

**CONTINGENT VALUATION STUDY ON PUBLIC  
GOODS: A CASE OF TUNKU ABDUL RAHMAN  
MARINE PARK**

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**SCHOOL OF BUSINESS AND ECONOMICS  
UNIVERSITY MALAYSIA SABAH  
2007**



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JUDUL: KAJIAN MENGENAI KESANGGUPAN PELAWAT MEMBAYAR PRODUK  
AWAM: TAMAN TUNKU ABDUL RAHMAN, KOTA KINABALU.

IJAZAH: SARJANA PENTADBIRAN PERNIAGAAN

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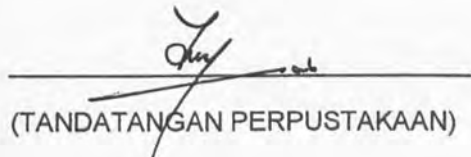
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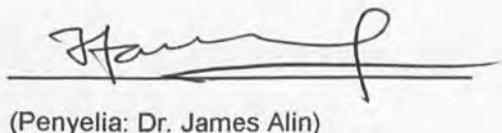
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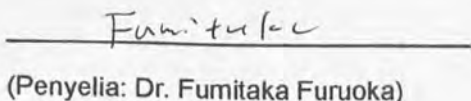


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## DECLARATION

The materials in this dissertation are original except for quotations, excerpts, summaries and references, which have been duly acknowledged.

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## ABSTRACT

One of the purposes of protected areas and other areas for the conservation of biodiversity is to maintain conditions of security that would enable areas to persist and sustain effective management in the long term. Dangers and threats to this persistence or sustainability may take on many forms, and include long term threats such as lack of sustainable financing and public support for conservation and many other indirect risks. This study was analyzed by using various statistical analyses, which investigate the psychographics and behavioral profiles of local and foreign visitors who are willing to pay for public goods-Tunku Abdul Rahman Marine Park, moderated by demographic factors. Results showed that visitors' attitude proves to have the most significant influence on visitors' willingness to pay for public goods. Visitors' value on safety measures in the marine park also significant in determining their willingness to contribute and pay for public goods. Managerial implications for Tunku Abdul Rahman Marine Park and suggestions for future research are discussed.



## **ABSTRAK**

### **KAJIAN MENGENAI KESANGGUPAN PELAWAT MEMBAYAR PRODUK AWAM: TAMAN TUNKU ABDUL RAHMAN, KOTA KINABALU**

*Salah satu sebab dan kepentingan taman pemuliharaan adalah untuk memelihara hidupan liar dan menjaga keselamatan hidupan ini untuk masa yang panjang. Kerosakan dan bahaya yang disebabkan oleh aktiviti manusia seperti kekurangan bantuan kewangan dan awam kepada pemuliharaan taman-taman akan melaratkan kerja-kerja pemuliharaan. Kajian ini dianalisis dengan menggunakan beberapa analisis statistik, untuk mengkaji psikografi dan profile tingkahlaku pelawat-pelawat tempatan dan asing yang mempunyai kesanggupan untuk membayar produk awam, dengan factor demografi sebagai pembolehubah (moderator). Keputusan yang diperolehi daripada analisis SPSS menunjukkan bahawa tingkahlaku pelawat terbukti mempunyai pengaruh yang paling ketara terhadap kesanggupan membayar untuk produk awam. Isu keselamatan juga menunjukkan pengaruh yang tinggi dalam kesanggupan membayar untuk produk awam. Implikasi terhadap pengurusan Taman Tunku Abdul Raman, Taman Sabah, serta cadangan-cadangan untuk kajian di masa hadapan turut dibincangkan dalam kajian ini.*

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## CHAPTER 1

### INTRODUCTION

#### 1.1 Overview

User fees and charges have been gaining increased consideration as natural areas that have become more popular for recreational use. Fees can provide an important source of revenue for managers, particularly in developing countries where protected areas are traditionally under-funded (Swanson 1992). The rationale supporting user fees is that most foreign visitors travel to remote protected areas to experience their very isolation and unspoilt natural features. The visitors should be willing to contribute to the costs of maintaining such conditions (Bunting 1991). Entrance fees paid by marine park visitors to enter marine protected islands constitute a significant potential revenue source to finance conservation of marine lives and islands. Environmental impacts are often neglected, the view being that severely indebted countries cannot afford to pay attention to environmental costs until other problems are resolved. According to Enger and Smith (2004), environmental problems can be "corrected" once a country has reached higher income level, but it ignores the growing realization that environmental impacts frequently cause international problems. Many countries under pressure from their debt crisis feel forced to overexploit their natural resources rather than manage them sustainably (Enger and Smith 2004). Income from entrance fees from all the marine parks of Sabah was calculated at RM466,734 in year 2003. The lowest income was generated from Tiga Island at RM2,584 in year 2003 while the highest income was generated by Tunku Abdul Rahman Park at RM202,075 in year 2003, which was almost half of the total income from all marine parks in Sabah (Cabanban and Nais 2003). This



potential income from marine protected areas provides a huge economic return to government and society, in helping them in tourism development and as well as marine conservation.

## 1.2 Research Problem

Tunku Abdul Rahman Park was found by the State Government in collaboration with the Sabah National Park Trustees when the State Government firstly declared a major portion of Gaya Island and the whole Sapi Island as Tunku Abdul Rahman National Park. The islands were left largely undisturbed, and in 1974 the government gazetted the Tunku Abdul Rahman Park as Sabah's second National Park. Named after Malaysia's first Prime Minister, Tunku Abdul Rahman, the five islands of the Tunku Abdul Rahman Park (TAR) and their surrounding seas have long been a haven of peace and tranquility.

The islands protect the natural vegetation, animals and the underwater gardens of the coral reefs that provide visitors with endless hours of enjoyment. TAR encompasses five islands: Gaya, Sapi, Manukan, Mamutik and Sulug. Initially the area of the Park was 8,900 acres including the sea and then in 1979, the Park was extended to include the three adjacent islands namely Mamutik Island, Manukan Island, and Sulug Island. Together the five islands and the surrounding seas cover a total area of approximately 12,185 acres.

The marine national park is only 20 minutes by boat from Kota Kinabalu, Sabah's Capital and Malaysia's youngest city. The TAR Park is a major landmark of the city of Kota Kinabalu and is famous for the its crystal clear waters and beautiful corals, just a stone throw away from our capital. The park is very popular for activities such as sun bathing, BBQ, diving, fishing, snorkelling, kayaking, windsurfing and recently para-sailing which offers visitors a great bird's eye view of the city and the islands with Mt. Kinabalu as the back drop.





**Table 1.1: State Parks in Sabah**

Park	Year Gazetted	Area (Hectares)	Major Habitat Type
1) Kinabalu Park	1964	74370	Lowland, Montane, Subalpine.
2) Tunku Abdul Rahman Park		Broaden area: 4929 (Land broaden)	
a. Gaya Island	1974	1483.19	Marine, Island Vegetation.
b. Sapi Island	1974	10.12	
c. Manukan Island	1979	20.64	
d. Sulug Island	1979	8.09	
e. Mamutik Island	1979	6.07	
3) Turtle Islands Park	1977	1740	Marine.
4) Pulau Tiga Park	1978	Broaden area: 15864 Land broaden: 1500	Marine, Island Vegetation.
5) Tawau Hills Park	1979	27972	Lowland, Submontane.
6) Crocker Range Park	1984	139919	Lowland, Montane.

Sources: Adapted from Nais, J. and Ali, L., 1991

The Sabah Parks Board of Trustees, also been known as Sabah Parks manages six state parks totalling 2,265.61sq km, nearly 3.6% of Sabah's total land area. Sabah Parks is governed by State's Ministry of Tourism and Environmental Development. Table 1.1 represents all ecological habitats in Sabah, ranging from marine, coastal, lowland, montane to subalpine habitats. Tunku Abdul Rahman was established in 1974 as a park



For conservation of diverse marine organisms and began to receive visitors from outside the islands. The Sabah Parks has its origin in the establishment of the Kinabalu National Park in 1964 under the National Park Ordinance, No.5/1962 (Lamri, Sidek and Nais 1989). The 1962 Ordinance was then replaced by the National Park Enactment, 1977, and which was later superseded by the Parks Enactment No.6/1984. After that, all National Parks were reconstituted as State Parks.

As the parks encompass an area large enough for biological viability, the conservation approach is to let the processes and evolution of ecosystem take place naturally (Nais and Ali 1991). An unregulated usage by man of the marine environment poses serious threats to continued availability or sustainability of marine resources (Portiah Wan Hamzah 1991). To avoid environmental debacle, there has been an increasing call for the Government of Sabah to synchronize development policy with environmental responsibility. But in some instances, certain life forms are seriously threatened that active conservation measures have to be taken. The country boasts Tunku Abdul Rahman Marine Parks, a marine ecosystem so diverse it has become the playground for tourists from all corners of the world and receiving the highest number of visitors and major direct or indirect uses of marine resources have caused undesirable destruction towards the environment and marine conservation. These problems require a good management of public facilities and human resources in the parks.

Problems related to overexploitation, destructive techniques of usage, and environmental problems are as follows:-

- 1) Littering at Marine Parks
- 2) Visitors' Safety at Marine Parks
- 3) Adequacy of Park Facilities-tables and chairs, showers, toilets, rubbish bins
- 4) Overcrowded in Certain Islands
- 5) Walking on/Breaking coral



- 6) Touching Coral/Shells
- 7) Disturbing Marine Life
- 8) Boat Anchoring on Corals
- 9) Spear Fishing
- 10) Collecting Coral/Shells

This research seeks to characterize the demand for MPAs in Tunku Abdul Rahman Park by determining those factors that help to influence the value and perceptions that tourists' place on MPAs. It is expected that this exercise will provide guidance for the implementation of practical fee structures to ensure that Tunku Abdul Rahman Parks' natural environment, particularly its marine environment are adequately maintained. Tunku Abdul Rahman Parks are currently being marketed as an eco-tourist destination and given the growing trends in nature-based tourism, there is no doubt that increasing numbers at environmental attractions of TAR Parks will impose a significant amount of pressure on these fragile environments.

For the purpose of this study, the Contingent Valuation Method (CVM) was popularly chosen among economists as a tool in estimating the value of a wide variety of environmental goods, these include air and water quality, outdoor recreation and landscape and wildlife conservation (Hanley 2000). CVM requires conducting a survey whereby tourists in this instance were asked to express their willingness to pay (WTP) for the use of MPAs in TAR Parks, what they know about environmental good which depends on the information they are provided within CVM survey, their own preferences, their budget constraints, and the availability of substitutes and complements. The maximum WTP for an entrance fee to enter TAR Parks is defined as the proposed amount of entrance fee/conservation rate that respondents would agreed to pay in



consuming public goods. The maximum WTP is modelled as a function of nationality, age, gender, income, marital status, income, and level of education.

This research conducted consumer-based study with the aim to determine the characteristics of visitors who are willing to pay TAR Park in Sabah. It is typically focused on the relationship between willingness to pay and demographic characteristics, for example age, income and education level, and independent variables which is visitors' attitudes, values and TAR Park attributes. Hence the research question is, **"How much does visitors' attitude, visitors' values and product attributes influence willingness to pay for public goods-TAR Park"**

### 1.3 Rationale of the Study

In exploring for the factors that might affect the visitors willingness to pay for TAR Parks, in the context of this study is Tunku Abdul Rahman Park, off Kota Kinabalu. This research aims to investigate factors which influence visitors' willingness to pay a price premium for the public goods-TAR Park. The rate of entrance fee charged is comparatively lower than other Asian countries like Philipines: RM190-Foreigners and RM95-Locals; Indonesia: RM9.50; and Thailand: RM16.72-Foreigners and RM1.52- Locals (Lindberg and Halpenny 2001). According to Lindberg and Halpenny (2001), the entrance/conservation fee is charged as high as RM 399 in Cocos Island, Costa Rica. One way to finance marine reserves is to charge an entrance fee. Revenues thus collected would help cover maintenance and enforcement costs of marine conservations. It reports the results of a survey study among local and foreign tourists on their maximum willingness to pay (WTP) to enter TAR Parks. Furthermore, it identifies factors that affect the level of WTP. Finally, it estimates potential revenues from entrance fee collection. Hence, this study serves as a partial fulfilment of the requirements for the degree of Masters in Business Administration.



#### 1.4 Scope Of the Study

The scope of this proposed study will look into the visitors' willingness to pay for TAR Park. Therefore, the researcher has proposed the five islands of TAR Park- Gaya, Sapi, Manukan, Mamutik and Sulug as the case study. The proposed site has been chosen based on the fact that TAR Park received the highest number of tourists among all the marine protected areas in Sabah. The recent statistics collected from Sabah Parks authority shown that there is an increasing number of tourists visited TAR Parks over the Year 2004, 2005, and 2006, respectively 172,072, 150,449, and 185,032. At TAR Park, there is a steady increase in the number of both Malaysians and foreign tourists. Plus, due to the fact that TAR Park is being so close to Kota Kinabalu, the Capital of Sabah, it becomes the greatest tourist attraction for visitors from overseas as well as the local people who wish to relax and enjoy the sunshine, beautiful beaches and crystal clear water. The visitors that will be the subject of interest in this proposed research would be both local and foreign visitors who visit TAR Park, who spend their money to pay for the conservation fees especially for the Marine Life. The reasons as to why both local and foreign visitors aged 18 and above will be the respondents of this research is due to the fact that the conservation fees charged are as low as RM10.00 for foreign visitors and RM3.00 for local visitors aged 18 and above. Table 1.2 indicated the past pricing rates from the earliest 1980s to present time. In the early days of 1980s, the entrance fees charged are RM2 for both Malaysian and Non-Malaysian adults, while RM1 for them aged 18 years and below. After 10 years or more, in the late 1990s, the entrance fees are charged separately for Malaysian and Non-Malaysian visitors. Foreign visitors are charged RM3 for adults, and RM2 for child below 18. After the announcement of Kinabalu Park, Sabah as World Heritage Site in year 2002, the entrance fees are as stated in Table 1.2. The entrance fee in present time is RM10 for foreigner adults and RM3 for local adults. Over the years, the number of visitors has shown a great difference





of almost five times, but the entrance fee has only increased by a minimal percentage. Within more than 20 years of time, according to Cabanban and Nais (2003) and Sabah Parks (2007), the number of reported visitors has increased tremendously recording 35,000 visitors in 1988 and 185,032 visitors in 2006 (increased of 150,032 visitors). Table 1.3 summarized all the fee charges for additional services provided by TAR Parks.

**Table 1.2: Entrance Fees Charge for Visitors to Tunku Abdul Rahman Park**

Year	Malaysian	Non-Malaysian
1980s	RM2 (Adult) RM1 (Below 18 Years Old)	
1999-2001	RM2 (Adult) RM1 (Below 18)	RM3 (Adult) RM2 (Below 18)
2002-till present	RM3 (Adult) RM1 (Below 18)	RM10 (Adult) RM6 (Below 18)

Source: Sabah Parks 2007

**Table 1.3: Various Fee Charges For Visitors to Tunku Abdul Rahman Parks**

Type of Tickets/Services	Tourist Classifications	Entrance Fee (RM) per person	
		18 and above	18 and below
Conservation Fees	Local Tourists	3.00	1.00
	Foreigners	10.00	6.00
Glassbottom Boat Rental Fees	Local Tourists	4.00	2.00
	Foreigners		
Camp Site Rental Fees	Local Tourists	5.00	2.00
	Foreigners		
Rental Fee for Barbeques set	Local Tourists	5.00	5.00
	Foreigners		
Jetties Landing Fees	Ships-RM10.00		
	Boats-RM5.00		
Manukan Island Conference Room	RM100.00 per day		

Source: Tunku Abdul Rahman Park, 2007

**Table 1.4: Price Classifications of Various Tour Agents and Operators**

<b>Tour Agents/Operators</b>	<b>Port of Departure</b>	<b>Price per pax (Local/Foreigner)</b>
1. Sabah Holiday	Ex-Mainland Jetty, Sutera Harbour, Shangri-la	RM138
2. Nature Heritage Travel & Tours S/B	Ex-Mainland Jetty, Sutera Harbour, Shangri-la	RM195
3. Borneo Ultimate Sports Adventure Tours S/B	Ex-Mainland Jetty	RM160
4. Survival Outdoor Quest	Ex-Shangri-la, Nexus	RM150 +RM50 for transportation from Nexus
5. Real Holidays S/B	Ex-Mainland Jetty, Sutera Harbour, Shangri-la	RM165
6. Summer Cruise Holiday	Ex-Mainland Jetty (ferry boat)	RM25 per pax- Foreigner RM23 per pax-Local RM22 per pax- Student

7. Dynamic Holiday Cruise S/B	Ex-Mainland Jetty (ferry boat)	RM24 per pax-Adult RM13 per pax-Child
8. Aparu Holiday Tours S/B	Ex-Mainland Jetty (speed boat)	RM31 per pax-Adult RM20 per pax-Child
9. Sea Quest Tours and Travel S/B	Ex-Sutera Harbour,	RM40 per pax-Adult RM24 per pax-Child
10. Tanjung Aru Tours and Travel S/B	Ex-the Marina, Shangri- La's Tanjung Aru Resort	RM40 per pax-Adult RM20 per pax-Child

Note: Extra RM30 for transportation from Hotel located around KK city.

Tour Inclusive (Item 1-5): Terminal Fee, Boat Transfer, Entrance Fee to park, BBQ Lunch. Item 6-10: Boat Fees/Charges only.

Source: Pamphlets collected at counters in KK Ferry Terminal, Tour Agents Offices, and Hotels.

A tour agent is a business that links buyers of travel and tourism services with appropriate sellers, providing information and advice to buyers, as well as selling services (Frost 2004). WWF-UK has been keen to ensure that ecotourism projects it supports are well positioned in terms of the international market from an early stage. They have signed a contract with the specialist operator Discovery Initiatives to develop and promote tours to field projects in China



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