

# Title of paper: Issues, Challenges and Opportunities of Designing Sustainable Financing for Natural Environment and Ecosystem



MOHD SHAHWAHID HAJI OTHMAN, PhD

MSR INSPIRES PROFESSIONAL SERVICES



# Abstract

- Forms of sustainable financing is introduced by reviewing a selected conservation financing schemes currently practiced. The objectives that these schemes are intended to achieve and issues faced are highlighted. An attempt at formulating a conservation trust fund for sustainable ecosystem management in Sabah is presented in the context of the form of the conservation financing, source of financing, payment mechanism, value and how collected, and governance of the trust fund. The challenges and opportunities at potentially introducing such a fund are discussed. In light of all these, the implications to sustainable financing of wetland conservation are discussed.



# CONTENT OF PRESENTATION

- CONSERVATION FINANCING
- EXPERIENCE FROM GoM-UNDP-GEF Project's on the biodiversity conservation in multiple use ecosystem in Sabah Malaysia [Study on the feasibility to introduce an ecosystem conservation fee targeting visitors to Sabah.](#)
- CHALLENGES AND OPPORTUNITIES OF A CONSERVATION TRUST FUND FOR SUSTAINABLE ECOSYSTEM MANAGEMENT IN SABAH
- IMPLICATIONS TO SUSTAINABLE FINANCING OF WETLAND CONSERVATION

# Conservation Finance

“the practice of raising and managing capital to support land, water, and resource conservation.”

## **Conservation financing options vary**

- by source from public, private, and nonprofit funding organisations
- by type from loans, to grants, to tax incentives, to market mechanisms; and
- by scale ranging from federal to state, national to local

# Conservation Financing Scheme or Initiatives in Malaysia:

- Malua Bio Bank & Malua Trust, Sabah
  - MAS Voluntary Carbon Offset Fund, Pahang
  - Malaysian Palm Oil Council – wildlife conservation trust
  - New England Power – Innoprise
  - INFAPRO and INIKEA
  - Perak Forestry Department and the Perak Hydro Renewable Energy Corporation (PHREC)

# SABAH'S GIFT TO THE WORLD

[illegible][illegible]

No	Company Name	BCCs Unit	Price per BCC (USD)	Total (USD)	Date of purchase
1	Maxland Sdn. Bhd	10,000	10	100,000.00	Aug. 2008
2	Hormat Jadi Sdn. Bhd.	5,000	10	50,000.00	Aug. 2008
3	Bakalayan Sdn. Bhd.	1,500	10	15,000.00	Aug. 2008
4	Lebih Hasil Sdn. Bhd	5,000	10	50,000.00	Aug. 2008
5	Adam Leather (UK)	30	20	600.00	Mar.2010
6	Tetley Tea (UK)	500	6.50	3,250.00	Feb.2011
7	The Kimberly-Clark (UK)	1,000	10	10,000.00	Jan.2012- Dec.2013
8	Retail - On Line Sales	401	10	4,010.00	Jan.2012- Dec.2013



# MAS Voluntary Carbon Offset Fund, Pahang [launched 2008-?]

## MAS Voluntary Collection and Carbon calculator : YOUR PAYMENT FOR YOUR CARBON FOOTPRINT

The offset is not included as an option in the online booking process. Customers must click-through from a 'Towards a Greener Future' section on the home online booking page. A carbon calculator works out the amount of CO2 emissions for a particular trip and a sum calculated to offset the emissions. The amount is then paid for by credit card. Customers can make separate voluntary contributions.

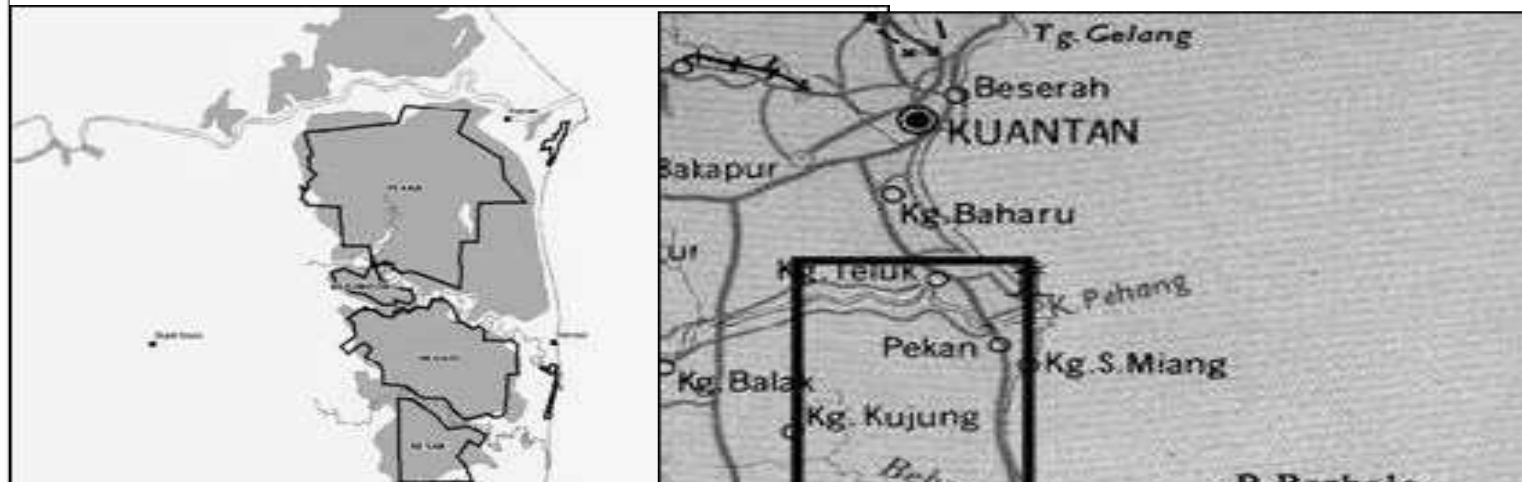


The screenshot shows a web browser window with the MAS logo and the text 'TOWARDS A GREENER FUTURE'. Below this, there are links for 'Carbon Calculator', 'Make a One-off Contribution', and 'FAQ'. The main section is titled 'Calculate your Carbon Offset'. It features a form with 'From' and 'To' dropdown menus (set to 'AMSTERDAM (AMS)' and 'KUALA LUMPUR (KUL)' respectively), radio buttons for 'One Way' and 'Round Trip' (with 'Round Trip' selected), and a 'No. Pax' input field set to '1'. To the right of the form is a table showing calculated CO2 emissions and amounts for different trip types. A 'Proceed' button is located at the bottom right of the table.

Delete	Destination	Trip Type	No. Pax	CO2	Amount
<a href="#">Delete</a>	KUL-AMS	One Way	1	1.217 tonnes	MYR38.93
<a href="#">Delete</a>	AMS-KUL	One Way	1	1.078 tonnes	MYR34.50
<a href="#">Delete</a>	AMS-KUL	Round Trip	1	2.295 tonnes	MYR73.43



South-East Pahang (87,045 ha)



# Examples & Initiative

## Peninsular Malaysia

### PES Mechanism in Perak

- Perak Forestry Department and the Perak Hydro Renewable Energy Corporation (PHREC) had voluntarily agreed for PHREC to make payment of **0.25% of revenue to the Perak Forestry Department** for ensuring provision of watershed services in terms of the quality and quantity of the flow
- Renewable Energy Act 2011 has given PHREC the mandate to act as the master developer for all mini-hydro projects in Perak, a total of 31 sites with an estimated combined installed capacity of 240MW.
- PHREC has entered a Joint-Venture agreement with Gunung Hydropower in 2012 to develop a mini hydro power plant, with 10MW installed capacity, in Perak.



# New Initiative: Feasibility to introduce an ecosystem conservation fee targeting Sabah visitors

(Reference: Paper presented at Heart of Borneo 2017 Conference, K.K. October 2017)

- **Study on Willingness of Visitors to Sabah to Contribute towards Ecosystem**
- **Conservation Fee**

One component of GoM-UNDP-GEF Project's on the biodiversity conservation in multiple use ecosystem in Sabah Malaysia  
A study was undertaken to provide information on

**Whether visitors are willing to pay the proposed ecosystem conservation fee,**

**The amount they are willing to pay**



# Visitors Survey at



Airport			
	Kota Kinabalu	Tawau	Sandakan
Percentage of Sampling according to Airports	67%	22%	11%
Categories of Tourist			
Non-Sabahan Malaysian	268	88	44
Southeast Asia (ASEAN)	91	30	15
Northeast Asia	135	43	19
Oceania	8	4	5
European	25	9	5
North American	4	3	4
Middle East	0	0	0
Grand Total	531	177	92

- 95% of visitors come to Sabah through airports, => the study relied on interviews of visitors leaving Sabah's three main city international airports which are at
  - Kota Kinabalu Airport
  - Sandakan Airport
  - Tawau Airport
- The distribution of 800 samples is based on regional proportions of visitor arrivals into Sabah in 2016



# Contingent Valuation Method

- Would you be willing to contribute to an **ecosystem conservation fee**?

The fees collected will:

- **Complement** government funding for carrying out conservation activities at the ecosystems and landscape level
- Be pooled into a ecosystem conservation **trust account** that will be managed by the State of based on best practices such as transparency and accountability, where activities and achievements will be presented in annual reports
- Be used to - *“To fund conservation activities at the ecosystems and landscape level to maintain and increase existing benefits of ecosystem services”*. These activities are grouped into the following categories:
- **I. Expand Protected Areas**
- **II. Restore resilience and functionality of ecosystems**
- **III. Reduce habitat fragmentation by enhancing connectivity**
- **IV. Support and incentivise best management practices**

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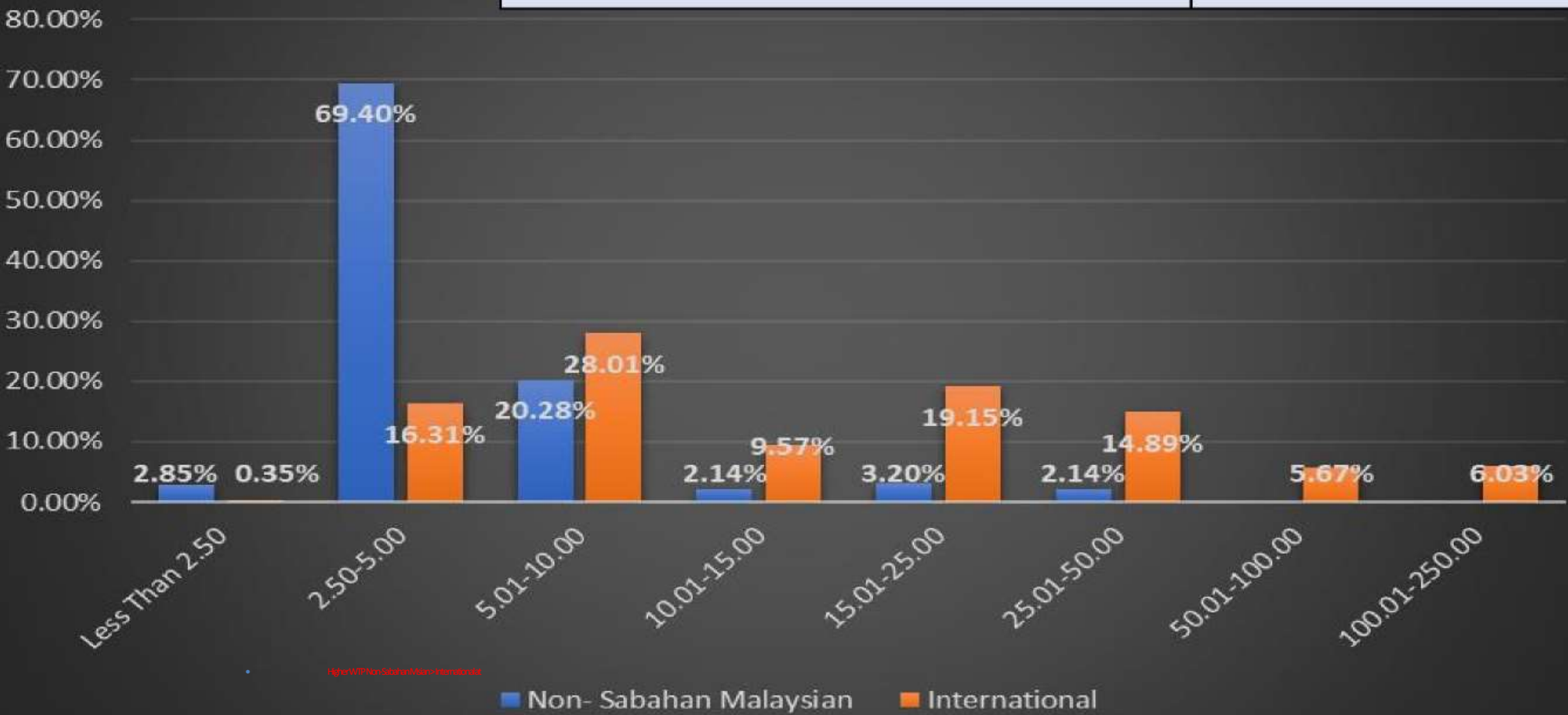


Sabah's terrestrial and marine resources above provide various benefits to

•WTP  
among Visitors

Type of visitors	Average
Non-Sabahan Malaysian	RM4.42
International	RM19.52
All visitors	RM11.97

WTP Distri



## •WTP by Purpose of Visit

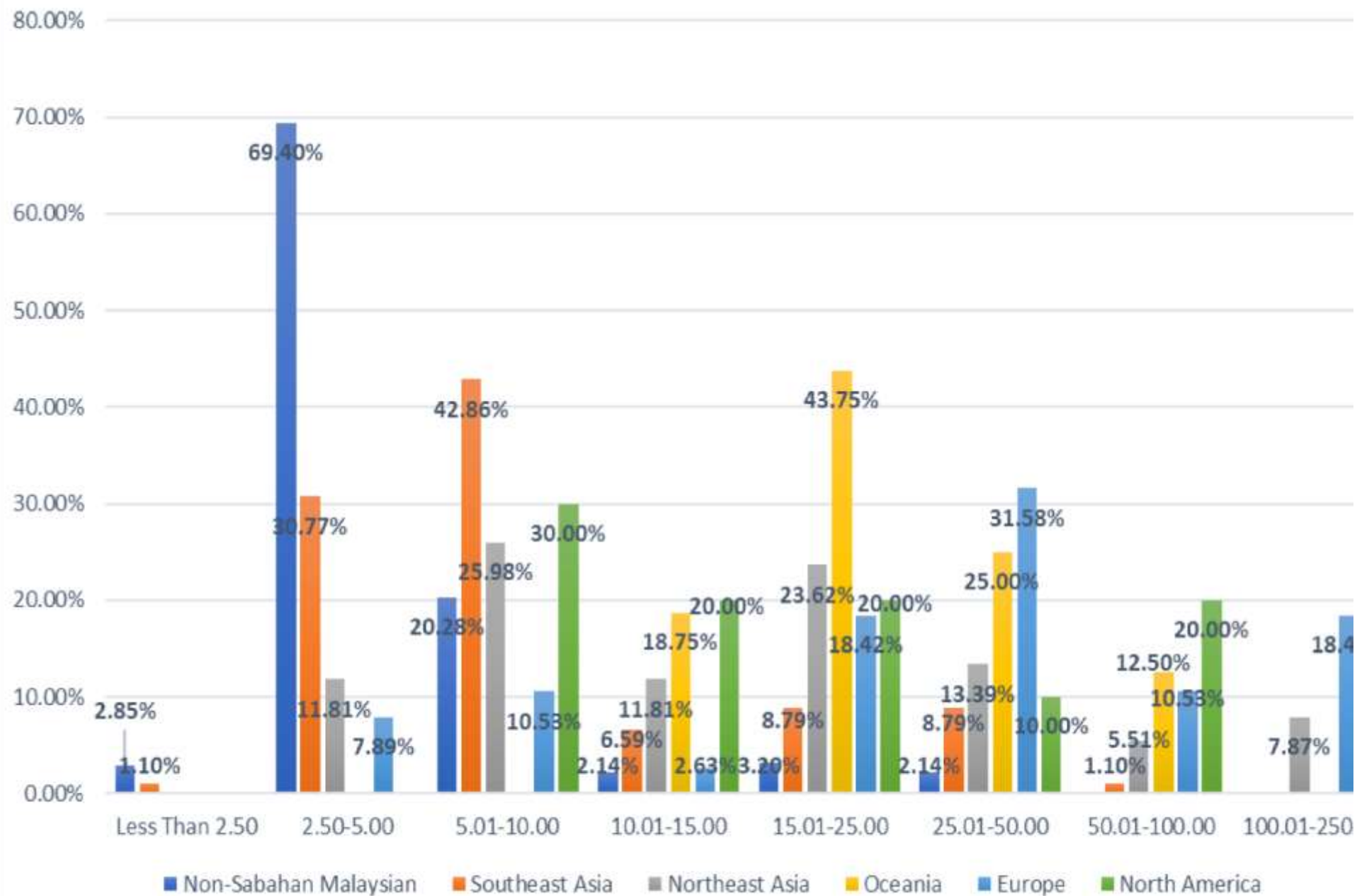
- The lowest average WTP was for official work purposes of RM7.28
- Followed by visits to friends and relatives of RM7.96
- Highest average WTP : for purpose of visiting tourism sites of RM13.00
- Above averages by purposes of visit, vary when broken down by regions.

<b>Official work</b>	RM 7.28
<b>Visiting family and friends</b>	RM 7.96
<b>visiting tourism site</b>	RM 13.00

Type of tourists	Reasons for Visiting Sabah	Average (RM)
Non-Sabahan Malaysian	Official work	4.55
	visiting friends	3.91
	visiting tourism site	4.32
International	Official work	16.08
	visiting friends	15.71
	visiting tourism site	19.72

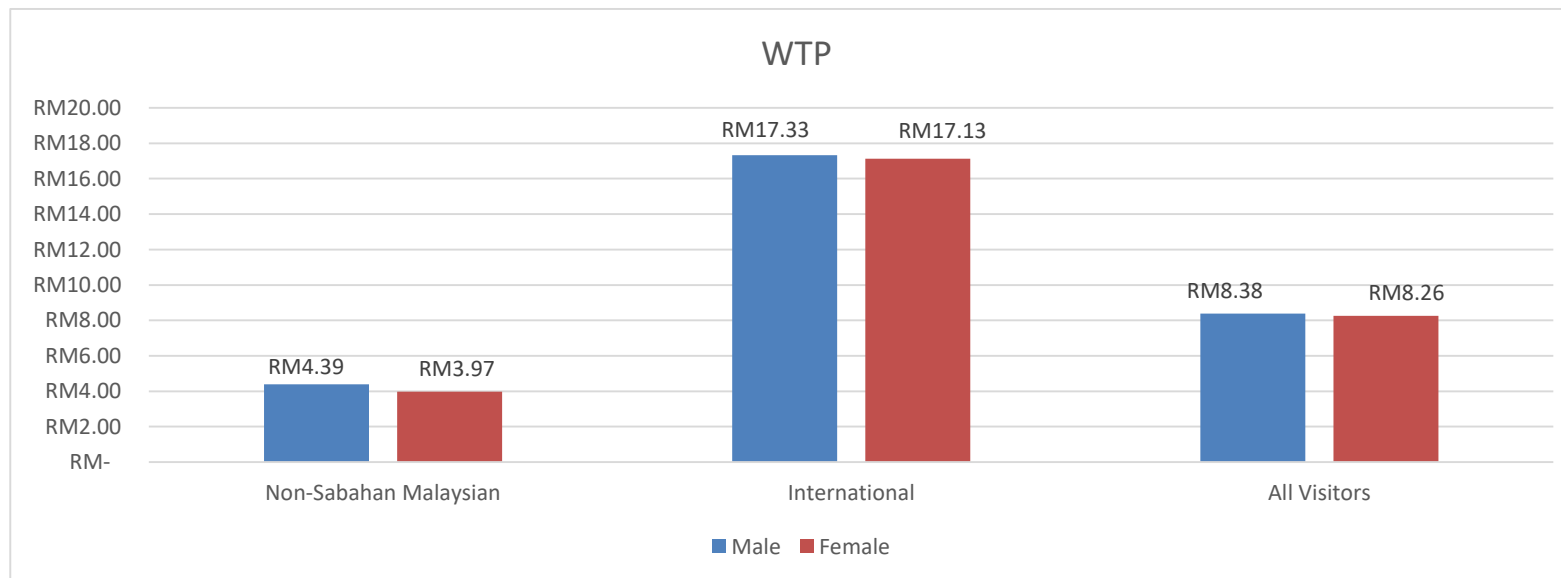


## WTP Distribution Based on Region of Origin



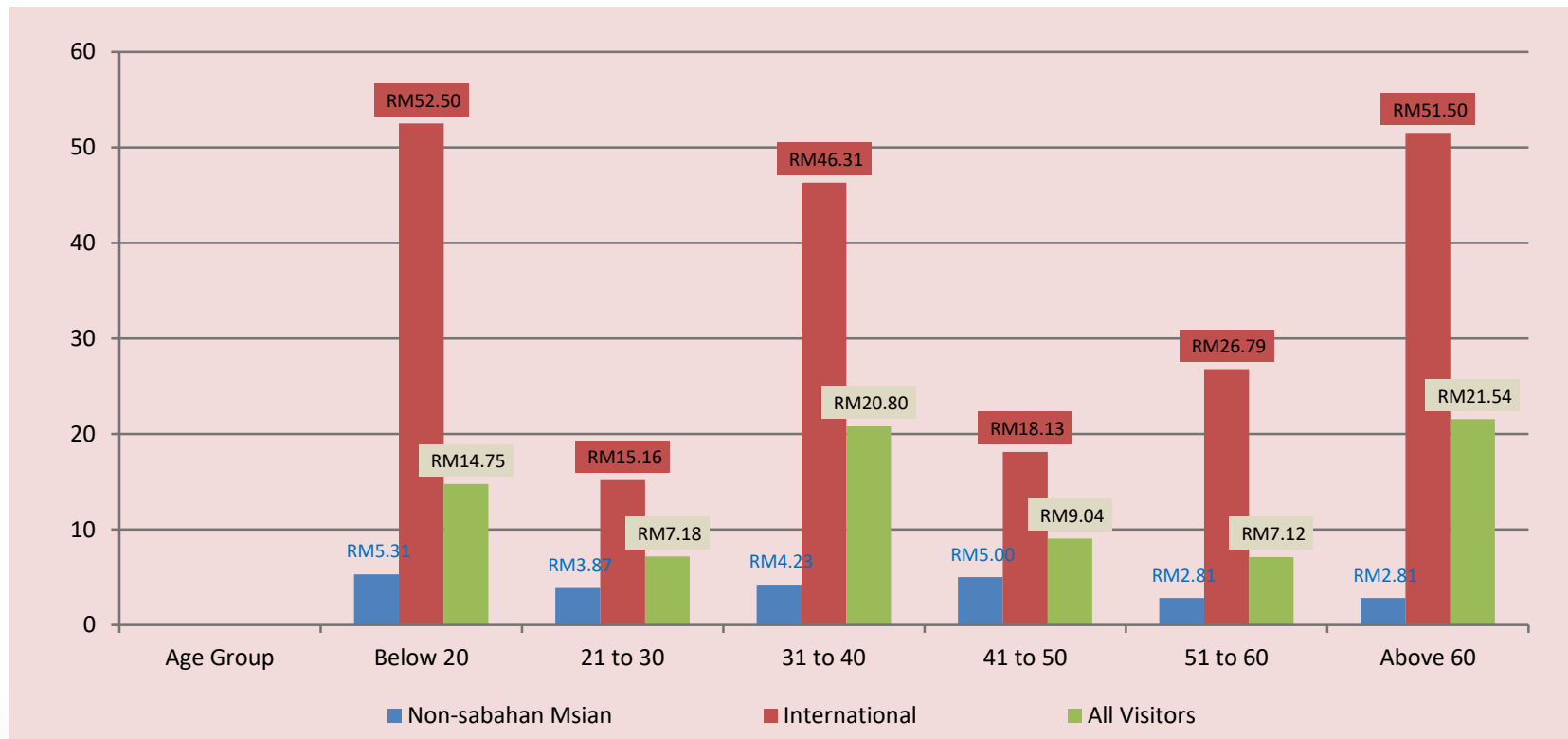
# OTHER INFLUENCES: GENDER ON WTP

- Similar WTP patterns among gender:
  - Non-Sabahan Malaysians
    - Males : RM4.39    Females: RM3.97
  - International Tourists
    - Males : RM17.33    Females : RM17.13



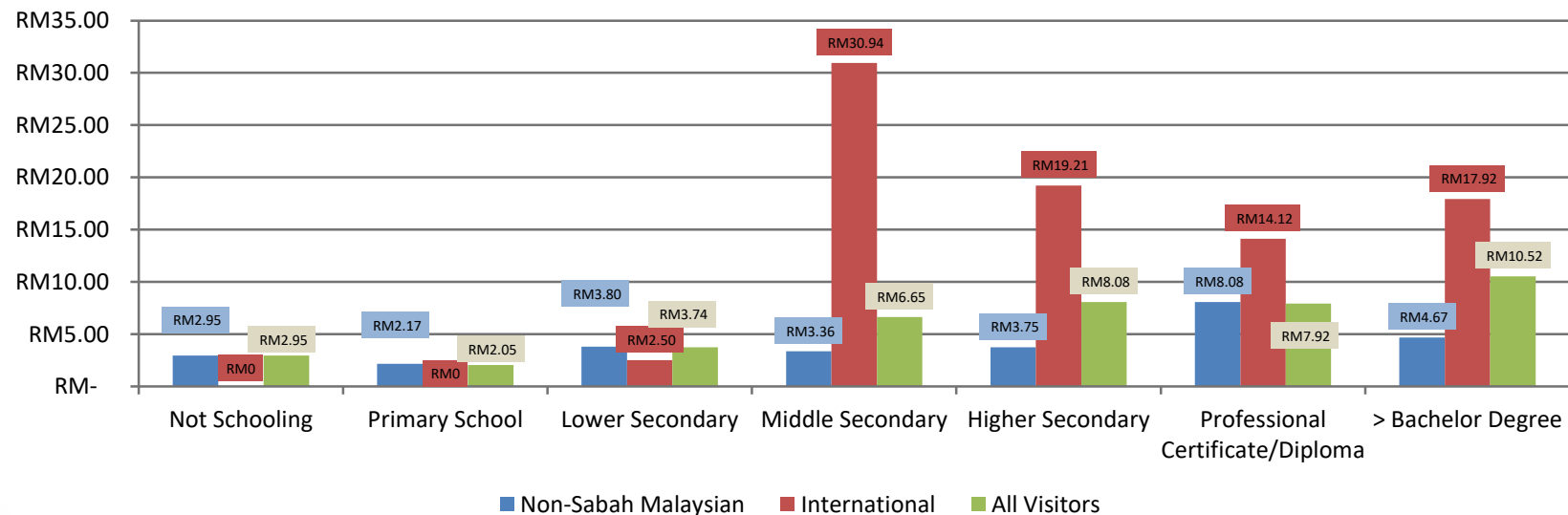
# OTHER INFLUENCES: AGE ON WTP

- No definite pattern of WTP with age.
- Higher Average WTPs Among
  - < 20 years old: International RM52.50 and N-S Malaysians RM14.75
  - 31-40 years : International RM46.31 and N-S Malaysians RM20.80
  - > 60 years : International RM51.50 and N-S Malaysians RM21.54.

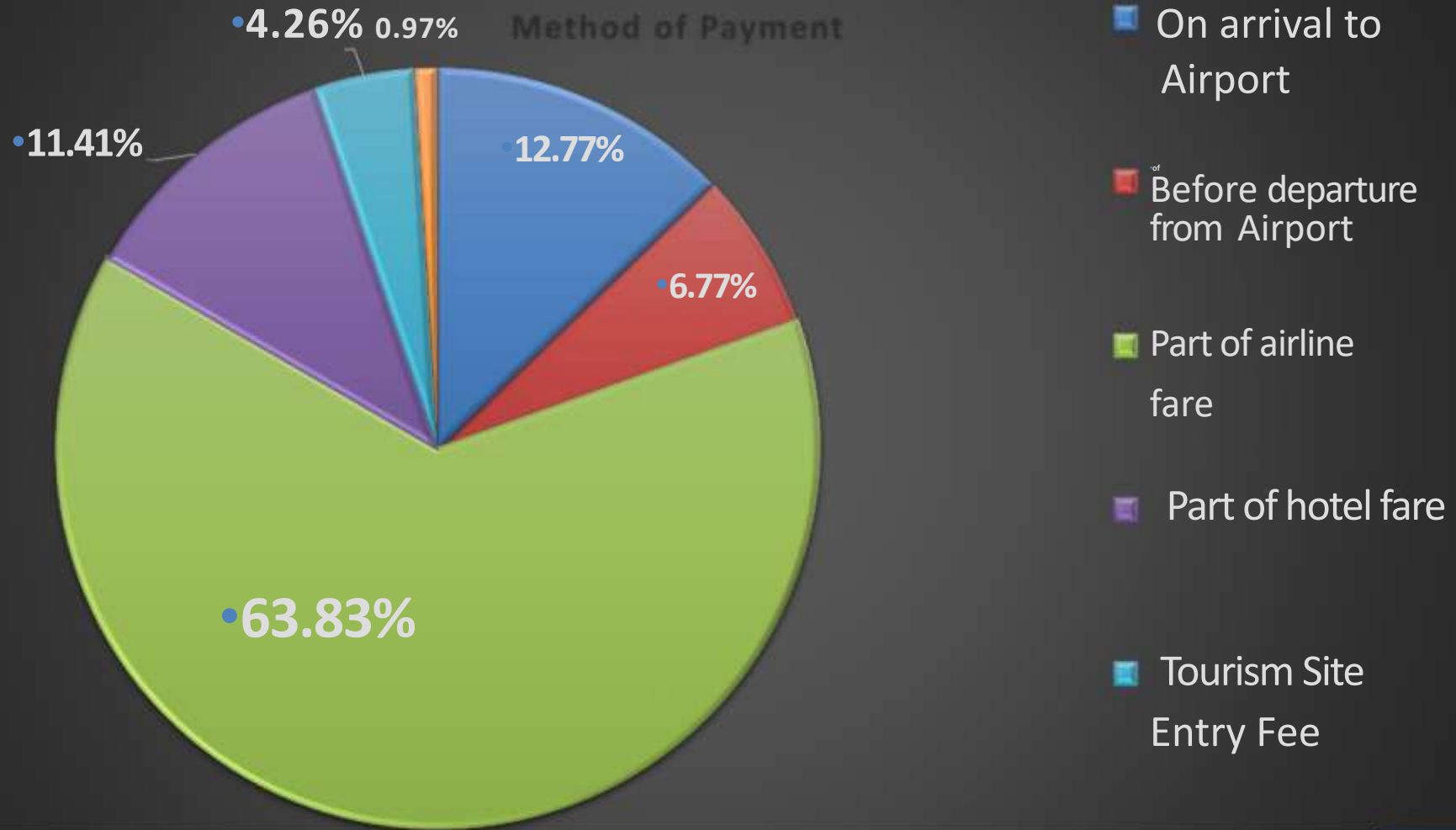


# OTHER INFLUENCES: EDUCATION ON WTP

- Non-Sabahan Malaysians with
  - Professional certificates and a degree: Ave WTP
    - [RM4.67 to RM8.08]
  - Lesser Educated : Average WTP
    - WTP < RM3.80.
- International visitors with
  - Middle Secondary Schooling & Above : Ave WTP
    - [RM14.12 to RM30.94]



## • Feedback: Method of Payment Collection



## •Additional Feedbacks Received

No.	Other comments	%
1	Agree with the Conservation Fee idea however the state & country have a major issue with mismanagement of funds. High degree of transparency is needed.	46.15%
2	A mechanism to differentiate tourists (locals & internationals) working and travelling frequently to Sabah.	23.08%
3	Actions needed to improve the cleanliness of Sabah & upon tourists polluting the environment.	15.38%
4	State government needs to advertise and give more information on the conservation fee before implementation.	7.69%
5	The conservation fee might lead people to other states or countries with similar tourism attraction.	4.62%
6	There have been a lot of new plantation projects occurring at and nearby what used to be forest reserve. This will give negative impacts to Sabah's ecotourism industry.	3.08%



# • Concluding Findings

**Overall, majority of visitors were willing to pay for the conservation fee (70.83%).**

**International tourists willing to contribute more** compared to Non-Sabahan Malaysian visitors.

Due to

- **the strength of their currency and**
- **the reasons of coming to Sabah.**

It is recommended to have **two separate conservation fee rates**


- **Non-Sabahan Malaysian Visitors**
- **International visitors.**

# • Estimation of Potential Revenue

- **Rates and Scenarios based on Average WTP**
  - Non-Sabahan Malaysian Visitor: Average WTP of RM 4.42
    - Suggested to round up to RM5.00
  - International visitors: Average WTP of RM19.52
    - Scenario 1: RM10.00 - closer to SE & NE Asian visitors' WTP
    - Scenario 2: RM15.0
    - Scenario 3: RM20.00 - closer to European and Australian/New Zealand visitors's WTP
- **Potential Aggregate Fee Collections from all visitors based on 2016 visitor arrival**
  - Scenario 1: RM22.8 million
  - Scenario 2: RM28.4 million
  - Scenario 3: RM34.1 million



# ISSUES

- **SELECTION OF CONSERVATION TRUST ACCOUNT / FUND RATHER THAN A TAX OR LEVY**
  - **GOVERNANCE BY A BOARD OF TRUSTEE TO SET POLICIES ON USE OF CONSERVATION TRUST ACCOUNT / FUND**
  - **LEAN ADMINISTRATION TEAM ON COLLECTION AND ADMINISTERING OF THE ECOSYSTEM CONSERVATION FEE**
  - **GUIDELINES ON THE USE OF THE ECOSYSTEM CONSERVATION PROGRAMME GRANT**
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# HOW COULD PES SUPPORT sustainable financing of wetland conservation

- **ESTABLISH A PES PROGRAMME DEDICATED TO WETLAND CONSERVATION**
  - **OR**
  - **SEEK A SHARE OF CONSERVATION TRUST FUND THROUGH APPLICATION FOR AN ECOSYSTEM CONSERVATION PROGRAMME GRANT**
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- **THANK YOU**