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VISITORS TIME COST FOR RECREATION AT LARUT MATANG MANGROVE FOREST

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VISITORS TIME COST FOR RECREATION AT LARUT MATANG MANGROVE FOREST

By

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A Project Report Submitted in 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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DEDICATION

This dissertation is especially dedicated to my beloved:

My Late Father: Che Mohamad Bin Man

Mother: Normah Binti Mohd Nong

All my dearest siblings:

Norisham Binti Che Mohamad, Nor Liza Binti Che Mohamad,

Nor Hamizi Bin Che Mohamad and Nor Hazri Bin Che Mohamad

Friends and companions: Nor Fazlina Binti Rosli, Noorhidayah Binti Ayob and Rodziah Binti Zainol

For their continuous support, encouragement and love.

Success is not the key to happiness. Happiness is the key to success. If you love what you are doing, you will be successful."

- Albert Schweitzer-

ABSTRACT

Larut Matang Mangrove Forest (LMMF) is rich with natural resources biodiversity and is one of the main attractions for tourism in Taiping, Perak. Starting on March of 2015, Matang Mangrove Eco-Educational Centre had charged the visitors entrance fee. The visitors are still willing to travel from a distance just to experience this opportunity. The objective of this study is to determine the characteristics of the visitors when travelling in terms of socio-demographic background, to determine the time cost involve when travel LMMF and also to determine the factors affecting the time cost when travel to LMMF Mangrove Forest. The questionnaire used for the onsite survey was designed to capture the socio-economic demand LMMF and to estimate the economic value of LMMF activity in Taiping, Perak. The count data with a sample size of 300 was modelled with a linear regression model. Based on this study, thirteen variables were tested mainly including time cost, income, on-site time, gender, marital status, age, brands, activities, quality of the places, facilities, services, conservation and occupation. The variables that influence the number of visitors for LMMF are time cost, brands and facilities. By taking the integral of the time cost model, the consumer surplus for LMMF is estimated at RM128.67per person per visit. The recreational value for LMMF for year 2015 is then estimated at RM6,168,568.47. This value implies that the opportunity cost for travelling to LMMF is valuable. This finding is vital for the stakeholder especially State of Perak Forestry Department to be use in allocation of financial resources for recreational development in LMMF.

ABSTRAK

Hutan Paya Laut Larut Matang merupakan salah satu kawasan yang kaya dengan sumber-sumber semulajadi yang menjadikannya antara tarikan dalam sektor pelancongan. Bermula pada Mac, 2015 Pusat Eko-pelajaran Hutan Paya Laut Matang telah mengenakan caj masuk kepada para pelawat. Para pelawat masih ingin melawat walaupun menempuhi jarak yang jauh hanya kerana mereka ingin merebut peluang untuk menimba pengalaman. Terdapat tiga objektif dalam kajian ini iaitu, menentukan ciri-ciri pengunjung sewaktu perjalanan dari terutama sekali dari segi latar belakang sosio-demografi, menentukan kos masa yang terlibat sewaktu perjalanan ke Hutan Paya Laut Larut Matang dan juga untuk menentukan faktor yang mempengaruhi kos masa sewaktu perjalanan ke Hutan Paya Laut Larut Matang. Kaedah soal selidik digunakan untuk kajian di kawasan telah ditetapkan untuk memenuhi permintaan sosio-ekonomi bagi Hutan Paya Laut Larut Matang dan untuk menganggarkan nilai ekonomi aktiviti Hutan Paya Laut Larut Matang, Taiping, Perak. Berdasarkan kiraan data dengan saiz sampel 300 ianya telah dimodelkan dengan menggunakan model regresi linear. Berdasarkan kajian ini, tiga belas pemboleh ubah diuji iaitu kos masa, pendapatan, masa yang diluangkan di Hutan Paya Laut Larut Matang, jantina, pekerjaan, status perkahwinan, umur , penjenamaan, aktiviti, kualiti tempat, kemudahan, servis dan konservasi. Pembolehubah yang menunjukkan pperkaitan dan memberi kesan kepada jumlah pengunjung untuk Hutan Paya Laut Larut Matang adalah kos masa, penjenamaan dan kemudahan. Anggaran nilai kesanggupan membayar bagi setiap pelawat dan juga nilai rekreasi keseluruhan bagi tahun 2015, telah dikira. Dengan menggunakan model integrasi kos masa, nilai anggaran adalah RM128.67 setiap seorang pelawat dan jumlah nilai aktiviti rekreasi untuk anggaran Hutan Paya Laut Larut Matang bagi 2015 adalah RM6,168,568.47. Data ini adalah penting bagi pihak berkepentingan terutamanya Jabatan Perhutanan Negeri Perak untuk digunakan dalam peruntukan sumber kewangan untuk pembangunan rekreasi di Hutan Paya Laut Larut Matang.

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APPROVAL SHEET

I certify that this research project report entitled **"Visitors Time Cost for Recreation at Larut Matang Mangrove Forest"** by
Nor Nasuha Binti Che Mohamad 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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LMMF	Larut Matang Mangrove Forest
CS	Consumer Surplus

CHAPTER 1

INTRODUCTION

1.1 Recreation in Mangrove Area

The visitors can find their enjoyment in particular recreational activities at mangrove area, which can be either directly or indirectly linked to the health and vitality of the mangroves. Mangrove forest generate recreation and amenity benefits as walking, bird watching and other recreational activities and existence value benefits (Morse, Luisetti, Turner and Fisher, 2011). Bird watchers, for example, particularly appreciate the mangroves for the specific and varied wildlife that they attract and support. The visitors can find enjoyment in identifying and watching the birds that inhabit mangrove areas. Recreational fishers are by far the largest community group that rely on mangrove environments for recreational pursuits. They often target mangrove areas as they recognise that mangroves provide breeding and nursery habitats for prized fish such as the barramundi. Mud crabs and prawns are also often caught, along with many other marine species.

1.2 The Elements of Time in Recreation

A person travelling to a recreation site bears the cost of not doing something else as well as the cash costs of the trip. The opportunity cost is thus the benefit or utility which could have been gained by doing the next best alternative activity in the time spent travelling to the recreation site. There are two fundamental concerns and a third troublesome issue to be considered.

The two fundamental concerns are the time pricing and time rationing issues. There is continuous trade-off between work and recreation, the opportunity cost of recreation is the monetary benefit and other benefits work. However, in modern industrialized countries where many people work fixed hours and are provided with weekend and public holidays as well as paid recreation leave, this trade-off notion is often irrelevant , because such people take recreation at the appropriate times and there is no opportunity to work in those holiday times. On the other hand, the work-recreation trade-off may be applicable to self-employed people and for those who have opportunities to work in second and part-time employment.

Apart from the situation where the opportunity cost involves time when income could be earned, there are many possible components of opportunity cost. The opportunity cost of going to the site is thus the forgone benefits of not doing one or more those other activities. According to (Mendes, 2002) time spent on travel and on site during the stay is also accounted as a visitor's opportunity. On the other hand, if individuals maintain they have 'nothing else to do', the opportunity cost of the time spent on the visit is zero.

1.3 Time Cost of LMMF

The fundamental focus of this study was to determine the visitor time cost of LMMF as a recreational site in terms of the general information of the study area, research method, data collection procedure and type of analysis undertaken.

The requirement for travel is explained by the recreational experiences phases in Figure 1.1 Recreational Experience Phases defined by Clawson (1963) and Clawson and Knetsch (1966). This research basically involve the phase in number two and four which is “travel to” since its involving the time cost of visitors from their residence traveling to LMMF and “travel back” that involve the time cost of visitors from LMMF to their residence.

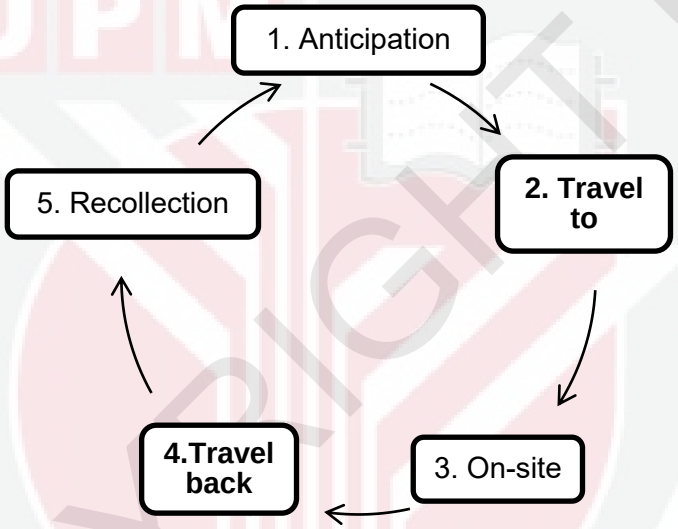

Figure 1.1: Recreational Experience Phases defined by Clawson (1963) and Clawson and Knetsch (1966).
(Source: Valuing Recreational Benefits of Perlis State Park, Malaysia Using Travel Cost Method, 2010.)

This study also looked for information on how does the time cost visiting LMMF influences the visitors recreational experience and benefit. This will lead to their participation characteristics and socio-economic backgrounds. The understanding of the basic norm of the visitors is important to this study to identify the characteristics

and factors affecting the demand on LMMF. As a final point, the information would lead to estimate the recreational value of LMMF.

1.3 Problem Statement

The LMMF is located 10 kilometres west of Taiping. There are many kinds of visitors that come to LMMF from various states of the peninsular Malaysia including from Sabah and Sarawak. From that, it is known that the more the distance, the higher the cost and length of time spent. They are many factors that influence their time cost to get to LMMF, which are the different types of vehicle, variety of purposes, with or no packages and also either come with group or individual.

Starting on March of 2015, Matang Mangrove Eco-Educational Centre had being charged the visitors with the entrance fee. The visitors are still willing to travel from a distance just to experience this opportunity. It is known a trade-off between work and recreation, the opportunity cost of recreation is the monetary benefit and other benefits of work. Thus, this study attempts to assess the opportunity cost of visitors traveling to LMMF to get the recreational experience. It is also imperative to understand the value of LMMF in terms of recreational value. Thus, this study quantifies the value of time so that the recreational value of LMMF can be assessed.

1.5 Objectives

The main objective of this research is to determine the time cost of visiting LMMF Taiping, Perak. 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 characteristics of the visitors when traveling in terms of socio-demographic background.
ii. To determine the time cost involve when travel to LMMF.
iii. To determine the factors affecting the time cost when travel to LMMF.

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