



**UNIVERSITI PUTRA MALAYSIA**

***RECREATIONAL TRAVEL COST TO LARUT MATANG, MANGROVE  
FOREST***

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# *DEDICATION*

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*Especially To My Beloved:*

*Mak*

*Ayah*

*Abang*

*All my dearest siblings:*

*Alang, Acik, Anyang, Pak su & Pakngah abi*

*And all my friends faz, dayah, suha, Setia*

## ABSTRACT

Outdoor recreational experience is one of the services provided in many natural areas. In planning for the development and operation of outdoor recreational opportunities in public land, valuation of the area is mostly done by establishing a recreational demand model curve. This study is conducted in the state of Perak. This study aims to determine the recreational, economic value using the travel cost method in Matang, Mangrove Forest. The data obtained with a sample size of 300 is modeled using a linear regression model. Based on this study, five variables that were tested, which are travel cost, job, income, gender and conservation of forests. The variables that showed a significant value at a confidence level of 0.05 which explain the demand for LMMF were travelling cost, gender and conservation. An estimate of consumer surplus (CS) per trip per user, as well as the total recreational value of 2015, was computed. The total estimation recreational, economic value in LMMF 2015 was calculated as a total of RM6651.3 year. This data is vital for the stakeholders, especially Perak Forestry Department to value this area as one of the crucial and valuable natural resources that have the potential to be developed into an economic growth area that could benefit to improve the livelihood of the local community.

## ABSTRAK

Pengalaman rekreasi luar merupakan satu daripada perkhidmatan yang ditawarkan oleh banyak kawasan alam semulajadi. Di dalam perancangan pembangunan dan operasi sesebuah tanah awam penilaian kawasan kebiasaannya dilaksanakan dengan mewujudkan keluk model permintaan rekreasi. Kajian ini dijalankan di Negeri Perak. Kajian ini bertujuan untuk menentukan nilai ekonomi rekreasi menggunakan kaedah kos perjalanan di Larut Matang, Taiping, Perak. Data yang diperoleh dengan saiz sampel sebanyak 300 dimodelkan dengan menggunakan model regresi linear. Berdasarkan kajian ini, lima pembolehubah yang telah dikaji iaitu, kos perjalanan, pekerjaan, pendapatan dan pemuliharaan hutan. Pembolehubah yang menunjukkan nilai signifikan pada tahap keyakinan 0.05 yang menjelaskan permintaan untuk LMMF adalah kos perjalanan, jantina dan pemuliharaan hutan. Anggaran lebihan pengguna (CS) setiap perjalanan bagi setiap pengguna, dan juga nilai ekonomi rekreasi untuk 2015, telah dikira. Anggaran lawatan setiap pengunjung serta nilai ekonomi rekreasi untuk tahun 2015 telah dikira iaitu sebanyak RM6651.3 setahun. Data ini penting agar pihak Jabatan Perhutanan Perak menghargai kawasan ini yang berpotensi berkembang menjadi kawasan, yang mempunyai nilai ekonomi tinggi dan mampu memberi manfaat kepada penduduk tempatan sekaligus mampu meningkatkan taraf kehidupan komuniti setempat.

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Thank you, may Allah Bless.

## APPROVAL SHEET

I certify that this research project report entitled “**Recreational Travel Cost to Larut Matang, Mangrove Forest**” by Rodziah Zainol 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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## LIST OF ABBREVIATIONS

TCM	Travel Cost Method
CS	Consumer Surplus
PFD	Perak Forestry Department
LMMF	Larut Matang Mangrove Forest
WWF	World Wide Fund for Nature
IUCN	International Union for Conservation of Nature



## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Recreation in mangrove area**

Recreation has multiple meanings according to individual views. Recreation takes into account of any kind of activities like visiting areas such as parks, wilderness areas, lakes, rivers and forest as well as engaging in different activities that bring benefit to the person (Kara and Demirci 2010). Recreation can be an emotional condition within an individual that flows from a feeling of well-being and satisfaction and at the same time it is characterised by feelings of mastery, achievement, exhilaration, acceptance, success, personal worth and pleasure ( Gray & Pellegrino 1973).In mangrove area recreation also can be done such as fishery, sightseeing, birding, walking and camping.

#### **1.2 The cost of Recreation**

The cost of travel is the cost associated with travel to a recreation area. Expenditure usually involves cost of fuel, Cost of food, the cost of accommodation, maintained costs before going to the site or recreation area example engine oil, including cost for parking and also the cost of buying souvenirs. Any expenses incurred during the journey or are there is taken as the cost of recreation.

### **1.3 Travel cost of Larut Matang Mangrove**

The study was done in Larut Matang, Mangrove Forest which is the west coast of Peninsular Malaysia. The LMMF cover 40,288 ha in the state of Perak and is typical riverine mangrove forest in Malaysia. The LMMF is under concerted scientific management since the beginning of the 20<sup>th</sup> century and still considered as the best managed mangrove forest in the world (Mahmud, 2015).

Travel costs of LMMF are including cost during the trip which is cost of food, toll, petrol and others. Other than that, also cost during their stay in Larut matang includes meals, entrance fee, parking and souvenir. These costs are accounted for estimated the sum of all expenses to the LMMF.

### **1.4 Problem Statement**

LMMF located in the Larut Matang district, in Perak and is well known for mangrove ecosystem are highly productive and providing many benefits to local residents such as fish, shrimp, cockle rearing, timber harvesting and non-timber products. For example, in the mangrove ecosystem, human derives direct use values in the form of outputs such as fish, timber and charcoal in addition to needs or service values such as recreation, which have no market price. Indirect uses of the mangrove ecosystem include its function as floodwater storage and flood protection, effluent storage and storm buffering.

This study chose LMMF as the study site. Visitors have to pay for the journey to get to Matang Mangrove Forest, which they need to travel either by own car or public transportation. Even though LMMF is located quite far from the city but still there are people willing to pay to go there just to get recreation experience. In addition, the geographical location of LMMF, which is at the northern coast of Perak, provides the variation in travelling cost, needed for regression analysis.

The problem of this study is whether visitors are willing to pay for their travel just to get the recreation experience is same with the value their released.

### **1.5 Objectives**

The main objective of this study is to determine the recreational economic value of LMMF. However, to be more specific on the aim of this study, the objectives were divided into several specific objectives. The specific objectives are as follows:

- I. To determine the travel cost of visitor to Larut Matang Mangrove Forest
- II. To determine the characteristic of visitor in term of socio-demographic backgrounds
- III. To determine the factor effecting travel cost when to Larut Matang Mangrove Forest

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