

# THE STUDY ON THE IMPORTANCE OF ECOTOURISM FOR LOCAL COMMUNITY EMPOWERMENT IN THE KELANTAN DELTA AREA, KELANTAN, MALAYSIA

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## ABSTRACT

A study on the importance of ecotourism for local community empowerment has been conducted in the Kelantan Delta area, Kelantan, Malaysia. This delta is famous for its mangrove forest and its natural beauty as the habitat of some natural resources. The delta was studied, firstly, to identify the potentials and suitability of the delta for ecotourism destination; secondly, to determine the main factor and other factors which would support and enhance the quality of the area for ecotourism purpose; and thirdly, to evaluate the contribution of the area for the local community empowerment. Field observation was carried out in some islands of the delta to see the physical features of the area. Other methods were also used in this study, such as interview with the locals, survey/questionnaire to the public and tourists. The study clearly defines that the delta has good potentials and suitability to be promoted as a model for ecotourism site in Kelantan. The study also shows that the mangrove forest is the main attraction of the delta, but recommends other complimentary and supporting attractions as the added values to the area. This area is also seen to be able to contribute for local community empowerment especially in creating economic opportunities to reduce the poverty of local community.

**Keywords:** Ecotourism, local community empowerment, the Kelantan Delta, poverty.

## INTRODUCTION

Ecotourism has been growing rapidly over the last decades. However, it is not easy to identify clearly what ecotourism is. There are actually various definitions of the term. While the term was first heard in the 1980s, the first broadly accepted and valid definition was established by The International Ecotourism Society (TIES) in 1990:

*"Responsible travel to natural areas that conserves the environment and improves the well-being of local people."*

Based on that definition, we can highlight three important things in ecotourism. Firstly, *responsible/sustainable travel*, which means ecotourism includes programs that minimize the

negative aspects of conventional tourism on the environment and enhance the cultural integrity of local people. Secondly, *conservation*, which means that ecotourism provides effective economic incentives for conserving and enhancing biodiversity and helps protect the natural and cultural heritage of our areas. Lastly, *community*, which means that ecotourism is an effective vehicle for empowering local communities around the world to fight against poverty and to achieve sustainable development.

Based on the definition of ecotourism by TIES (1990), those who implement and participate in ecotourism activities should follow the following ecotourism principles:

- Minimize impact.
- Build environmental and cultural awareness and respect.
- Provide positive experiences for both visitors and hosts.
- Provide direct financial benefits for conservation.
- Provide financial benefits and empowerment for local people.
- Raise sensitivity to host countries' political, environmental, and social climate.

Cristina (2004) stated that several objectives of ecotourism are learning, studying or participating in activities that do not bring negative effects to the environment; whilst protecting and empowering the local community socially and economically.

The Kelantan Delta is the one and only delta in the state of Kelantan, Malaysia. This delta area is famous for its mangrove forest and its natural beauty as the habitat of some natural resources. It will be gazetted as an ecotourism site in Kelantan. This study was conducted, firstly, to identify the potentials and suitability of the delta for ecotourism destination; secondly, to determine the main factor and other factors which would support and enhance the quality of the area for ecotourism purpose; and thirdly, to evaluate the contribution of the area for the local community empowerment.

## **ECOTOURISM IN MALAYSIA**

According Marker et. al. (2008), the tourism industry in Malaysia has been developing since the 1970s and in the 1980s the government made its first strategic policy on tourism. In 1999 the successful brand “Malaysia Truly Asia” was launched to position Malaysia as a major destination in the region. For ecotourism, Malaysia has many potential destinations. It is blessed with a variety of ecosystems such as tropical rain forests, mangroves, swamps,

mountains, limestone, caves, and so on. Some famous places in Malaysia have been known that promote ecotourism, such as the Danum Valley and Mount Kinabalu in Sabah, Endau-Rompin State Park in Johor and many more.

Malaysian government has been pursuing ecotourism since the mid-nineties. The development of government policies on ecotourism is set up in the following policies:

1. The National Ecotourism Plan 1995, which identifies 52 potential sites for ecotourism in Malaysia and suggests that Malaysia has a great potential for ecotourism. It further identifies a number of policies that the government can undertake to strengthen the industry.
2. Seventh Malaysia Plan 1996-2000, which intends to let the private sector implement the bulk of the National Ecotourism Plan.
3. Eighth Malaysia Plan 2001-2005, for which the government stepped up its efforts in ecotourism. It wanted to provide policy guidelines for sustainable development, make sure that products offered match the changing demand and by promoting Malaysia as an ecotourism destination.
4. Ninth Malaysia Plan 2006-2010, under which the government seems to increase its efforts on ecotourism and sustainable travel. The government also plans to upgrade and make more ecotourism activities and facilities available.
5. Government promotion, by which the government promotes Malaysia as an ecotourism destination..

A SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of Malaysia's ecotourism is explained in Table 1:

Table 1. SWOT Analysis of ecotourism in Malaysia (Marker et. al., 2008)

<b>Strengths</b> <ol style="list-style-type: none"> <li>1. Biodiversity, age of rainforests, good infrastructure.</li> <li>2. Good environmental regulation relative to the region.</li> <li>3. Good training</li> </ol>	<b>Weaknesses</b> <ol style="list-style-type: none"> <li>1. Lack of consistent political will.</li> <li>2. Lack of promotional focus.</li> <li>3. Lack of sufficient interest in the environment.</li> </ol>
<b>Opportunities</b> <ol style="list-style-type: none"> <li>1. Possibility to leverage multi-country tourism.</li> <li>2. Possibility of growing market for ecotourism in the region.</li> </ol>	<b>Threats</b> <ol style="list-style-type: none"> <li>1. Countries close by that compete on same parameters.</li> <li>2. Strength of less sustainable industrial clusters (oil, palm oil).</li> </ol>

## OVERVIEW OF THE KELANTAN DELTA

The study was carried out at the Kelantan Delta, the one and only delta in the state of Kelantan, Malaysia. The delta is located on the east coast and in the north easternmost of Peninsular Malaysia, within the area of two districts in Kelantan, Tumpat and Kota Bharu (Figure 1). The Kelantan Delta is located between latitudes of  $06^{\circ} 11'N$  and  $06^{\circ} 13'N$  and longitude of  $102^{\circ} 10'E$  and  $102^{\circ} 14'E$  with the total area is approximately 1,200 ha. The area range from the estuary of the Kelantan Delta until the Seri Tujoh beach in Tumpat. There are around 48 islands in the area with the coverage of 1,252 hectare land area. Among the islands are Timun island, Tongkang island, Tok Fakir island, Gagak island, Che Soh island, Chik Lah island, Rujah island, Ekor Che Tahir island, Seratus island, Beluru island, Renjuna island, Doljah island, Terendak island, Suri island, Haja Nik Mat island, Besar island, Kecil island, and some more.

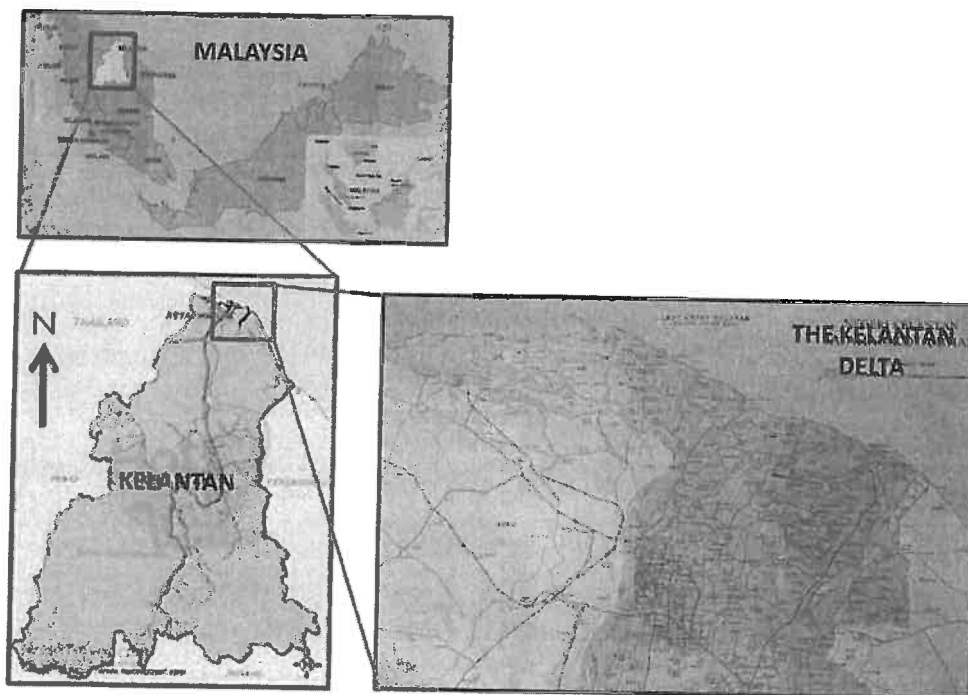


Figure 1. Map of the study area

According to Kamal Roslan Mohamed et. al. (1997), the Kelantan Delta is exposed to the strong waves, particularly during the annual monsoonal season (November to February). The present-day Kelantan Delta is influenced by the tide as shown by the dominance of well-developed mangroves in muddy estuaries together with small distributary channels.

## ECOTOURISM RESOURCES OF KELANTAN DELTA

The Kelantan Delta area is assumed as a suitable place to establish an ecotourism site as there are biodiversity and geodiversity in the area. Tourists are willing to come all the way to enjoy

and experience the natural resources in the area. All these natural resources make it home to a wealth of ecosystems which should be well protected and preserved. These ecosystems have become the major resources for ecotourism, they are:

## 1. Mangroves

Mangroves are various kinds of trees up to medium height and shrubs that grow in saline coastal sediment habitats in the tropics and subtropics (Wikipedia, 2012). Mangroves are supposed to become the primary attraction in the Kelantan Delta. Compared to the west coast of Peninsular Malaysia (mangrove extent is 91,177 ha = 16%), mangroves in the east coast is only 5,738 ha (1%), which is entirely exposed to the South China Sea. In Malaysia, mangroves occupy 564,606 ha area (Shamsudin and Nasir, 2005). Mangrove forests in the Kelantan Delta (Figure 2), called the Kelantan Delta Mangrove Forest (KDMF), experience run-off due to seasonal rainfall and offshore currents northerly and southerly that regularly modify the coastal morphological conditions in this area (Mohd. Suffian et al., 2004).



Figure 2. Mangrove forest in one island in the Kelantan Delta area.

In the area, mangroves have the vast diversity of flora and fauna with 17 islands all around the area. The speciality of mangroves is of its environmental benefits and to the society especially as a barrier to strong winds, waves, and water currents. They also prevent saltwater from intruding into rivers as the tree roots have special sap where it can absorb salt into the tree bark. Mangroves can also retain, concentrate and recycle nutrients and remove toxicants through a natural filtering process. These trees are tough and they provide resources for coastal communities who depend on the plants for timber, fuel, food, medicinal herbs and other products. The bottom of the trees is an important

breeding ground for many fishes, crabs, prawns and other marine animals. Mangrove forests has been utilized traditionally for different purposes including construction woods, fuelwoods, raw materials for the wood-based industry, etc (Mallar, 2012).

## 2. Other plants (flora)

The main role of the forest is the habitat of rich biodiversity of flora and fauna. Another prominent plant in the area is coconut (*Cocos nucifera*) trees. Main flora existing in this area are ketapang (*Terminia catappa*), leban (*Vitex pubescens*), baru-baru laut (*Hibiscus tiliaceus*), jeruju (*Acrostichum speciosum*), piyai raya (*Acrostichum aureum*), piyai lasa (*Acrostichum speciosum*), api-api putih (*Avicennia alba*), nipah (*Nypa fruticans*), bakau minyak (*Rhizophora apiculata*), tumu (*Bruguiera sp.*), berembang (*Sonneratia caseolaris*) and pepanjat (*Derris trifolata*) (Mallar, 2012). Figure 3 shows the diversity of flora in the area.

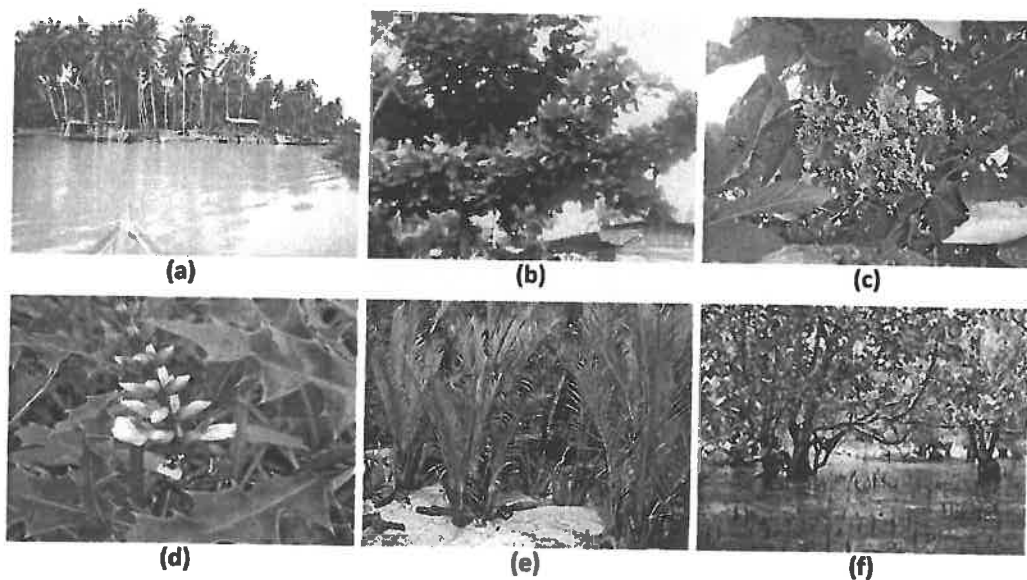


Figure 3. Some plants (flora) found in the Kelantan Delta area: (a) Coconut (*Cocos nucifera*); (b) Ketapang (*Terminia catappa*); (c) Leban (*Vitex pubescens*); (d) Jeruju (*Acrostichum speciosum*); (e) Nipah (*Nypa fruticans*); (f) Berembang (*Sonneratia caseolaris*).

## 3. Animals (Fauna)

There are various species of fish we can find in the rivers there: White seabass (*Cynoscion nobilis*), red fish species, grouper species, white pomfret fish (*Pampus Argenteus*), etc. There are also three groups of birds in this area: mangrove pitta (*Pitta megarhyncha*), mangrove blue flycatcher (*Cyornis rufigastra*), and greater golden

backed woodpecker (*Chrysocolaptes lucidus*). Migratory birds are also visible in this habitat such as great egret (*Ardea alba*), little egret (*Egretta garzetta*), little heron (*Butorides striatus*), osprey (*Pandion haliaetus*), pheasant tailed jacana (*Hydrophasianus chirurgus*), wood sandpiper (*Tringa glareola*), and common sandpiper (*Actitis hypoleucos*). Other dominant animals are reptiles in the mangrove swamps and crustaceans (Mallar, 2012). The diversity of fauna in the area is shown in Figure 4.

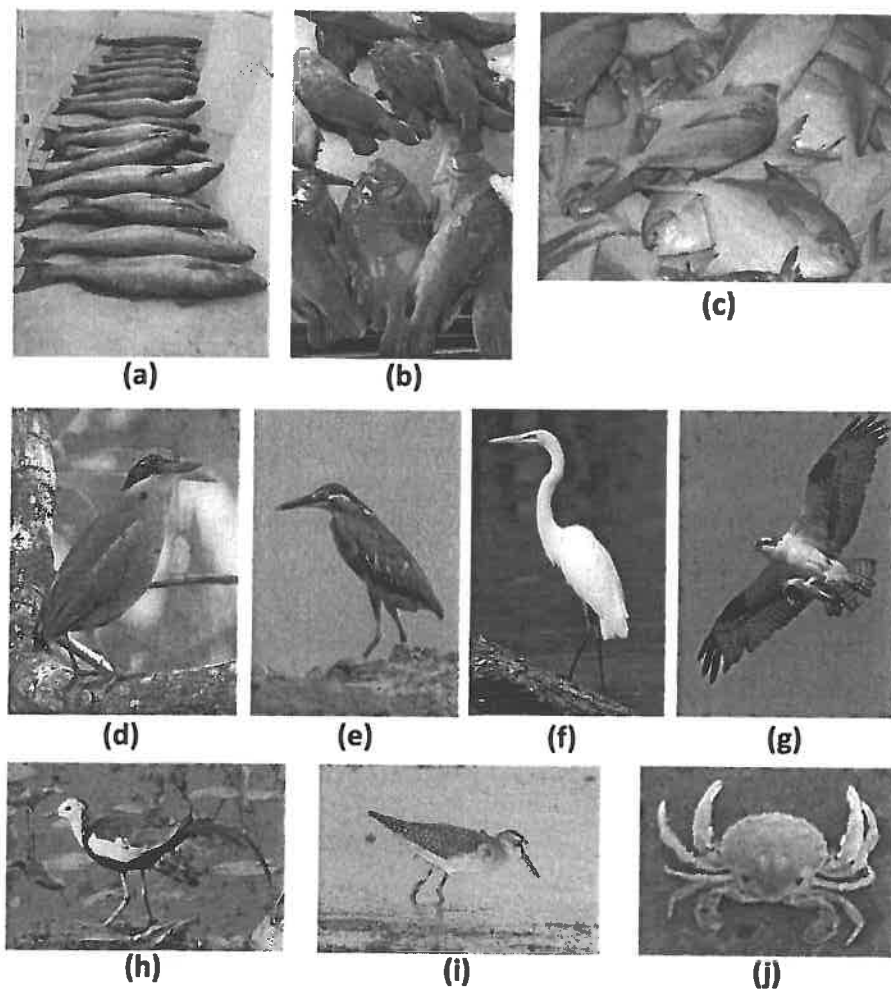


Figure 4. The diversity of fauna living in the area: (a) White seabass (*Cynoscion nobilis*); (b) Redfish; (c) White pomfret fish (*Pampus Argenteus*); (d) Mangrove pitta (*Pitta megarhyncha*); (e) Little heron (*Butorides striatus*); (f) Great egret (*Ardea alba*); (g) Osprey (*Pandion haliaetus*); (h) Pheasant tailed jacana (*Hydrophasianus chirurgus*); (i) Wood sandpiper (*Tringa glareola*); and (j) Crustacean.

#### 4. Distributary channels (rivers)

The water body or rivers in the Kelantan Delta area (Figure 5) in between the 48 islands are among the prominent attractions that would attract tourists to the area. Some people are fond of the rivers especially the mode of transport is only the boat. Even from island to island the river passage is calm and tranquil giving a harmonious environment.

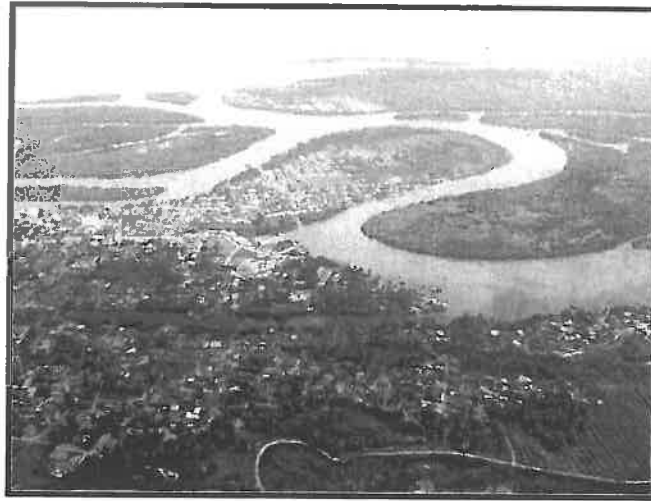


Figure 5. Distributary channels (rivers) in the Kelantan Delta area.  
(Source: <http://www.skyscrapercity.com/showthread.php?t=252167&page=154>)

## 5. Delta

The Kelantan Delta is unique where it has definitely contributed a big amount to the study of soil, estuarine water, mangroves, and the mangrove forest ecosystem. However, it also plays a major role in tourism and conservation efforts. From the satellite image, we can know that the Kelantan Delta (Figure 6) is one of the essential shoreline forested areas which contribute to the economic, social, ecology and surrounding environments. The main reason to visit this delta is for recreation or relaxation purpose (Mallar, 2012).



Figure 6. Satellite imagery of the Kelantan Delta area.

The ecosystem in this delta is underlain by alluvial plains, which eventually has made up into islands. Initially it was a bare land without any mangroves and forests, however, the



plants were introduced in the year of 2000. The area is composed of sand sedimentation due to sediment influx from the main river (the Kelantan River) and the strong wave from the sea (the South China Sea) making up a depositional coastal environment. This area may consist of brackish water and saline water, and more sea water will penetrate the area during the high tide level.

## **FACTORS SUPPORT ECOTOURISM DEVELOPMENT IN THE KELANTAN DELTA**

According to Mallar (2012), factors that support ecotourism development in the Kelantan Delta area can be elaborated according to “dimensions of ecotourism”. The dimensions were listed according to Lindberg, Enrique and Sproule (1996).

### **1. Environmental Dimension**

By definition, the descriptive component of ecotourism involves the natural environment as an attraction. In this point, mangrove forests are the most important natural resource in the area. In additions, the delta environment itself is another attraction. The main role of mangrove forests is the habitat of rich biodiversity of flora and fauna. Mangroves are also important to protect coastline and river banks against erosive wave action and strong coastal winds. Other resources include the diverse species of flora and fauna living in the area, as above mentioned. The scenic adventure by boat will mesmerize a lot of tourists with the beauty of nature. There is no absolute comparison to the tranquillity and calmness of this environment. The boat ride along the islands and also the travel guide could only cost RM 60. The explanation given and places taken along the path is to ensure visitors to see nature beyond imagination especially the estuarine connecting to the sea.

### **2. Socio-cultural Dimension**

The locals in those islands are 100% of Malay people and they are Muslim. The older generation are mostly from those islands itself, the original place of the villagers. Seratus island is one of the first island inhabited by people and people moved out to the neighbouring islands eventually. The older generation refused to leave the place as they prefer to live in the tranquil and calm village; without smoke, smog, noise and air pollution compared to the town or city. Besides, the villagers run their own business for

self sufficiency. Activities carried out are in a simple way for daily living. Men in the villages go out to the sea for fishing for commercial purpose and the remains are brought back home. Fishes, clams, crabs, shrimps are examples of fresh sea food obtained in a daily basis as the South China Sea is facing directly to the Delta. There are harsh conditions during the day when there are strong winds, storms, strong currents and waves which disables fishermen to go out to the sea. The problem arises during the monsoon season when the villagers are prohibited from going deep into the sea.

### 3. Economic Dimension

Many resources in the area can be commercialized and beneficial for generating income to the villagers. This area is also potential to become a study or research location about all these resources. *Nypa fruticans* (commonly known as 'the nipa palm' or locally called 'nipah') is a component of an inland mangrove swamp. There is some ecological function of nipa palm, such as the breeding place for clams, prawns, bivalves and fishes. Pine tree is part of mangrove area where it contributes to the locals in that area. Pine sugar is a type of sugar used for delicacies, yellowish brownish colour which is cooked for about 5 hours which is obtained from almost 200 stalks gaining about 10 – 15 kg of sugar. Current market value for the sugar is approximately RM2.50 to RM2.80 per kilogram.

The supporting attraction in this area is the fishing activities. This has been so far become an advantage for the area to be popular. Various fishing activities are to ensure continuous supply of fishes for some purposes, including for people consumption and as the raw material for the rural industry which is the cracker ('keropok') industry. The industry would be an income to the local residents there and it may contribute to the economic growth of the area. From visitors' point of view, the activity would enable them to taste the speciality of the local tastes and delicacies. Moreover, the crackers which have different tastes and flavours can attract more visitors to buy more crackers. Apart from that, mud crabs can be obtained in the area in a large quantity. This will be potential for another business. Traditional food business such as 'kuih kapit' is also potential to increase income of the locals. The main factor which contributes to the growth of all these businesses is that most ladies in the area are housewife with sufficient equipments to create a business opportunity.

The batik painting would be another interesting small medium industry in the area. Kelantan batiks may be one of the nation's most expensive paintings as they are beautiful and are hand drawn. The block printing is also done but it is only done upon requests or orders. Visitors would be able to experience the hands-on experience painting batik in the actual place, wearing it, and purchasing it. The '*dodol*' making is a nationwide business because Kelantan produces good quality, homemade *dodols* which are thick and tasty. The traditional way is still used in the islands where tourists would be able to witness the way the delicacy is made, participate in the making of *dodols*, purchasing them and even are able to have a new business dealing for business expansion. Another small medium business which has been widely done is copra ('*kopra*'). The kopra is used as an alternative as an fuel for burning besides coal and petrol. In addition, there is also local delicacy such as jackfruits and local sweet bananas which could be deep fried into fritters, fresh coconut drink for health benefits. Fresh coconut water is obtained for the coconut pluck from the tree and it is consumed for body heat reduction.

#### **4. Infrastructure Dimension**

There are many infrastructures in the area which can accommodate tourists or visitors. The most prominent infrastructure is the homestay in Suri island village. It is a traditional fishing village under the state's homestay programme managed by the Fisheries Development Authority of Malaysia under the Kelantan State Homestay Association and Tourism Malaysia Kelantan. To date, the village has hosted many tourists from some countries, such as Australia, Canada, Japan, and Hong Kong. There is a clinic in Teluk Renjuna island where it is needed only for an emergency and mild sickness cases, but one has to travel by boat to the nearest town, Tumpat for further medical treatment. The clinic has the capacity of accommodating 10 people. There is also a big mosque in the same island where it caters muslims in the island and the neighbouring islands to do their prayers. Another mosque is Masjid Ismaili in Tumpat town. Other interesting site in the area is the existence of 25 temples which mark a uniqueness of Malaysia where various cultures and religions can exist in the same area. There is a famous Siam Temple with a 37-meter tall of standing Buddha in Wat Phikulthong Vararam temple. Whereas Wat Phothisivan is one of the most popular Buddhist temple which houses a 40-metre statue of a sleeping Buddha, which is the longest of its kind in Southeast Asia. There are also some public telephones or pay phones scattered in the island which can be used by tourist

who are not using the mobile phones. In the island there is a guest house as well. It may be beneficial for visitors to stay over there.

There are some transportation services to access the area. The area has two main jetties, Tumpat Jetty and Pulau Besar Jetty. There are bus services in the Tumpat town to the nearest bus stop of the Kelantan Delta, and there are taxi services around the district to the jetty of the Delta. The taxi stand and bus station are situated right beside each other. The Tumpat railway station is another tourist attraction and it is very near to the Tumpat Jetty. It is a famous railway station since it is the end station of railway track which protrudes all the way from Gemas in Negeri Sembilan (the southern part of Malaysia). This would enable tourist to travel easily by Kereta Api Tanah Melayu (KTM train). Another alternative to go to the area is by flights which landed at nearby airport, Sultan Ismail Petra Airport in Pengkalan Chepa which is about 30 minutes from Kota Bharu.

## **ECOTOURISM FOR LOCAL COMMUNITY EMPOWERMENT IN THE KELANTAN DELTA**

There is no doubt that tourism sector, including ecotourism, plays a major role in generating income, creating new employment and also stimulating economic development. The benefits of ecotourism for local communities can be broadly categorized as economic, socio-cultural and physical (Chaynee, 2005).

### **1. Economic benefits**

The most direct economic benefits are the improvements in employment and income. The National Ecotourism Plan recognises that local communities living at ecotourism site have generally low incomes. Hence, ecotourism provides a viable economic option for such communities while protecting the ecosystem and also employment provider for the local community. The Kelantan Delta area is rich of various natural resources which can be commercialized and beneficial for generating income to the locals. For example, many species of fish is beneficial not only for people consumption, but also as the raw material for the cracker industry. Another example of small medium business exists in the area is copra (Figure 7).



Figure 7. Ecotourism can contribute for the local community when locals can utilize the natural resources properly. Some examples of direct economic benefits from the Kelantan Delta area: (a) The cracker industry; (b) The copra business.

## 2. Socio-cultural benefits

With regards to socio-cultural benefits, since ecotourists are travellers seeking unique and authentic travel experiences, there is an added incentive for local communities to retain their traditional heritage and lifestyles for long-term viability. For example, the industry of the Kelantan batik in the area (Figure 8) will help to increase local's income while preserving their traditional heritage.



Figure 8. The batik painting industry in the Kelantan Delta area.

## 3. Physical benefits

Finally, the most direct physical benefits will be the conservation and development of the environment. Conservation will help to prevent inappropriate development and practice that will lead to degradation of habitats and landscapes, depletion of natural resources and contribute to waste and pollution. Meanwhile, development will help to improve the quality of the area. In the Kelantan Delta, the conservation of the area has been done since few years ago such as by planting mangroves and building the embankment in the area to protect from the

strong wave of the sea (Figure 9). Development of infrastructures and facilities in the area such as jetty, home stay, conservation centre, transportation (accessibility) and so on will attract visitors to come and enjoy the area (Figure 10).

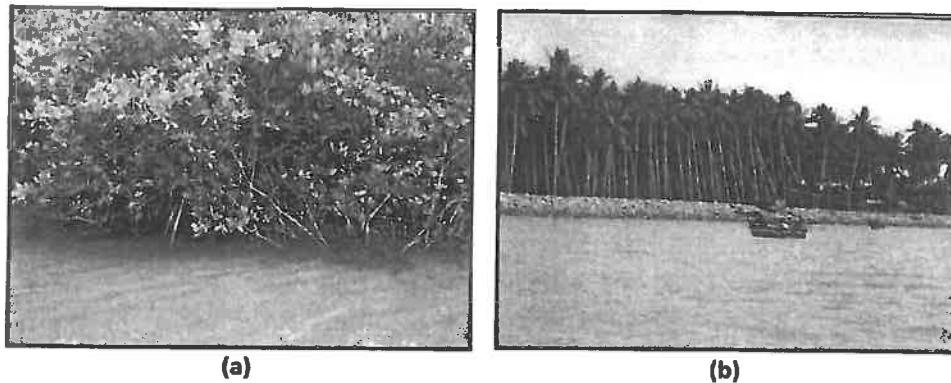


Figure 9. Some conservation efforts toward the environment in the Kelantan Delta area to protect and preserve the area: (a) Mangrove plantation; (b) Land embankment.

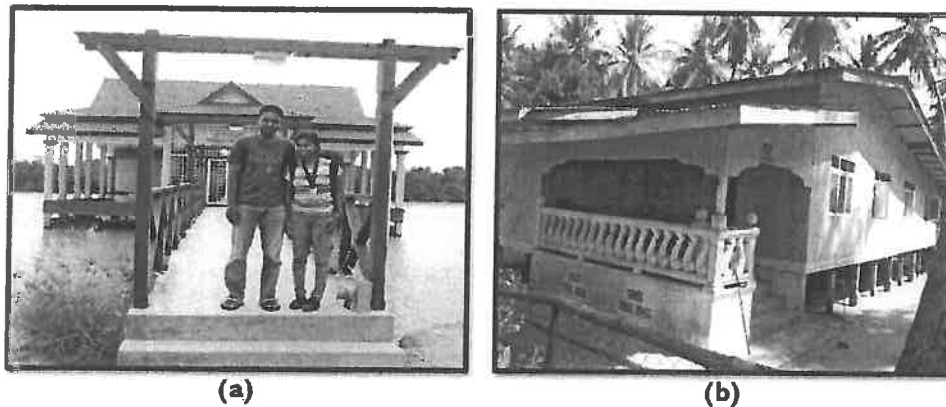


Figure 10. Development of some infrastructures in the area will attract more ecotourists to come and enjoy the area: (a) Jetty; (b) Home stay in the village.

## CONCLUSION

There is a wide potential of the Kelantan Delta area to become an ecotourism site in Kelantan and in Malaysia. The potential of tourism development in the area is mainly based on its natural resources or ecosystems, such as mangrove forests, biodiversity of flora and fauna, rivers, and delta environment. There are some factors which support ecotourism development in the Kelantan Delta area. These factors can be classified according to “dimensions of ecotourism”, including environmental, socio-cultural, economic, and infrastructure dimensions. However, another important factor which can support the potential is local community empowerment. Local communities or villagers have to play important rule in the area, working together and collaborate with some parties, such as the government, the private

sector (developers, operators, and so on), researchers/academics, and visitors (ecotourists). Ecotourism contributes to change local community attitude to participate in improving locals and natural resources preservation and to give more profits to improve local community livelihood. The benefits of ecotourism for local communities can be broadly categorized as economic, socio-cultural and physical benefits.

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