



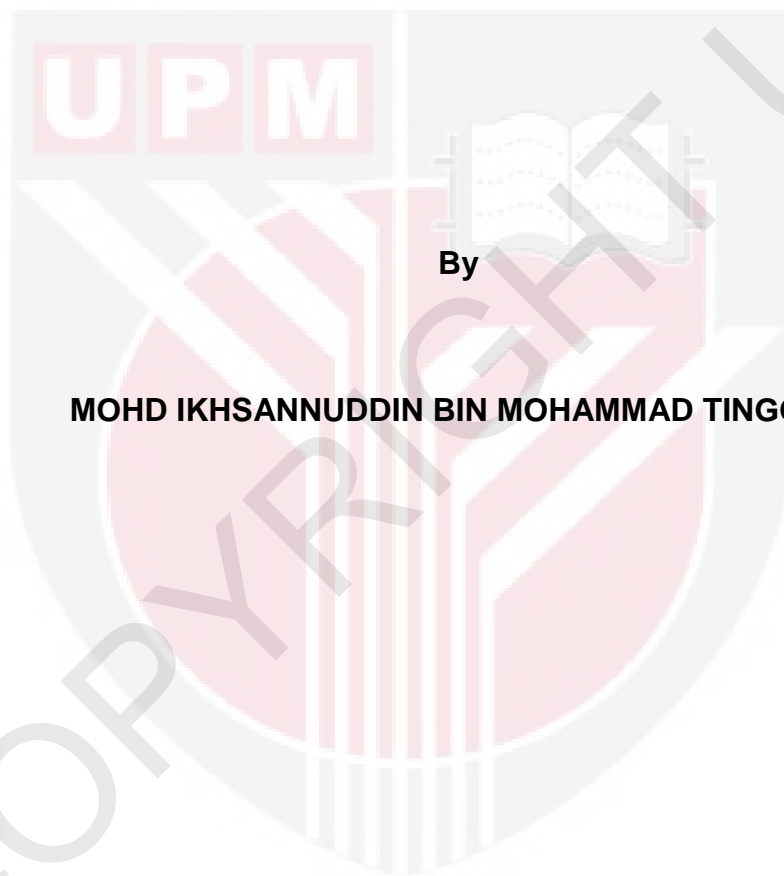
UNIVERSITI PUTRA MALAYSIA

***PARTICIPATION OF LOCAL COMMUNITIES IN CONSERVATION
OF MANGROVE FOREST AT KUCHING WETLANDS, SARAWAK***

MOHD IKHSANNUDDIN BIN MOHAMMAD TINGGAL

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**PARTICIPATION OF LOCAL COMMUNITIES IN CONSERVATION OF
MANGROVE FOREST AT KUCHING WETLANDS, SARAWAK**



By

MOHD IKHSANUDDIN BIN MOHAMMAD TINGGAL

**A Project Report Submitted in Partial Fulfillment of the Requirement
for the Degree of Bachelor of Forestry Science in the
Faculty of Forestry
Universiti Putra Malaysia**

2016

DEDICATION

I dedicate this thesis to my parents

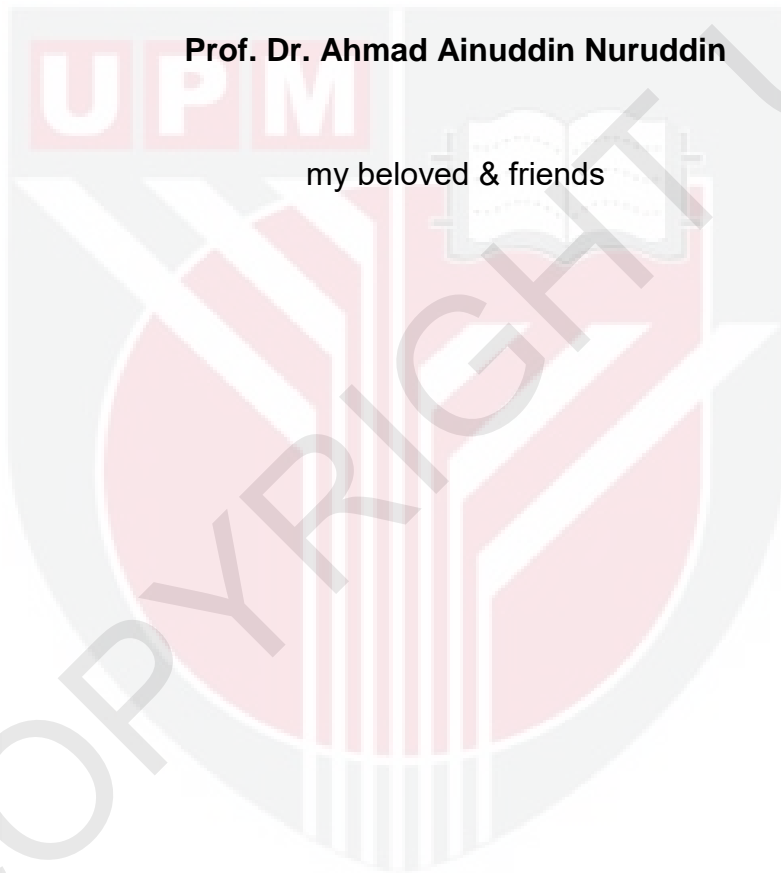
Mohammad Tinggal Bin Abdul Hamid

Siti Musfirah Binti Abdullah

my supervisor

Prof. Dr. Ahmad Ainuddin Nuruddin

my beloved & friends



ABSTRACT

The mangrove forest areas at Kuching Wetland, which is a Ramsar site, is being exploited at an increasing rate even though conservation programs are extended to the communities. This study is carried out to determine the factors that influence the participation of the local communities in conservation of the mangrove forest resources. 365 respondents were interviewed from seven villages nearby Kuching Wetland National Park. The data were collected using face-to-face interviews of the households' representatives at the selected villages using convenient survey technique. Using multiple regression analysis, factors like socio-demographics, economic income, resources, conflicts, knowledge and awareness were tested to determine the influence on the participation. Three factors were identified that influence the participation of local communities, which include knowledge, memberships organization and certain villages. The results reveal that knowledge, location of the wetland and memberships in voluntary organizations have significant relationship with participation in conservation. The study shows that the majority of the members of the communities who are living near the mangrove forest in Kuching Wetlands National Park show positive attitudes towards conservation of mangrove forest resources. Education and awareness campaign for the new generations should be extended to the local communities to enhance their participation in the conservation of the mangrove forest at Kuching Wetland.

ABSTRAK

Kawasan hutan bakau di Kuching Wetland merupakan tapak Ramsar yang dieksploitasi pada kadar yang semakin meningkat walaupun program pemuliharaan ditawarkan ke atas masyarakat. Kajian ini dijalankan untuk menentukan faktor-faktor yang mempengaruhi penglibatan masyarakat setempat dalam pemuliharaan sumber hutan bakau. Sebanyak 365 responden telah di soal selidik dari tujuh buah kampung berdekatan Taman Negara Kuching Wetland. Data yang telah dikumpulkan menggunakan temubual secara langsung daripada penduduk di kampung yang dipilih dengan teknik mudah. Dengan menggunakan "multiple regression analysis", tiga faktor telah dikenal pasti yang mempengaruhi penglibatan masyarakat tempatan, yang merangkumi pengetahuan, keahlian dalam organisasi dan beberapa buah kampung. Faktor-faktor seperti sosio-demografi, pendapatan ekonomi, sumber, pengetahuan, konflik dan kesedaran diuji untuk menentukan pengaruh ke atas penglibatan penduduk. Keputusan mendedahkan pengetahuan, beberapa buah kampung dan keahlian dalam organisasi mempunyai hubungan yang signifikan dengan penyertaan ke arah pemuliharaan. Kajian ini menunjukkan bahawa majoriti ahli-ahli masyarakat yang tinggal berhampiran hutan bakau di Taman Negara Kuching Wetlands menunjukkan sikap positif terhadap pemuliharaan sumber hutan bakau. Pendidikan dan kempen kesedaran kepada generasi baru perlu diperluaskan kepada masyarakat setempat untuk meningkatkan penyertaan mereka dalam pemuliharaan hutan paya bakau di Kuching Wetland.

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APPROVAL SHEET

I certify that this research project report entitled “Participation of Local Communities in Conservation of Mangrove Forest at Kuching Wetland, Sarawak” by Mohd Ikhsannuddin Bin Mohammad Tinggal has been examined and approved as a partial fulfillment of the requirements for the degree of Bachelor of Forestry Science in the Faculty of Forestry, Universiti Putra Malaysia.

Approved by:

Prof. Dr. Ahmad Ainuddin Nuruddin
Faculty of Forestry
Universiti Putra Malaysia
(Supervisor)

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

Date: 20 June 2016

TABLE OF CONTENTS

	Page
DEDICATION	ii
ABSTRACT	iii
ABSTRAK	iv
ACKNOWLEDGEMENTS	v
APPROVAL SHEET	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF ABBREVIATIONS	xi
CHAPTER	
1	INTRODUCTION
1.1	Study Background 1
1.2	Problem Statement 3
1.3	Objectives 4
2	LITERATURE REVIEW
2.1	Introduction 5
2.2	Conservation 5
2.3	Local Communities 6
2.4	Participation 7
2.5	Wetlands 8
2.6	Knowledge 9
2.7	People Roles 9
3	METHODOLOGY
3.1	Introduction 11
3.2	Research Design 11
3.3	Research Framework 12
3.4	Data Collection Method 13
3.4.1	Primary Data 14
3.4.2	Questionnaire Survey 15
3.5	Sampling Design 15
3.5.1	Target Population 15
3.5.2	Sampling Location (study site) 16
3.5.3	Sampling Elements 17
3.5.4	Sampling Technique 17
3.5.5	Sampling Size 17
3.6	Research Instrument 19
3.7	Questionnaire Design 20
3.8	Analysis of Data 20
4	RESULTS
4.1	Introduction 23
4.2	Reliability Test 23
4.3	Socio-demographic Background 24
4.3.1	Gender 24
4.3.2	Age 24

4.3.3	Education Level	25
4.3.4	Family Members	26
4.3.5	Income	27
4.4	Association memberships	28
4.5	Participation mean index of local community	29
4.6	Regression analysis for factors that influencing local community participation in Kuching Wetlands	30
5	DISCUSSION	
5.1	Socio-demographic Characteristics	33
5.2	Participation mean index	34
5.3	Factors influencing Participation in Conservation of Mangrove Forest	35
6	CONCLUSION	39
	REFERENCES	41
	APPENDICES	
	Appendix A: Questionnaire Sample Design	46
	Appendix B: Mean Index	52
	Appendix C: Survey Picture	54

LIST OF TABLES

TABLE		PAGE
3.1	The total number of local population at the targeted villages and the sample size that were assumed to be taken	18
4.1	Determined Reliability Result of Questionnaires	23
4.2	Mean index for participation index and other expected factors that could influence the local community participation	29
4.3	Median of variables	30
4.4	Results of Regression Analysis for participation towards Conservation	30

LIST OF FIGURES

FIGURE		PAGE
3.1	Research model of the participation in mangrove conservation.	13
3.2	Face to face interview with village chief	14
3.3	Location of site visit	16
4.1	Respondents gender	24
4.2	Age of respondent	25
4.3	Educational level	26
4.4	Family Members	27
4.5	Monthly Income of The Respondent	28
4.6	Local Communities in Organization	29

LIST OF ABBREVIATIONS

KWNP	Kuching Wetland National Park
KTWR	Koshi Tappu Wildlife Reserve
SMFR	Sarawak Mangrove Forest Reserve
TPA	Totally Protected Area
SPSS	Statistical Package for Social Science



CHAPTER ONE

INTRODUCTION

1.1 Study Background

Mangrove forest is one of the important ecosystems that gives many benefits towards humanity and all living organism. Mangrove forest wetland values and functions are being affected in most cases as there is over exploitation, uncontrolled access for non-community members and outsiders using resources without caring for the regeneration capacity (Sherestha, 2012). Mangrove sustains itself by colonizing new mud flats and growing seaward. Coastal erosion and high rates of deposition of silts around the estuaries and coasts have been found to affect species colonization and succession in many parts of the mangrove areas. As mangroves become smaller and more fragmented, important ecosystem goods and services will be diminished or lost. Many wildlife species and aquatic species make the mangrove their habitats, considering the life-support function of mangrove ecosystems for many species, their high productivity and important position within the wider seascape, it is clear that loss of mangrove forest can have far-reaching consequences for biodiversity and the people who depend on these ecosystems for the delivery of important goods and services (United Nations Environmental Program, 2014).

In Malaysia, the mangrove forests are utilised for coastal protection, forestry products, fisheries, wildlife, agriculture, aquaculture, settlement, urban and industrial development, and ecotourism (Chong, 2006). The conversions of

the mangrove forests have resulted in losses in not only the timber products but also other non-timber products on which the communities are dependent for their incomes. In many locations abandoned aquaculture ponds, plots of land, or industrial sites are evidence of the unsustainable exploitations of mangrove forests. Chong has suggested that with the exception of the Matang mangrove forest reserve, in Perak, mangrove forests in other states are not sustainably managed because of conflicting interests in state level management policies that are sectoral in nature and suggests that federal policies regarding the conservation of mangrove forests are crucial in ensuring the sustainability of the mangrove forests. The Kuching Wetlands National Park (KWNP) is one of the totally protected areas in Sarawak with the total area of 6610 ha. KWNP is located within larger area known as Sarawak Mangrove Forest Reserve, which gazetted in 1924 and cover an area of 17,153 ha (Sarawak Forestry Department, 2010). This unique wetlands area make would be very critical in conservation of the area with many local community surrounding the forest itself. The participation of the community is really importance to develop the improvement and stability of development and conservation. Thus, there are many factors that influence the participation of the community. Toward the conservation of the mangrove forest, factors that determine were knowledge, awareness, conflicts, socio-demographic and resources.

1.2 Problem Statement

Mangrove forest is very important to the local community. It gives many benefits either food or shelter. For the fishermen and the villager that depend on the sea and mangrove forest, they need it for their livelihood. Mangrove forests used by the locals help to supplement their main income which is obtained from fish catching; the incomes are unstable due to the occurrence of bad weather or storms

Nowadays, the mangrove forest have been degraded and the area is getting less every day. Various economic activities have created numerous environmental and ecological problems in coastal areas, including beach erosion, resource depletion and environmental degradation, and destruction of natural habitats (Cicin-Sain & Knecht, 1998). There are many conservation awareness activities being held at Kuching Wetland such as Ramsar awareness programme (CEPA), Petronas Corporate Social Responsible (CSR) programme, Unimas-Swinburne Study programme and Fujixerox Corporate Social Responsible (CSR) programme. One of the conservation programs that received much support among the communities is the mangrove restoration or replanting program, and up to year 2010 the program has been able to replant more than 508,000 mangrove plants in the state (SFD, 2010). The need to conserve is a must. Replanting, community services, and restoration program may have been an excellent idea to conserve and maintain the forest. Based on Sarawak Forestry Department (2013), Kuching Wetland National Park had planted 10,625 of Bakau Kurap with the cost of RM 95,000.00. In 9 February 2013, Kuching Wetland

National Park also had replanting activity at Lemidin river to celebrate events in conjunction with the celebration of World Wetlands Day 2013 that attended by many, including 300 school students, public servants, corporate bodies, NGOs and SFD staff. Though there are many involvements by the communities in conservation, the participation of the local community is still undetermined. Thus, a study about the factors influencing the participation of the locals in conservation of mangrove forest is essential to for fully understand how local can contribute more for their country. A survey on local participation can also help to explain current community perception about mangrove forest in Kuching Wetlands.

1.3 Objectives

The main objective of this study is to determine the participation of the local community in conservation of mangrove forest at Kuching Wetlands National Park. The specific objectives are: -

- i) To determine factors influencing the participation of local communities in conservation of mangrove forest at Kuching Wetlands.
- ii) To measure level of participation of local communities in the conservation programs of Mangrove forest at Kuching Wetlands.

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