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Consumers' willingness to pay towards wild honey bee nesting site: The case of My Bee Savior Malaysia

(Kesanggupan pengguna untuk membayar terhadap tempat bersarang lebah madu liar: Kajian kes Penyelamat Lebah Malaysia)

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Keywords: wild honey bee, My Bee Savior, willingness to pay, contingent valuation method

Abstract

Wild honey bee usually nesting in forest, trees and far from resident's area, but recently, most of them were found in residential area either urban or rural area. Based on data from Non-Government Organisation named My Bee Savior who form a team to move these wild honey bees from residential areas to safer places. The majority of complaints they got were nesting in house structure and home furniture. However, this NGO not well known because most of the people makes complaints directs to local authorities. The main problem with local authorities was they destroy the nest because following their standard operating procedure. Such of that action can affect the bee and the environment. This study is to determine consumers' willingness to pay (WTP) for wild honey bee nesting sites with reference to My Bee Savior a Malaysia non-government organisation (NGO) initiated by the Malaysian Agricultural Research and Development Institute (MARDI). A total of 812 respondents were interviewed for this purpose. The contingent valuation method (CVM) was used to determine consumers' WTP for the wild honey bee rescue. Logistic regression analysis shows that the bid price, the true value of willingness contributions and the type of work affect the individual's willingness to contribute to the trust funds fund to preserve the wild honey bee species in the country. Based on this study, it was found that the majority of respondents (84.4%) agreed to contribute to the trust fund with amounts varies, but most of them not aware the existing of My Bee Savior. However, average amount WTP for wild bee activity is RM19.59 per person. This result could be used as a guide to develop policies and strategies for funding the conservation of the wild honey bee in the country. The amount of money could be derived for example, by allocating part of the tax payers' contribution to be channeled to relevant parties responsible for maintaining the wild honey bee species.

Introduction

Pollutant agent and ecosystems are connected through pollination involving the production of seeds and fruits and increase the rate of plant breeding. Some species of plants depend on pollutant agents to maintain the survival of their species in the ecosystem. Pollen agents like bees also provide food and honey to other animals as food sources and sources of income to humans. About 80 percent of plant species, especially the pollination of flowering

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species, are caused by animals, especially from insects. The main role of pollinators is to ensure breeding, the formation of fruit cells and dispersal in plants. According to Kleijn et al. (2015) 80% of crop pollination delivered by 2% of bee species and Klein (2007) found that 87 species of plants (70%) out of 124 main crops are pollinated by pollen.

Bees are the most important insect pollinator because a wide variety of them is known to be efficient and effective pollinators of many plant species (FAO 2007). However, numbers of them especially honey bee are declining rapidly, causing global concern for pollination services (Biesmeijer et al. 2006). Convention of Biological Diversity established an International Initiative for the Conservation and Sustainable use of Pollinators in 2000. The initiative aims to promote sustainable use of pollinator diversity in agriculture and related ecosystems. Conservation of bee diversity would help to achieve pollination services in case commonly used honeybee is diminishing.

Pollutants such as insects in providing ecosystem services and production practices are widely used by farmers around the world for crop production. In some previous studies in some European countries, farmers adopting the approach of using bees as pollinator's agents in the field to increase domestic agricultural production and this method can reduce dependencies on imports of agricultural products. In Malaysia, studies conducted by the MARDI show increased coconut and pineapple production after bee breeding was introduced in the plantations (DOA 2012, Jaafar 2011; Mian 2009).

However, ecosystem critically endangered causing species of wild honey bees are declining and some other wild bee species at risk and could seriously threaten fppd security and biodiversity (Biesmeijer et al. 2006 and FAO 2007). The current decline of pollinators by 40% (<40%) and 9% out of percentages are bees and European Butterflies (Potts 2016). Wild honey bees usually nest in trees in forest areas and residential areas. In a study of the *Apis cerana* nesting site preference in West Sumatra, it was found that there were no nesting sites in the trees and mostly nestled in concrete electric, rat holes, old chairs and space between two layers of wood made of wood (Jasmi et al. 2014). In India, bee species like *Apis florea* choose a variety of trees, bushes and human structures with a total of 10 colonies (Narayanaswamy and Basavarajappa 2013), while the same species normally nesting in tall trees are now often found in building structures (Deowanish et al. 2001). Meanwhile, in the Peninsular Malaysia, the Klang Valley area recorded the highest record for wild bee habitat (*Apis cerana*) within 30 months from 2015 to June 2017 as shown in *Figure 1*.

Apis cerana tends to nest in a residential area and prefer on home furnishings. Many complaints received and found a nesting site in dark environments such as rooms, rooftops and home furnishings as indicated in *Table 1*. This can lead to the risk of destruction on this type of honeycomb in the event of no rescue of feral honey bees. While the *Apis dorsata* prefer to nest on the branches of the trees around the housing and building structure.

These feral honeybees tend to nest in a residential area because of environmental destruction of flora and fauna. Nowadays, many developments in residential areas being carried out and new areas are explored mostly forest areas. This causes wild bees to build a new nest for survival and choose residential areas. This will cause discomfort to the population and feral honeybee nest have to removed or destroyed. For a balanced survival and ecosystem, beekeeping must be implemented to ensure that these wild bees can be rescued from the threat of extinction.

The declining number of honeybee population causes by nesting feral of honeybee nesting in residential area. This causes fear among resident and they called Local Authority or Firefighter Department to

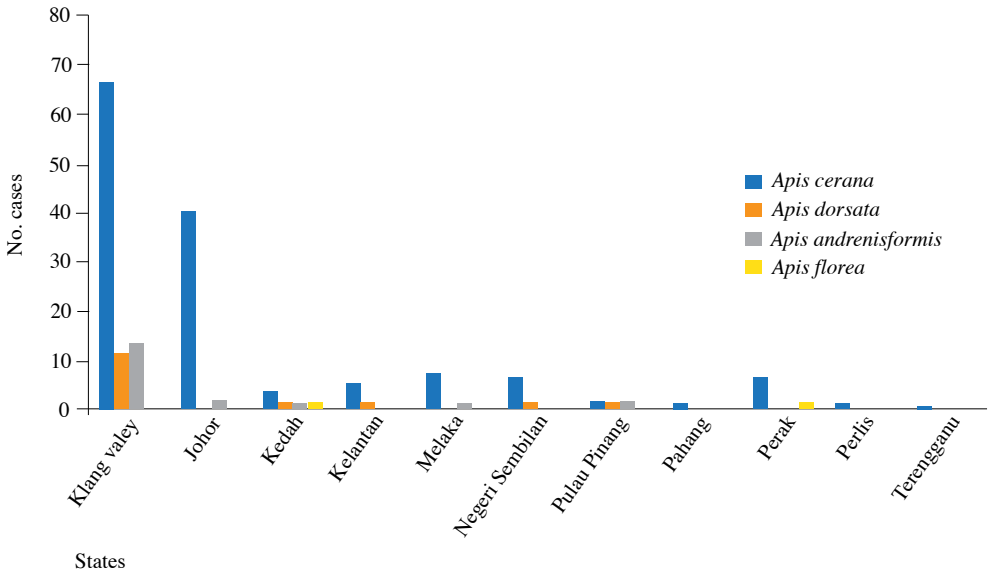

Figure 1. Feral honey bees recorded in peninsular Malaysia

Table 1. Nesting site preferences by feral honey bees

	Apis cerana	*Apis dorsata*	*Apis andreniformis*	*Apis florea*
Roof	31	–	–	–
Room	21	–	–	–
Cupboard	10	–	–	–
Tree branches	–	11	20	20
Building structure	–	5	–	–

move the nest. Lack of standard operation procedure (SOP), they move the nest by destroy or burn it. This activity causes the declining of the bee population and loses to industry. Starting 2017, MARDI officially launches Non-Government Organisation (NGO) called My Bee Savior volunteer to move the honey bee nesting in residential area to a safe place in order to protect the population of honey bees. My Bee Savior cooperates with local authorities move the wild bee nesting from threatened to safe area far from residential area volunteer anytime. The group also provided courses and talks on the steps to handle wild honeybees to the public.

Literature review

In the pollination context, we can distinguish three types of non-use values (Kolstad 2000): existence value (based on the utility derived from knowing that insect pollinators exist), altruistic value (based on utility derived from knowing that anyone else benefits from insect pollinators), and bequest value (based on utility gained from 19 future improvements in the welfare of one's descendants). It would have been impossible to try to measure empirically these different categories of non-use values.

Insect pollinators pollinate about 80% of flowering plants (FAO 007). Many plants have evolved intricate relationships with many insect pollinators, without which they would not reproduce and/or maintain their genetic diversity (Daily et al. 1997).

In natural ecosystems, insect pollinate more than 50% of tropical forest and thus they play a major role in maintaining and conserving biodiversity. In agricultural ecosystem, many agricultural crops are dependent on insects for their pollination, and assisted pollination may have to be done when natural pollination is insufficient in order to reduce potential yield loss (Klein et al. 2007).

On a global scale, the total annual value of insect pollination services has been estimated at USD 217 billion (Sciencedaily 2008). In Malaysia, only a case study of quantifying the pollination service by a weevil, *Elaeidobius kamerunicus* in oil palm plantation is documented. The weevil introduced into oil palm plantation in this country in 1981, has been proven not only to successfully improve pollination and increase fruit set of the palm oil, but eliminated the costly and inefficient process of assisted pollination (Syed et al. 1982). The pollination service provided by this beetle saved the oil palm industry USD 100 million per year. There are a number of methods that can be used to estimate the value of the pollination service. But no single method adequately captures the entire value of the pollination service. Using the market valuation equation of Gallai et al. (2009), the total value of pollination for UK agriculture amounted to £230 million per year in 2008.

Carreck and Williams (1998) estimate the value of pollination service on the basis of the crop value of the pollinated crops. Gallai et al. (2009) extended this simple bioeconomic approach to determine the global economic value of insect pollination and the vulnerability to pollinator loss. The approach gives an order of magnitude estimates of the value of pollination service.

The difference in the mean WTP between those with information and those without information of declining bee numbers is statistically significant ($p < 0.05$). Those aware of declining bee populations and after the proposed conservation policy was introduced, expressed a mean WTP of £1.45 per week per household compared to £0.56 per week per household for those who were not aware of declining bee populations (Mwebaze et al. 2010).

Economic valuation on the sustainability of wild bees

The economic valuation of pollination, as with any ecosystem service, has a number of potential context specific uses. First, economic valuation of ecosystem services is a means of illustrating the value (benefits) of conserving pollination services (Costanza et al. 2014) and highlights the risks of these services diminishing to policy makers and other stakeholders that may not have previously considered or understood their benefits (Abson and Termenson 2010). Secondly, once quantified economically, the market and non-market values of pollination can be included as part of cost-benefit analysis to inform policy or business decisions and land planning (Hanley and Barbier 2009).

Beyond crop production, insect pollinators provide a number of non-markets benefits. From an economic value viewpoint, this happens in at least two ways. First, individuals derive pleasure from seeing pollinators and knowing they exist. This is known as non-use, passive use or existence value. Such values are direct benefits to individuals from the presence, diversity and abundance of pollinators and as such changes to the presence, abundance and/or diversity will change utility. The monetary value of such changes in utility is given by an individual's WTP for an improvement in pollinator populations, or WTP to avoid a loss of pollinators.

Second, individuals may care about the consequences of pollinators' actions. For example, this could be through the effects of wild pollinators on the diversity and abundance of wild flowers and trees. Several studies have noted that respondents derive greater aesthetic utility from increasingly floristically diverse landscapes

(Lindeman-Matthies et al. 2010), indirectly benefitting from the actions of pollinators. Wild pollinators are also important for the production of fruit and seeds for wild birds through their action on wild and garden plants (Jacobs et al. 2009), thus indirectly contributing to the utility from bird-watching.

Evaluation of environmental sustainability including wild honey bee species which has no target market illustrates the importance of resources to the community. The objective of this paper is to show WTP by the public for conservation efforts of wild honey bee species that are feared to be extinct. The WTP in monetary value (RM) will illustrate the importance of the wild honey bee conservation project to the community. Such information can be used as a guide to making decisions on resource allocation efficiently, including provisions for the conservation projects of pollinators in the country.

Many studies have been made related environmental service assessment (environmental services) such as parks, recreation, forest reserve and catchment forest water and biological diversity of plants. However, the study of the assessment economic impact on pollinating agents is very limited. Convention Biology Diversity (CBD) is justified assessing natural resources such as pollutants based on two reasons, first the conservationists need to know the economic value of the source environment related to agriculture to be justified budget allocation for conservation efforts such resources while community activists also want the information to be is used as a guide to compensate which is reasonable to the top farmers their willingness and sacrifice to continue to conserve this pollination source for the benefit of the universal community.

The assessment of the economic aspects of the wild honey bees identified the value of the wild bee economy as an important pollutant agent providing justification in resource conservation efforts among beekeepers who need to know and to be justified for the budget preparation for the business while the community activists want such information as a guide to conserving the bees' conservation and their willingness and sacrifice to continue conserving the genetic resources of plants for the benefit of the universal community.

Morse and Calderon (2000) also acknowledge that free pollination exists from beekeepers who are willing to pollinate a farmer's crop with no compensation for pollination since they gain a high return for honey produced. Additional services provided that are not compensated by farmers to beekeepers include pollination from nearby hobby beekeepers or bees that are moved nearby for queen rearing. Morse and Calderone (2000) also note that honeybees provide other services which create positive externalities to the surrounding ecosystem including, pollination of plants that prevent erosion, pollination of gardens, pollination of native plants that provide food for wildlife.

Methodology

Quantitative and qualitative methods used to analyse data. The collection of primary data publicised through a structured questionnaire to gather information on public perceptions on the rescue activities of bee species underway by the My Bee Savior team. Secondary data and information derived from scientific reports. This study involved several urban and rural areas (*Table 2*). This information can also determine the perception of public perceptions in urban and rural areas. In the questionnaire, respondents presented with a scenario concerning bee populations. The scenario designed to shed light on total values of pollinating honeybees and the welfare measure used reflects the consumer's maximum willingness to pay (WTP). Respondents asked their WTP for a policy to maintain bee numbers at current levels.

Stratified sampling was used to collect data by dividing into two areas,

namely urban and rural areas, sample sizes were selected based on the previous study (Sudman 1967), and 812 respondents were selected. Analysis of WTP measured empirically and this analysis has been widely used to evaluate non-market goods (non-market goods). In this study, contingent valuation method (CVM) used to analyse the data. WTP measured empirically using the CVM. This methodology had also been widely used to assess the values of non-market goods such as environmental amenities (Mitchell and Carson 1989), mortality risk reduction (Jones-Lee et al. 1985) and morbidity risk reduction (Krupnick and Cropper 1992).

The respondent's WTP is represented by the dichotomous variable of WTP, with values of 1 for those willing to pay the additional amount and 0 is otherwise. An OLS regression of the above relationship with WTP as the dummy variable is bested by several problems, namely: (1) non-normality of the error term, (2) heteroscedasticity, and (3) the possibility of the estimated probabilities lying outside the 0 – 1 boundary (Gujarati 1988). Then the logistic regression technique is used to estimate the WTP (Hanemann, 1984). This method can estimate the probability of answering YES for the independent variable rate bid. In estimating the WTP, some assumptions are made regarding the upper limit values and lower limits for the integral for each bid rate, the probability of saying 'YES' is one (1) while the probability of saying 'NO' is zero (0). As a result, the negative value of WTP can be deducted and zero is used as a lower limit value. Linear multiple regression techniques are used to identify variables that affect the actual or maximum rate affordable to the public.

The analysis of WTP was measured empirically and this analysis has been widely used to evaluate non-market goods. The regression model to determine the real value of the willingness to pay is as follows:

$$WTP = [B_0 + (B_2X_2 + B_3X_3 + ..., B_KX_K)]/B_1$$

where,

B0 = Coefficient value for constant
B_2X_2 = Coefficient value for X_2
B_3X_3 = Coefficient value for X_3
B_KX_K = Coefficient value for X_K
B_1 = Coefficient value for B_1

Results and discussion

As shown in *Table 2* the numbers of respondents from rural and urban areas were 243 (29.9%) and 569 (70.1%), respectively. Most of these respondents were females, which consisted of 431 (52.1%) as compared to males, which were 381 (47.9%). This is consistent with the study done by Robert et al. (1975), when couples interviewed, and normally the wife or female partner would answer the questions. From the interview, it is shown that 19.3% of respondents worked in the public sector. Those who worked in the private sector contributed 59.6%. Another 14.1% were self-employed, and 7.0% were categorised as a housewife. Occupation is a very important factor because it usually reveals the consumers' social class, which can influence the pattern of behaviour towards lifestyle pattern. Occupation and income related to each other.

Previous studies have identified a variety of demographic characteristics that affected consumers' WTP for environment sustainable in *Table 3*, demographic of respondents who earn higher income are believed to have different patterns compared to those with lower incomes. Higher income respondents (estimated earnings above RM3000) are willing to pay for the continuity of bee biodiversity, as it is more likely to contribute to the biological

Table 2. Number of respondents by major location

Location	Total
Rural area	243
Urban area	569
	812

Source: Survey, 2017

Table 3. Socio-economic profile of respondents

Profile	Category	Percentage (%)
Location	Urban	70.1
	Rural	29.9
Gender	Men	47.9
	Women	52.1
Ages	Below 20	7.3
	20 – 30	22.1
	31 – 40	58.3
	41 – 50	9.8
	More than 50	2.4
Marital Status	Bachelor	26.6
	Married	73.4
Household	Below 2	1.3
	3 – 5	41.9
	6 – 10	30.7
	More than 10	26.1
Education level	Primary school	11.6
	Secondary school	33.9
	College/university	54.5
Occupation	Public sector	19.3
	Private sector	59.6
	Self employed	14.1
	Housewife	7.0
Household income	<RM1000	3.0
	RM1001 – RM2000	24.1
	RM2001 – RM3000	19.9
	RM3001 – RM4000	30.2
	RM4001 – RM5000	12.0
	>RM5001	10.8

diversity conservation fund compared with the lower income group. Most respondents (53%) have household incomes above RM3,000.

Public perception of bee conservation activities in Malaysia

The findings revealed that there were many (65.4%) people who were unaware of the presence of the team whom saving wild honeybee nest in a residential area in Malaysia (*Figure 2*). In fact, many respondents are aware of the presence of bee rescue teams through this study. In *Table 4,* the activities of respondents willing to help

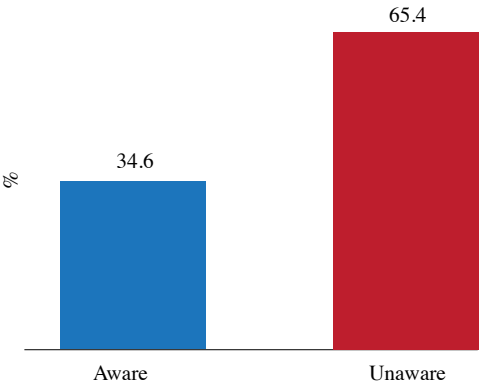

Figure 2. Public awareness on Wild Honey Bee Rescue

to ensure the bee conservation in Malaysia by gender.The majority of them were female have higher awareness compare to men.

This decision is anticipated as the existence of this bee rescue team can be said to be relatively new among them and was set up in early 2015. Previously, the habitat shifting of wild bee habitats done by rescue agencies such as the Fire Department and the Civil Defense Department of Malaysia (JPAM). However, these authorities will usually destroy the bee habitat for the safety factor of the population.

Most respondents from urban areas had higher level (47%) of awareness to contribute for wild honey bee conservation activities relative to rural population (*Table 5*). In addition, urban residents (45%) were more interested in promoting wild honeybee conserving activities than rural areas (25%) and this is consistent with the situation of information that is easier and more effective to be disseminated in urban settlements.

The willingness to pay for the activity of protecting bees

The majority of respondents (82.96%) expressed their willingness to contribute to the wild honeybee rescue team in the residential area for conservation of wild bee species that feared to be extinct with different donation value based on the bid price offered to them, from RM20 to RM60

Table 5. Wild honey bees conservation: people perception by area

	Location	Yes (%)	No (%)
The willingness of public for wild honey bee conservation	Urban	47	11.60
	Rural area	28.90	12.70
Face to face conservation program	Urban	26	32.40
	Rural area	23.70	18.00
Promotes the activities of protecting bees in social media	Urban	45	13.20
	Rural area	25.00	16.70

(*Table 6*). The rest (17.04%) consisted of those who did not agree directly to contribute and they disagreed with the bid price offered. Those who disagree with some of the reasons include saying that wild bee habitat transfers in residential areas are the duty of the government without involving the public.

Those who disagree with the bid price offered at RM25 think the price of the bid is either too high or too low. Therefore, they suggest the actual price or the maximum price they think desirable to refer to *Table 6*.

Based on the estimation results, equivalent WTP measures were determined using logistic regression at the coefficient value (*Table 7*). Logistic registries assign a residual variable WTP with a value of either 1 or 0 for Yes or No responses. The independent cohort consists of bid prices and other factors, including age (AGE), education (EDU), sustainability (STBLE) and people complaints (REPORT) and age (AGE have a significant influence on the willingness of the public to contribute to protecting honeycomb activities to preserve the sustainability of this country's ecosystem.

Firstly, the regression analysis indicated a significant positive relationship between age and WTP for bee conservation (bid value). Older people were more able to pay a higher price for conservation and had a lower marginal utility of money income. Secondly, the environment stability or bee conservation significantly positive with the dependent variable. This shows people tend to pay money for the good activities related to environment conservation. Higher education level tends to conserve more for the environment. The education level significantly positive with the dependent variable. However, for government responsible significantly negative with bid price. This means, people say this activities conservation to sustain the bee hive at public was government intention. Government should take responsibility to conserve the environment and make fund to protect especially bee hive in residential area compare to destroy or burnt. Many of them think the government should have a standard operating procedure (SOP) for this activity. Mwebaze (2010) stated that, more than half of the respondents suggested that the government in partnership with industry should pay for pollination services while a large number (27.8%) insisted that the government alone should pay for the policy.

The summary of the results of the multiple regression analysis shown in *Table 7*. The independent variables of AGE, EDU and REPORT have significant influence on the true contribution value that the public is willing to pay to conserve the wild honeybee species. The higher the age and the higher the level of one's education, the higher the value of the willingness to pay for conservation activities of wild honeybees. Meanwhile, those with higher education are willing to contribute to the conservation activities of wild honeybees.

The actual price bid is RM25 for every rescue event, but after analysing using WTP formula, the price paid for the public is RM19.59. This finding is consistent with economic theory, which shows that demand will decline when prices rise. It can see

Table 6. Frequency of willingness to pay for wild honeybee conservation

		Bid price (RM)					
		20	30	40	50	60	Total
Yes	Percentage	42.6%	16.51 %	12.38 %	7.34 %	4.13%	82.96%
No	Percentage	8.5%	4.13%	1.4%	2.81%	0.2%	17.04%

Table 7. Coefficient for multiple regression models

	B	S.E.	Wald	df	Sig.	Exp(B)
BID	–.212	.015	189.276	1	.000	.809
AGE	.613	.110	30.779	1	.000	1.845
STBLE	1.482	.622	5.667	1	.017	4.400
EDU	.420	.170	6.126	1	.013	1.521
REPORT	.704	.282	6.225	1	.013	2.021
GOVRESP	–1.172	.209	31.465	1	.000	.310
CONSTANT	–.070	1.026	.005	1	.945	.932

–2 Log likelihoods 608.039a
Cox and Snell R Square .465
Nagelkerke R Square .623
Independent Variables actual contribution rate is willing to pay (Bid)***p <0.01; **p <0.05; *p <0.10

that the WTP decline as the prices asked of respondents' increase, in accordance with economic theory (Hanley and Barbier 2009). This also means the higher the bid value offered, the higher the response to not being able to pay for the activity of conserving the wild honeybees.

Conclusion

In this study, 812 respondents interviewed to assess the level the awareness and willingness of the public to contribute to the fund protecting by moving habitat of wild bee nesting in the area residence to a safer area to conserve species diversity the feared bees are getting extinct. In general, the findings in this study indicate the majority of the consumers are aware of the effect of wild honey bee losses, but only some have the right perception towards it. Most people still call the local authorities to divert the wild bee hives in residential areas them because they have no choice to move themselves and some of them are still worried about the environmental destruction that occurs especially wild honeybees.

This study used CVM to estimate consumers' decision on whether to pay a premium and how much more to pay for environment conservation, especially wild honey bee hive based on the data collected from two areas (rural and urban) in peninsular Malaysia. The findings show partly large respondents are willing to contribute to the fund with a value of differences. This proves that public awareness has existed regarding the importance of conserving wild bee species. Logistic regression analysis shows that the bid price, the true value of willing contributions and the type of work affect the individual's willingness to contribute to the trust funds fund to preserve the wild honeybee species in the country. Average willingness to pay for wild bee activity is RM19.59 per person.

The importance of awareness campaigns to provide information about the value of honeybees and the ecological importance of their unique ecosystem service could potentially increase the number of individuals that would be WTP for their protection, as revealed in this paper. The findings from this survey could provide a convincing argument for policy makers and other stakeholders in agriculture and

conservation to consider policies required to protect insect pollinators. Without such a policy, future generations may not enjoy this service if we do not conserve honeybees given the continued threat of emerging diseases, habitat loss, pesticide use, and climate change. Given the importance of awareness of WTP values, there is an urgent need to spread knowledge about the positive externalities of bees for pollination. People should have a strong awareness about the importance of bee in the environment not only supplies for honey but also as a pollinator agent. Campaigns and promotion of awareness on the conservation of diversity of bee species should be continued and enhanced, especially in rural settlements so that wild bee species protected and not destroyed. The government should make education a platform to introduce the act or policy to protect and conserve bees in the country.

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Abstrak

Lebah madu liar biasanya bersarang di hutan, pokok dan jauh dari kawasan kediaman, namun dengan keadaan persekitaran terkini, sarang lebah madu banyak ditemui di kawasan kediaman sama ada di kawasan bandar atau luar bandar. Berdasarkan data dari organisasi bukan kerajaan iaitu Pasukan Penyelamat Lebah atau My Bee Saviour yang membentuk satu pasukan untuk memindahkan lebah madu liar ini dari kawasan kediaman ke tempat yang lebih selamat secara sukarela. Sebilangan besar aduan yang mereka terima bersarang dalam struktur rumah dan perabot rumah. Walau bagaimanapun, NGO ini tidak terkenal kerana kebanyakan orang membuat aduan terus kepada pihak berkuasa tempatan. Masalah utama dengan pihak berkuasa tempatan ialah mereka memusnahkan sarang kerana mengikuti prosedur operasi standard mereka. Tindakan sedemikian boleh menjejaskan populasi lebah dan alam sekitar. Kajian ini bertujuan untuk menilai kesanggupan untuk membayar (WTP) di kalangan pengguna terhadap aktiviti pengalihan tempat bersarang lebah madu liar yang dijalankan oleh My Bee Savior yang diilhamkan oleh Institut Penyelidikan dan Kemajuan Pertanian Malaysia (MARDI). Sejumlah 812 responden telah ditemu ramah untuk tujuan ini. Kaedah penilaian kontingen (CVM) digunakan untuk menentukan WTP pengguna untuk penyelamatan lebah madu liar. Analisis regresi logistik menunjukkan bahawa harga tawaran, nilai sebenar sumbangan kesediaan dan jenis kerja mempengaruhi kesediaan individu untuk menyumbang kepada dana amanah bagi memelihara spesies lebah madu liar di negara ini. Kajian mendapati bahawa majoriti responden (84.4%) bersetuju untuk menyumbang kepada tabung amanah dengan jumlah yang berbeza-beza, tetapi kebanyakan mereka tidak mengetahui kewujudan Penyelamat Lebah. Walau bagaimanapun, purata WTP untuk aktiviti lebah liar adalah RM19.59 seorang. Hasil ini boleh digunakan sebagai panduan untuk membangunkan dasar dan strategi untuk membiayai pemuliharaan lebah madu liar di negara ini. Sejumlah wang boleh diperoleh contohnya dengan memperuntukkan sebahagian daripada sumbangan pembayar cukai untuk disalurkan kepada pihak yang bertanggungjawab untuk mengekalkan spesies lebah madu liar.