



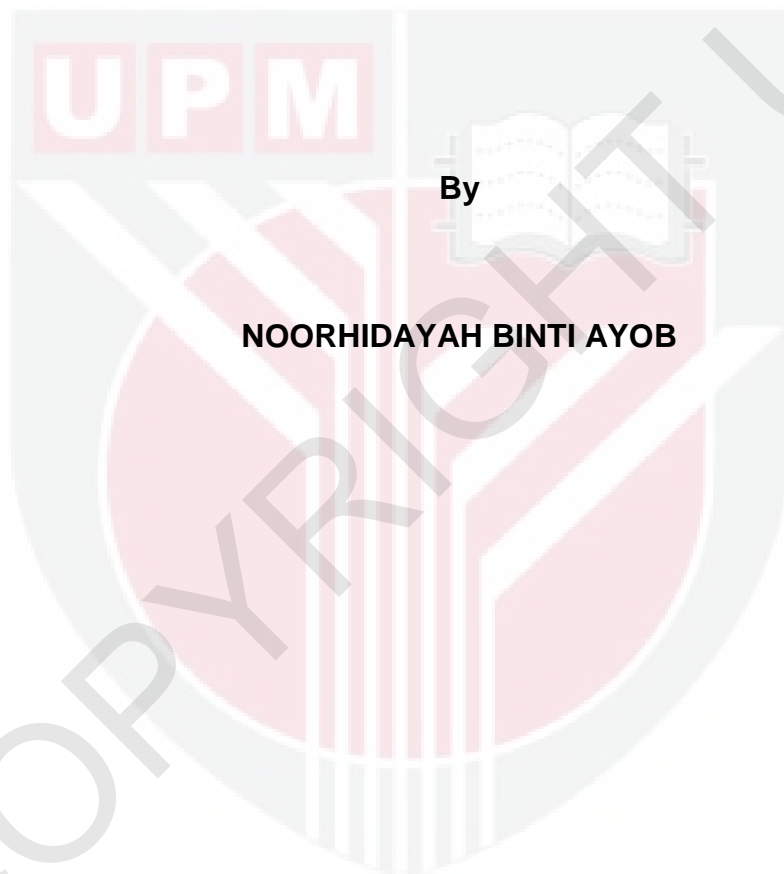
UNIVERSITI PUTRA MALAYSIA

***ALTERNATIVE SITES FOR RECREATION AREA IN LARUT MATANG
MANGROVE FOREST RESERVE, TAIPING, PERAK***

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FH 2016 30

**ALTERNATIVE SITES FOR RECREATION AREA IN LARUT MATANG
MANGROVE FOREST RESERVE, TAIPING, PERAK**



By

NOORHIDAYAH BINTI AYOB

**A Project Report Submitted in Partial Fulfillment of the Requirements
for the Degree of Bachelor of Park and Recreation Science in the
Faculty of Forestry
Universiti Putra Malaysia**

2016

DEDICATION

I dedicated this work to

Abah

Mama

Adik

Adnan

Fazlina, Nasuha, Setia, Rodziah

BSTR

Gold-Whiskered Barbet 2012/2013

Thank you for your love, encouragement and endless support.

May Allah Bless All of us.

ABSTRACT

Larut Matang Mangrove Forest (LMMF) in Taiping, Perak offers the environment for ecotourism recreational activities in mangrove area to the visitors. Recreation site and study site have a relationship between substitutes and complements. Recreation site usually has substitutes. In this research, the aims are to determine the ecotourism economic value of LMMF using travel cost method (TCM), and more specifically, to determine the alternative recreation site, factors affecting the alternative recreation site and the socio-demographic background of visitors of LMMF. One of the common issues in travel cost studies is to obtain the travel cost from any specific destination to the alternative recreation site. Structured questionnaire and on-site data collection methods are employed to obtain the primary data from the respondents. The count data with a sample size of 300 was modeled with a linear regression model. Based on this study, five variables were tested mainly age, income, distance to alternative sites, travel cost to alternative sites and attractiveness. The variables that showed significant value which affected the demand for LMMF at Taiping Perak were travel cost to alternative sites and attractiveness. An estimate of consumer surplus (CS) per person per visit, as well as the total recreational value for year 2015, was computed. The value estimated was RM RM2,037.50 per visit per person and the total approximation recreational value of LMMF for year 2015 was RM97,679,787.50. This data is for the use of stakeholder especially Perak State Forestry Department in order to foresee valuable natural resources that might have the potential to improve the economy of local community in LMMF.

ABSTRAK

Hutan Paya Larut Matang di Taiping, Perak menawarkan persekitaran untuk aktiviti rekreasi eko-pelancongan di kawasan bakau kepada pengunjung. Kawasan rekreasi dan kawasan kajian mempunyai hubungan antara pengganti dan pelengkap. Kawasan rekreasi biasanya mempunyai pengganti. Dalam kajian ini, tujuan utama adalah untuk menentukan nilai ekonomi eko-pelancongan di Hutan Paya Larut Matang menggunakan kaedah kos perjalanan, dan lebih khusus, untuk menentukan kawasan rekreasi alternatif, faktor yang mempengaruhi kawasan rekreasi alternatif dan latar belakang sosio-demografi pengunjung di Hutan Paya Larut Matang. Salah satu isu yang dalam kajian kos perjalanan ini adalah untuk mendapatkan kos perjalanan dari mana-mana destinasi tertentu ke kawasan rekreasi alternatif. Soal selidik digunakan di kawasan kajian untuk mendapatkan data primer daripada pelawat. Data kiraan dengan saiz sampel 300 telah dimodelkan dengan model regresi linear. Berdasarkan kajian ini, lima pembolehubah diuji terutamanya umur, pendapatan, jarak ke kawasan alternatif, kos perjalanan ke kawasan alternatif dan daya tarikan. Pembolehubah yang menunjukkan nilai signifikan yang mempengaruhi permintaan untuk Hutan Paya Larut Matang di Taiping, Perak adalah kos perjalanan ke kawasan alternatif dan daya tarikan. Anggaran lebih pengguna bagi setiap orang setiap lawatan, serta nilai aktiviti rekreasi untuk jumlah bagi tahun 2015, telah dikira. Nilai anggaran adalah RM RM2,037.50 setiap lawatan seorang dan jumlah nilai anggaran aktiviti rekreasi Hutan Paya Larut Matang bagi tahun 2015 adalah RM97,679,787.50. Data ini adalah untuk kegunaan pihak berkepentingan terutamanya Jabatan Perhutanan Negeri Perak untuk meramalkan sumber berharga yang mungkin mempunyai potensi untuk meningkatkan ekonomi masyarakat setempat di Hutan Paya Larut Matang.

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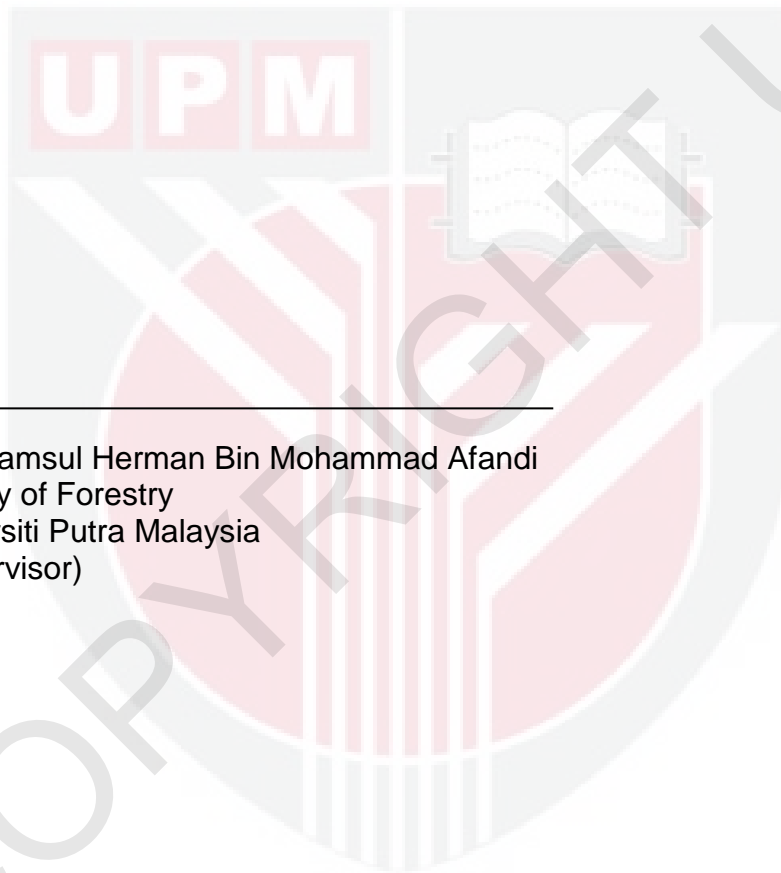


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APPROVAL SHEET

I certify that this research project report entitled “**Alternative Sites for Recreation Area in Larut Matang Mangrove Forest Reserve, Taiping, Perak**” by Noorhidayah binti Ayob had been examined and approved as a partial fulfilment of the requirements for the degree of Bachelor of Park and Recreation Science in the Faculty of Forestry, Universiti Putra Malaysia.

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Date: June 2016

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LIST OF ABBREVIATIONS

CS	Consumer Surplus
FAO	Food and Agriculture Organization
LMMF	Larut Matang Mangrove Forest Reserve
PFE	Permanent Forest Reserve
PLUS	Projek Lebuh Raya Utara-Selatan
RM	Ringgit Malaysia
SPSS	Statistical Package for Social Science
TCM	Travel Cost Method



CHAPTER 1

INTRODUCTION

1.1 Recreation in Mangrove Area

Nowadays, people mostly don't know that recreational activities can be carried out in the mangrove area. In general, recreation is performing an enjoyment activity, a relaxation for our body and mind. People usually like to do recreation during leisure time. For example weekends, holidays, or a free time after working hours.

Recreation can be divided into two categories which are indoor and outdoor. Indoor recreation normally conducted by people inside buildings, while outdoor recreation is performed outside the buildings, in an open space, and natural environments. Outdoor recreation can be enjoyed in a natural environment site, such as recreational areas, national parks, forest reserved, waterfalls and many others. Natural environments include forests, beaches, islands, mountains, and others. In addition, outdoor recreation activity can also be enjoyed in open, man-made resources, such as theme park, playgrounds, gardens, etc.

Many ecotourism recreational activities are conducted in natural areas and protected areas, such as forest recreation areas, national parks, nature parks, and mangrove areas. According to (Jusoff, 2009), mangrove areas provide invaluable goods and services both in economics and environmental terms. The mangrove areas is idealized for

people who love nature and wildlife, photographers, bird-watchers, or anyone who are wants to feel ease and enjoy the beauty of mangrove environment and the biodiversity of flora and fauna.

The special attractions of mangrove area are the boardwalks and river cruising that allow visitors experience the rich biodiversity in mangrove ecosystems. It also provides educational experience about the information of different species of flora and fauna in mangrove area. In addition, we can create public awareness, the understanding and concern of visitors to the conservation of biodiversity in mangrove area.

1.2 The Importance of Alternative Recreation Sites

The alternative site and study site have a relationship in terms of substitutes and complement. Recreation sites usually have substitutes. A substitute recreation site is assumed to be more attractive to visitors the closer it is to their origin and the larger it is for visitor to maximize their experiences (Beal, 2000). Ortaçfime (2002) claims that alternative sites are the availability and price of alternative goods is one of the important factors that determine the price of a good in free market economics (Ortaçfime, 2002).

The most important determinant demand of is price and quality of the substitute goods. When the price is increase, the cost and the time needed for travelling to the first site, will enhance people to prefer the

lower substitute prices that will resulting to a movement of demand of substitute sites.

1.3 The Alternative of Larut Matang Magrove Forest

Larut Matang Mangrove Forest covers an area of 40, 446 hectares, was managed by Forestry Department of Perak. It was gazette as a permanent forest reserve a way back in 1906. Apart from that, it is the largest and oldest mangrove forest in Malaysia. It is well known as ecotourism destinations in a mangrove area especially bird watching activity.

Each recreation sites has substitutes. Recreation alternative sites will be chosen by the visitors based on their similarity of recreational experiences to the destination in LMMF.

The experiencing of travel to alternative sites is explained by the outdoor recreation experience phases in Figure 1. This research is basically involve the phase in number two and four but travel to alternative sites of LMMF which is “travel to” since its involving the travel cost of visitors from place of residence to alternative sites of LMMF and “travel Back” that involve the travel cost of visitors from alternative sites of LMMF to their place of residence.

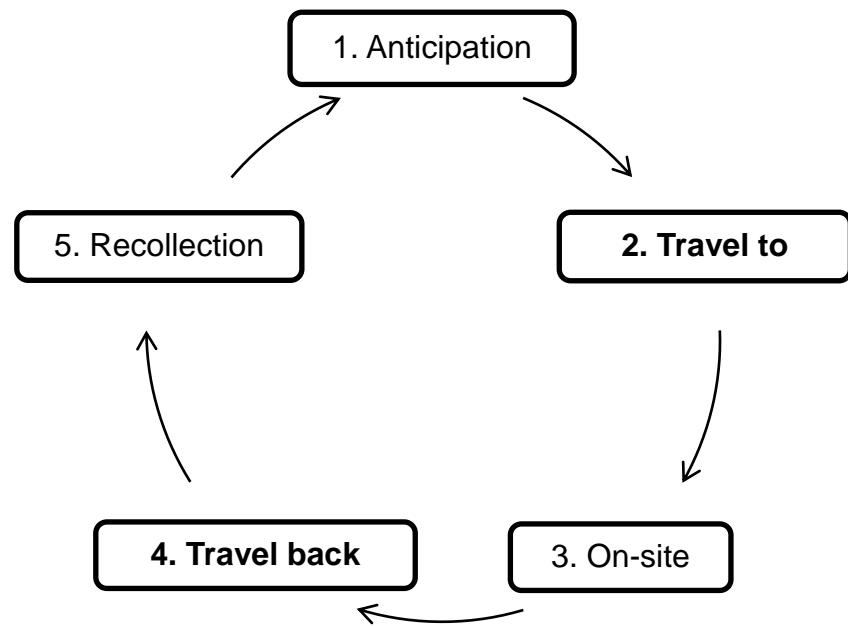


Figure 1: Recreational Experience Phases defined by Clawson (1963) and Clawson and Knetsch (1966)
 (Source: Types of Values and Valuation Methods for Environmental Resources, 2012)

This study is determined the information on what are the visitor's alternative sites and travelling cost to alternative sites of LMMF affects the visitors recreational experiences. The visitors behavior and socio-economic backgrounds can be identified through this phases. It will affecting the demand and shows the economic value of alternative recreational sites of LMMF.

1.4 Problem Statement

Larut Matang Mangrove Forest is located in Taiping, Perak and it is well-known as ecotourism location. It is located 10 kilometres west of Taiping. Many visitors come to LMMF from all over the country either from

Peninsular Malaysia or Sabah and Sarawak. This study will be conducted there because we want to know the alternative recreation sites (substitute) of LMMF from the perception of visitors. The further the alternative recreation sites, the higher the cost of travelling. There are many factors that affecting the alternative sites of LMMF, which are the main purpose of visitation, different types of vehicles, the expenditure on-site, number of people in a group or income of visitors.

Starting on March of 2015, Matang Mangrove Eco-Educational Centre had being charged the visitors with the entrance fee. From that time, the number visitors of LMMF become lower. But visitors still willingness to pay the entrance fee just to experience the recreation in mangrove area.

This study is to determine the alternative sites of LMMF whether it is substitutes or complement to LMMF. Alternative sites are the competitors to LMMF, visitors can change or switch from LMMF to other alternative sites that have lower of travelling cost and have short distance. If this situation is not overcome, LMMF will lose of visitors. It also to assess the economic value of recreational benefits of LMMF is using travel cost method and thus the opportunity cost of visitors travelling to LMMF to get the recreational experience.

1.5 Objectives

The main objective of this study is to determine ecotourism economic value of Larut Matang Mangrove Forest using travel cost method.

However, the specific aims of this study are as follows:

- i. To determine the alternative recreation site of Larut Matang Mangrove Forest.
- ii. To determine the factors affecting the alternative recreational site of Larut Matang Mangrove Forest.
- iii. To determine the social demographic of visitors at Larut Matang Mangrove Forest.

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