Journal of Agribusiness Management and Development, Vol 3 No 2, September 2022, Page 1-12
ISSN 2775-0248 (Print) ISSN 2775-0256 (Online)
Available at https://journal.ugm.ac.id/v3/JAMADEV/

WILLINGNESS TO DONATE FOR CONSERVATION AT MOSSY FOREST, CAMERON HIGHLANDS

Al–Arif Abdul Rahim[1], Farahani Jamlus[1], Nitanan Koshy Matthew[1,2]*

[1] Department of Environment, Faculty of Forestry and Environment, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia

[2] Institute of Tropical Agriculture and Food Security (ITAFoS), Universiti Putra Malaysia, 43400 UPM, Serdang, Selangor, Malaysia

Corresponding Author: nitanankoshy@upm.edu.my

Received : 23 April 2022 Accepted : 25 July 2022 Published : 25 September 2022

ABSTRACT

Socio-economic study was conducted at Mossy Forest, Cameron Highlands regarding the willingness to donate among the visitors who have visited the place. Four bidding values (RM3, RM5, RM7, and RM9) were given according to sets of questions. The objectives of this study are to identify the socio-demographic and characteristics of the visits of visitors; to determine the level of environmental awareness and attitude of visitors and to determine the willingness to donate by the visitor in Tanah Rata for the conservation of Mossy Forest in Cameron Highlands. From the finding, majority of the visitors (68) that were interviewed was first-time coming to Mossy Forest and the majority (97) would like to visit again. From the interview session, 82 of them are willing to donate to the nature conservation of Mossy Forest. For regression between willing to donate and bid, the relation shows negative interaction (inversely proportional) where the bidding value increase, the willingness to donate decreased.

Keywords: *Awareness, attitude, willingness to donate*

INTRODUCTION

Mossy Forest of the Cameron Highlands in Pahang, moss-covered tree trunks with gnarly roots vie for space amidst thick growths of lichens and ferns in a scenic landscape. The forest, in Gunung Brinchang, is one of Pahang's most popular tourist destinations, but the picturesque forest's very popularity has been threatening some of its flora. Ramakrishnan Ramasamy, president of the local environmentalist group Regional Environmental Awareness of Cameron Highlands, blames tour operators. Rather than keep the flocks of tourists on well-trodden designated walkways to stop them from trampling all over sensitive species of moss, local tour operators often allow visitors to roam freely on the mossy carpets covering the ground (Clean Malaysia 2016). Due to this issue, few actions need to be taken in order to maintain and preserve the natural resource value and since Mossy Forest is usually being visited by visitors rather than the locals, initiative like paying or donating money for conservation purposes is always at argument of who should pay more (Balmford and Whitten 2003).

Since this place is an attraction to the tourist and visitors and they usually give higher impact to the Mossy forest thus concept of willingness-to-pay (WTP) or willingness-to-donate is focus towards these group more than the locals (Schuhmann et al. 2019). WTP is the amount of people that are willing to pay for their own benefit and also how much they are willing to pay (Haveman and Weimer 2001). Maximum WTP is the monetary income-related measure that provides a value to the utility increasing 'better management' of environmental resources as a public good. It is the maximum price people would pay to obtain that improvement of quality (Rodella et al. 2019).

However, the WTP is influenced by a number of independent variables, including socio-economic characteristics, individuals' preferences and knowledge about environmental issues (Piriyapada and Wang 2015). Also, since the higher level awareness on environmental impact nowadays, people have higher tendency to pay more or willing to pay for the sake of environmental conservation and also for the sake of natural resource preservation for the future (Freeman et al. 2019). Of course, to invite and to promote the visitors to pay or donate, first the purpose of payment or donation must be transparent such as list out or show a structural plan the purpose and the money flow so that people will not hesitate to donate or pay (Schuhmann et al. 2019; Balmford and Whitten

2003). The objectives of this study are to identify the socio-demographic and characteristics of the visits of visitors; to determine the level environmental awareness and attitude of visitors and to determine the willingness to donate by visitor in Tanah Rata for the conservation of Mossy Forest in Cameron Highlands. For this study, we approached the visitors through questionnaire regarding Mossy Forest by asking one would be willing to pay for a given amount (BID), to indicated the visitors if they would or not be willing to pay the selected amount and interviewed their knowledge on Mossy Forest and their level of environmental awareness.

METHOD

Study Area

The study areas are located at Mossy Forest, Cameron Highlands. The mossy forest is a natural environment that grows only at the highest elevations of Cameron Highlands and other mountain ranges across Malaysia. At such heights, low-level clouds in the sky driven by winds, blanket the forests with constant mist and moisture - creating an ideal biotope for moss, ferns, lichen and orchids. Visitors can explore the mossy forest through a boardwalk 2km before the peak of Gunung Brinchang, beginning from a clearing along the main road. The visitors will be given questionnaire and will be selected randomly by the four groups that will conduct the survey based on their checkpoint stated on the study area (VisitMalaysia.info).

Questionnaire Design

There are 5 distinctive elements in the designed questionnaire. The focus on the features of visitation of the respondents visiting the Mossy Forest; the visitors' satisfaction level on the facilities of the Mossy Forest; and their level awareness and attitude on environmental issues are asked. Lastly, visitors' willingness to donate for conservation and demographic social data on the visitors themselves are acquired. 4 sets of questionnaires are used for obtaining primary data collection. The only differences being the number of bids asked for the willingness to pay for an entrance fee at Mossy Forest. The bid amount starts from RM3.00 followed (by an incremental of RM2.00) until RM9.00. The language used in the questionnaire bi-lingual in English and Malay.

The reliability test is conducted by researchers to find out the extent to which it is without bias and to ensure a consistent measurement across time and various items (Sekaran and Bougie 2003). In the same report Sekaran (2003) noted that it is a measure of the stability and consistency with which the instrument measures the concept. The study went on to elaborate that the inter-item consistency reliability tests the coefficient for multi-point scaled items by looking at the Cronbach's alpha value. The higher the coefficients, the better the measuring instrument (Sekaran and Bougie 2003). A minimum level of 0.7 for the Cronbach's alpha value was suggested by Nunnally (1978) (Nunnally and Bernstein 1978).

Cronbach' alpha is used to measure of internal consistency of a questionnaire or survey that is made up of multiple Likert – type scale and items. Cronbach's alpha reliability co-efficient normally ranges between 0 and 1. The closer the Cronbach's alpha coefficient is to the value of 1.0; the greater the internal consistency of items in the scale. The rules for of categories for the Cronbach's alpha reliability co-efficient value is by following the rules provided by the George and Mallery (2003).

Therefore, the pilot study has been completed and a reliability test has been performed in this study on the questions involving the Likert scale (Section 2, 3 and 4 on the Visitor's Satisfaction on Facilities; Environmental Awareness; and the Visitor's Willingness to Donate respectively). To serve the requirement of fieldwork per se, an expert validity was conducted with one of the lecturer, Dr. Velan Kunjuraman of Universiti Malaysia Kelantan (UMK) that specializes in community based tourism to validate the questionnaire.

Sampling Procedures

In the present study, the stratified sampling technique is used in determine the samples which are the visitors from locals and internationals. The respondents are randomly chosen around the study area. The 6 group members in Group D will give the questionnaire base on the nationality of the visitors either they are local visitors or international visitor. The assumption for local and international ratio of samples is 70:30 from total number of samples. The respondents for questionnaire are those who are 18 years old and above.

Data Collection

One time survey, the questionnaire will be given on the 4th April to 7th April 2019 (Thursday– Sunday) around Cameron Highland and at Mossy Forest.

Survey Methods

In this study, the self-administered questions (SAQ) method is chosen. Research has shown that respondents are more likely to report sensitive or illegal behaviour when they are

allowed to use a SAQ format rather than during a personal interview on the phone or in person. For this reason SAQs are commonly supplement face-to-face interviews when researchers are concerned about social desirability issues (Lavrakas 2008). Before the questionnaire is given to the respondents, short briefing will be provided to ensure the respondents understands the purpose of the questionnaire.

Sample size

The sample size of the respondents is chosen based on the Zikmund table as shown in appendix 4. The table shows that 135 respondents will be chosen if the total visitors based on year 2018 are 15,760 (Department of Forestry Cameron Highland). Hence: 15,760 should be referred in Zikmund Table where; a total of around 316 samples are required (Zikmund-Fisher et al. 2010).

Table 1. Selected tables for determining sample size when the characteristic of interest is a proportion

Population Size (n)	Sample Sizes for a 95% Confidence level when Parameter in Population is Assumed to be over 70% or under 30% Reliability			
	±1% Points	±2% Points	±3% Points	±5% Points
1,000	a	a	473	244
2,000	a	a	619	278
3,000	a	1,206	690	291
4,000	a	1,341	732	299
5,000	a	1,437	760	303
10,000	4,465	1,678	823	313
20,000	5,749	1,832	858	318
50,000	6,946	1,939.	881	321
100,000	7,465	1,977	888	321
500,000	7,939	2,009	895	322

Nonetheless, to suit the fieldworks purposes several adjustments are necessary to derive at a fair amount of precise sample required. This follows aspects mentioned below:

1. The survey is held for only 3 days
2. Assuming a usual data collection requires minimum of 7 days which is evident in past studies: the ratio of present data collection to actual in days: (3:7).

Hence, to smoothen the process of gaining respondents during actual survey for the purpose of fieldwork the adjustments following (no. 2) can be used to prorate the actual sample required during the fieldwork. (Nonetheless; such adjustment is not applicable for actual survey for (final year project as well; master of PhD research). The actual sample required for the fieldwork:

3/7 x (316): 135 only

However, efforts to collect more samples are definitely encouraged providing sufficient time and circumstances. For further justifications regarding the fieldwork per se: the use of qualitative research would definitely balance the required sample of 135.

Data analysis

Data will be analysed using the SPSS Statistical Package for Social Sciences (version 21). The basic analysis begins with the data cleaning. Then, the descriptive statistical analyses are conducted. Among the types of descriptive analyses conducted in the study are the frequency distributions, cross tabulations and the central tendency comprising the mean, median and mode measure of spread using the variance and standard deviation etc. The willingness to donate by the visitors will be estimated using the Stata 15 software.

RESULTS AND DISCUSSION

Demographic Profile

Socio-demographic section comprises of different part which were gender, age, race of respondents, education level occupation and also monthly income as shown in **Table 1 and 2.** The different parts are important in knowing the background of the respondents. For the gender section, findings showed that 51.8% (N=57) of the respondents are female while the rest 48.2%

are male. Data for age can be categories into different categories; where the majority of respondents (56.4%, N=62) is in the age range of 21-30; 31.8% (N=35) respondents the age in the range of 31-40; 4.5% of the respondents from the range of less than 21 (N=5) and also 41-50 (N=5). For the age of more than 50 years old (N=3), it contributes to the least percentage of 2.7%. For the race aspect, more than half of the respondents (86.4%, N=95) are Malay; 8.2% (N=9) are Chinese; 4.5% (N=5) are Indian; and 0.9% (N=1) in the "Others" category. For education, 37.3% (N=41) of the respondents had a Diploma or equivalent; 34.5% (N=38) had Bachelor's Degree; 24.5% (N=27) had High School papers; and 3.6% (N=4) had Master's degree. For occupation, 31.85 (N=35) are from civil service; 26.4% (N=29) are self-employed; 22.7% (N=25) are student; whilst for retired and unemployed group, both are 0.9% (N=1). The respondents are highly diverse in monthly income. The majority (32.4%, N=23) stated that the monthly income is in the range of RM2001-RM3000, followed by RM1001-RM2000 (29.6%, N=21); less than RM1001 (15.5%, N=11), RM3001- RM4000 (12.7%, N=9) and RM4001- RM5000 (4.2%, N=3). For the monthly income aspect, there are 39 missing data because the respondents chose not to disclose their monthly income level.

Table 1. Socio-demographic profile of respondents

Demographic profile	**N=110/ (100%)** **(N)**	**(%)**
Gender		
Male	53	48.2
Female	57	51.8
Age		
Less than 21	5	4.5
21-30	62	56.4
31-40	35	31.8
41-50	5	4.5
More than 50	3	2.7
Race of respondents		
Malay	95	86.4
Chinese	9	8.2
Indian	5	4.5
Others	1	.9
Education level		
High school	27	24.5
Diploma or equivalent	41	37.3
Bachelor Degree	38	34.5
Master Degree	4	3.6
Occupation		
Student	25	22.7
Self-Employed	29	26.4
Government Sector	35	31.8
Private Sector	19	17.3
Retired	1	0.9
Unemployed	1	0.9

Note: N = Sample size

Table 2. Monthly Income Level of Respondents

Income Level	**Frequency**	**Valid Percentage (%)**
Less than RM1001	11	15.5
RM1001-RM2000	21	29.6
RM2001-RM3000	23	32.4
RM3001-RM4000	9	12.7
RM4001-RM5000	3	4.2
More than RM5000	4	5.6
Total	71	100.0

*Missing data 39, the respondents choose not to answer their monthly income level

Section 1: Visitors Features

Overall feature of visitation of Mossy forest recorded at **Table 3.** About 61.8% (N= 68) of the respondents are first timers in Mossy Forest; while another 38.2% (N=42) had been here before. For the number of times visited since 5 years ago, data showed that about 45.5% (N=50) of respondents have visited the forest twice; 21.8% (N=24) were the first-time; 14.5% (N=16) were the third-time; and 2.7% (N=3) have visited 11 times. The percentage obtained for this part is from the total times visited by adding the current visiting and also the previous visits. About 51.8% (N=57) respondents knew about Mossy Forest from internet; 45.5% (N=50) knew from friend/relatives; 30.9% (N=34) from medias; while 1.8% (N=2) from book/guides; and 0.9% (N=1) from exhibitions. For others option, about 6.4% (N=7) obtained the information from the local people and also via job and research purposes. The total number of respondents answered is more than 110 because this question allowed the respondents to answer more than 1.

Table 3. Characteristic respondent visited Mossy Forest (N=110, 100%)

Items	Frequency	Percentage (%)
First time visit Mossy Forest		
Yes	68	61.8
No	42	38.2
Number of time visited Mossy Forest in 5 years period		
1	24	21.8
2	50	45.5
3	16	14.5
4	12	10.9
5	1	0.9
More than 5	7	6.3
Source of information about Mossy Forest		
Internet	57	51.8
Media	34	30.9
Friend/Relatives	50	45.5
Books/Guide	2	1.8
Exhibition	1	0.9
Part of travel packages	5	4.5
Others	7	6.4
Main reasons for visiting Mossy Forest		
Rest & Relaxation	43	39.1
Sport & Recreation	46	41.8
Education	13	11.8
Research Purpose	7	6.4
Others	1	0.9
Payment for entrance fee		
At the counter provided	89	80.9
Accompanying on trip		
No one	1	0.9
Partner	14	12.7
Family/ Relatives	30	27.3
Friends	49	44.5
Co-workers	15	13.6
Others	1	0.9
Status in Cameron Highlands		
Local Visitor	110	100
International Visitor	0	0
Revisiting Mossy Forest		
Yes	97	88.2
No	13	11.8

Note: N = Sample size

Section 2: Visitor Satisfaction Level On Facilities Provided

This section focuses on surveys to assess the level of respondents' satisfaction with the facilities provided at Mossy Forest. The proposal

is to show minimum and maximum scores for respondents' satisfaction levels in scores of 1 to 5.

Visitor satisfaction level on facilities provided recorded at **Table 4** above. This section focuses on surveys to assess the level of option. Next, the main reasons visiting Mossy Forest was cited for sport and recreation (41.8%, N=46); about 39.1% (N=43) for rest and relaxation; 11.8% (N=13) for education; 6.4% (N=7) for research purposes while 0.9% (N=1) for other reasons such as job purpose (tour guides). For the entrance fee, majority of respondents pay at the counter provided (80.9%, N=89); while the rest were part of travel packages (19.1%, N=21). About 44.5% (N=49) of respondents visited Mossy Forest while accompanying by friends; 27.3% (N=30) with family/friends; 13.6% (N=15) by co-workers; while 0.9% (N=1) on alone and others. For the status of visitor in Cameron Highland, all of the respondents are local visitors (100%, N=110). For the part of revisiting Mossy Forest again the future; the majority of respondents (88.2%, N=97) stated that they will visit again in the future; while for the rest (11.8%, N=13) stated they don't want to visit in the future due to health, age factor, income factor and also it is enough to visit just once in a lifetime. respondents' satisfaction with the facilities provided Mossy Forest. The proposal is to show minimum and maximum scores for respondents'

Table 4. Respondents' satisfaction with the facilities provided at Mossy Forest (N=110).

Items	1	2	3	4	5	Mean
Safe tour area.	3 (2.7%)	6 (5.5%)	20 (18.2%)	68 (61.8%)	13 (11.8%)	3.75
Adequate signage.	4 (3.6%)	7 (6.4%)	37 (33.6%)	49 (44.5%)	13 (11.8%)	3.55
Trail area is clean.	3 (2.7%)	5 (4.5%)	24 (21.8%)	54 (49.1%)	24 (21.8%)	3.83
Trail is safe to use.	2 (1.8%)	2 (1.8%)	28 (25.5%)	60 (54.5%)	18 (16.4%)	3.82
The condition hut is safe for use.	3 (2.7%)	5 (4.5%)	25 (22.7%)	46 (41.8%)	31 (28.2%)	3.88
Spacious parking area.	5 (4.5%)	15 (13.6%)	31 (28.2%)	46 (41.8%)	13 (11.8%)	3.43
Forest area is clean and free from rubbish.	4 (3.6%)	11 (10.0%)	26 (23.6%)	42 (38.2%)	27 (24.5%)	3.70
The waste bin is sufficient.	6 (5.5%)	17 (15.5%)	45 (40.9%)	30 (27.3%)	12 (10.9%)	3.23

Note: (Likert scale 1-5 at the row-column indicates the "strongly disagree" to "strongly agree" on the level of satisfaction with the facilities provided at Mossy Forest.);
N= 110 (sample size).

Table 5. Respondents' awareness on environmental issues that may affect Mossy Forest (N=110).

Items	1	2	3	4	5	Mean
Air pollution.	27 (24.5%)	10 (9.1%)	32 (29.1%)	32 (29.1%)	9 (8.2%)	2.87
Surface and groundwater contamination.	23 (20.9%)	19 (17.3%)	37 (33.6%)	20 (18.2%)	11 (10.0%)	2.79
Urbanization and land use.	18 (16.4%)	19 (17.3%)	25 (22.7%)	33 (30.0%)	15 (13.6%)	3.07
Deforestation.	20 (18.2%)	12 (10.9%)	19 (17.3%)	38 (34.5%)	21 (19.1%)	3.25
Improper solid waste management.	19 (17.3%)	21 (19.1%)	31 (28.2%)	27 (24.5%)	12 (10.9%)	2.93
Greenhouse gas emissions and climate change.	20 (18.2%)	18 (16.4%)	28 (25.5%)	32 (29.1%)	12 (10.9%)	2.98
Inefficient natural resource management.	20 (18.2%)	15 (13.6%)	34 (30.9%)	28 (25.5%)	13 (11.8%)	2.99

Note: (Likert scale 1-5 at the row-column indicates the "very low" to "very high" level of awareness on environmental issues that may affect Mossy Forest); N= 110 (sample size).

satisfaction levels in scores of 1 to 5; where score 1 indicate strongly disagree while score 5 indicate strongly agree. For the first facility which is safe tour area, 61.8% of respondents' state they agree with the statement; 18.2% neutral; and 2.7% strongly disagree. For adequate signage, 44.5% agree; 33.6% neutral; and 3.6% strongly disagree. For clean trail area, 49.1% agreed; each 21.8% neutral and strongly agrees; while 2.7% strongly disagree. For the condition hut is safe for use, 41.8% agreed; 28.2% strongly agree; and 2.7% strongly disagree. For spacious parking area, 41.8% agree; 28.2% neutral; and 4.5% strongly agree. For the cleanliness of forest from rubbish, 38.2% agree; 24.5% strongly agree; and 3.6% strongly disagree. For the last item which is sufficient of waste bin, 40.9% neutral; 27.3% agree; and 5.5% strongly disagree. Overall data analysis about respondents' satisfaction with the facilities provided at Mossy Forest showed that the majority of respondent agree with the items Number 1 until 7 but for the items Number 8, majority of the respondent perceptions is neutral. The reliability statistic of the level of respondents' satisfaction with the facilities provided at Mossy Forest is 0.894 Cronbach alfa.

Section3: Environmental Awareness

environmental issues that may affect Mossy Forest. The proposal is to show minimum and maximum scores for respondents' awareness on environmental issues in scores of 1 to 5.

Section 3 environmental awareness focuses on surveys to assess the level of respondents' awareness on environmental issues that may affect Mossy Forest. The proposal is to show minimum and maximum scores for respondents' awareness on environmental issues in scores of 1 to 5; where score 1 indicated very low while score 5 indicate very high. For the first environmental issue which is air pollution, 29.1% of respondents state that the awareness level are average and above average; and 8.2% where the awareness level is very high. For surface and groundwater contamination, 33.6% level of awareness are at average level; 20.9% very low; and 10.0% very high. For urbanization and land use, 30.0% at above average level; 22.7% at average level; and 13.6% at a very high level. For deforestation, 34.5% are at above average level; 19.1% at very high level; and 10.9% below average. For improper solid waste management, 28.2% at average level; 24.55% at above average; and 10.9% at very high level. For greenhouse gas emission and climate change, 29.1% at above average level; 25.5% at average level; and 10.9% at very high level. For inefficient natural resource

Table 6. Respondents' actions towards managing the environment (N=110).

Items	1	2	3	4	5	Mean
I pick up and throw trash that I see in the street.	1 (0.9%)	4 (3.6%)	39 (35.5%)	48 (43.6%)	18 (16.4%)	3.71
I conserve water whenever possible.	0 (0.0%)	6 (5.5%)	38 (34.5%)	46 (41.8%)	20 (18.2%)	3.73
I turn off the lights when I leave the room.	0 (0.0%)	1 (0.9%)	31 (28.2%)	46 (41.8%)	32 (29.1%)	3.99
I buy energy efficient appliances and light bulbs.	0 (0.0%)	6 (5.5%)	36 (32.7%)	45 (40.9%)	23 (20.9%)	3.77
When I go to buy something, I make sure that it is the most environmentally friendly product on the market.	0 (0.0%)	16 (14.5%)	41 (37.3%)	35 (31.8%)	18 (16.4%)	3.50
I prefer to take public transport to get around.	13 (11.8%)	21 (19.1%)	43 (39.1%)	22 (20.0%)	11 (10.0%)	2.97
I practice recycling my waste.	7 (6.4%)	18 (16.4%)	43 (39.1%)	26 (23.6%)	16 (14.5%)	3.24
I buy recycled or used products.	13 (11.8%)	15 (13.6%)	50 (45.5%)	22 (20.0%)	10 (9.1%)	3.01

Note: (Likert scale 1-5 at the row-column indicates the "never" to "very often" level of actions towards managing the environment;
N= 110 (sample size).

management, 30.9% at average level; 25.5% at above average level; and 11.8% at very high level. On overall data analysis about respondents' awareness on environmental issues that may affect Mossy Forest, data showed that more than half of the respondents awareness level are at above average level for the items Number 1,3,4 and 6; while for the items 2,5,7 the rest of the respondent awareness level are at the average level. For the least percentage, majority of respondents' awareness level at the very high level for the items Number 1, 2, and 3, 5, 6, 7; and for the item Number 4, the least percentage of awareness level of respondents at below average level. The reliability of the respondents' awareness on environmental issues that may affect Mossy Forest is 0.932. According to the George and Mallery (2003), 0.932 is at the score category of > 0.9; which is considered excellent. Thus, it showed that questionnaire is reliable, and it indicates a high level of internal consistency of the questionnaire.

This sub-section focuses on surveys to assess the level of respondents' actions towards managing the environment. The proposal is to show minimum and maximum scores for respondents' actions levels in scores of 1 to 5.

This sub-section of environmental awareness focuses on surveys to assess the level of respondents' actions towards managing the environment. The proposal is to show minimum and maximum scores for respondents' actions levels in scores of 1 to 5; where score 1 indicate never while score 5 indicate very often. For the first scenario about picking-up and throwing trash that I see in the street, 43.6% of respondents stated that it is an often action by them; 35.5% sometimes; and 0.9% never. For conserve water whenever possible, 41.8% often; 34.5% sometimes; and 0% never. For turn off the lights when I leave the room, 41.8% often; 29.1% very often; and 0% never. For buying energy efficient appliances and light bulbs, 40.9% often; 32.7% sometimes and 0% never. For buying environmentally friendly products on the market, 37.3% sometimes; 31.8% often; and 0% never. For using public transport to get around, 39.1% sometimes; 20.0% often; and 10.0% very often. For practice recycling my waste, 39.1% sometimes; 23.6% often; and 6.4% never. For buying recycled or used products, 45.5% sometimes; 20.0% often; and 9.1% very often. Overall data analysis of respondents' action towards managing the environment (highest percentage), data showed the respondents action toward managing environment can be divided into two categories which are at often for items 1, 2, 3, 4 and at sometimes for items 5, 6, 7 and 8. For the lowest percentage majority of respondents' action toward managing the environment are never for items 1, 2, 3, 4, 5 and 7; while the rest at very often for items 5 and 8. The reliability of the respondents' actions towards managing the environment is 0.832. According to the George and Mallery (2003), 0.832 is at the score of groups > 0.8; that indicates good and acceptable study. Thus, it showed that questionnaire is reliable and showed high level of internal consistency.

Section 4: Willingness to Donate

Section willingness to donate (WTD) contained descriptive analysis of willingness to donate for the conservation of Mossy Forest and also the reason for donating as recorded at Table 7. For willingness to donate (WTD), a majority of 74.5% (N=82) of respondents are willing to donate; while for the rest 25.5% (N=28) are not willing to donate. For amount of bid, 26.4% (N=29) respondents receive RM3 for bid amount; 22.7% (N=25) for RM5; while 25.5% (N=28) for RM7 and also RM9 respectively. The reason

Table 7. Descriptive of willingness and reason to donate for conservation

Items	**N=110(100%)**	
WTD	**Frequency**	**Percentage (%)**
No	28	25.5
Yes	82	74.5
BID (RM) for WTP		
3	29	26.4
5	25	22.7
7	28	25.5
9	28	25.5
Reason willing to donate		
Partly used for Mossy Forest restoration, and another to help restore forest reserves elsewhere.	52	55.9
To ensure that Mossy Forest can be used for future generations	39	41.9

respondents are willing to donate due to Mossy Forest restoration and another part to help restore forest reserve elsewhere (55.9%, N=52); while the rest is to ensure that Mossy Forest can be used for future generation (41.9%) (N=39).

Table 8 showed the total amount (RM) respondents' willingness to donate. 39.1% (N=43) respondents are willing to donate in the range of RM1.00-RM5.00; 34.5% (N=38) in the range of RM6.00-RM10.00; while 4.5% (N=5) both in the range of RM11.00-RM15.00 and also for more than RM20.00; 2.7% (N=3) in the range of RM16.00-RM20.00; while sadly, 14.5% (N=16) of the respondents are not willing to donate at all.

On the reason of not willing to donate; 55.0% (N=33) are willing to donate the amount but in other ways; 31.7% (N=19) could not afford to donate; while 13.3% (N=8) for other reasons such as logical justifications of having used a lot of expenses to reach Mossy Forest (fuel consumptions) to bizarre explanations such as that nature is for all.

Respondents' interest in conservation of biodiversity recorded at Table 4.5.4 as above. For this part it has a Likert scale from 1 to 5. For items familiar and aware with conservation biodiversity, 38.3% of respondent are familiar; 34.5% quite familiar; and 5.5% are very familiar. For item watch or read documentaries related to nature and biodiversity, 48.2% choose sometimes; 22.7% frequently; and 1.8% never.

The Environment Awareness and Attitude have a positive co-efficient with the WTD. This positive relationship implies that increasing the awareness and attitude toward environment not only for the visitors but also for every individual will increase the WTD for conservation of the natural resources at Mossy Forest. Increasing awareness and attitude towards environment will make people appreciate the existence of nature and to protect them from destruction for future generations. Hence, the demand for goods would shift outwards for an increasing of environment awareness and attitude at Mossy Forest.

The incomes of the visitor have a positive co-efficient with the WTD and it is also significant at 1%. This positive relationship implies that increasing the income of the visitor would cause increasing WTD for the conservation of natural resources. Increasing the income level causes the people to have fewer problems financial-wise. Thus, they tend to donate for the conservation purpose. Hence, the demand for goods would shift outwards for an increasing of income of the visitor.

For education category, it has a positive co-efficient with the WTD. This positive co-efficient relationship indicated that increasing the educational level will increase the WTD. Increasing the educational level, people tend to expose more about everything including the importance of keeping flora and fauna sustainable for the future generations. Hence, they tend to motivate themselves to protect the nature and by doing so will increase the level of WTD. Increasing the education will increase the WTD, thus, the demand for goods would shift outwards for an education of the visitor.

Table 8. Total amount (RM) respondents willing to donate

Items	**N=110(100%)**	
Amount (RM)	**Frequency**	**Percentage (%)**
0	16	14.5
1.00 – 5.00	43	39.1
6.00 – 10.00	38	34.5
11.00 – 15.00	5	4.5
16.00 – 20.00	3	2.7
More than 20.00	5	4.5

Table 9. Reason to donate for conservation

	Frequency	**Valid Percentage (%)**
Willing to donate		
Partly used for Mossy Forest restoration, and another to help restore forest reserves elsewhere.	52	55.9
To ensure that Mossy Forest can be used for future generations	39	41.9
Others	2	2.2
Not willing to donate		
Could not afford to donate.	19	31.7
Willing to donate the amount but in other ways.	33	55.0
Other reasons	8	13.3

Note: The respondents can choose more than one answer

Age of the visitor also influence the WTD. The age of the visitor has a negative coefficient with the WTD. This negative relationship indicates that the young generations have an increase WTD toward the conservation. The younger generations tend to visit Mossy Forest for the sport and also recreational purposes if compared to the older generations that had less in number of visits to Mossy Forest; probably due to health conditions or they tend to go for other relaxing places. Thus, this factor will influence the WTD among the diversity of visitors' age. Hence, the demand for goods would shift inward for an increasing the age of the visitor.

Demand of Conservation has a positive co-efficient with WTD and it is significance at 1%. This relationship indicates that if the demand of conservation increases, it will increase the willingness of the people to donate for conservation purposes. Hence, the demand for goods would shift outwards for an increasing of demand of conservation at Mossy Forest.

Bid have a negative co-efficient with WTD and it is significance at 5%. This negative relationship indicates that increasing the amount of "bid" will decrease the WTD of the visitors. From that, we can say that the amount of bid influences the peoples' willingness to donate. People tend to donate with the amount that they think is enough for conservation purposes. But

Table 10. Respondents interest in conservation of biodiversity N=110 (100%)

	1(%)	**2 (%)**	**3 (%)**	**4 (%)**	**5 (%)**	**Mean Satisfaction**
Familiar and aware with conservation biodiversity	10.9	20.9	34.5	38.3	5.5	2.69
Watch or read documentaries relate to nature and biodiversity	1.8	20.9	48.2	22.7	6.4	3.12

Note: (Likert scale 1-5 at the row-column indicate the not familiar at all to very familiar); N= no. of respondents

Table 12. Poisson regression output

Variables	
(Constant)	.94808***
	(3.57)
Facilities	.21252***
	(3.82)
Awareness & Attitude	.27030D-04
	(.00)
Income	56375D-04***
	(3.95)
Education	00016
	(.35)
Age	-.00017
	(-.63)
Gender	-.00049
	(-.69)
Donate	.00088***
	(3.53)
Reason	.24213**
	(2.08)
Bid	-.00074**
	(-2.32)
Pseudo R^2	.1733440
Log likelihood function	-457.79459

Note: * Significant at 10 percent, ** Significant at 5 percent, ***Significant at 1 percent level and in brackets is t-statistic value whereas that without brackets is coefficient value of the variable

Table 13. Projection conservation value

	Coefficient	Std. error	z	p-value
WTD	**9.257513**	0.8572515	10.80	0.000

Total conservation value:
Coefficient (RM 9.30) × Total visitor a year (*15780)
= RM 146754
Note: *in the year 2018

they will shy away if there is a monetary figure stated on how much they have to donate. After all, donation comes purely from a divine heart. Hence, the demand for goods would shift inward for an increasing the amount of bid.

The relationship between willingness to donate (WTD) and bid can be analysed by using regression method. In order to analyse regression, software Stata (Version 15) have been utilized. The result showed at Table 12 that it stated that the P-value is 0.002 where it is below than 0.05. Hence, the P-value is significant. The measure of goodness of fit (Pseudo R2) is greater than 8%. For the co-efficient, the value is -0.1899612.

Thus, it indicates that the relationship between WTD and bid is inversely proportional. If the amount of bid higher, the level of willingness to donate will decrease. In the year 2018, total conservation value are RM145,937.60.

CONCLUSION

As presented above, we believe that environmental awareness is an important issue that has to be aware by the visitors and the local community. The study shows that visitors mostly are willing to donate for the conservation of the Mossy Forest in order to ensure restoration of the natural settings and that the forest can continue to amaze future generations. Besides, visitors should know about environmental awareness especially where they visit to make sure that they can maintain the cleanliness and use the facilities aptly. In fact, they can contribute to the conservation of the Mossy Forest not only by donating money but also by their manners and attitude.

The awareness regarding environmental issues can level up the efforts on conserving the natural resource and preserving the environment (Freeman et al. 2019). In developing countries with limited resources for environmental management, who pays the cost of conservation, and the amount, has been the subject of much debate (Schuhmann et al. 2019). It would be ideal if analysts could elicit willingness to pay amounts directly from individuals through structured conversations (Haveman and Weimer 2001). The reason why tourists or visitors also need to contribute in donating for conservation is most of the time the place is being visited by the visitors and also being disturbed by the visitor (Clean Malaysia 2016; Sardana 2019). Henceforth, the effort in ensuring the conservation of biodiversity is not just the role of the local community but also towards the visitors.

It is hoped that the findings will summarize what future researchers need to do to further motivate and increase the likelihood of willingness to pay (WTP)/ willingness to donate (WTD) amongst visitors in the future. After all, it is for the ultimate benefit of preserving our environment and nature for future generations to enjoy and amaze as much as we did in present.

ACKNOWLEDGMENTS

Acknowledgments are only written if they are considered important to be written as related to funding sources, data access and guidance. It can also be written to be presented to other parties who assist in completing the writing of the paper.

REFERENCES

Balmford, Andrew, and Tony Whitten. (2003). "Who Should Pay for Tropical Conservation, and How Could the Costs Be Met?" *Oryx* 37 (2): 238–50.

Clean Malaysia. (2016). "Big Trouble in Pahang's Mossy Forest." 2016. https://cleanmalaysia.com/2016/07/05/mossy-forest/.

Freeman, Richard, Wenquan Liang, Ran Song, and Christopher Timmins. (2019). "Willingness to Pay for Clean Air in China." *Journal of Environmental Economics and Management* 94: 188–216.

Haveman, R H, and D L Weimer. (2001). *Cost-Benefit Analysis*. Cambridge University Press.

Lavrakas, Paul J. (2008). *Encyclopedia of Survey Research Methods*. Sage publications.

Nunnally, Jum C, and I H Bernstein. (1978). *Psychometric Theory*. *The Role of University in the Development of Entrepreneurial Vocations: A Spanish Study*. McGraw-Hill New York.

Piriyapada, Sunida, and Erda Wang. (2015). "Modeling Willingness to Pay for Coastal Tourism Resource Protection in Ko Chang Marine National Park, Thailand." *Asia Pacific Journal of Tourism Research* 20 (5): 515–40.

Rodella, Ilaria, Fabio Madau, Massimiliano Mazzanti, Corinne Corbau, Donatella Carboni, Kizzi Utizi, and Umberto Simeoni. (2019). "Willingness to Pay for Management and Preservation of Natural, Semi-Urban and Urban Beaches in Italy." *Ocean & Coastal Management* 172: 93–104.

Sardana, Kavita. (2019). "Tourists' Willingness to Pay for Restoration of Traditional Agro-Forest Ecosystems Providing Biodiversity:

Evidence from India." *Ecological Economics* 159: 362–72.

Schuhmann, Peter W, Ryan Skeete, Richard Waite, Troy Lorde, Prosper Bangwayo-Skeete, Hazel A Oxenford, David Gill, Winston Moore, and Fredrika Spencer. (2019). "Visitors' Willingness to Pay Marine Conservation Fees in Barbados." *Tourism Management* 71: 315–26.

Sekaran, Uma, and Roger Bougie. (2003). "Research Methods For Business, A Skill Building Approach, John Willey & Sons." *Inc. New York*.

Zikmund-Fisher, Brian J, Mick P Couper, Eleanor Singer, Carrie A Levin, Floyd J Fowler Jr, Sonja Ziniel, Peter A Ubel, and Angela Fagerlin. (2010). "The DECISIONS Study: A Nationwide Survey of United States Adults Regarding 9 Common Medical Decisions." *Medical Decision Making* 30 (5_suppl): 20–34.