

# Tourists Perception and Willingness to Pay for the Conservation of Ecotourism Resources in Sohoton Cove, Surigao del Norte, Philippines

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## ABSTRACT

Sustainable management of tourism resources was formulated to address the need for environmental issues and threats that may harm very significant tourist spots. However, multi-stakeholder fora often neglect the importance of tourists' perception and views for the conservation of resources. This study determines the understanding of tourists visiting Sohoton Cove in Surigao del Norte, which specifically aimed at determining tourist's profile, satisfaction level of their experience, and willingness to pay for the conservation of ecotourism resources. A self-made validated interview schedule was designed to gather information, and a total of 169 tourists were the respondents of the study. Results indicated an increase in tourist arrival over the past seven years, and a good number of international tourists had visited the area. Tourists pointed out activities they like, such as the passing through the Sohoton cove and jellyfish encounter. They also emphasized the need to improve and provide enough safety equipment for visitors. The majority of the tourists were more willing to pay to experience the scenic attraction that Sohoton Cove offers. In general, tourists express the value of conserving the Sohoton Cove for the sustainability of tourism activity.

Keywords: *Tourism, island ecosystems, willingness, pay, sustainability*

## 1 Introduction

Tourists nowadays are conscious of environmental issues and threats that may harm very significant tourist spots. Because of this, the concept of ecotourism was formulated to incorporate sustainable management of tourism resources. Ecotourism is a concept that applies sustainable tourism activities in areas with natural and cultural heritage, which takes into consideration balanced development for economic, environmental, and social aspects. It also enhances and fosters knowledge management, needs, and benefits local/host communities can gain while satisfying tourists. The purpose of implementing knowledge management in ecotourism is to promote and develop sustainable activities to attract and increase the number of tourists, improve the economic conditions of locals, protect and preserve nature to ensure long-term contributions (Tisca et al., 2016). Community leaders and economic development specialists have increasingly treated tourism as an essential industry that can enhance local employment opportunities, tax revenues, and economic diversity (Kim et al., 2012). The revenues generated from visitors can be used to develop programs for the protection and conservation of natural resources.

Tourism in the islands raises concerns for safety and excessive growth with an unsustainable focus on the interests of a model of economic development (Baldacchino, 2014). Small islands are considered among the most vulnerable ecosystem in the world due to the reduced size of the territory and physical conditions of insularity, which increase susceptibility and exposure of natural or social systems to the threats from

humanity. It is considered a fragile ecosystem where its biophysical environment is susceptible to minute changes once anthropogenic activities start. Brau & Cao (2006), as cited by Remoundou et al. (2009), carried out a choice experiment on a sample of tourists on completion of their holiday on the island of Sardinia (Italy). They found that tourists appreciate the island more if it is not overcrowded and have high levels of accessory to recreational facilities. Further, the environmental quality was also found to be an essential determinant of destination choice for tourists going to Sardinia.

However, in a multi-stakeholder forum on ecotourism management plan formulation, tourists are often absent, and their views and perceptions are unheard of. This study tries to determine the contribution of tourists since they play an essential role in shaping ecotourism projects. The need to determine the views and perceptions of tourists relative to the sustainable plan and management of ecotourism resources are deemed vital and could address the information gap for a long-term sustainability plan. Thus this study aimed at determining the perception of tourists or visitors of Sohoton Cove in Bucas Grande, Socorro, Surigao del Norte. The trend of tourist arrival, tourists' profile, satisfaction level of their experience, and willingness to pay (WTP) for the conservation of ecotourism resources were determined. The findings of this study would provide a guide to the Sohoton ecotourism management in reviewing their pricing policy and crafting measures to ensure the sustainability of its ecotourism resources.

## 2 Materials and Methods

### Study Site

The study was conducted in the Sohoton Cove located at Barangay Sudlon and Barangay Dona Helene, Socorro, Surigao del Norte (Figure 1). It is the major tourist destination in Socorro, which attracts a growing number of visitors each year. The area is accessible from Barangay Hayanggabon, Claver, Surigao del Norte, and Surigao City jump-off points through water transport vehicles. The area is part of the Siargao Island Protected Landscapes and Seascapes (SIPLAS), declared as protected area per Presidential Proclamation No. 902 on October 10, 1996.

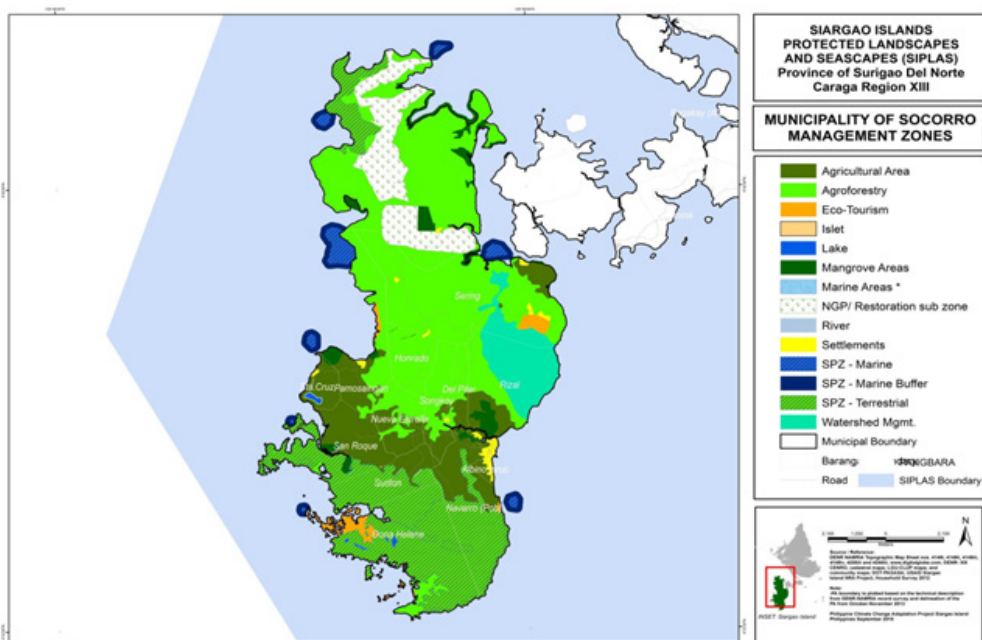


Figure 1. Map showing the location of the study site.  
Source: *SIPLAS Management Plan, 2015*

### Assessment Methods and Approaches

**Reconnaissance Visit.** The researchers conducted a reconnaissance visit before the actual study to gain information about the natural ecotourism features; determine issues, threats, and potential tourism attractions; and assess the current status of tourism facilities in the area. Likewise, pilot-testing of the self-made interview schedule was also conducted to 30 respondents during the visit to discover errors in the survey instrument.

**Data Collection.** A self-made validated instrument intended for tourists was developed. The instrument contains background information of the respondent, awareness, attitude, and perception of ecotourism. The one-on-one interview was employed in the survey, and an opportunity sampling technique was used for the tourist respondents since the availability of particular tourist was considered at the time the interview was carried out. The interviews were done right after the tour from Sohoton Cove. A total of 169 tourists were the respondents of the study.

### Data Analyses

The WTP can also be considered a measurement that indicates the tendency to act in monetary terms by an individual for the intended change or quality improvement and a tool in evaluating resources such as the environment which do not have a specific commercial or market value (Ramdas & Mohameda, 2014). Descriptive statistics using percentage was used to describe the number of people willing to pay for conservation, protection, and development of Sohoton Cove. A correlation analysis was conducted primarily for identifying the factors that had an impact on the WTP. Also, multiple linear regression analysis was used to compute the willingness to pay (WTP) of the respondents using the formula;

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p$$

Where  $y$  is the predicted value (WTP) of the dependent variable,  $\beta_0$  which is constant and  $\beta_1, \beta_2$  are the dependent variables (ex. age, gender, civil status), respectively. The analysis would determine the contributing factors that affect the respondents' WTP.

## 3 Results and Discussion

### Tourist Arrival

Tourist arrivals in Sohoton have steadily grown from the years 2010 to 2016 (Figure 2). Initially, the graph demonstrated a slight increase rate for the years 2010 to 2013. However, in 2014, Sohoton ecotourism guests increase up to more than 15,000 visitors, 95% of which were local tourists. The sudden growth of domestic tourists was influenced mainly by the promotion of Sohoton ecotourism to different regions in the Philippines. From then on, an increase of 76% was recorded in 2015 and 59% in 2016. Through social media promotion, international tourist arrivals have also increased by 21% from 2010 to 2016, adding up to 5,442 foreign tourists in 7 years. The result indicates the development of tourism is increasing, especially in developing countries.

### Tourist's Profile

Of the 169 tourists-respondents, 51% percent were females, and 49% percent were males. The majority

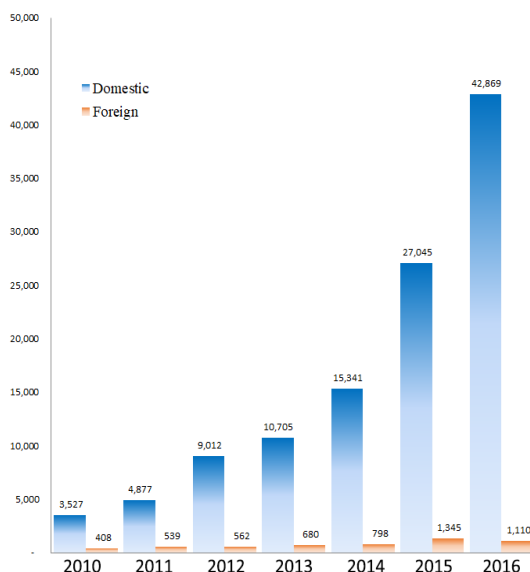


Figure 2. Number of tourist arrivals in Sohoton Cove for seven (7) consecutive years (2010-2016)

of the respondents are in the age bracket of 21 to 44 years old. This range of age is when people are working and earning. They are capable of spending part of their earnings and have a sense of adventure to wander to places they have not been. Most of the respondents were single and has a decent job; hence, they have the liberty to go to several locations as they have extra financial resources.

Most of the visitors on the island hail from the Philippines (96%) and only four percent of the respondents were international tourists indicating that Sohoton is already known to the international community. The respondents' sources of information about the tourist destination were mostly from their network of friends. The result suggests that traditional information provisions such as direct word-of-mouth and tourists' own experience are highly resilient and influential when tourists decide where they will spend their vacation or holiday (Jacobsen & Munar, 2012). Tourists generally have limited knowledge about a destination that they have not visited, and they often choose based on symbolic information acquired either from the media or from social groups (Mok & Armstrong, 1995). Therefore, the influx of tourists from other regions can also be attributed to travel TV programs by national media, social media platforms, or travel bloggers who feature the tourist sites in their blogs. Electronic gadgets, therefore, have become indispensable components of the daily lives of tourists. Jalilvand et al. (2012) found that electronic word of mouth (eWOM) positively influences the destination image, tourist attitude, and travel intention of potential tourists. Some respondents mentioned that they have read about Sohoton Cove on printed materials such as travel magazines and newspapers.

The majority of the tourists visited Sohoton to spend a vacation, find pleasure, and relax (Figure 3). Some were there due to medical reasons (6%), while a few came because of business (4%), intention to conduct research (2%) and for educational purposes (1%). Most tourists spend a vacation to seek for a novel and thrilling experience the tourist destination can offer. Others also want to explore the wilderness of the place and find comfort in it, knowing that there are still environments that are less scathed due to human activities. People traveling to islands, independently of their origin, look for relaxation, beaches, and pleasant weather, and they appreciate nature and landscape (Jiménez & Hernández, 2011).

Tourists identified activities that interest them while in Sohoton (Figure 4). The cove is 40 meters wide from the entrance to exit with stalactite formations and fruit bats hanging on the coves' ceiling. It is not

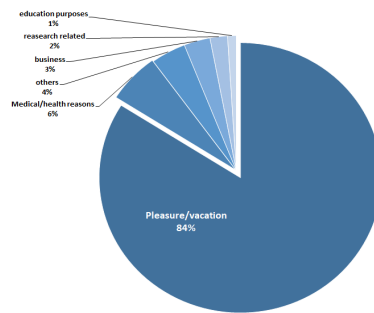


Figure 3. Reasons of tourists for visiting Sohoton Cove

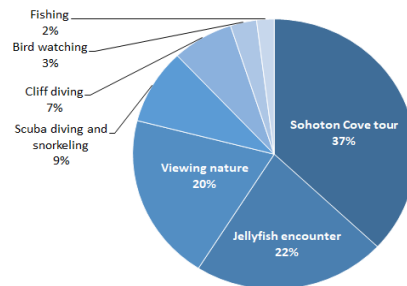


Figure 4. Activities that interest Sohoton Cove tourists

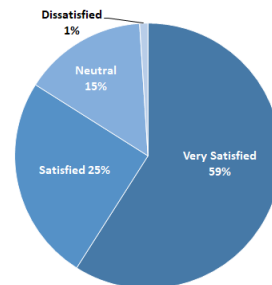


Figure 5. Percentage of satisfaction of Sohoton Cove tourists after visit

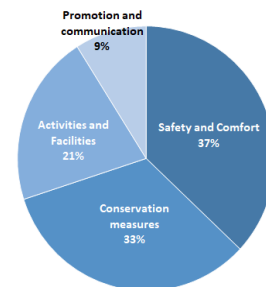


Figure 6. Areas that need improvement in Sohoton Cove

accessible during low tide; hence, it is impossible to access the beauty that lies inside. This cove is considered the sole entrance and exit to Sohoton Cove. The stingless jellyfish encounter was also attractive to the visitors. The area where the jellyfish are found can be accessed through a small paddle boat, which can only carry a maximum of three persons. Tourists can stay in the boat and scoop jellyfish, or they can dive and swim with it.

### ***Perception of Tourists***

From the data collected, it is revealed how tourists feel after visiting Sohoton and the activities they have done. The majority of the respondents, (59%) indicate they are delighted with their experience in Sohoton, some (25%) said they were satisfied, 15% mentioned that they are neither satisfied nor dissatisfied, and 1% expressed being dissatisfied with their visit (Figure 5). Tourists were delighted since the environment is still pristine, tour guides are friendly, tourists' attraction sites are exciting, and the cove is comparable and much more unspoiled than other places in the Philippines. Tourists were amazed by the jellyfish encounter activity since the majority have come across with the jellyfish for the first time. The attractiveness of a destination reflects the feelings, beliefs, and opinions that an individual has about the destination's perceived ability to satisfy the special vacation needs of that person (Hu & Richie, 1993). Satisfaction can promote the return intentions and the willingness of tourists to recommend the site to family and friends (Verdugo et al., 2016). Few tourists mentioned that their experience in Sohoton saddened them. Accordingly, the reason was that there was no transparent billing and the rate was not fixed for motorboats that ferry them from the jump-off points and vice versa. A negative experience in a destination associated with costing does not determine overall satisfaction, but it makes the destination less attractive, and thus reduces the probability of a return visit (Alegre & Garau, 2010).

### ***Improvement in Sohoton Cove***

A delightful experience entails offering services that cater to satisfaction and excitement, hence new and enjoyable activities, along with continuously improving facilities, is somehow necessary. Ninety-eight percent (98%) of the respondents opted for improvements, and only two percent (2%) thought otherwise. With the responses, Sohoton ecotourism needs to undertake improvements in its facilities, visitor handling, new activities, and improve internal management.

When asked for areas needing improvements, tourists were more concerned with their safety and comfort while staying in Sohoton (Figure 6). This is because safety equipment such as helmets and life jackets were limited and often time cannot accommodate the visitors, especially during peak season. There were also no lifeboats that can be used in case of emergencies; hence, the need for safety equipment and facilities are significant. They also perceived the need for tour guides and boatmen to attend lifesaving training. The public toilets of Sohoton Cove Tourist Center and the New Ranger Station were also not enough when there is an influx of tourists. This scenario could also be attributed to the absence of carrying capacity data that may have affected the struggle for sustainable management of the areas' ecotourism resources. This scenario brought complications such as overcrowding, unorganized handling of tourists, insufficient amenities and direct services, stress on biodiversity, and satisfaction of visitors.

Environmental conservation measures were only second in terms of development as perceived by tourists due to lack of awareness. Besides, there was no ecological orientation to the visitors before their entry in the island, indicating that there is a need to conduct the orientation to make tourists more aware of environment-friendly activities. Lack of awareness of environmental conservation may influence the person's behavior and commitment to environmental protection. Opportunities for nature-based environmental learning, education, and experience can transform an ordinary tourist into a more responsible pro-environmental individual who cares about the environment, the community, and the society (Luo & Deng, 2008). Cultivating ecotourism knowledge and attitudes towards ecotourism during their visits would increase the perceived value of protected areas and tourist satisfaction, an essential element for the long-term success of ecotourism products and destinations (Verdugo et al., 2016). Such communication will allow for improved understanding of the tourism impacts that the community perceives and the actual effects that result from tourism, which can lead

to the development of a stronger tourism product and more fulfilling experience (Byrd et al., 2009). The study of Lück (2003) mentioned that tourists like to receive more information about the environment as an effective agent for conservation.

### ***Tourists' Willingness to Pay***

The study found that the various scenic attraction was on top among tourists' priority in WTP, which is significant at the 95% confidence level (Table 1). The majority of the tourist were more willing to pay to experience the scenic attraction that Sohoton offers. The fixed physical assets of the island, such as the cove, white sand, pleasant climate, clear blue waters, and beach forest, provide an escape route from the busy and stressful life in urban areas. Splendid sceneries in small islands offer the tourists a bridge to the natural environment. Variables such as culture and tour operator management were significant at the 99% confidence level, which indicated that tourists consider the importance of culture and tour operator management in their willingness to pay.

Multiple linear regression analysis shows that the mean WTP of the respondents going to the Sohoton is Php 188.00 (USD 3.71) per visit. The mean WTP is based on the number of respondents surveyed during the field survey period. The economic value was calculated using willingness to pay of the tourist multiplied to the number of tourists interviewed during the survey.

Estimated WTP of tourists was calculated using the equation;

$$\text{WTP} = 108.344 + 5.175 [\text{age}] + -4.201 [\text{number of visits}] + -281.168 [\text{scenic attraction}] + 161.982 [\text{affordability of destination}] + -97.157 [\text{work}] + 161.985 [\text{experience adventure}] + 386.953 [\text{culture}] + -378.145 [\text{tour operator management}] + -44.347 [\text{address}].$$

The number of tourists was estimated at 28,609 and 43,979 in the year 2015 and 2016, respectively, which comprise the local and international tourists. The data estimated that the economic value of Sohoton would amount to Php 5,378,492.00 – 8,009,928.00 (USD 106,052.23-157,938.45).

Table 1. Correlation Analysis of Tourist Responses

Variable	Parameters Coefficients	t	Significance
(Constant)	108.344 (180.367)	0.601	0.550
Age	5.175 (4.168)	1.241	0.218
Number of visits	-4.201 (3.604)	-1.166	0.247
Scenic Attraction	-281.168* (127.090)	-2.212	0.030
Affordability of destination	161.982 (95.209)	1.701	0.093
Work	-97.157 (122.651)	-0.792	0.431
Experience adventure	161.985 (112.001)	1.446	0.152
Culture	386.953** (111.932)	3.457	0.001
Tour operator management	-378.145** (116.637)	-3.242	0.002
Address (Proximity to the tourist spot)	-44.347 (101.902)	-0.435	0.665

\*\*Correlation is significant at the 0.01 level (2-tailed);

\*\* correlation is significant at the 0.05 level (2-tailed)

## **4 Conclusions and Recommendations**

Tourist arrival in Sohoton has increased over the past years due to its promotion on different social media platforms. Respondents of the study were 51% females and 49% males, aged 21 to 44 years old, single, and had decent jobs. Most tourists are from the Philippines and came to know about Sohoton through their

network of friends. Most went to the island for vacation purposes and found the cove and encounter with the stingless jellyfish exciting. The majority of the tourists find their vacation to be delightful due to the areas' pristine environment, friendly tour guides, and new tourist spots like the cove. However, a few numbers of tourists mentioned that a transparent billing or rate should be fixed for motorboats that ferry them from the jump-off points and vice versa. Tourists also emphasized that the management should improve the safety and comfort of the visitors and that there is a need to increase the number of helmets and life jackets. Safety equipment was limited and cannot accommodate all visitors, especially during peak seasons. Lifeboats can also be purchased in case of emergencies and attendance to lifesaving capability training for tour guides, and boatmen were deemed necessary according to most tourists.

Tourists were more than willing to pay to visit the area due to the unique culture in the area, brilliant tour operator management, and the scenic attraction of Sohoton. Multiple linear regression analysis shows that the mean WTP of the respondents going to the Sohoton is Php 188.00 (USD 3.71) per visit.

## 5 Acknowledgment

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## Conflict of Interests

The authors declare that there is no conflict of interests regarding the publication of this paper.

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