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Assessing Willingness to Pay for Conservation of Endangered Species and Habitats Using Two Payment Vehicles in Contingent Valuation Survey: A Case for Northwest Panay Peninsula, Philippines

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The study aimed to determine the effects of payment vehicles in contingent valuation surveys for conserving endangered species and habitats of Northwest Panay Peninsula Natural Park (NWPPNP), Philippines. Results showed that income was found to be significantly affecting WTP in all data set regressions across two payment vehicles: residence certificate or cedula (CED) and surcharge on electric bill (ELEC), and is positively signed. Familiarity with endangered species is also positively affecting willingness to pay (WTP) of CED respondents but not on ELEC respondents. On the other hand, WTPYr or bid price is not significantly affecting CED respondents but significantly affecting ELEC respondents. This means that regardless of bidprice, still less CED respondents were not willing to pay for the conservation of endangered species and habitats of NPP while for ELEC respondents as bid price increases, less were willing to pay for the conservation thereby confirming the law of demand. This study documented and found that in rural San Jose Antique and Kalibo, Aklan, people have high level of awareness of the importance of endangered species conservation. However, when asked for specific (monetary) commitment, the majority was unwilling or noncommittal. Based on the dichotomous choice contingent valuation method survey, results confirm the low WTP of respondents since only up to 14 percent were willing to pay for the hypothesized conservation fund for NWPPNP's endangered species and habitats. This is almost the same portion as those who were willing to pay through either of the payment vehicle groupings.

Keywords: Contingent valuation, payment vehicles, endangered species, willingness to pay, Northwest Panay Peninsula Natural Park

INTRODUCTION

Sprawling across the municipalities of Nabas, Malay and Buruanga in Aklan province and the municipalities of Libertad and Pandan in Antique province, the Northwest Panay Peninsula is a recognized important bird area and still has significant stands of primary, low elevation rainforest that are valuable as gene banks for rehabilitation of deforested areas in the entire region of Western Visayas (Curio 2003; PhilinCon 2018).

Vis-à-vis the Northwest Panay Peninsula Natural Park's (NWPPNP) gargantuan potential for its biodiversity richness, various problems and threats underscore the need for conserving the species and habitats at the Northwest Panay Peninsula. During the October 15, 2002 meeting by the Northwest Panay Biodiversity Management Council, all Council members participated in the Advocacy Agenda Formulation workshop and identified several threats to the existence and conservation of the NWPPNP. Among these were: mining interests in the site, timber poaching, slash and burn farming, illegal settlement, wildlife collection, and bioprospecting (Foundation for the Philippine Environment, 2019).

Considering these threats, conserving the NWPPNP will not be an easy task. The conservation efforts that Philippine Endangered Species Conservation Project (PESCP) and Biodiversity Conservation Trust of the Philippines, Inc (BIOCON) have embarked on in the past several years include having the following efforts and actions (PanayCon, 2013): (1) forest ranger patrols, (2) confiscation, rehabilitation, and release of wildlife that had been illegally caught and domesticated, (3) community organizing, introduction of alternative livelihood like agroforestry for communities affected by the protected area establishment and (4) conservation related research.

Sustaining and more so improving these conservation efforts will require resources, particularly funding. The government has very minimal expenditures yet on conserving the area because most of the costs incurred were shouldered by PESCP and BIOCON, which in turn obtained funding from other agencies and donors. The value of NWPPNP ecosystems for humans and local economy is often underestimated as compared to the value of timber, meat and other products gained by its short-term exploitation and destruction (PhilinCon 2018).

This study aimed to determine if the NWPPNP is valuable to citizens, and whether potential economic values for conserving it can cover the costs

of conservation. This study also provides information on how residents of the Aklan and Antique provinces value the endangered species and habitats in NWPPNP through their willingness to pay for their conservation. Two payments vehicles were employed to test if there were significant difference in willingness to pay (WTP) response for contingent valuation surveys. The results of this study can provide inputs in exploring alternative sources of financing the conservation program.

Contingent Valuation and its Validity

Endangered species generate considerable benefits and services to society, many of which is rarely reflected in the market (Innes and Frisvold, 2009). Because these public services are rarely bought and sold on the auction block, they never enter into private markets and thus remain unpriced. The economic value of threatened and endangered species are difficult to estimate (Amuakwa-Mensah et al., 2018; Pandit et al., 2015), thus it is therefore a great challenge is to quantify their value in monetary terms. In the case of placing monetary value on environmental “goods” like endangered species conservation, contingent valuation is the most popular and widely used method.

The contingent valuation method (CVM) estimates the economic value of environmental goods by placing survey respondents in a hypothetical market setting created for a particular species or group of species (Kontogianni et al., 2012; Richardson and Loomis, 2011; Zander et al. 2014) and asking them their willingness to pay (WTP) to either avoid the total loss of a population or increase the population size.

CVM has been the main approach used on the studies on threatened species and endangered communities (Pandit et al., 2015). Most studies focused on calculating the economic value of a single species such as charismatic and flagship species as bald eagles (*Haliaeetus leucocephalus*) or loggerhead sea turtles (*Caretta caretta*). Diffendorfer et al, 2014 used CVM to value insects particularly the monarch butterfly (*Danaus plexippus*). Some studies were designed to determine the economic benefits of several species at all once. Boxall et al. (2012) computed WTP estimates for the recovery of three marine mammals — the beluga whale, the blue whale and the harbor seal that were indicators of the health of the St. Lawrence Estuary in Canada. On the other hand, Yao et al. (2014) studied the enhancement of biodiversity from four different classes, that is birds, fish, reptiles and plants in the forest of New Zealand. Zander et al.

(2014) conducted a CVM study to explore funding support for threatened bird conservation in Australia and found out that more than half of the respondents were willing to pay into a fund for bird conservation. Each respondent on the average, was willing to pay an amount of AU\$11/year which is equivalent to social willingness to pay of AU\$14 million/year for threatened Australian birds when extrapolated to the Australian population as a whole.

Various studies on nonmarket values of threatened species are sensitive to changes in size of species population, the types of species being valued, and whether visitors or local households are valuing the species. Non-use values, especially the existence value of a species, was a major reason for respondents' WTP for species conservation (Kontogianni et al., 2012). Other studies found that altruistic/bequest value — that they have a moral obligation to help conserve species/future generations can also enjoy the benefits of a particular species — are more strongly intended to contribute towards conservation (Pienaar et al. 2017; Subade and Francisco, 2014). Respondents who demonstrated a higher level of environmental concern and who placed greater importance on protecting threatened and endangered species had stronger intentions of contributing towards species conservation.

WTP was generally found to be positively correlated with higher income and higher education level (Hakansson et al., 2011; Pienaar et al. 2017; Subade and Francisco, 2014). Results showed that the likelihood that respondents intended to contribute towards conservation depended on perceived behavioral control, measured using sociodemographic variables. Higher income individuals had higher probability of intending to contribute towards species conservation, provided that the funds were elicited through the payment of higher product prices, rather than higher taxes (Pienaar et al. 2010). Higher education also increased the likelihood that respondents intended to contribute (Jianjun et al. 2010). This is understandable because more years of schooling would arguably increase a person's knowledge about social, political, economic and environmental experience. Moreover, education increases the person's comprehension of conservation programs.

Respondents pay the population described in the hypothetical scenario through payment vehicles. The payment vehicle can be as follows: increase in local taxes, entrance fees, surcharge on bills, higher prices, and other mechanisms (Pandit et al. 2015; Subade & Francisco 2014; Pienaar et al. 2017). Jianjun et al. (2010) believes that payment vehicle design is a crucial element in application of CVM. In their study of valuing marine turtle conservation

in Asian cities, two payment vehicles were used. The first was a monthly mandatory surcharge on household's electricity bills and the second was a voluntary surcharge on household's electricity bills every month. Results of the study showed that the dummy variable Mandatory (for mandatory payment) was only positive and significant in Vietnam. The mandatory payment vehicle would produce higher willingness to pay for the marine conservation turtle for Vietnamese. The respondents in Beijing, Davao and Bangkok were indifferent for the payment vehicle.

MATERIALS AND METHODS

The Study Area

The Northwest Panay Peninsula Natural Park is located on two provinces in the island of Panay, Philippines; in the provinces of Aklan and Antique. It has an approximate area of twelve thousand nine and twenty-nine hundredth (12,009.29) hectares or 120.09 km² (House Bill 4758), situated within the municipalities of Nabas, Malay, Buruanga, Libertad and Pandan (11°49'25"N 121°59'55"E, Figure 1).

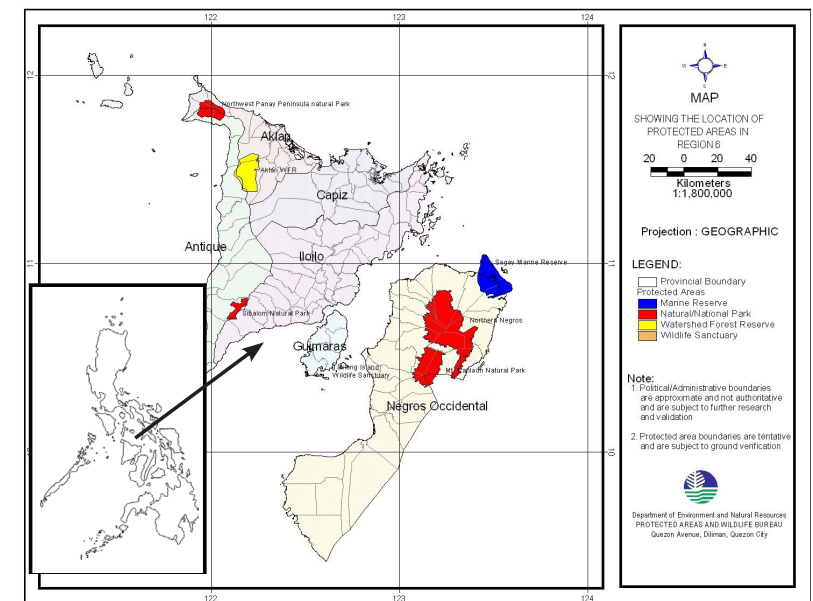


Figure 1. Location of Protected Areas in Region VI showing the Northwest Panay Peninsula Natural Park, Philippines. (Source: Department of Environment and Natural Resources, 2017.)

In recent years, surveys in the area have recorded many highly threatened bird and mammal species, including the Negros bleeding-heart pigeon *Gallicolumba keayi* (critically endangered), Visayan tarictic hornbill *Penelopides panini panini* (endangered), Visayan wrinkled hornbill *Aceros waldeni* (critically endangered), white-winged cuckoo-shrike *Coracina ostenta* (vulnerable), green-faced parrotfish *Erythrura viridifacies* (vulnerable), and Visayan warty pig *Sus cebifrons* (critically endangered) (Curio 2002). Moreover, as a less studied site, various species not yet recorded, have been discovered mainly by the Frankfurt Zoological Society-supported Philippine Endemic Species Conservation Program (PESCP) in the site such as *Ardea cinera* (grey heron), *Ardeola speciosa* (Javan pond heron), *Gorsachius giosagi* (Japanese night heron), *Anas clypeata* (European northern shoveler), *Ophiophagus Hannah* (king cobra), *Elaphe erythrura psephenoura* (rat snake), *Python reticulatus* (reticulated python), *Ptenochirus jagori* (musky fruit bat) and 17 endemic butterfly species. Some scientists claim that the Northwest Panay Peninsula may qualify for a world record of biodiversity as measured by the number of animals and plants per square kilometer. However, due to lack of studies, much needs to be accounted yet on the site's biodiversity in terms of the number of species, particularly those endemic to the site. Hence, there is a great imperative for conserving the area.

METHODOLOGY

Primary data on the WTP of randomly selected residents in Kalibo, the capital town of Aklan province, and San Jose, the capital town of Antique province, were gathered through self-administered (SA) survey using the drop-off (DO) approach (Subade and Francisco, 2014; Cook et al., 2012; Whittington, 2010). These survey sites were chosen since they play crucial roles in the respective provincial governments' decision-making process particularly in the allocation of budget for funding development projects and public goods. Moreover, they are the biggest urbanized towns in these provinces, though both can be considered rural (more rural and some urban). Two towns of Antique and three towns of Aklan cover the NWPPNP, hence the conservation of NWPPNP was expected to be of immediate concern for the residents of these provinces.

The study examined two payment vehicles as regards their potential

for soliciting people's WTP and possible financing source for conservation: Electric bill surcharge and the annual community tax collected by the local government treasury.

Electric Bill (ELEC) Surcharge. A mandatory payment through a surcharge in the monthly electric bill for the next five years was proposed to be used as a payment vehicle for conservation. Electricity is widely distributed all over Panay, though there remain some rural households that are not yet reached by electricity. Moreover, a similar surcharge known as environmental charge is already being collected on a per kilowatt basis per household, amounting to PhP 0.0025 per kilowatt of electricity consumed. So far no one has protested nor complained about this surcharge, which is reflected in the unbundled rates indicated in the electricity bill. It was clearly explained to the respondents that the proposed surcharge in this study is a fixed surcharge, and will not vary with the volume of electricity used.

Annual Community Tax Surcharge or Cedula (CED). Every resident of legal age is required to obtain a residence certificate (commonly called "cedula"), which he/she will need for any documented transactions like purchase of property, signing a contract, transacting in a bank, etc. Using such a payment vehicle would make it possible to cover all households (and as many people of legal age) in the collection of any environment-related fee like the conservation fee being proposed by this study. The proposed surcharge would be imposed yearly for the next five years. In the focus group discussions (FGDs) conducted in April–May 2005, this payment vehicle was found to be the most popular among the FGD participants.

Sampling Plan and Procedure

To ensure that there will be at least 40 samples per bid, 60 respondents per bid were obtained to have allowances for item nonresponse, nonreturn of questionnaire, refusal to participate, and questionable answers. With five bids and two payment vehicles, the study had 1200 respondents altogether.

Eight *barangays* each were randomly selected in San Jose and Kalibo. For each *barangay*, the number of respondents randomly selected was proportionate to the total number of households.

The target respondents were the household heads, but if unavailable, the spouse or another adult (18 years old and above) member of the family/household who is an income earner was interviewed. A randomly selected

replacement was used for the survey in case randomly selected household-respondent could not be found or refused to participate in the survey.

A self-administered-CVM survey was used as a data collection tool with the use of a “drop-off” protocol (Subade & Francisco, 2014, Jianjun et al. 2010, Whittington, 2010). Interviewers made personal contact with the respondents, but left the survey with the respondent to complete. An appointment was made to retrieve the completed questionnaire and answer any questions. The drop-off protocol has been proven to provide high return rates of completed questionnaires and is not prone to interviewer bias (Subade, 2005).

RESULTS AND DISCUSSION

The final survey was conducted in San Jose Antique and Kalibo, Aklan in eight waves that covered weekends from late September to middle of December 2005. There were 600 target respondents from San Jose and 600 from Kalibo, for which the equivalent number of questionnaires were distributed to randomly selected respondents, based from the sampling lists provided by each barangay.

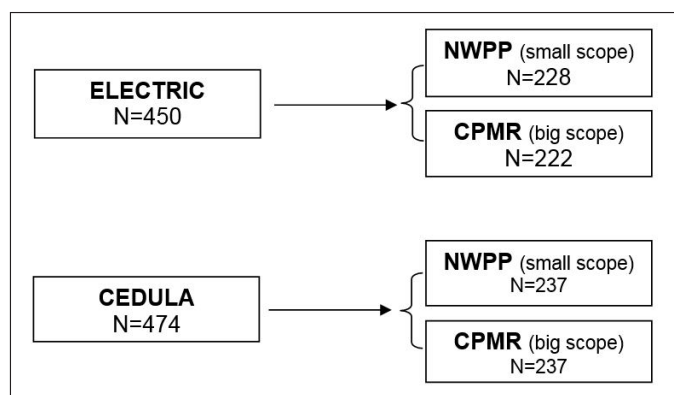


Figure 2. Distribution of Respondents by Payment Vehicle and Scope (N = 924)

Out of the 1200 questionnaires distributed, 1106 were accomplished, returned to the enumerators, and found usable for the purpose of this study. After protest vote-responses to WTP question were removed, 924 were found usable for analysis. Figure 1 shows the distribution of the 924 questionnaires,

whereby protest votes were removed and certainty responses were adjusted.

Willingness to Pay for Conservation. Responses to WTP question by payment vehicle are given in Table 1 below. The low (i.e., below 50%) rate of affirmative replies in all respondent groups is not surprising, as this was also found by previous studies on non-use values (Giraud et al., 1999, Berrens et al., 2002; Seenprechawong, 2001; Subade, 2005).

Table 1. Respondents' WTP for Conservation of Endangered Species and Habitats at NPP

Bid Price	WTP Reply				TOTAL
	Community Tax (CED)		Electric Bill (ELEC)		
	Yes	No	Yes	No	
60	13 (6.84%)	85 (44.74%)	17 (8.95%)	75 (39.47%)	190
120	15 (7.98%)	77 (40.96%)	22 (11.70%)	74 (39.36%)	188
360	9 (4.79%)	85 (45.21%)	15 (7.98%)	79 (42.02%)	188
600	11 (6.25%)	76 (43.18%)	8 (4.55%)	81 (46.02%)	176
1200	14 (7.69%)	89 (48.90%)	5 (2.75%)	74 (40.66%)	182
Total	62	412	67	383	924

Reasons for WTP. To distinguish the components or rationale for positive WTP, those who responded “yes” to the WTP question were also asked to state their reasons or motives for such. The economic values or motives for willingness to pay in Table 2 were categorized based on Stevens et al. (1994), McConnell (1997), and Manouka (2001).

Table 2. Reasons for Respondents' Willingness to Pay (N = 129)

Reason	Community Tax (CED)	Electric Bill (ELEC)	All
1. I want to preserve NWPPNP [and CPMR (Central Panay Mountain Range)] because I visit it. (direct use value)	5 (8.06%)	9 (13.43%)	14 (10.85%)
2. I want to preserve NWPPNP (and CPMR) because I directly use or consume goods and services such as birds, medicinal plants, reptiles, ornamental plants, etc. from it. (direct use value)	3 (4.84%)	2 (2.99%)	5 (3.88%)
3. I want to contribute to preserve NWPPNP (and CPMR) for future generations. (bequest value)	31 (50.0%)	29 (43.28%)	60 (46.51%)

4. I take personal pleasure in knowing that NWPPNP and CPMR will continue to exist. (existence value)	4 (6.45%)	3 (4.48%)	7 (5.43%)
5. I would like to contribute because I am concerned about the people who depend upon the goods and services provided by NWPPNP (and CPMR). (nonpaternalistic altruistic motive)	2 (3.23%)	2 (2.99%)	4 (3.10%)
6. I would contribute because I think that the goods and services provided by NWPPNP should be available for others. (paternalistic altruistic motive)	2 (3.23%)	2 (2.99%)	4 (3.10%)
7. I do not use NWPPNP (and CPMR) now, but I am willing to contribute to have the option of visiting/using it in the future. (option value)	1 (1.61%)	1 (1.49%)	2 (1.55%)
8. I am contributing because marine plants and animals in NWPPNP (and CPMR) have the right to exist independent of anyone's use either in the present or future. (existence value)	5 (8.06%)	6 (8.96%)	11 (8.53%)
9. It is a good cause and I enjoy contributing to good causes in general. (good cause)	5 (8.06%)	6 (8.96%)	11 (8.53%)
10. It is my moral duty to contribute to preserve NWPPNP (and CPMR). (moral duty)	2 (3.23%)	5 (7.46%)	7 (5.4%)
11. Others	0 (0%)	1 (1.49%)	1 (0.78%)
12. Unanswered	2 (3.23%)	1 (1.49%)	3 (2.33%)
Total	62	67	129 (100%)

Table 2 confirms the *a priori* expected outcome; that is, since most of the respondents were offsite (i.e., more than 100 km from NWPPNP) regardless of payment vehicles, their direct use values would be small. Across respondent groups, no more than 20 percent cited use values (categories 1 and 2), though when combined these were the second most cited motives for WTP. On the other hand, the main reason/motive for WTP was bequest values — the concern for future generations. Almost half (47%) of all respondents cited this as their main reason. Moreover, nearly half of the community tax group cited it as their motive for contributing to the hypothesized conservation fund. These respondents believed that the endangered species and habitats in NWPPNP ought to be conserved so that there can be something for their children and children's children.

A distant third WTP motivation were existence values — the belief that marine plants and animals in NWPPNP have the right to exist independent

of anyone's use either in the present or future and good cause. It was cited by nearly 9 percent of the respondents (8.06% of CED respondents, 8.96% of ELEC respondents)

Reasons for Non-WTP. Respondents who indicated unwillingness to pay were also asked to indicate their reasons. As mentioned earlier, protest votes were removed from the data set. These were the no-replies whose reasons included: “being far from the place I feel paying anything is irrelevant to me”, “I do not think paying will solve the problem”, “I believe this improvement will take place without my contribution”, and “I do not trust the institutions who will handle the money for this conservation work.” Several authors explained that such responses should not be included in further analysis particularly in the WTP function's regression(s) (Loomis et al. 1993; Stevens et al. 1994; Spash et al. 2000; Manouka 2001). Zero bids (or no replies) associated with protests do not necessarily indicate a zero value for the resource being valued (Manouka 2001; Stevens et al. 1994). Respondents may be objecting to some aspects of the survey. For example, they may be objecting or rejecting the way the CV question was asked as to collecting contributions from people. They could also be rejecting the scenario being hypothesized as to the “good” being “purchased” by their WTP. Such respondents/responses are also called scenario rejecters.

Of the remaining 795 “no” replies across payment vehicle groupings, 55 percent cited economic reason for non-WTP (i.e., they could not afford to pay or they did not have spare income to give for the conservation trust fund) (Table 3).

Table 3. Reasons for Respondents' Nonwillingness to Pay

Reason	CED	ELEC	All
I cannot afford to pay/I have no spare income but would otherwise contribute.	233 (56.55%)	208 (54.31%)	441 (55.47%)
I feel the environmental improvement of NWPPNP (and CPMR) is unimportant.	6 (1.46%)	6 (1.57%)	12 (1.51%)
Other reasons	14 (3.39%)	10 (2.61%)	24 (3.01%)
Not applicable	159 (38.59%)	159 (41.51%)	318
Total	412	383	795

Determinants of Willingness to Pay. Logit regressions were conducted on the data set from which the protest votes had been removed and the certainty was adjusted. Table 4 shows that across payment vehicles and by pooled regression, the coefficient for bid or price (WTP per year) is significant and has a negative sign, an a priori expectation consistent with demand theory. This means that at higher prices, the probability of people willing to pay for the good decreases. Alternatively, as price increases, the demand would lessen (Table 4).

Furthermore, income was found to be significantly affecting WTP in all data set regressions, and is positively signed; familiarity with endangered species is also positively affecting WTP of Cedula respondents. On the other hand, WTPYr or bid price is not significantly affecting Cedula respondents. This means that regardless of bid price, still less Cedula respondents were willing to pay for the conservation of endangered species and habitats of NPP. However, WTPyr or bid price and educational attainment were found significantly affecting WTP of the ELEC respondents. As bid price increases, less ELEC respondents were willing to pay. Educational attainment was found significantly affecting WTP of ELEC respondents which means that the more educated or higher the educational attainment, the more he is willing to pay. This is may be because of the increase in the level of awareness in environmental issues like endangered species conservation as people get more educated.

Table 4. *Regression Results of WTP Model when Protest Votes were Removed and Certainty was Adjusted*

Variable	Community Tax (CED)	Electric Bill (ELEC)	All
Constant	-3.126 (-3.182)***	-2.815 (-3.220)***	-2.928 (-4.602)***
WTPYr	-0.000029 (-0.088)	-0.00155 (-3.319)***	-0.00065 (-2.445)**
Income	0.000038 (2.663)***	0.000044 (2.455)***	0.00004 (3.507)***
Age	-0.0081 (-0.683)	0.00137 (0.121)	-0.00198 (-0.244)
Sex	-0.207 (-0.718)	0.0776 (0.271)	-0.047 (-0.233)
EducYrs	0.0261 (0.358)	0.0819 (1.814)*	0.059 (1.807)*

Fames	1.34 (2.163)**	0.246 (0.579)	0.64 (1.888)*
HelpFm	-0.153 (-0.515)	0.234 (0.774)	0.021 (0.1)

Note: * significant at 10% level; ** significant at 5% level; *** significant at 1% level

Parametric and Nonparametric Mean WTP Estimation of Conserving NPP Species and Habitats

An advantage of nonparametric analysis of CV data is that the response to price can be directly observed in the data (Jianjun and Wang, 2005). This nonparametric technique on analyzing WTP responses develops survivor curves showing the likelihood of agreeing to pay the yearly/monthly fee (e.g., a surcharge on the Electric bill or annual community tax) as a function of how much the respondent was asked to contribute (bid price). This means that for each bid price (PhP 60, PhP 120, PhP 360, PhP 600, PhP 1 200), the percentage of respondents willing to pay the corresponding requested bid price can be calculated.

The lower bound and midpoint methods were used in estimating the nonparametric values of mean WTP. Table 6 shows the parametric and nonparametric estimates for both methods, across payment vehicles. Across all respondents (i.e., the pooled data), the nonparametric annual mean WTP amounted to PhP 140 for the lower bound estimate, and PhP 176 for the middle bound estimate. When computed for monthly equivalent, mean WTPs were PhP 12 and PhP 15, respectively. These figures are not very far from the nonparametric estimates for both the community tax-based and Electric bill-based mean WTPs.

In contrast, the parametric mean WTP for all respondents, using Hanemann's formula, is almost 80% bigger than the survivor function-based estimates. Moreover, the parametric estimate for the community tax-based annual mean WTP is large at about PhP 3 000.00, which is due to the nonsignificance of bid amount as determinant of WTP for the community tax data regression. Nonsignificance for Cedula or community tax was also stressed in the study of Morrison et al (2000) wherein unfamiliarity with the use of tax levies and referenda was believed to affect the plausibility of payment vehicles and lead to payment vehicle bias.

Table 5. Parametric and Nonparametric Estimation of Mean WTP

Hanemann's Formula	Yearly		Monthly	
All respondents N = 924	253.89		21.16	
Community tax (n = 474)	**		**	
Electric bill (n = 450)	165.8		13.8	
	Lower Bound		Middle Point	
Survivor Function (Nonparametric)	Yearly	Monthly	Yearly	Monthly
All respondents (N = 924)	140.47	11.7	176.29	14.69
Community Tax (n = 474)	152.62	12.7	179.27	14.9
Electric bill (n = 450)	122.68	10.22	170.49	14.21

SUMMARY AND CONCLUSION

There has been lack of information on average citizen or household preference for and awareness of endangered species conservation, particularly in the developing country setting. This study documented and found that in rurban San Jose Antique and Kalibo, Aklan (consisting of about 22,267 households), people have high level of awareness of the importance of endangered species conservation. However, when asked for specific (monetary) commitment, the majority was unwilling or noncommittal.

Based on the dichotomous choice CVM survey, results confirm the low WTP of respondents since only up to 14 percent were willing to pay for the hypothesized conservation fund for NWPPNP's endangered species and habitats. This is almost the same portion as those who were willing to pay through either of the payment vehicle groupings. The main motivations for their WTP were bequest and use values. On the other hand, the survivor function estimates of mean WTP showed that the average respondent was willing to pay as contribution to the conservation fund amounts ranging from PhP 122 to PhP 176 per year. These WTP estimates can collect a modest social WTP of PhP 2.7–3.9 million, which is not sufficient to cover the opportunity costs of conservation. Thus, sourcing conservation funds for NWPPNP should go beyond the local residents.

In retrospect, recognizing the rich biodiversity of the site and the country's commitment to biodiversity conservation as enshrined in the NIPAS Act of 1992, the Rio Summit of 1992 and the International Convention on Biodiversity Conservation, Philippine President Gloria Macapagal

Arroyo signed a declaration in April 2002 establishing the Northwest Panay Peninsula Natural Park (Presidential Proclamation No. 186). In 2014, the Philippines House of Representatives approved on third and final reading a bill declaring the Northwest Panay Peninsula as a protected area. House Bill 4758, or the Northwest Panay Peninsula Natural Park Act, aims to conserve and protect the biological and physical diversities of Northwest Panay Peninsula through sustainable and participatory management by the local governments in Aklan and Antique (House Bill 4758). Former Senator and now Congresswoman of Antique Loren Legarda urged her fellow Antiqueños as well as citizens of the Panay island to protect NWPPNP (Legarda, 2018). Legarda, a staunch environmentalist, said that protected areas are critical in biodiversity conservation, to quote "Antiqueños and Aklanon are fortunate to have the Northwest Panay Peninsula Natural Park, home to the famous Tarictic Hornbill and Dulungan Hornbill and other endemic species of flora and fauna in Western Visayas. Its lush forest and natural spring are important sources of water and refuge for various animals in the area".

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