30.3%) dan kawasan delta (26.9%). Potensi aktiviti pelancongan alam semulajadi yang dicadangkan dalam kawasan bakau ialah menaiki bot (37%), lawatan hutan bakau (32%) dan melihat burung (31%). Dari kajian ini, terdapat 71% daripada responden bersetuju untuk membangunkan Tumpat sebagai destinasi pelancongan. Oleh itu, kawasan bakau di Tumpat kemampuan untuk menjadi sebagai destinasi pelancongan berdasarkan aktiviti yang pengunjung boleh lakukan di kawasan bakau.

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LIST OF ABBREVIATIONS

GST	- Goods and Services Tax
NKEA	- National Key Economic Area
TPWD	- Texas Parks and Wildlife Department
MOCAT	- Ministry Of Tourism-Culture, Arts and Tourism Ministry
VMY	- Visit Malaysia Year
MTPB	- Malaysia Tourism Promotion Board
MMFR	- Matang Mangrove Forest Reserve
DIDM	- Department of Irrigation and Drainage Malaysia
SPSS	- Statistical Package for the Social Science

LIST OF SYMBOLS

ha	- Hectare
%	- Percent
°	- Degree
C	- Celsius
N	- North
E	- East
mm	- Millimetre

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

Tourism is define as a process, activity and result produced from interaction between tourists, suppliers of tourism, tourist organizer, host community, government's host and surrounding of environment involved in attraction (Goeldner & Ritchie, 2011) and a movement of persons away-from-home to other places of interest (Bhatia, 2006).

In Malaysia, the tourist arrival recorded in 2013 was 25.72 million and increased in 2014, received 27.44 million and declined in 2015 to 25.70 million (Tourism Malaysia, 2015). The drop on tourism caused by several factors such as regional haze phenomenon in late August to October, the of security in the east of Sabah, the incidents in the airline industry, earthquakes, floods (Tourism Malaysia, 2016) and 6 percent of Goods and Services Tax (GST) and the uncertainty in the current political situation (Malaysia Kini, 2016).

Tourism has emerged as one of the major industries which benefit economy and local community development strategy in past decade. Tourism industries play an important role in invigorating developed country's economic growth and developing country. Through the tourism industry, a country will be able to control

currency flow and to increase income. Therefore, tourism activity development helps in enhancement the economy (Mastura *et al.*, 2015).

In 2015, the number of tourist arrivals in Kelantan in September was about three million people consisting of local and foreign tourists (Bernama, 2015). Kelantan was the one of five leading states that received the highest number of domestic visitors in 2010. The top five main destinations at Kelantan were Pasar Siti Khadijah, Rantau Panjang Trade Zone, Pasar Malam Wakaf Che Yeh, Muzium Negeri Kelantan and Pantai Cahaya Bulan (Syahida & Zainal, 2013).

One of the most productive ecosystems is mangrove forests. The areas produce commercial forest products, protect shorelines and support fisheries activities. In high salinity, extreme flows, strong winds, high temperatures and mud-covered condition, mangrove will occur. Mangrove forests consist of woody plants that rise between land and sea in tropical and sub-tropical (Kathiresan & Bingham, 2001). Mangrove ecosystems are important to sustain local fishery industry in Malaysia (Shukor, 2004).

In the Asia-Pacific region, the mangrove in Malaysia is the third largest mangrove forest after Indonesia and Thailand consist of 641,886 ha. It mostly found in the states of Johor, Kedah, Perak, Pahang, Kelantan and Terengganu (Juliana *et al.*, 2014). In Peninsular Malaysia, there are about 106,544 ha of land occupied by mangrove forests (Shukor, 2004). Kelantan consists of 744 ha of mangrove forest, where there are patches of mangrove forests located at estuaries and river banks in

Tumpat and Bachok (Latiff, 2012). Based on satellite QuickBird data obtained from the Malaysian Remote Sensing Agency, mangrove area in Tumpat was estimated at 339.6 ha (Behara *et al.*, 2010).

1.2 Problem Statement

In Tumpat, there are several studies mangrove had been done. The studies on ecosystem, biodiversity and mangrove vegetation were conducted. However, the survey on nature tourism in this mangrove not yet to be done. This study is important because the nature tourism activities at mangrove areas can make Tumpat become well-known as tourism destination by its natural resources. This will increasing the number of visitors to visit Tumpat.

1.3 Objectives

The objectives of this study are:

1. To identify the nature tourism attractions in Tumpat mangrove area
2. To access the potential nature tourism activities in mangrove of Tumpat
3. To assess the perceptions towards tourism development of mangrove in Tumpat

CHAPTER 2

LITERATURE REVIEW

2.1 Tourism

Tourism is the activities of persons travel and stay in places outside their usual environment not more than one year for leisure, business and other purposes (Education Bureau, 2013). Nature tourism is a travel to natural areas that conserve the environment and improve the welfare of local people (TPWD, 2016).

There are two units responsible government body in tourism development in Malaysia. There are Ministry of Tourism-Culture, Arts and Tourism Ministry (MOCAT) before 2004 that are responsible for planning, monitor and in accordance policy with government. The other one is Malaysia Tourism Promotion Board (MTPB) that plays major role marketing and encouraging tourism aspects and proposes investment opportunity. Other central agency also involved in tourism development including; (i) Department of Agriculture (agro-tourism), (ii) Department of Forestry (nature tourism), (iii) Department of Fisheries (beach tourism), (iv) Department of Wildlife and National Park (nature tourism), (v) Department of Aborigines' Affairs (ethnic tourism) and (vi) Department of Museums and Antiquities (heritage/ cultural tourism) (Aissa & Saleh, 2014).

In 2014, Malaysia celebrates Visit Malaysia Year (VMY) the fourth with theme "Celebrating 1Malaysia Truly Asia" and Malaysia Year of Festivals campaign with theme "Endless Celebrations" stress various festivals greeted by society from various cultures. NKEA Tourism (National Key Economic Areas) outlined to target up to 36 million tourist arrival and RM168 billion in receipts by 2020. Both campaigns is key driver towards accomplish the country's target. Through NKEA Tourism, joint venture between Ministry of Tourism and Culture, other Government agency and private sector has been enhanced to help obtain Malaysia's position as a main tourism destination (Tourism Malaysia, 2015).

In Malaysia, tourism is identified as one social interest and major economy that contribute to wealth materialization. Tourism sector were identified as a economic activity driver which would contribute to growth directions and economic development as stated in Ninth Malaysians Plan. Government has allowed various facilities to travel agency develop other potential areas in tourism industry like nature tourism, edutourism, islamic tourism and homestay (Sahida *et al.*, 2011).

2.2 Nature Tourism

Nature tourism defines as responsible journey to natural area, which protects environment and increase local population's well-being. It tourism based on natural affinity of an area. Examples like birdwatching, taking pictures, camp, hiking, hunting, fishing and visit park (TPWD, 2016). There are five major principle of nature tourism: (i) education about the area, (ii) usage of resources with sustainably

and prevention of poverty, (iii) improvement of local community and assistance in development, (iv) respect for cultural or social or political and (v) revenue for tourism industry. Tourism linked to nature: a trip or tours related to nature in an attractive area with attractive nature (Blaj, 2014).

Nature tourism site should be rich with natural attraction by bringing benefit for travel and tourism with various flora and fauna, having unique characteristics on few historical value and culture, natural has been untouched or group tradition and suitable for recovery, conservation by tourism activity, cannot be often visited by blow-up tourist and not threatened by damaging activities. This area should be suitable for walking, observe the bird and swim (Cabahug, 2002). Mangrove forests have become reachable through informative signage, arboretum, board walks, chalets, charcoal village and nature education centre has become a popular tourism destination in recent years (Ong & Gong, 2013).

2.3 Mangrove Nature Tourism

The recreational purposes are enjoying, education to understand mangrove plants and preservation efforts such as planting mangrove trees for mangrove nature tourism (Teguh & Martina, 2015). Mangrove ecosystem potential recreation is zonation existence which usually different from coast to transition zone. So it can be processed into particular area support tourist attraction. Furthermore, usual basic form which normally found in a few mangrove types of plant and fruit that are applicable as fabric dye and drinks. Other than that, in mangrove ecosystem there are

various species of birds, insect and primate who lives in tree canopy and mangrove base. For example snake, prawn, fish, shell fishes, snail and crab. Next, local community attraction custom on source of mangrove and depend mangrove forest existence. The potential activities like fishing, swim, bird observation, wildlife attractions and education (Teguh & Martina, 2015).

Mangrove areas in Bakau Teluk, Pulau Tulai regarded as tourist's attention destination. Nevertheless, mangrove areas in Pulau Tioman also potentially to be developed as tourism destination areas. Although mangrove areas only part of view, the presence clearly increases tourist attraction. Basic amenities like information counter, pavement, garbage site and toilet is deemed necessary. Major information panel and site map must prepare in mangrove areas. Pavement could be built for visitor to access mangrove areas without destroy root system and stand. This facility of location and information guide should be placed strategically in websites to give beneficial information and to maintain biophysical stability of a website. Since mangrove provides various important functions in nature, it hopes that nature tourism mangrove activity will influence the people and sense of community on environment, conservation and sustainable development with positively (Saad *et al.*, 2015).

The mangrove area is a part of the scenery where its presence could enhances tourist attraction. The facilities such as information counter, walking trails, garbage boxes and toilets are considered necessary (Saad *et al.*, 2015). The proper tourism activities which will not damage the environment such as snorkeling, kayaking, nature track like research and education tour, scuba diving, taking pictures, bird

watching, and mangrove tree plantation or adoption attract more visitors to the mangrove forest while promoting the conservation of this natural setting (Saad *et al.*, 2015). Visitors' attraction area consists of forests reserve, conservation centre, marine park, lake, islands, migratory birds and mangrove areas (Azizan, 2010). Few of the mangrove areas have great possibility because of current importance on nature tourism. For example Pulau Kalumpang in Matang is a reservation for wildlife and millions of migratory birds on their way to Siberia (Teh & Yap, 2003). There are three groups of birds found such as mangrove pitta, mangrove blue flycatcher and greater golden backed woodpecker. Migratory birds could be seen such as great egret (*Ardea alba*), osprey (*Pandion haliaetus*) and wood sandpiper (*Tringa glareola*) (Dony *et al.*, 2013).

Visiting charcoal factory, bird watching and dolphin watching are the main nature tourism activities in Matang Mangrove Forest Reserve (MMFR). More than half rations of tourists confirmed MMFR is a good tourist destination (Anisul *et al.*, 2015). The mangroves are sources of highly valued commercial products, fishery resources and sites for developing nature tourism (Kathiresan, 2012). Fishing activities are the supporting attraction in Kelantan delta (Dony *et al.*, 2013). Kuala Merbuk, Kedah, Kukup, Johor and Kuala Gula, Perak are known for supporting migratory birds (Latiff, 2012). Mangroves are place for birds to stay. The visitors can do bird feeding for migrating birds. General damage of mangroves could affect the number of staying and migrating bird species (Ong & Gong, 2013).

Recreational activities at mangrove areas are capable to generate finances via jungle trekking, boating, and bird watching. For example in Selangor, there are Kampung Kuantan and Kampung Belimbing that well-known with fireflies at night (Latiff *et al.*, 2014). This mangrove tree attracts a species of fireflies (*Pteroptyx tener*) which is known to emit some form of luminescence at night. The behavioral pattern of these fireflies and the ecology of mangroves in Kampung Kuantan have been studied and documented by researchers from local and international institutions. Fireflies lives in big colonies and each colony inhabits the trees with young leaves preferably in areas of minimal human intervention that have been shown in studies (Jamil & Suzana, 2010). The example existence activities at mangrove areas are shown in Table 2.1.

Table 2.1: List of activities in mangrove areas

State	Activities
Kuala Selangor Nature Park (Selangor)	<ul style="list-style-type: none"> • Mangrove trail • Bird watching • Education and awareness programmes
Kampung Kuantan, Kuala Selangor (Selangor)	<ul style="list-style-type: none"> • Fireflies watching
Kuala Gula (Perak)	<ul style="list-style-type: none"> • Mangrove trail • Bird watching • Firefly watching • Boat ride • Visit to fishing and aquaculture

Matang Mangrove Forest Reserve (Perak)	<ul style="list-style-type: none">• Mangrove trail• Boat ride• Bird watching• Firefly watching• Visit to fishing and aquaculture• Charcoal making
Klias Wetland, Klias (Sabah)	<ul style="list-style-type: none">• Mangrove river tour• Fireflies watching• Proboscis monkey
Labuk Bay (Sabah)	<ul style="list-style-type: none">• Mangrove trail• Mangrove river cruise• Bird watching• Proboscis monkey

(Source: Tan, 2007)

2.4 Mangrove Forest Ecosystem

Mangrove is ecosystem that immensely productive. Mangrove forest is rich with total species and total individuals in every species for invertebrates and vertebrate animals. Mangroves provide suitable breeding and nursery area to a huge amount of fish, shrimps, crayfish, clams, and other aquatic organisms. Waters equally used as feed, reproduce, and rest for many species of birds, amphibious, reptile, and aquatic mammals (Nabila, 2011).

Major mangrove forest types in Sabah as *Rhizophora* forests, *Avicennia-Sonneratia* forests, *Bruguiera* forests and *Nypa* forests. The flora consists of ferns, herbs, palms, woody climbers, trees and shrubs. The fauna includes invertebrates such as crustaceans, chelicerates and insects. Vertebrates such as fish, amphibians, reptiles, mammals and birds (Tangah *et al.*, 2015).

Inshore society coast have long known and admit ecology value and swamp forest ecosystem socio economic value sea to local community subsistence. Mangrove forest is habitat to various species of living creatures fishy, bird, reptile, amphibious, mollusc and crustacean. Furthermore, mangrove trees provide wood supply that is quality for use build a house, firewood, ebony and use for catch fish (Hyrul *et al.*, 2010).

Kuala Gula is area for birdwatching because it located at *East Asia's Australasian Flyway* and the stopping point migratory birds in Peninsular Malaysia. The main areas of tourist-packed sport fishing, activities along the mangroves and live the life of a fishing village. The main activities of the inhabitants of Kuala Gula as a fisherman are to catch crabs, shrimp and fish. Some residents of Kuala Gula make nature tourism as a source of their livelihood as a boatman, tour guide and provide tourist facilities (Hyrul *et al.*, 2010).

Mangrove forest is very important of resources of coastal, especially to socio-economic development. Population most wide human stay in beach and most communities depends source locally to living they. Mangrove is source highly valued

commercial product, fishery resources and as site to develop eco-tourism (Kathiresan & Bingham, 2001).

Mangrove ecosystem provides various services to people that stay at the beach, in fisherman especially those living depend on stock that is healthy fish and other sea products. Fisherman participation and their comprehension on mangrove forest are important in mangrove management. Mangrove ecosystem is an important factor for fishermen to earn a monthly income (Sirisuda *et al.*, 2013).

CHAPTER 3

MATERIALS AND METHODOLOGY

3.1 Study Area

The study area is located in the mangrove of Tumpat, Kelantan (Figure 3.1). This area is situated between 6° 13' N and 102° 14' E (Behara *et al.*, 2011). The total mangrove areas in Tumpat are approximately 13,000 hectares includes Pulau Rulau, Pulau Che Soh, Pulau Tongkang, Pulau Ekor, Pulau Besar, Pulau Terendak, Pulau Che Lah, Pulau Hj. Nik Mat, Pulau Seratus, Pulau Kuda, Pulau Dollah, Pulau Renjuna, Pulau Beluru, Pulau Che Minah, Tanjung Kuala (Duff), Pulau Che Tahir and Pulau Timun (Yusoff & Rahim, 2007). The yearly mean temperature is 26.8°C (Behara *et al.*, 2011). Average of daily rainfall on 2nd January to 7th January of 2017 in Tumpat, Kelantan is 59.67 mm within one hour (DIDM, 2016).



Figure 3.1: The locations of the study area.

3.2 Data Collection

The field survey carried out at five different places, which were Bandar Tumpat, Pantai Sri Tujuh, Kok Majid, Pulau Beluru and Pulau Suri by accessing the attractions and existing activities in mangrove. This study used questionnaires as an influent to assess local perception towards nature tourism in Tumpat, Kelantan. The questionnaires were divided into four sections, A, B, C and D. Section A consists of demographic profile of the respondents (e.g. gender, age, race, level of education and occupation). Section B contained questions regarding the nature attractions in mangrove of Tumpat. In section C was about the potential nature tourism activities in mangrove of Tumpat. Lastly in Section D the perceptions towards tourism development in Tumpat were questioned. A Likert scale was applied in the questionnaires form. Typical scales used were “Strongly disagree, Disagree, Not Sure, Agree and Strongly agree”. The questionnaire was written in both English and

Malay languages. The target respondents in this study were random people or visitors at or near at Tumpat Delta area. 100 set of questions were distributed throughout 5 areas nearby. The survey areas were conducted in Bandar Tumpat, Kok Majid, Pulau Beluru, Pulau Suri and Pantai Sri Tujuh. The survey was conducted from September to October 2016.

3.3 Data Analysis

Prior to real data collection, a pilot study was carried within two weeks in order to test the reliability of the questions set up in the survey form. Cronbach's Alpha was analysed and survived 0.757, which is acceptable to use the sets of questions for the real data collection. The perception towards tourism development shows Skewness to the right.

All results was recorded and analysed in Statistical Package for The Social Sciences (SPSS). Every section were analysed as mean and percentage. The reason was to calculate the percentage of respondents according to categories.

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CHAPTER 4

RESULTS AND DISCUSSION

4.1 Demographic Profile

A total of 100 respondents were surveyed. 67% of respondents are male and the rest are female. Most of the respondents aged 21 to 30 years old (62%). 59% of the respondents were continuing their studies to Diploma/ Degree/ Master/ PhD level. 37% of respondents had achieved to STPM and 4% to UPSR. The respondents in the study were working in government sectors are 34%. Furthermore, there are the same number of respondents who working as student and self-employed (33%). Table 4.1 shows the results of demographic profile of respondents.

Table 4.1: Demographic profile of respondents

Demographic	Categories	Percentage (%)
Gender	Male	67
	Female	33
Age	21-30	62
	41-50	28
	<20	10
Level of Education	Diploma / Degree / Master / PhD	59
	SPM/ STPM	37
	UPSR	4
Occupation	Government	34
	Student	33
	Self-employed	33

4.2 The Nature Tourism Attractions in Mangrove Areas of Tumpat.

There were several nature resources in Tumpat. The main attraction chosen by respondents were mangrove forests (42.8%), diversity of flora and fauna (30.3%) and delta areas (26.9%) as shown in Table 4.2.

Mangrove forests play a major role in the tourism sector, conservation efforts and contribution to the economic, social, ecological and environment (Mallar, 2012). Benefits of mangrove trees were barrier to strong winds, waves and water current (Dony *et al.*, 2013).

Diversity of flora and fauna also was attractions in mangrove area. Richness flora and fauna makes the mangrove areas that is important in contribution of biological diversity, value of socio-economy and environmental protection (Huda *et al.*, 2013). Flora diversity that found in mangrove area was jeruju, nipah and bakau minyak. The coastal communities depend on the plants for timber, fuel, food and medicine herbs (Dony *et al.*, 2013). Fauna diversity at the bottom of the mangrove trees was an important breeding ground for fishes, crabs and prawn. Migratory birds, reptiles and crustaceans were observable in mangrove of Tumpat (Dony *et al.*, 2013).

The other attraction in mangrove of Tumpat was delta areas. Delta occurs by deposition of silt that forms the alluvial plains and eventually forming an island. The delta certainly contributes vast study on soil, water estuaries, mangrove swamps and

mangrove ecosystems. In 2000, planting mangrove trees was introduced by Department of Kelantan's Forestry (Huda *et al.*, 2013).

Table 4.2: List of attractions in Tumpat

Attractions at Tumpat	Percentages (%)
Mangrove forests	42.8
Diversity of flora and fauna	30.3
Delta areas	26.9

4.3 The Potential Nature Tourism Activities in Mangrove Areas of Tumpat

This study found that, boat ride (37%), mangrove tour (32%) and bird watching (31%) were the main suggested nature tourism activities that potentially could be done in mangrove areas. Table 4.3 shows the list of activities of nature tourism in mangrove in Tumpat.

Boat ride activities gain the highest percentage. Boat was the only transportation on the rivers in Tumpat delta. Moreover, boating was the most interesting activities for visitors and the travel guide could cost RM 60 (Dony *et al.*, 2013).

Another finding in this study was mangroves tour around the mangrove islands. The explanation given during surround the mangrove islands to ensure that visitors see nature especially it connects the estuary to the sea. The main species that exist in the mangroves forests were jeruju, nipah and bakau minyak (Dony *et al.*, 2013).

Furthermore, bird watching was potential activities in mangrove of Tumpat. Egret and osprey are the animal was observed by Dony (2013). This result is in agreement with Dony's (2013) findings that the great egret (*Ardea alba*) and osprey (*Pandion haliaetus*) are the birds that visible in that area.

Table 4.3: The potential activities that visitors able to do in mangrove areas in

Tumpat

Activities at mangrove areas	Percentages (%)
Boat ride	37.0
Mangrove tour	32.0
Bird watching	31.0

4.4 Perceptions on Tourism Development in Mangrove

The opinion of respondents towards tourism development in Tumpat was surveyed and resulted that 71% agreed to develop Tumpat as tourism destination (Figure 4.4). There were several factors evaluated for this section. It was evaluated based on the mean from Likert scale. The result of the perception on tourism developments in mangrove area of Tumpat was presented in Table 4.5. The highest mean gained by the survey was by increasing tourism sector in Tumpat, the demand of facilities and services will be increased. There were several other factors that caused respondent choose for tourism development in Tumpat. Thru development, communities can retain their heritage lifestyle for long-term. Attractive and educative activities in mangrove area will increased the number of visitors. When number of visitor increased, it could offer a great opportunity to local communities and increasing their income. Other factor of respondent agree upon the development of tourism sector in Tumpat was to introduce the traditional foods of the area such as ‘dodol’ and different flavour of crackers. Through these selling activities, the local communities can get benefit in term of income generation.

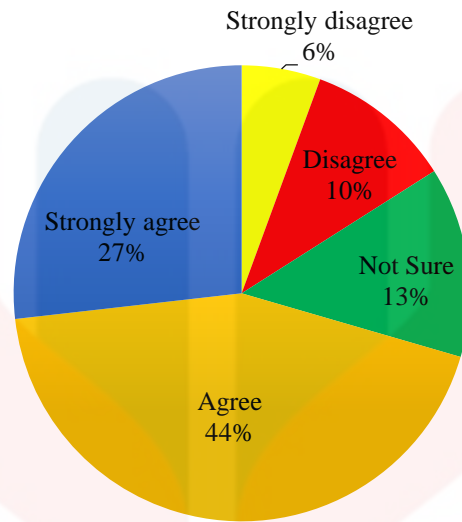


Figure 4.4: The percentage of perceptions of respondents towards tourism development of mangrove areas in Tumpat

Table 4.5: The mean of perception level that achieved by respondents

Factors that support tourism development in Tumpat	Mean
Increased sector of tourism can make the demand in terms of facilities and services increasing	4.44
Development of infrastructures and facilities at mangrove areas will attract visitors to come	4.25
The number of visitors increased because of the tourism sector	4.23
Local communities able to retain their heritage and lifestyles for long term viability due to tourism development	4.20
The tastes and flavour of cracker and ‘dodol’ that made by local communities. can attract visitors to buy it	3.93
Tourism development help to improve the quality of mangrove area	3.92
The activities at mangroves areas give chances of job opportunities to the local communities.	3.80
Mangrove areas are potential to become a study or research location	3.63
Conservation activities will help to prevent inappropriate development at mangrove areas.	3.54
The source of income of local communities will be increasing due to activities at mangroves areas.	3.48
The beauty travel will mesmerize visitors with nature beauty of mangrove areas	3.40
Mangrove forests are the most important natural resources	3.38
The main role of mangrove forests is the habitat to flora and fauna diversity	3.31
Mangrove is important to protect coastline and riverbanks against erosion wave action and strong coastal winds	3.08

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study found that, there were three nature attractions in mangrove of Tumpat, which were mangrove forests, diversity of flora and fauna and delta areas. Richness of natural resources in mangrove of Tumpat should be protected and preserved for nature tourism purposes. Three potential nature tourism activities were identified in mangrove of Tumpat, which were boat ride, mangrove tour and bird watching. Those potential activities could give job opportunities among the local communities. There are 71% of respondents were agreed to develop mangrove in Tumpat as tourism destination. This study showed that development on tourism was necessary. As to concludes, the mangrove of Tumpat will be able to become as tourism destination due to nature tourism activities that visitor able to do in mangrove areas.

5.2 Recommendations

Further improvement focus on tourism in mangrove areas such as invite the local people to be involved in tourism development because of majority of respondents were agreeing to support tourism development in mangrove areas. Moreover, implementation of awareness among the local people such as education, campaign and demonstration of planting tree participated by local residents. Preservation and conservation activity of mangrove forest should be taken to be beneficial to the economic, social and environment. Furthermore, add other activities that can be done in the mangrove areas. Other than that, management and planning on nature tourism are very important to develop mangrove areas as tourists' destination. The number of visitors will be increased because of tourism sector.

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APPENDIX A



The Potential of Nature Tourism Activities at Mangrove Areas in Tumpat, Kelantan

Potensi Aktiviti Pelancongan di Kawasan Bakau Tumpat, Kelantan

Objectives /Objektif:

1. To identify the nature attractions in mangrove of Tumpat
Untuk mengenal pasti tarikan alam semula jadi di kawasan bakau Tumpat
2. To access the potential nature tourism activities in mangrove of Tumpat
Untuk mengakses potensi aktiviti pelancongan alam semula jadi dalam bakau Tumpat
3. To assess the perceptions on tourism development in mangrove
Untuk menilai persepsi terhadap pembangunan pelancongan di kawasan bakau

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Section A: Respondent's Profile

Bahagian A: Latar Belakang Responden

Please tick (/) to the box provided.

Sila tandakan (/) pada kotak yang disediakan.

1. Gender : Male Female
Jantina Lelaki Perempuan
2. Age(Years) : < 20 41-50
Umur 21-30 51-60
(Tahun) 31-40 > 60
3. Race : Malay/ *Melayu* Chinese/ *Cina*
Bangsa Indian/ India Others/Lain-lain:

4. Level of Education : No Education / SPM/ STPM
Tidak bersekolah
Tahap Pendidikan : UPSR Diploma / Degree /
Master / PhD
 PMR/PT3 *Diploma / Ijazah/ Sarjana /Kedokteran*
5. Occupation : Non- Government / Unemployed /
Pekerjaan Swasta Tidak bekerja
 Government/ Retire/
Kerajaan Pesara
 Student/ Others/
Pelajar Lain-lain:
 Self-employed/ _____
Sendiri

6. Are you a resident of Tumpat?

Adakah anda penduduk Tumpat?

Yes / Ya

No / Tidak

7. Did you know that Tumpat have mangrove trees?

Tahukah anda Tumpat mempunyai pokok-pokok bakau

Yes / Ya

No / Tidak

8. How do you know about mangroves in Tumpat?

Bagaimana anda tahu tentang kawasan bakau di Tumpat?

Residents of Tumpat

Penduduk Tumpat

The program organized by the Kelantan State Forestry Department

Program yang dianjurkan oleh

Jabatan Perhutanan Negeri

Kelantan (JPNK)

Social media/ Media massa

Google Map/ Waze/

Peta Google/ Waze

Travel agency/

Agensi pelancongan

Friends/ Relatives

Kawan-Kawan/Saudara

Suratkhabar/ Newspaper

Internet/ Internet

Book and guides

Buku dan panduan/

I Don't know/ Saya Tidak Tahu

Advertisement/ Iklan

Others/ Lain-lain:

9. What transportation did you use to go to come to Tumpat?

Apakah kenderaan yang anda gunakan untuk tiba ke Tumpat?

Bicycle /Basikal

Walking / Berjalan

Taxi/ Teksi

Motorbike/ Motorsikal

Train/ Keretapi

Car/ Van / Kereta/ Van

Bus/ Bas

Others/ Lain-lain: _____

Boat/ Bot

10. What was the reason you come to Tumpat?

Apakah tujuan anda datang ke Tumpat?

- | | |
|--|--|
| <input type="checkbox"/> Business/ Work
<i>Berniaga / Bekerja</i> | <input type="checkbox"/> Holiday and Recreation
<i>Bercuti dan Riadah</i> |
| <input type="checkbox"/> Sightseeing/ <i>Bersiar-siar</i> | <input type="checkbox"/> Health Treatment/
<i>Rawatan kesihatan</i> |
| <input type="checkbox"/> Visiting friends/ relatives
<i>Melawat rakan-rakan / saudara-mara</i> | <input type="checkbox"/> Education/Doing research
<i>Pengajian / Melakukan penyelidikan</i> |
| <input type="checkbox"/> Attending wedding/ Family gathering/ Funeral
<i>Menghadiri majlis perkahwinan / Berkumpul antara keluarga / Kematian</i> | <input type="checkbox"/> Event (Kelantan International Wau Festival/ Religious etc.)
<i>Festival (Pesta Wau Antarabangsa Kelantan, keagamaan, dll)/</i> |
| <input type="checkbox"/> Honeymoon/ <i>Bulan madu</i> | <input type="checkbox"/> Others/ <i>Lain-lain: _____</i> |

11. Do you ever go to mangrove areas?

Adakah anda pernah pergi ke kawasan paya bakau?

- Yes / *Ya* No / *Tidak*

12. How many times have you been here for year 2015?

Berapa kali anda berkunjung ke Tumpat untuk sepanjang tahun 2015?

- | | |
|---|---|
| <input type="checkbox"/> 1 time/ <i>kali</i> | <input type="checkbox"/> > 2 times/ <i>kali</i> |
| <input type="checkbox"/> 2 times/ <i>kali</i> | <input type="checkbox"/> Never/ <i>Tidak pernah</i> |

13. Do you think that Tumpat is potentially to be at tourism destination?

Adakah anda berpendapat bahawa Tumpat berpotensi untuk menjadi destinasi pelancongan?

- Yes / *Ya* No / *Tidak*

14 If Yes, Why?.Explain.

Jika Ya, kenapa? Nyatakan sebab:

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Section B: The Nature Attractions in Mangrove of Tumpat.***Bahagian B: Tarikan Alam Semulajadi dalam Kawasan Bakau Tumpat***

Please tick (/) to the box provided. Answers can be chosen more than one.

Sila tandakan (/) pada kotak yang disediakan. Jawapan boleh dipilih lebih daripada satu.

15. What the nature attractions that you see at Tumpat?

Apa tarikan semula jadi yang anda lihat di Tumpat?

Mangrove Forests/
Hutan paya bakau

Diversity Of Flora And Fauna/
Kepelbagaian Flora Dan Fauna

Beaches/ *Pantai*

Rivers/ *Sungai*

Fisherman village/
Perkampungan nelayan

Delta areas/ *Kawasan delta*

Section C: The Potential Natural Tourism Activities in Mangrove Areas of Tumpat

Bahagian C: Potensi Aktiviti Pelancongan Semulajadi Dalam Kawasan Bakau Tumpat

Please tick (/) to the box provided. Answers can be chosen more than one.

Sila tandakan (/) pada kotak yang disediakan. Jawapan boleh dipilih lebih daripada satu.

16. What the potential natural tourism activities that you can do at mangrove areas at Tumpat?

Apakah aktiviti pelancongan semulajadi yang boleh dilakukan di kawasan paya bakau di Tumpat?

- | | |
|---|--|
| <input type="checkbox"/> Mangrove tour/
<i>Lawatan kawasan bakau</i> | <input type="checkbox"/> Bird watching/ <i>Melihat burung</i> |
| <input type="checkbox"/> Research and conservation/
<i>Penyelidikan dan pemuliharaan</i> | <input type="checkbox"/> Mangrove forest/ <i>Hutan bakau</i> |
| <input type="checkbox"/> Fishing/ <i>Memancing</i> | <input type="checkbox"/> Boat ride/ <i>Menaiki bot</i> |
| <input type="checkbox"/> Breeding and rearing of fisheries/
<i>Kawasan pembiakan dan penternakan perikanan</i> | <input type="checkbox"/> Supplying of firewood and charcoal/
<i>Membekal kayu api dan arang</i> |

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Section D: Perceptions on Tourism Development in Tumpat

Bahagian D: Persepsi Terhadap Pembangunan Pelancongan di Tumpat

Please tick to the box provided.

Sila tandakan pada kotak yang disediakan.

1	2	3	4	5
(Strongly disagree)	(Disagree)	(Not Sure)	(Agree)	(Strongly agree)
<i>(Sangat tidak setuju)</i>	<i>(Tidak bersetuju)</i>	<i>(Tidak pasti)</i>	<i>(Setuju)</i>	<i>(Sangat bersetuju)</i>

17. What are the factors that support tourism development in Tumpat?

Apakah faktor yang membantu pembangunan pelancongan di Tumpat

Factors that support tourism development in Tumpat

Faktor yang membantu pembangunan pelancongan di Tumpat

-
- i. I think that mangrove forests are the most important natural resources. 1 2 3 4 5
(Saya berpendapat bahawa hutan bakau adalah sumber-sumber semula jadi yang paling penting.)
-
- ii. I think the main role of mangrove forests is the habitat to flora and fauna diversity. 1 2 3 4 5
(Saya berpendapat bahawa peranan utama hutan bakau adalah habitat kepada kepelbagaian flora dan fauna.)
-
- iii. I think that mangrove is important to protect coastline and riverbanks against erosion wave action and strong coastal winds. 1 2 3 4 5
(Saya berpendapat bahawa hutan bakau adalah penting untuk melindungi pantai dan tebing sungai daripada hakisan ombak dan angin pantai yang kuat.)
-

<p>iv. I felt that the beauty travel will mesmerize visitors with nature beauty of mangrove areas. <i>(Saya merasakan bahawa perjalanan yang indah akan memukau pengunjung dengan keindahan alam semula jadi kawasan bakau.)</i></p>	<p>1 2 3 4 5</p>
<p>v. I think that mangrove areas are potential to become a study or research location. <i>(Saya berpendapat bahawa kawasan hutan bakau yang berpotensi untuk menjadi lokasi kajian atau penyelidikan.)</i></p>	<p>1 2 3 4 5</p>
<p>vi. I hope that activities at mangroves areas give chances of job opportunities to the local communities. <i>(Saya berharap bahawa aktiviti di kawasan paya bakau memberi peluang pekerjaan kepada masyarakat setempat.)</i></p>	<p>1 2 3 4 5</p>
<p>vii. I agree that the tastes and flavour of cracker and ‘dodol’ that made by local communities can attract visitors to buy it. <i>(Saya bersetuju dimana cita rasa dan rasa keropok dan 'dodol' yang dibuat oleh masyarakat setempat. boleh menarik pengunjung untuk membelinya.)</i></p>	<p>1 2 3 4 5</p>
<p>viii. I am expecting that source of income of local communities will be increasing due to activities at mangroves areas. <i>(Saya menjangkakan bahawa sumber pendapatan masyarakat tempatan akan meningkat disebabkan oleh aktiviti-aktiviti di kawasan bakau.)</i></p>	<p>1 2 3 4 5</p>
<p>ix. I am expecting that conservation will help to prevent inappropriate development at mangrove areas. <i>(Saya menjangkakan bahawa pemuliharaan akan membantu untuk mengelakkan pembangunan tidak sesuai di kawasan bakau.)</i></p>	<p>1 2 3 4 5</p>

x.	I am expecting that tourism development help to improve the quality of mangrove area. <i>(Saya menjangkakan bahawa pembangunan pelancongan membantu untuk meningkatkan kualiti kawasan bakau yang semakin meningkat.)</i>	1	2	3	4	5
xi.	I am expecting that development of infrastructures and facilities at mangrove areas will attract visitors to come. <i>(Saya menjangkakan bahawa pembangunan infrastruktur dan kemudahan di kawasan hutan bakau akan menarik pengunjung untuk datang.)</i>	1	2	3	4	5
xii.	I hope that local communities able to retain their heritage and lifestyles for long term viability due to tourism development. <i>(Saya berharap masyarakat tempatan dapat mengekalkan warisan mereka dan gaya hidup untuk daya maju jangka panjang kerana pembangunan pelancongan.)</i>	1	2	3	4	5
xiii.	The number of visitors will be increased because of the tourism sector. <i>(Bilangan pelawat akan meningkat kerana sektor pelancongan sektor.)</i>	1	2	3	4	5
xiv.	Increased sector of tourism can make the demand in terms of facilities and services increasing. <i>(Peningkatan pelancongan boleh membuat permintaan yang dari segi kemudahan dan perkhidmatan.)</i>	1	2	3	4	5

Thanks For Your Time
Terima Kasih Atas Masa Anda