



UNIVERSITI PUTRA MALAYSIA

**ECONOMIC VALUES OF
CONSERVATION AND MANAGEMENT ATTRIBUTES IN
BAKO NATIONAL PARK, SARAWAK, MALAYSIA**

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By

THALANY KAMRI

**Thesis Submitted of the School of Graduate Studies, Universiti Putra
Malaysia, in Fulfilment of the Requirements for the Degree of
Doctor of Philosophy**

May 2014

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

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**Chairman: Assoc. Prof. Alias Radam, PhD
Faculty: Economics and Management**

Existing for 55 years to date, the key attributes of Bako NP are seen to be under threat. These deficiencies are due to low levels of finance for its conservation and management purposes. An ideal national park should have its objective of generating enough income to cover its operating expenses and a surplus to invest in both conservation and management. The policy options to increase park revenue would remain unclear with lack of information on demand parameters. This study illustrates the estimation of economic values of national park attributes. The techniques applied for the estimation of use value in national parks are contingent valuation method and choice experiment. A total of 564 respondents were randomly selected amongst foreign and local visitors at Bako NP.

The CVM elicits visitors' willingness to pay for the improvement of conservation and management in the park. The logit model is defined according to dichotomous choice method to obtain the willingness to pay for the proposed entrance fee bid. A total of 80.5% of the respondents among foreign visitors agreed to contribute for national park conservation. However, only 43% of the respondents among local visitors are willing to contribute for the same purpose. Foreign visitors are willing to pay 1.58 times higher than the current entrance fee. Their willingness to pay is RM51.76. On the other hand, local visitors have a slight increase in their willingness to pay as compare to their current charges which is only RM18.80.

In CE, two blocks of estimation were analysed that are conservation and management. For conservation, a total of 70.5% of respondents selected one of the options above the status quo level of conservation fee. The results show that visitors are mostly concern for the issue of decreasing in the population of rare species. Visitors are willing to pay to improve the level from continuous to slow down the decreasing rate. For the case of

management, a total of 64.3% of the respondents selected one of the options above the current situation of entrance fee. The results show that visitors are most concern for protection level of the park. Visitors are willing to pay to improve the level from moderate to high level of protection.

The consumer surplus is estimated to be approximately RM31.76 for foreign visitors and RM8.80 for local visitors, representing the extra benefits that visitors gain from the park. The value of Bako NP is calculated by multiplying the number of foreign (32344) and local visitors (13112) by the willingness to pay for visiting Bako NP. The result shows that the estimated total economic value of Bako NP for 2013 is RM1.9 million.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**NILAI-NILAI EKONOMI BAGI CIRI-CIRI
KONSERVASI DAN PENGURUSAN DI
TAMAN NEGARA BAKO, SARAWAK, MALAYSIA**

Oleh

THALANY KAMRI

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Wujud sejak 55 tahun yang lalu, ciri-ciri utama Taman Negara Bako dilihat semakin terancam. Keadaan yang semakin terjejas ini adalah berpunca dari kekangan kewangan dalam membiayai peruntukan untuk tujuan konservasi dan pengurusan. Sebuah taman negara yang sempurna perlu mempunyai objektif bagi menjana pendapatan yang mampu untuk menampung perbelanjaan serta lebihan yang dapat dilaburkan untuk konservasi and pengurusannya. Suatu polisi untuk meningkatkan pendapatan taman adalah tidak jelas sekiranya kurang pendedahan informasi dari segi faktor-faktor permintaan. Kajian ini bertujuan untuk memberi gambaran tentang analisa penilaian ekonomi bagi ciri-ciri taman negara. Teknik yang digunakan bagi tujuan ini adalah *contingent valuation method* dan *choice experiment*. Sejumlah 564 orang responden dipilih secara rawak yang terdiri di antara pelawat dari luar negara serta pelawat tempatan yang melawat Taman Negara Bako.

Kaedah *contingent valuation method* digunakan untuk menalisa nilai kesediaan membayar di kalangan pelawat bagi peningkatan dari segi konservasi and pengurusan taman. Model logit ditakrifkan mengikut kaedah pilihan dikotomi untuk menilai kesediaan membayar bagi tawaran harga yang dicadangkan. Hasil kajian ini mendapati 80.5% responden dari kalangan pelawat asing bersetuju untuk menyumbang kepada konservasi taman negara. Akan tetapi, hanya 43% responden dari kalangan pelawat tempatan bersetuju untuk menyumbang kepada perkara yang sama. Pelawat asing mempunyai kesediaan membayar sebanyak 1.58 kali ganda daripada yuran kemasukan semasa. Kadar kesediaan membayar mereka adalah sebanyak RM51.76. Manakala, pelawat tempatan menunjukkan peningkatan yang amat sedikit berbanding dengan kadar semasa iaitu sebanyak RM18.80.

Dari segi *choice experiment*, dua blok penilaian telah dianalisa iaitu konservasi dan pengurusan. Bagi blok konservasi, sebanyak 70.5% responden telah memilih salah satu alternatif yang lebih tinggi dari yuran konservasi pada keadaan semasa (*status quo*). Kajian menunjukkan para pelawat amat perihatin dengan isu populasi spesies yang berkurangan. Para pelawat sedia membayar untuk mempertingkatkan kadar daripada berterusan kepada kurang berterusan. Bagi blok pengurusan pula, sejumlah 64.3% responden memilih salah satu alternatif yang lebih tinggi dari yuran masuk pada keadaan semasa (*status quo*). Kajian menunjukkan para pelawat amat mengambil berat tentang kadar kawalan keselamatan. Para pelawat sedia membayar untuk mempertingkatkan kadar daripada sederhana kepada peringkat yang lebih tinggi.

Anggaran lebihan pengguna adalah sebanyak RM31.76 untuk pelawat asing dan RM8.80 untuk pelawat tempatan yang menggambarkan nilai faedah yang dapat dinikmati oleh pelawat apabila berada di taman. Taman Negara Bako dinilai dengan mendarab bilangan pelawat asing (32344) dan pelawat tempatan (13112) dengan kesediaan membayar untuk melawat Taman Negara Bako. Hasil kajian menunjukkan anggaran jumlah nilai ekonomi Taman Negara Bako pada tahun 3013 ialah sebanyak RM1.9 juta.

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I certify that a Thesis Examination Committee has met on 5 May 2014 to conduct the final examination of Thalany Kamri on her thesis entitled **“Economic Values of Conservation and Management Attributes in Bako National Park, Sarawak, Malaysia”** in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the students be awarded the degree of Doctor of Philosophy.

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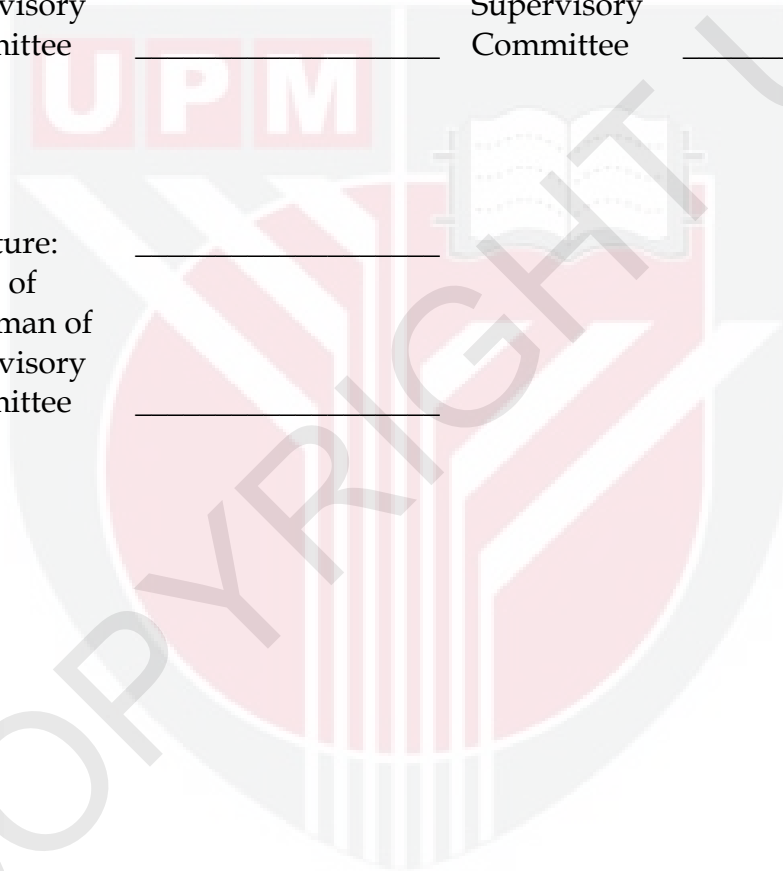


TABLE OF CONTENTS

		Page
	ABSTRACT	ii
	ABSTRAK	iii
	ACKNOWLEDGEMENTS	v
	APPROVAL	vi
	DECLARATION	viii
	LIST OF TABLES	xiii
	LIST OF FIGURES	xv
	LIST OF ABBREVIATIONS	xvi
	CHAPTER	
1	INTRODUCTION	1
	1.1 Introduction	1
	1.2 Importance of Valuation	3
	1.3 Problem Statement	4
	1.4 Research Objectives	5
	1.5 Significance of Research	6
	1.5.1 Visitors	6
	1.5.2 Literature	6
	1.5.3 Bako NP and the State of Sarawak	7
	1.6 Organisation of Thesis	7
2	BACKGROUND OF STUDY AREA	9
	2.1 Overview of Sarawak	9
	2.2 Ecotourism Activities and Facilities	11
	2.3 Bako National Park	13
	2.3.1 History	13
	2.3.2 Management	14
	2.3.3 Accessibility	20
	2.3.4 Visitors Attraction	20
	2.3.5 Threats	24
	2.4 Studies Done in Bako NP	25
	2.5 Conclusion	26
3	LITERATURE REVIEW	27
	3.1 Total Economic Value	27
	3.2 Theoretical Framework	28
	3.2.1 Utility Theory	29
	3.2.2 Consumer Theory	30
	3.2.3 Random Utility Theory	31
	3.2.4 Welfare Theory	31
	3.3 Stated Preference Techniques	35
	3.3.1 Contingent Valuation Method	36
	3.3.2 Choice Modelling	40

3.4	Choice Experiment	45
3.4.1	Assignment of Attributes and Levels	46
3.4.2	Choice of Experimental Design	50
3.4.3	Questionnaire Design	51
3.4.4	Data Sampling	53
3.4.5	Data Collection	54
3.4.6	Analytical Framework	55
3.4.7	Welfare Measures	59
3.5	Advantages of Choice Experiment	59
3.6	Application of Choice Experiment on Recreational Sites in Malaysia	60
3.7	Conclusion	61
4	METHODOLOGY	64
4.1	Generation of Attributes and Levels	62
4.2	Experimental Design	69
4.3	Survey Question Format	69
4.4	Pilot Test	70
4.5	Target Population and Sampling	70
4.6	Attitudinal Information of Visitors	71
4.6.1	Exploratory Factor Analysis	71
4.6.2	Confirmatory Factor Analysis	72
4.7	Contingent Valuation Method	75
4.8	Choice Experiment	77
4.9	Conclusion	82
5	RESULTS AND INTERPRETATION	83
5.1	Data Preparation	83
5.2	Descriptive Characteristics of Sample	84
5.2.1	Socio-demographic Profile of Respondents	84
5.2.2	Characteristics of Visits	87
5.2.3	Perception on Attributes When Visiting National Park	88
5.3	Factor Analysis	94
5.3.1	Normality	94
5.3.2	Absence of Multicollinearity	95
5.3.3	Factors of Visits	96
5.3.4	Exploratory Factor Analysis	99
5.3.5	Confirmatory Factor Analysis	102
5.4	Contingent Valuation	103
5.4.1	Empirical Result of Logit Model	104
5.4.2	Discuss of Regression Results	106
5.4.3	Measure of Regression Model of Fit	107
5.4.4	Willingness to Pay Estimation	108

5.5	Choice Experiment	108
5.5.1	Basic Model	114
5.5.2	Conditional Logit Model	116
5.5.3	Mixed Logit Model	126
5.5.4	Results of Marginal Values	136
5.5.5	Consumer Welfare	140
5.5.6	Odds Ratio	141
5.5.7	Conclusion	144
6	SUMMARY AND CONCLUSION	146
6.1	Summary of the Study	146
6.2	Summary of Result Analysis	147
6.3	Policy Implication	148
6.3.1	Policy Maker	148
6.3.2	National Park Authorities	149
6.3.3	Visitors	150
6.4	Limitations and Future Research	151
6.5	Conclusion	153
	BIBLIOGRAPHY	154
	APPENDICES	
	BIODATA OF STUDENT	
	LIST OF PUBLICATIONS	