

# **UNIVERSITI PUTRA MALAYSIA**

# THE ATTRACTIVENESS OF LARUT MATANG MANGROVE FOREST RESERVE AS A RECREATIONAL SITE

**NOR FAZLINA BINTI ROSLI** 

FH 2016 29

# THE ATTRACTIVENESS OF LARUT MATANG MANGROVE FOREST RESERVE AS A RECREATIONAL SITE



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

# **DEDICATION**

"Take the chances when you still have the time"

Ayah

Mak

Along

Acik

Ude

Alang

Adik

Hidayah, Setia, Rodziah, Nasuha, Syukirah, Faiz

Thank you for all your time and endless support

#### **ABSTRACT**

Larut Matang Mangrove Forest (LMMF) is situated in Perak under jurisdiction of Department of Forestry Perak. LMMF provides lots of marine sources for the residents. There are crabs, fish, cockles and shrimps. Not only that, mangrove forest gives out lots of benefits like timber, many activities such as sight-seeing, river cruising and birding can be done there. This study is focused to measure the attractiveness of the place through quality of activities, facilities, accessibilities and also the branding of this place. The socio demographic of the respondents were researched on to find the influence in the attractiveness of LMMF. Attractiveness is something subjective. Variety of opinions was found in literature reviews to show the meaning of attractiveness from past studies. 300 respondents were asked to fill in the questionnaires in order to find out what make the mangrove attractive for them. The result shows that its location is the main attribute of factor analysis, followed by the interesting experience offered and also the facilities and interpretation. In the study, only education levels of socio demographic gave significant values for t-test with  $R^2 = 70.9$  %. While, education and number of visit to LMMF showed the significant effects of attractiveness to the respondents. The benefits of the study will directly contribute to the betterment of the management of LMMF and improving the quality of facilities that have already been provided. Besides, it will definitely allows visitors to gain great experience especially when when the management team takes action to solve the problems occurring.

#### **ABSTRAK**

Hutan Paya Laut Larut Matang terletak di Perak di bawah bidang kuasa Jabatan Hutan Perak. Hutan Paya Laut dipenuhi dengan sumber-sumber laut untuk penduduk setempat. Antaranya ialah ketam, ikan, kerangan dan juga udang. Selain itu juga, hutan paya laut turut menyumbang pelbagai kebaikan seperti hasil balak dan pelbagai aktiviti rekreasi seperti melihat pemandangan, menyelusuri sungai dan juga melihat burung. Kajian ini memfokuskan untuk mengkaji tarikan di Hutan Paya Laut Laut Matang menerusi faktor-faktor seperti kualiti aktiviti, kemudahan, ketersampaian serta penjenamaan. Selain itu, sosio-demografi responden turut dikaji untuk melihat pengaruh tarikan di Larut Matang. Tarikan ialah sesuatu yang sangat subjektif. Terdapat pelbagai maksud dan faktor yang boleh dimaksudkan sebagai tarikan.300 orang responden dipilih untuk menjawab kaji selidik demi mengetahui maksud tarikan paya laut terhadap mereka. Hasil kajian dalam factor analysis menunjukkan lokasi menjadi faktor utama tarikan diikuti dengan pengalaman kemudian ketersampaian dan juga interpretasi. Dalam kajian, hanya taraf pendidikan menunjukkan kesan di dalam t-test dengan nilai R<sup>2</sup>=70.9 %. Selain itu, bilangan lawatan ke Hutan Laut Larut Matang menunujukkan kesan terhadap tarikan. Antara kebaikkan kajian ini adalah memberi pelunag kepada pihak pengurusan untuk mempertingkatkan kualiti kemudahan di samping memberi peluang kepada pengunjung untuk merasai pengalaman yang lebih baik.

#### **ACKNOWLEDGEMENT**

First and foremost, I would like to thank Allah SWT for giving me strength and bless to fulfil my thesis. Next, I want to express my gratitude to my supervisor, Dr. Syamsul Herman bin Mohammand Affandi for his guidance and knowledge in writing and doing this research and also Ms. Nur Shazwani binti Ab Razak in guidance and supporting throughout the completion of this study.

I also wish to express my gratitude to Prof. Dr. Awang Nor bin Mohamad for sponsoring this study.

Last but not least, my beloved parents and friends for their contribution directly and indirectly for the success of the study.

#### **APPROVAL SHEET**

I certify that this research project report entitled "The Attractiveness of Larut Matang Mangrove Forest Reserve" by Nor Fazlina binti Rosli has been examined and approved as a partial fulfilment of the requirement of the requirement for the degree of Bachelor of Park Science and Recreation Science in the Faculty of Forestry, Universiti Putra Malaysia.

Approved by:

Dr. Syamsul Herman bin Mohammad Afandi Faculty of Forestry Universiti Putra Malaysia (Supervisor)

Prof. Dr. Mohamed Zakaria bin Hussin Dean Faculty of Forestry Universiti Putra Malaysia

Date: June 2016

# **TABLE OF CONTENTS**

DEDICATION		PAGE
DEDICATION ABSTRACK ABSTRAK		ı ii iii
ACKNOWLED APPROVAL S		iv V
TABLE OF CC		v Vi
LIST OF TABL		ix
LIST OF FIGU		X
LIST OF ABB	REVIATIONS	xi
CHAPTER		
1	INTRODUCTION 1.1 General Background 1.2 Recreation	1 2 2
	1.3 Aesthetic of Mangrove 1.4 Importance of Attractiveness Quality in Mangrove Area	2 4
	1.5 Larut Matang Mangrove Forest 1.6 Problem Statement 1.7 Objectives	4 5 6
2	LITERATURE REVIEW  2.1 The Concept of Attractiveness	7 8 9 11 12 14
3	METHODOLOGY 3.1 The Case Study Area 3.1.1 Background Information 3.1.2 Historical Development 3.1.3 Geographical Location 3.1.4 Climate 3.1.5 Geology and Topography 3.1.6 Biological Environment 3.1.7 Administration and Management 3.1.8 Local Community	15 16 16 16 17 17 18 18

	<ul> <li>3.2 Variables and Level of Measurement</li> <li>3.2.1 Dependent Variable</li> <li>3.2.2 Gender of Respondents</li> <li>3.3.3 Marital Status</li> <li>3.3.4 Number of Visit</li> <li>3.3.5 Education Level</li> <li>3.3.6 Satisfaction</li> <li>3.3.7 The Elements of Attractiveness</li> <li>3.2.8 The Measurement of Attractiveness</li> <li>3.3 Design of Questionnaire</li> <li>3.3.1 Questionnaire Structure</li> <li>3.3.2 Questionnaire Version</li> <li>3.4 Fieldwork</li> <li>3.4.1 Initial Data Collection</li> <li>3.4.2 Pretesting and Pilot Survey</li> <li>3.4.3 Survey and Sampling Procedure</li> <li>3.5 Data Analysis and Regression</li> </ul>	19 20 21 21 21 22 22 23 23 25 25 26
4	RESULT AND DISCUSSION 4.1 Introduction 4.2 Respondents of Demographic Profiles 4.2.1 Age 4.2.2 Income 4.2.3 Gender 4.2.4 Formal Education 4.2.5 Marital Status 4.3 Visit and Travel Characteristics 4.3.1 Number of Visit 4.3.2 Time from Origin to LMMF 4.3.3 Vehicles	28 28 29 30 31 32 32 33
	<ul> <li>4.4 Visitor perception</li> <li>4.4.1 Attractiveness</li> <li>4.4.2 Attractiveness factors</li> <li>4.5 Reliability Test</li> <li>4.6 KMO and Bartlett's Test</li> <li>4.7 Regression Model</li> <li>4.7.1 Regression Result</li> <li>4.7.2 The Effect of Number of Visit</li> <li>4.7.3 The Effect of Education</li> <li>4.7.4 The Effect of Factors</li> </ul>	34 36 37 40 41 41 42 42
5	CONCLUSION AND RECOMMENDATIONS 5.1 Conclusion 5.2 Recommendations 5.3 Suggestion for Future Study	43 43 44

REFERENCES	45
APPENDICES	47
Appendix A Questionnaire	47
Appendix B Permission Letter	64
PUBLICATION OF THE PROJECT UNDERTAKING SHEET	65



# **LIST OF TABLES**

TABLE		PAGE
1	Previous Studies on Attractiveness	14
2	Variables and Level of Measurement	20
3	Age Groups	29
4	Income Groups	29
5	Gender of Respondents	30
6	Formal Education Level	31
7	Marital Status	31
8	Number of Visit per Year	32
9	Time to Origin from LMMF	33
10	Types of Vehicles	33
11	Attractiveness of LMMF	34
12	Location of LMMF	35
13	Experience in LMMF	35
14	Facilities and Interpretation in LMMF	36
15	Reliability Test of Questionnaire	36
16	KMO and Bartlett's Test	37
17	Factor Analysis	38
18	Regression Result	41

# LIST OF FIGURES

FIGURE		PAGE
1	Recreation Components	11
2	Total Outdoor Recreation Experience Phase	13
3	Map of LMMF	15



# **LIST OF ABBREVIATIONS**

KMO Kaiser-Meyer-Olkin

LMMF Larut Matang Mangrove Forest

SPSS Statistical Packages for Social Science



#### **CHAPTER ONE**

#### INTRODUCTION

### 1.1 General Background

Ecotourism is a term that related to the parks and wilderness visit .Therefore, mangrove is part of the ecotourism. Mangrove is well known with muddy, high salinity, alternate condition of aerobic and anaerobic, sub strum that always shifting and unstable. A part from that, mangrove forest grows only at tropical and subtropical near the equator as it cannot stand the freezing weather. Mangrove trees have their own unique characteristics that enable them to stand the condition of their growing areas. The leaves restrict the stomata from opening too much. Only small amount of pores will be open to release carbon dioxide during photosynthesis. This helps the tree to conserve its fresh water. The roots of the tree are interesting as it is above ground root that called pneumatophores. Means the roots allow oxygen to enter.

The research before showed that there are many benefits and important of mangrove forest especially at Larut Matang Mangrove Forest, Perak. Before, mangrove was forgotten by many people. Nowadays, mangrove started to become one of the famous tourism destinations in Malaysia. To make sure people satisfy while going to Larut Matang Mangrove Forest, a research is done on the attractiveness of Larut Matang Mangrove Forest. The research will be focusing on the facilities, activities and etc. that we have around Larut Matang Mangrove Forest.

#### 1.2 Recreation

Recreation is a leisure activities that give the feeling of fun, relief and relax. Mostly people will do recreation during free times, gaps and holidays like weekend, school and public holidays. There are two types of recreation that is outdoor and indoor. Outdoor recreation will be do outside building and allowed people to be free running and jogging. For examples, parks and playgrounds. Indoor recreation more focus on court games like badminton and squash. Next, gardening, reading, listening to radios are parts of the recreation as it gives pleasure to us.

Furthermore, recreation relate to health. So, there are benefits of recreation like being healthy, avoid obesity as we being active and stroke. After they do some recreation, they will feel more less tired, healthier and less anxious (Lohmann, 1996). Therapeutic recreation also quiet famous now especially for cancer and autism people to give them sense of calmness and relax. As therapeutic helps people with a good environment instead of taking medicine.

## 1.3 Aesthetic of mangrove

Many people especially youngsters do not know the important of the mangrove forest. Because of the smelly smell people thinks that the mangrove has no function. That was totally wrong. Research had been conducted that mangrove gives benefits to people, animals as well as our "Mother Earth". Flashing back the world highly killed people during Tsunami

on December 2004 showed the most important of mangrove all over the world.

Some of the benefits of mangrove are sources of food of marine lives, breeding area for marines, transit of migratory birds, timber sources, charcoal sources, prevention of soil erosion, sources of lives stock feed, natural resources of industrial effluences, medicinal and food sources for human being (Ahmad, 2009). Mangrove has own attraction that people might not know about it. It is rich with marine food like shrimps and crabs. Not only that, mangrove can be used to do recreational activities like river cruising and fishing (Ahmad, 2009). It is not only to human, mangrove also attracting fish. It had been habitats for marine lives especially to avoid preys and tides. The prop roots also part of the shelter for the fish (Nagelkerken & Faunce, 2008). Mangrove is really important in terms of economic and environmental and helps to avoid natural disasters like tsunami and climate change and help to generate income for the villagers.

Besides, mangrove has good scene of view that gives pleasure and calmness to everyone. Mudskippers and variety types of unique crabs give different view to the people who come. The tide also can amaze people who come to visit this area.

# 1.4 Importance of attractiveness quality in mangrove area

Larut Matang Mangrove Forest had been famous since people realise the important of it. Mangrove at Larut Matang protected some part of Malaysia from being hit up by the tsunami. Therefore, this place started to receive more people every day especially during school holiday. Despite being natural protective, there are more reasons that people come to visit this place.

Hopefully, the forestry department can have the data of socio demographic of visitors that come to Larut Matang Mangrove Forest whether this is the first time or etc. Socio demographic can help knowing the visitors better as different visitors have own pull factor in visit a place.

Besides, useful information about the attractiveness of this place can help the Forestry Department of Perak to enhance the quality of the Larut Matang Mangrove Forest based on the attributes that had been study such as facilities and the activities provided.

## 1.5 Larut Matang Mangrove Forest

Larut Matang Mangrove Forest is located in the Taiping, Perak. This mangrove forest is about 40,466 hectares which is calculated as 50 per cent of the mangroves in Malaysia. Since 1920s, the mangrove has been gazette as protected forest. Larut Matang is estimated to cover 40.151 hectares of mangrove in Peninsular Malaysia.

Currently, 20 per cent of the areas are reserved for environmentally purpose only. Illegal activities especially logging is restricted. Mangrove Forest has been a heritage to the country as it has its own benefits. Special attention is needed to make sure this mangrove still can be functional to human being, flora and fauna.

Fishery production natural habitats, charcoal production and migratory of birds are among roles that had been played by mangrove forest for decades. Among of the reasons that attract fish to choose mangrove as their habitats is the unique characteristics of the root (Nagelkerken & Faunce, 2008).

#### 1.6 Problem Statement

This study is conducted to determine the attractiveness of Larut Matang Mangrove Forest. As we know, attractiveness is really subjective. It is depends on the person to verify the meaning of attractiveness to them. Using theory of demands, attractiveness can be measure based on people preferences and how they think the places have a good quality. No one can argue each person's preferences because it is their own choices. People may think that one's opinion but, must accept it without prejudice.

Since the visitors have their own objectives, this research aim to study the factors that attract users to prefer Larut Matang Mangrove Forest Reserve based on quality and benefits that users can get through Larut Matang

Mangrove Forest. This is because, without the attractiveness people would not come there.

## 1.7 Objectives

The main objective from this finding is to determine the attractiveness of Larut Matang Mangrove Forest, Perak. This finding can help the Department of Forestry Perak to enhance the quality of their attractiveness through the attractiveness attribute that will be determined through my research study.

- I. To evaluate the attractiveness of Larut Matang Mangrove Forest Reserve.
- II. To identify factors affecting the attractiveness using attractiveness attribute.
- III. To identify the social demographic of the respondents that came from and other than Perak.

#### **REFERENCES**

Ahmad, S. (2009). Recreational values of mangrove forest in Larut Matang Perak. *Journal of Tropical Forest Science*, *21*(2), 81–87.

Alkeyev, M. A., & Bazarbayeva, T. A. (2014). Recreational Zoning in the Degree ofAttractiveness of Natural Landscapes. *Example of the Pavlodar Region of Kazakhstan Al-Farabi Kazakh National University , Faculty of Geography and Nature Management*, 29(1), 68–76.

Authors, F. (2006). European Journal of Marketing.

Braxton-davis, P., Harshberger, E., Sage, C., & Shattuck, L. (2010). The Social Psychology of Love and Attraction, 14(1).

Capitello, R., Begalli, D., & Agnoli, L. (2013). Tourism experiences and wine experiences: *A new approach to the analysis of the visitor perceptions for a destination*. The case of Verona.

Chris, H., Woojin, C., Heekyung, L., Chiu, C., Scott, M. M., Frew, A. J., Becks, S. (2014). Tourists 'Behaviors and Evaluations Article information: Corner, S. (2011). *Likert Items and Scales of Measurement?*, 15(March), 20–24.

Deng, J., Ph. D., Dyre, D., &Wang, J. (2010). *Perceptions of relative attractiveness of nature-based tourism asset*: A comparison between CVB directors and visitors.

Example, T. (2013). *Analysis of Covariance ( ANCOVA )*. Some background ANCOVA on SPSS.

Fish, A., & Macklin, R. (2004). Perceptions of executive search and advertised recruitment attributes and service quality. *Personnel Review*, 33(1), 30–54.

Grimm, B., T, M. L. N. I., Heinsohn, K., Richter, C., Metzler, D., Infratest, T. N. S., Richter, C. (2009). The impact of demographic change on tourism and conclusions for tourism policy Federal Ministry of Economics and Technology Abridged version, (July).

Hede, A., & Kellett, P. (2011). Marketing communications for special events. *European Journal of Marketing*, *45*(6), 987–1004.

Jusoff, K. (2008). Managing Sustainable Mangrove Forests in Peninsular Malaysia, 1(1), 88–96.

Kastenholz, E., & Carneiro, M. J. (2004). The impact of socio-demographics on tourist behavior – analyzing segments of cultural tourists visiting Coimbra.

Kinley, T. R., Forney, J. a., & Kim, Y.-K. (2012). Travel motivation as a determinant of shopping venue. *International Journal of Culture, Tourism and Hospitality Research*, *6*(3), 266–278.

Law, R., Cheung, C., & Lo, A. (2004). The relevance of profiling travel activities for improving destination marketing strategies. *International Journal of Contemporary Hospitality Management*, 16(6), 355–362.

Li, Y. N. (2006). Factor analysis of service quality dimension shifts in the information age.

Lohmann, M. (1996). Article information: You ' Il better stay at home? Studies on recreational effects of.

Luis Méndez, J., Oubiña, J., & Rubio, N. (2011). The relative importance of brand-packaging, price and taste in affecting brand preferences. *British Food Journal*, *113*(10), 1229–1251.

Moffett, S., Mcadam, R., Moffett, S., & Mcadam, R. (2012). *Knowledge management: A factor analysis of sector effects.* 

Nagelkerken, I., & Faunce, C. H. (2008). What makes mangroves attractive to fish? Use of artificial units to test the influence of water depth, cross-shelf location, and presence of root structure. *Estuarine, Coastal and Shelf science*, 79(3), 559–565.

Patzer, G. (2006). Ethics concerning physical attractiveness phenomenon: Business Strategy Versus Research knowledge, 1–13.

Rubenstein, A. J., & College, T. (2005). *Variation in perceived attractiveness differences between dynamic and static faces*, *16*(10), 759–762.

See, A. (2012). ESPON ATTREG project: Concept of attractiveness.

Smith, F. G., Debruine, L. M., Jones, B. C., Krupp, D. B., Welling, L. L. M., & Conway, C. A. (2009). Attractiveness qualifies the effect of observation on trusting behavior in an economic game. *Evolution and human behavior*, 30(6), 393–397.

Tingchi, M., James, L., Liu, M. T., & Brock, J. L. (2011). Selecting a female athlete endorser in China consumer gender difference.

Vacha-haase, T., & Thompson, B. (2004). How To Estimate and Interpret Various Effect Sizes, 51(4), 473–481.

Wells, C. S., & Wollack, J. A. (2003). An instructor's guide to understand test reability.

Witell, L., Löfgren, M., & Gustafsson, A. (2011). print\_Identifying ideas of attractive quality in the innovation process. *The TQM Journal*, 23(1), 87–99.