TOURISTS' WILLINGNESS TO PAY (WTP) THE ECOTOURIST IN MADDELA, QUIRINO, PHILIPPINES

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Abstract

This study focused on the assessment of the tourists' WTP by identifying the factors that influence their WTP and estimate the amount that they are WTP for the GRES. A contingent valuation method was used in determining the WTP of tourists. Opportunity sampling was applied in the selection of respondents and they were interviewed using a survey instrument. Factors influencing WTP were determined through the Binomial Logistic Regression Model and the mean WTP is through the Turnbull method of estimation. Results of the assessment show that majority (62%) of the tourist respondents are willing to pay an environmental fee. The logit regression outcome indicated that bid price, household size, number of gainfully employed household members, and certainty of their answer to WTP as "very sure" and "sure" are the factors which significantly influencing WTP. The mean WTP for an environmental fee is PhP126.47.00. This amount is comparable to the environmental fees collected in other tourism sites in the country. Thus, the result of this study showed evidence of the possibility of implementing an environmental fee that will support the protection and conservation of GRES. If collection of environmental fees will be institutionalized with the mean WTP, there would be a sustainable source of fund which may be utilized by the governing body.

Keywords: estimate, contingent valuation, ecotourism, and willingness to pay

INTRODUCTION

Natural resources are gifts given to mankind to sustain life. They provide a wide range of Ecosystem Services (ES) such as provisioning like food, fiber, and water which are often valued by markets; regulating like flood, erosion, and disease control which they seldom have markets; supporting like nutrient cycling that maintain the conditions of life on earth; and cultural services like aesthetic, spiritual value or recreation which do have markets while others do not [1]. Ecosystem services have been enjoyed by many people for free leading to exploitation. With this, economic valuation of ES is important to raise awareness about ES contributions to wellbeing and provide information for decision making [2-4]. The continued over-exploitation of ecosystems thus comes at the expense of the livelihood of the poor and future generations [3]. Seeing that employment of people in rural areas are heavily dependent on the different ecosystem services.

One of the identified promising industry for strong and sustained economic growth in the Philippines is the tourism industry [5]. In 2019, the share of the tourism industry to the country's Gross Domestic Product (GDP) is estimated at 12.7 percent compared to 12.3 in 2018 [6]. Since the Philippines is rich in natural resources, this brought the country to be noteworthy for nature-based tourism known as "ecotourism". The Governor's Rapids Ecotourism Site (GRES) is one of the most visited ecotourism in Quirino province. The GRES is a freshwater ecotourism and the recreation activities in the site include rock climbing; caving; cliff diving;

rafting; boating; spelunking; rubber tubing; swimming; bird watching; camping and, mountaineering. The main tourist attraction here is the fast/rapid flow of the river for the exciting and thrilling kayaking adventure. This ecotourism site provided economic incentives by creating direct and indirect jobs and other benefits in all facets of its operation. Livelihood opportunities were generated as an alternative source of income for the local people. However, the site is exposed to exploitation due to the increasing number of visitors and extraction of forest resources in the upstream. Whereas, protection and conservation activities in the area are limited due to lack of funds.

Although, ecotourism has been recognized as a promising strategy in promoting economic development, according to Boley and Green [7] the health of an ecotourism destination and the health of its ecosystem must go hand-in-hand. Generally, the local people are apathetic in participating activities that promotes continuous provision of ecosystem services because they are not remunerated [8,9]. Decisions relevant to developing incentive programs and prioritizing conservation practices are limited due to lack of information on the monetary value of ecosystem services [10,8]. Hence, ecosystem services should receive increased attention to continuously provide benefits other than livelihood such as fresh air, unsoiled water, carbon sequestration, and recreation [11,12].

Environmental fees on ecotourism could be a source of funds for the conservation and protection of the site. To justify the pricing of environmental fees, there is a need for economic valuation as mandated in DENR Administrative Order (DAO) 2000-51 [13], "Guidelines and principles in determining fees for access and sustainable use of resources in the protected area". An appropriate entrance fee mechanism helps to tackle the problem of the insufficient fund as it generates more direct revenue. However, it is important to determine the attitude and willingness to pay (WTP) of people towards the entry fee. The economic valuation of environmental goods and services is important for policy formulation as well as for national income accounting [14]. As emphasized by Daly [15], to be effective and sustainable, it must be proven that it has economic value and could generate revenue.

OBJECTIVES OF THE STUDY

This research aimed to assess the tourists' Willingness to Pay (WTP). Specifically, this study aimed to (1) describe the socio-economic characteristics of tourist respondents; (2) identify the factors that influence the tourists' willingness to pay; and, (3) estimate the amount that the tourists are willing to pay (WTP) for the sustainable development and management of the GRES.

CONCEPTUAL FRAMEWORK

Considering the natural beauty, biodiversity and potential of GRES for ecotourism, this study assessed the tourists' willingness to pay for sustainable development and management of the GRES. Figure 1 presents the conceptual framework of this study.
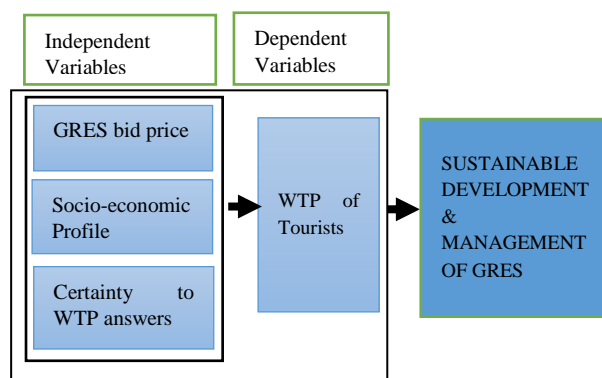
Figure 1: Conceptual Framework of

In determining the WTP, several factors such as the bid price, the socio-economic profile of the tourists as well as certainty to WTP answers were included. The bid price was determined through focused group discussions with the stakeholders while the socio-economic profile the tourists were done by face-to-face interviews. Their certainty was asked if they were very sure, sure or unsure to their answer on WTP. The study captured the interplay of the socio-economic profile as factors that can influence the willingness to pay of the tourists with a sound statistical and economic tool for analysis. Sustainable management of the GRES is the responsibility of several stakeholders. The tourists need to pay an environmental fee to accrue funds for its sustainable development and management.

RESEARCH METHODOLOGY

Research Design

Descriptive research was employed in this study. The description was focused on the profile of the respondents. Another approach employed in this study is inferential research. The approach focused on WTP estimation using Turnbull estimator and determination of the factors affecting WTP used the binomial logistic regression model [16]. Primary data was gathered with the use of a structured interview schedule. This study deployed interviewers to administer the survey to gain more relevant information from respondents [17]. The survey instruments were pre-tested to the respondents before it was used as the final data gathering instrument. Pretesting enabled the researcher to determine sections of the questionnaire which some respondents found vague or difficult to understand [18]. The instrument was prepared using the information gathered from the FGD conducted with the stakeholders. The instrument was repeatedly revised before trained interviewers used it in the field. The data gathered was complemented and validated using direct observations and key informant interviews.

SAMPLING AND RESPONDENTS

The respondents are the tourists who visited the GRES. Tourists respondents were selected using the opportunity sampling from November 2018 to February 2019. The tourists coming

in the latter part of the week specifically from Thursday to Saturday were interviewed after they visited the site. The sample size was calculated using the formula of Cochran[19] with a 0.05 margin of error. The computed sample size is equal to 343. A Contingent Valuation Method (CVM) study should have 200-2000 respondents to achieve reasonable reliability [20]. Thus, the computed sample size fulfilled the required samples of the CVM study.

RESEARCH INSTRUMENT

This study followed the recommended steps in the Contingent Valuation Method (CVM) process. A hypothetical scenario was formulated presenting the existing condition, current and imminent threats, and the proposed management program that will be implemented. Prior to the formulation of the hypothetical scenario, insights from key informants (KIs) who have direct connections or associations to the ecotourism site were gathered through individual interviews and Focused Group Discussions (FGDs). The bid prices were also elicited, the KIs were asked the question: "Are you willing to pay an environmental fee that will be used for the sustainable management and development of the GRES?" The question was answered by "yes" or "no" by the key informants. Those who answered "no" to the CV question were automatically eliminated to answer the next question. Those who answered "yes" were asked further the question: "How much is the amount you are willing to pay? It was explained to the KIs that they should write the most reasonable bid price for environmental fee. The first five bid amounts with the greatest number of votes from the KIs were chosen and used in the different models of the survey questionnaire [21]. The survey questionnaires were pretested to five (5) tourist's respondents per model for improvement primarily the length of interview and clarity of the questions [22].

DATA ANALYSIS

The socio-economic profile was analyzed using IBM Statistical Package for Social Science (SPSS) Statistic 23 using means, frequencies, percentages, and ranks. A Binomial Logistic Regression Model or Logit in STATA/SE 12.0 was used in determining the factors that influence the WTP of the respondents. From the contingent valuation question, the binary choice of either 1 for 'YES' response or 0 for 'NO' response was treated as the dependent variable while the socio-economic profile of the respondents and other variables served as the independent variables. A logistic regression model was used to estimate the tourists' WTP. Considering the WTP estimation in logistic distribution function, the probability of accepting the offered bid is estimated as:

$$\text{Log } \frac{\text{Pr(WTP=1)}}{1-\text{Pr(WTP=1)}} = \alpha + \beta_1 X_1 + \beta_2 X_2 \ldots \beta_n X_n + e \qquad (1)$$

where WTP = 1 is the equivalent to the "yes" response; $X_1, X_2 \ldots X_n$ is independent variables; and α, β's are parameters to be estimated. Furthermore, the mean WTP was estimated using the Turnbull estimator. It is the standard approach used in contingent valuation studies to estimate willingness to pay (WTP) models using discrete responses without making assumptions about the distribution of the data [23].

RESULTS AND DISCUSSION

SOCIO-ECONOMIC CHARACTERISTICS OF THE TOURISTS

Table 1: Frequency and percent distribution of the community respondents according to age (2018-2019)

Characteristics	Frequency (n=340)	Percentage (%)
Age		
11−17	38	11.2
18−24	149	43.8
25−31	62	18.2
32−38	38	11.2
39−45	23	6.8
46−52	10	2.9
53−59	12	3.5
≥ 60	8	2. 4
min = 11	max = 70	average = 27
Sex		
Male	168	49.4
Female	172	50.6
Civil Status		
Married	117	34.4
Single	221	65.6
Widow	2	0.6
Educational Attainment		
No Formal Education	4	1.2
Elementary Level	9	2.6
Elementary Graduate	7	2.1
HS Level/Grade Level	39	11.5
HS Graduate	45	13.2
Vocational/College Level	206	60.6
College Graduate	15	4.4
Masters & Ph.D. Level	15	4.4
Income Level		
≤ to 5,000	164	48.2
5,001 - 10,000	50	14.7
10,001 - 15,000	37	10.9
15,001 - 20,000	26	7.6
20,001 - 25,000	11	3.2
25,001 - 30,000	32	9.4
>30,000	9	2.8
Occupation		
Unemployed	47	13.8
Self-Employed	41	12.1
Government Employee	82	24.1
Private Employee	53	15.6
Student	90	26.5
Others (Retired, OFW)	27	7.9
Number of gainfully employed		
0−1	164	48.2
2−3	37	10.9
4−5	26	7.6
6−7	11	3.2
10−11	50	14.7
min = 0	max = 11	average = 2

The socio-economic characteristics of the tourists' respondents (Table 1) indicate that the age of the tourist respondents is ranging from 11 - 70 with an average age of 27 years old. This connotes that the GRES visitors are relatively young who have all the energy to withstand strenuous activities offered by the GRES like caving along the narrow entrance and exit point, cliff diving, and walking on huge wobbly stones. This mean age (27 years old) is close to the identified average age (29 years old) of the tourists of Puncak Lawak Park, Indonesia wherein visiting the park also requires vigor to enjoy the different activities [24]. Female respondents are slightly higher than males which comprise 50.6% and 49.4% respectively. It was observed that females are more enthusiastic and accommodating during the interview than their male counterparts. This result is consistent with the findings of Jalani[24] wherein 68% of the total respondents are females while 32% are males. However, these findings are in contrast to the result of the study in Yankari game reserve, Bauchi, Nigeria wherein the majority of the respondents are males (73.4%) [25]. Single respondents obtained the largest percentage with 65%, followed by married respondents at 34.4% while the widow/er recorded the least proportion of the respondents with 0.6%. This result is consistent to the findings of Bradecina[26] which revealed that more than half of the respondents (59%) were singles. The majority (60.6%) of the respondents reached vocational or college level. Only a few (1.2%) do not have formal education. This implies that the ecotourism at the GRES is visited by people with a middle and high level of educational attainment. Visiting ecotourism is a learning experience in which people with higher educational attainment are continuously sought. These findings agree with the claims about visitors of Puncak Lawang Park in West Sumatera, Indonesia, and Caramoan Beachscape in Camarines Sur, Philippines who were both dominated by middle to highly educated people [27,26]. Moreover, almost half (48.2%) of the tourist respondents belong to the income bracket of $\leq$ to PhP5,000/month. This result can be explained by the fact that many of the tourists interviewed are students whose allowances were declared as their income. Further, the underlying reason of declaring lower income is that people are generally uncomfortable in revealing their actual income [22]. More than half of the respondents are composed of students and government employees, 26.5% and 24.1%, respectively. About 15.6% of the total respondents were working in the private sector. The rest were unemployed, self-employed and retirees. Associating the result on employment status of Puncak Lawang Park ecotourism, there were more private employees than government employee respondents [27]. The mean number of household members who are gainfully employed is two (2), the maximum is 11 and the minimum is zero (0). Almost half (48.2%) of the respondents have 0-1 household member who is gainfully employed.

FACTORS INFLUENCING TOURISTS' WILLINGNESS TO PAY

Table 2: Result of the logit regression model of Willingness to Pay

Factors	Coeff	Z	P>|z|	Sig
Constant	0.978	0.900	0.368	**
Bid Price	-0.015	-5.590	< 0.001	*
Household size	0.179	2.430	0.015	**
Number of gainfully employed	-0.284	-2.080	0.037	**
The certainty of WTP – very sure	2.607	6.310	< 0.001	*
The certainty of WTP – sure	0.837	2.080	0.038	**
LR chi2(15) =107.80 Pseudo R2 = 0.2405				
Prob > x^2= < 0.001*** Log likelihood = -170.252				
Prediction Accuracy = 72%				

The logistic regression model is presented in Table 2. The results of the logistic regression analysis, the bid price is negative and significantly related to WTP at a 1% confidence level. This implies that as the amount offered increases, the respondents are less likely willing to pay. The negative coefficient of the bid price is consistent with most CVM studies [21,26,28,]. Moreover, household size is significantly related to WTP at a 5% confidence level with a positive sign which indicates that as household size increases, the tourists are more likely to pay for the bid offered which coincide with the study of Amarnath and Sridevi [29]. This result is contrary to the findings of Seck [30] wherein visitors who come in groups tend to be less likely to respond positively to the bid-offer. This could be an indication that they are already paying higher total amounts, especially in the case of parents visiting with children.

The variable "number of gainfully employed" has a negative and significant coefficient which means that the more household members who are gainfully employed, the less likely they are willing to pay for an environmental fee. This finding is contrary to the hypothesis and results of studies suggest that the more members who earn an income for the family have higher purchasing power. This implies that more gainfully employed household members may opt to go to other recreational sites, hence, the decrease in their willingness to pay for the GRES program. Seck [30] also claimed that foreign visitors who happened to have more money to spend are less likely to pay higher prices than their local counterparts. The certainty of respondents' answers to WTP such as "very sure" and "sure" were also tested as factors and results show that both are positive and significant at 1% and 5% confidence level respectively. These infer that as the respondents are "very sure" and "sure" of their answers, they are more likely willing to pay. The model has 340 observations and it was selected based on the following: 1) there are meaningful and significant factors of willingness to pay; 2) the prob>chi2 is significant; and, 3) lastly, the prediction accuracy is high. Hence, the results of the logistic regression model indicate the goodness of fit with five (5) significant factors (the bid price, household size, number of gainfully employed, the certainty of WTP as very sure, and certainty of WTP as sure). The model is statistically significant having a Prob>chi2= <001

and the prediction accuracy equal to 72%. The pseudo R2 = 0.2405 indicates that the model had captured 24.05% of the total variance. The model is close to the result of Adamu et al. [25] who also conducted an economic valuation of ecotourism resources in Yankari game reserve found six (6) significant factors affecting WTP which include the bid amount, education, age, income, gender, and visit frequency. The result of the model has a pseudo-R-squared of .3070 with a prediction accuracy of 83.58%.

ESTIMATION OF WILLINGNESS TO PAY

WTP Response to Bid Price

Table 3: Distribution of the respondents' votes on WTP at different bid levels

Bid (PhP)	Number of Respondents	Response			
		Yes	Percentage	No	Percentage
50	68	62	18.24	6	1.76
75	68	47	13.82	21	6.18
100	68	37	10.88	31	9.12
150	68	42	12.35	26	9.65
200	68	26	7.65	42	12.35
TOTAL	**340**	**214**	**62.94**	**126**	**37.06**

The tourists' WTP for an environmental fee was determined from their responses of either "yes" or "no" relevant to the bid amount set in the questionnaire used (Table 3). The results showed that 62.94% of the total respondents voted for "Yes" on WTP while 37.06% answered "No". The "Yes" responses decreased as the bid amount increased and vice versa. The result is parallel with the economic theory of demand that as price increases, people are less willing to buy. The WTP responses manifest a declining proportion as the bid amount increases.

Estimate of WTP

Table 4: The number of visitors and the estimated benefit to be generated.

Year	GRES Visitors	Mean WTP	Estimated Revenue
2014	251	126	31,626.00
2015	5,313	126	669,438.00
2016	17,451	126	2,198,826.00
2017	14,393	126	1,813,518.00
2018	37,122	126	4,677,372.00
Total			9,390,780.00

The mean WTP was calculated using the Turnbull method of estimation. The result indicates that the tourists' mean WTP for an environmental fee is PhP 126.47. This fee is added to other fees and summed up into the entrance fee. The entrance fee has been used by many studies because users of recreational services are more familiar with the term "entrance fee' [31-33]. This amount is higher than the environmental fees collected in other tourism sites in the country like Boracay which collects only PhP 75.00 for its environmental fee. Concerning this,

Bradecina [26] stated that high WTP is common for newly established ecotourism destinations that feature exclusivity and pristine nature. This amount if implemented may generate sufficient funds for the protection and conservation of the GRES. Utilizing the computed mean WTP, the expected benefits can be estimated by multiplying the mean WTP value with total visitors of the GRES. The expected benefits from 2014-2018 are presented in Table 4. The GRES is considered as a young tourism site that is being developed continuously by the Municipal LGU of Maddela and Provincial LGU of Quirino. The potential of the tourism site is manifested by the increasing number of tourists from 2014-2018 despite the decline in the number of visitors in 2017 because of the peace and order situation in the area during that time. Generally, the total revenue increases since there is an increase in the number of visitors. The result shows that the aggregate expected benefit estimated is approximately PhP 9,390,780.00 for the last five years. With this amount, the governing body of the protected area could sustain its maintenance and protection. The funds may be used for operation such as the hiring of additional forest and river guards for patrolling the protected area, reforestation and establishment of the riparian plantation, and other activities relevant to the maintenance, protection, and conservation of the area.

CONCLUSIONS

This study measured the tourists' Willingness to Pay (WTP) for the protection and conservation of GRES. It describes the socio-economic characteristics of the respondents, determined their willingness to pay, and estimated the amount they are willing to pay. GRES is primarily visited by students with a middle level of education and belong to a household where one is gainfully employed. The majority of the respondents are willing to pay an environmental fee on top of the user fees for the sustainable protection and conservation of the tourism site. The estimated mean WTP of the tourists is PhP126.00 coming up with an aggregate benefit of PhP 4,677,372.00 or an average of PhP 389,781.00 per month, based on the number of tourists in 2018. GRES is a growing tourism site within the Quirino Protected Landscape. The estimates show their potential to raise funds locally. If collection of environmental fees will be institutionalized with the mean WTP, there would be a sustainable source of fund which may be utilized by the governing body to conduct protection and conservation activities in the area such as hiring workers to patrol, reforest, and maintain. The computed aggregate benefit from WTP could hire at most 45 individuals to do the job at a rate higher than the existing labor rate in the area. Proper management of funds to be collected could help in reaping more economic benefits. Despite the criticisms for the method, researches in various fields have given encouraging results to vote CVM as a promising approach for environmental valuation and damage assessment (Saikia and Goswami) [14]. This study can help other nature-based tourism sites in determining a reasonable access fee.

ACKNOWLEDGMENT

REFERENCES

1. Balvanera, P., Karp, D., Quijas, S., and Ash, N. Ecosystem Services. 2016. https://www.researchgate.net/publication/311406617

2. Costanza, R., de Groot, R., Sutton, P., van der Ploeg, S., Anderson, S. J., Kubiszewski, I., Turner, R. K. Changes in the global value of ecosystem services. Global Environmental Change, 26, 152–158, 2014.

3. de Groot, R., Brander, L., van der Ploeg, S., Costanza, R., Bernard, F., Braat, L., van Beukering, P. Global estimates of the value of ecosystems and their services in monetary units. Ecosystem Services, 1(1), 50–61, 2012.

4. Jacobs, S., Dendoncker, N., & Keune, H. Ecosystem Services. Global Issues, Local Practices. Ecosystem Services. San Diego, CA: Elsevier, 2014.

5. Añasco, Cherry P., and Lizada, Joy C. Philippine Tourism: Evolution towards Sustainability. 2 SHS Web of Conferences 12, 010, 2017.

6. Philippine Statistics Authority (PSA). 2020. https://psa.gov.ph/tourism/satellite-accounts/id/162606

7. Boley, Bynum B., and Green, Gary T. Ecotourism and natural resource conservation: The 'potential' for a sustainable symbiotic relationship. Journal of Ecotourism, 2016.
   DOI: 10.1080/14724049.2015.1094080

8. Calow, P. The importance of money as a common currency in ecosystem service valuation-a comment on the Roskilde workshop recommendations for risk assessment. Environ. Toxicol, Chem. 36 (4), 866, 2017.

9. Grebner, D.L., Bettinger, P., Siry, J.P. Introduction to Forestry and Natural Resources. Academic Press, USA, pp. 78-94, 2013.

10. Wright, W.C., Eppink, F.V., Greenhalgh, S. Are ecosystem service studies presenting the right information for decision making? Ecosystem serv. 25, 128-139, 2017.

11. Chapman, P.M., Selck, H., Doorn, N., Munns, W.R. Ecosystem services deserve better than "dirty paper". Environ. Toxicol. Chem. 36(4), 867-868, 2017.

12. Coztanza, R., de Groot, R., Sutton, P., van der Ploeg, S., Anderson, S.J., Kubiszewski, I., Farber, S., Turner, R.K. Changes in the global value of ecosystem services. Glob. Environ. Chang. 26, 152-158, 2014

13. DAO 2000-51. Guidelines and Principles in Determining Fees for Access and Sustainable Use of Resources in Protected Areas.

14. Saikia, Ashifuddin Ahmed, and Goswami, Chandan. Estimating Peoples' willingness to pay for Ecotourism Resources Using Contingent valuation Method: A Review of Existing Literature, Assam Economic Review, Vol 11, 2018.

15. Daly, C. A. K., Fraser, G., & Snowball, J. D. Willingness to pay for marine-based tourism in the Ponta do Ouro Partial Marine Reserve, Mozambique. African Journal of Marine Science, 37(1), 33–40, 2015.

16. Niroomand, Naghmeh, and Jenkins, Glenn P. Estimation of households' and businesses' willingness to pay for improved reliability of electricity supply in Nepal. Energy for Sustainable Development. Volume 55, 201-209, 2020.

17. Matthew NK, Ahmad S, Ramachandran S, Syamsul-Herman MA & Zaiton S. Visitors' preferences on forest conservation and Management in endau–rompin national park. Journal of Tropical Forest Science 30(3): 354–361, 2018. https://doi.org/10.26525/jtfs2018.30.3.354361

18. Manlosa, Aisa O., Briones, Nicomedes D., Alcantara, Antonio J. and Florece, Leonardo M. Willingness to Pay for Conserving Layawan Watershed for Domestic Water Supply in Oroquieta City, Philippines. Journal of Environmental Science and Management, 16(2), 1-10, 2013.

19. Cochran, William G. Sampling Techniques. 3rd edition. John Wiley and Sons, Inc., 1977.

20. Mitchell, R.C. & Carson, R.T. Using Surveys to Value Public Goods: The Contingent Valuation Method. Washington DC: Resources for the Future, 1989.

21. Carig, Elizabeth T. Prospects of Payment for Watershed Services Scheme in Barobbob Watershed Nueva Vizcaya Philippines. The Upland Farm Journal, 24(1), 2016.

22. Kaffashi, Sara, Yacob, Mohd Rusli, Clark, Maynard S., Radam, Alias and Mamat, Mohd Farid (2015). Exploring Visitors' willingness to pay to generate revenues for managing the National Elephant Conservation Center in Malaysia, Forest Policy and Economics, 2015. http://dx.doi.org/10.1016/j.forpol.2015.03.004

23. Zapata, Samuel D., and Carpio, Carlos E. Distribution-free Methods for Estimation of Willingness to Pay Models Using Discrete Response Valuation Data, Agricultural & Applied Economics Association's AAEA Annual Meeting, Minneapolis, Minnesota, 2014.

24. Jalani, Jeffrey O. Local People's Perception of the Impacts and Importance of Ecotourism in Sabang, Palawan, Philippines. SciVerse ScienceDirect. Procedia –Social and Behavioral Sciences, 57, 247-254, 2012.

25. Adamu, Abdullahi, Mohd Rusli Yacoba, Alias Radamb, Rohasliney Hashima, and Shehu Usman Adama. Economic Valuation of Ecotourism Resources in Yank ari Game Reserve, Bauchi, Nigeria. Science Direct. Procedia Environmental Sciences, 30, 130-144, 2015.

26. Bradecina, Raul G. Economic Valuation of the Caramoan, Camarines Sur Beachscape: an environmental services payment scheme for sustainable ecotourism. Economy and Environment Program for Southeast Asia (EEPSEA), 2014.

27. Iasha, Armira, Yacob, Mohd Rusli, Kabir, Ibrahib, and Radam, Alias. Estimating Economic Value for Potential Ecotourism Resources in Puncak Lawang Park, Agam District, West Sumatera, and Indonesia. Science Direct. Procedia Environmental Sciences, 30, pp 326-331, 2015.

28. Siew, Mei Kuang, Yacob, Mohd Rusli, Radam, Alias, Adamu, Abdullahi, and Alias, Emmy Farha. Estimating Willingness to Pay for Wetland Conservation: A contingent Valuation Study of Paya Indah Wetland, Selangor, Malaysia. Procedia Environmental Sciences, 30, pp. 268-272, 2015.

29. Amarnath, J.S. and Sridevi, U. An Environmental Impact Assessment of Sewage Pollution in Madurai District. International Journal of Environmement, Agriculture and Biotechnology (IJEAB), Vol. 1, Issue 3, 2016.

30. Seck, Abdoulaye. 2016. A dichotomous-choice contingent aluation of the Parc Zoologique de Hann in Dakar. African Journal of Agricultural and Resource Economics, 11(3): 226-238, 2016.

31. Devi, Amrita. Valuation of Tourist Sites in Meghalaya – a case study of East Khasi Hills, Ph.D. Thesis, North Eastern Hill University, Shillong, Meghalaya, 2010.

32. Hakim, Arif Rahman, Sri Subanti and Mangara Tambunan. "Economic Valuation of Nature-Based Tourism Object in Rawapening, Indonesia: An Application of Travel Cost and Contingent Valuation Method," Journal of Sustainable Development, Vol 4, No 2, pp 91-101, 2011.

33. Mansouri, Masoumeh, Ziaedin Badehian, Kamran Adeli and Kambiz Abrari Vajari. "Estimating the Recreational Value of Forest Parks Using Contingent Valuation Method (Case Study: Hassan Gavyar Forest Park of Noorabad City)," Agriculture Science Developments, Vol 3, No 5, pp 200-204, 2014.