

Assessment of the ecotourism and livelihood potentials of Sayahan waterfall in Barangay Gaas, Ormoc city, Philippines

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World Journal of Advanced Research and Reviews, 2022, 14(02), 406–413

Publication history: Received on 10 April 2022; revised on 15 May 2022; accepted on 18 May 2022

Article DOI: <https://doi.org/10.30574/wjarr.2022.14.2.0445>

Abstract

Ecotourism and livelihood potentials of Sayahan falls in Ormoc, Philippines were gathered through onsite observation and interviewing of respondents. Forty (40%) percent of the informants were aged 31-40, married (55%), high schoolers (55%), males (90%), local residents (70%), and whose primary source of income is farming (90%). The falls has a moderately dense background forest and reachable by trekking in about 45-60 minutes. The cascading horsetail medium-sized waterfall has a height of around 60 meters. The force of falling water was very strong but its quality was moderately good due to little turbidity. Ecotourism potential revealed a high rating of 2.70 on availability of public transport. The rest of the ecotourism potential criteria (safe to the public, sustainability of tourism activities, travel time to the waterfall, panoramic appeal, and passable pathways) bared moderate potentials of 2.45, 2.35, 2.30, 2.15, and 1.55 rating, respectively. Provision of adequate financial and development support from the GOs and NGOs of Ormoc could help boost the ecotourism potential of Sayahan falls. The assistance could include improving the pathways going to the falls and increasing the density of vegetative cover of the waterfall premises. The livelihood potential of Sayahan falls bared a high potential rating of 2.55. Tour guiding by the locals had a rating of 2.90, peaceful surroundings (2.80), expected number of goers (2.70), fruits and vegetables supply (2.50), and eco-friendly souvenir shops (2.45), sustained tourists visit of 2.35 and accommodation and food (2.15). Though the ecotourism potential of Sayahan falls is moderate, its livelihood potential is high. The elevated altitude of Sayahan falls surroundings is favorable to growing various fruits and vegetables which are saleable to the tourists. Thus, the high livelihood potential of Sayahan falls may be used as a means to transform the area into a full-blown tourist destination.

Keywords: Ecotourism; fall; tourism; tourism and livelihood; tourist site; waterfall

1. Introduction

Tourism is one of the fast-growing industries today. People nowadays are getting fond of going to tourist destinations even in the local level. Many visitors today seem to have preference on adventuring to ecotourism sites than going to the busy and noisy metropolis. This shift of behavior from sedentary to a more bustling attitude has led to the proliferation and gradual development of the tourism industry.

In Ormoc City, Philippines a natural site which invited the interest of the researcher is Sayahan falls located at Sitio Maglahug in Brgy. Gaas. A waterfall is a vertical drop or a series of steep drops of water from a mountain that flows out to the river or stream and eventually to the sea. A waterfall is favorable not only in terms of supplying water to the rivers and streams for everyone's use, but also serve as an excellent spot for ecotourism that may create livelihood opportunities for the locals.

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Data were gathered through a combination of actual or onsite observation and interviewing of selected informants using a prepared interview guide. Informal discussions with residents in the area who have personal knowledge about Sayahan falls were also done. Result showed that Sayahan falls can be reached in about 45-60 minutes of trekking from Sitio Maglahug, Brgy. Gaas, Ormoc City. The cascading horsetail type waterfall has a height of around 60 meters from the peak to its bottom. The location of Sayahan falls is very cool due to its high altitude, thus the growing of various fruits and vegetables may be done by the locals. Interestingly, the livelihood potential of Sayahan falls turned out an overall high potential rating of 2.55. The high livelihood potential of Sayahan falls may be taken advantage by concerned agencies, public or private, in helping the locals improve their lot.

Some studies have shown that great opportunities for ecotourism and livelihood may be seen when good support is considered for the development of its services and facilities taking cognizance sustainability [1], [2], [3]. Hence, this study which primarily assessed the ecotourism and livelihood potentials of Sayahan falls, may be helpful to Ormoc City LGU or concerned agencies like the Department of Tourism. The output may serve as an input towards the development and promotion of ecotourism in Ormoc and even the entire province of Leyte and Region VIII in the Philippines.

Objectives of the Study

Based on the foregoing ratiocination, the following research objectives are sought to be answered:

- To determine the profile of the respondent-informants.
- To determine the biophysical and other attributes of Sayahan falls.
- To find out the ecotourism and livelihood potentials of Sayahan falls.

2. Methodology

This study used a combination of qualitative and quantitative (case study and descriptive survey) research methods [4]. A case study is an in-depth, detailed examination of a particular case within a real-world context. Descriptive survey research describes and interprets a set of information. It is concerned with conditions or relationships that exist; practices that prevail; beliefs, points of view, or attitudes that are held; processes that are going on; effects that are being felt; or trends that are developing.

2.1. Data Gathering Tools

The following data-gathering instruments were used in this study:

- Site Visit and Observation – this was done by actually going to Sayahan falls in Sitio Maglahug, Brgy. Gaas, Ormoc City, Philippines in order to gather first-hand information about the waterfall.
- Informal Discussion – this was conducted through personal talks with the barangay officials and inhabitants living near Sayahan falls in Brgy. Gaas, Ormoc City, Philippines.
- Interview Guide – this was a well-prepared guide for conducting the interview with the concerned informants. The content was carefully checked and was subjected to pilot-testing.

2.2. Data Gathered

The following data were gathered to answer the objectives of this study:

- Socio-demographic profile of respondent-informants
- Biophysical attributes of the waterfall
 - Distance from the road (km)
 - Walking time to the waterfall (min)
 - Height of the waterfall
 - Type of waterfall
 - Size of the waterfall
 - Intensity of falling water (approx.)
 - Quality of falling water
 - Density of background forest

- Ecotourism potential
 - Panoramic appeal
 - Passable pathway
 - Safe to the public
 - Travel time to the waterfall
 - Availability of public transport
 - Sustainability of ecotourism activities

- Livelihood potential
 - Expected number of goers
 - Sustained tourists visit
 - Peaceful surroundings
 - Tour guiding by locals
 - Eco-friendly souvenir shops
 - Fruits & vegetables supply
 - Accommodation and food

2.3. Data Processing

Non-numeric data were processed by organizing and summarizing the gist of the information. While numeric data were tallied to get the totals and weighted ratings using excel. Since the objective did not call for a correlation for being primarily a case study thus no inferential statistics was done. The information was presented in tables, clear photos and videos of the waterfall and its surroundings

3. Results and discussion

Below presents the data collected from the survey and on-site visit conducted on December 20, 2021. The data-gathering instrument used an interview guide which solicited some basic information about the waterfall. The informant-respondents consisted of twenty (20) locals who were of age. They were chosen based on their direct knowledge about Sayahan falls; that is, they must have already visited the place before.

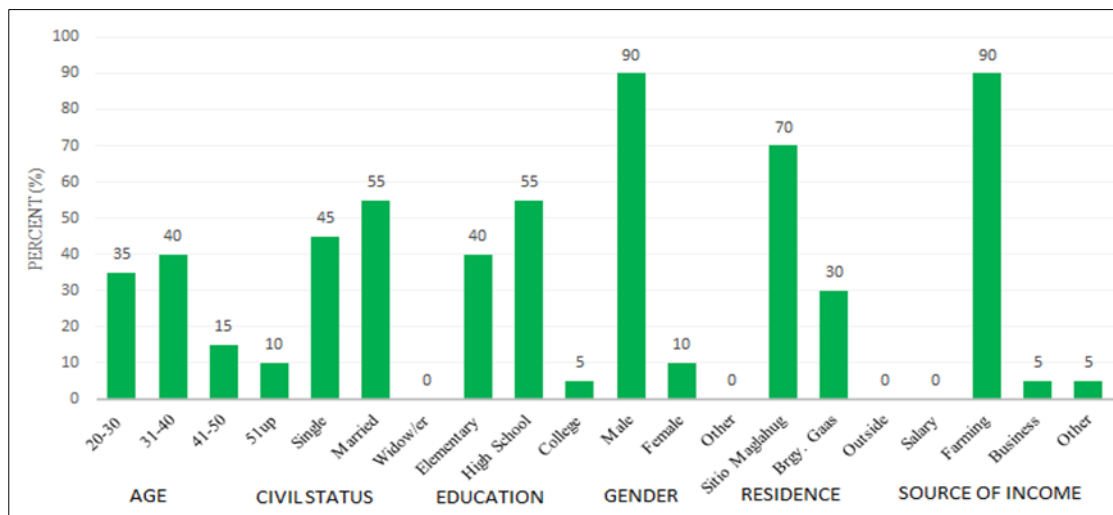


Figure 1 Histogram showing the profile of the informants

The socio-demographic profile of the respondent-informants showed their ages from 31-40 years old, majority are married males who have reached high school education. Most of them are engaged in farming right in Sitio Maglahug, Brgy. Gaas, Ormoc City, Philippines.

Sayahan falls is found at the mountainous and moderately forested area of Sitio Maglahug, Brgy. Gaas in Ormoc City, Leyte, Philippines. From Sitio Maglahug to the actual waterfall site, it would take around 45-60 minutes of trekking [5], [6]. The waterfall is distanced about 1.5 kilometers from the nearest vehicle-passable road in Sitio Maglahug through a narrow and grassy pathway. The cascading horsetail type [7] Sayahan falls has a height of around 60 meters from the top to the bottom of the falling water and is considered only a “Medium” waterfall.

In terms of quality of the falling water, it appears to be “Moderately Good” due to the slight turbidity of water from the waterfall. The opaque color of the falling water was perhaps caused by the successive rains that were poured in the area days prior to the site visit. As narrated by the tour guide informant, the water that drops from Sayahan falls turns “Very Clear” during the summer months.

As regards the density of the background forest, it was found that the trees and vegetation that surround Sayahan falls were getting less luxuriant. Such that it would be a big challenge to the local leadership to initiate and/or implement active measures that could bring back the denseness of the background forest of Sayahan falls. Science would tell that the amount and quality of water that flows from a waterfall is closely related to the density of forest. It was stated that in order for ecotourism to succeed, it should be based on policies, laws and proper planning. Otherwise, ecotourism could be most destructive to nature [8].

Table 1 Biophysical and other attributes of Sayahan waterfall in Ormoc City, Philippines.

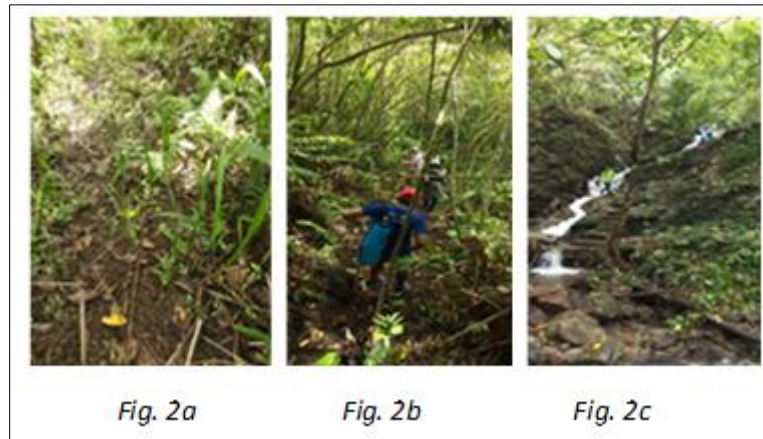
Location of the waterfall	Sitio Maglahug, Brgy. Gaas, Ormoc City
Distance from the road (km.), <i>approx.</i>	1.5
Walking time to the waterfall (min.)	45-60
Height of the waterfall (m.), <i>approx.</i>	60
Type of waterfall	Cascading Horsetail
Size of the waterfall	Medium
Intensity of falling water	Very Strong
Quality of falling water	Moderately Good
Density of background forest	Moderately Dense

The criteria for ecotourism potential revealed that only Availability of Public Transport (Ormoc City to Brgy. Gaas) showed a High Potential rating of 2.70. While Safe to the Public, Sustainability of Tourism Activities, Travel Time to the Waterfall, Panoramic Appeal, and Passable Pathways, had Moderate Potential ratings of 2.45, 2.35, 2.30, 2.15, and 1.55, respectively. Overall, however, the ecotourism potential of Sayahan falls got a rating of 2.25 (Moderate Potential).

Table 2 Ecotourism potential of Sayahan falls, Ormoc City, Philippines.

Ecotourism Criteria	Level of Ecotourism Potential			
	(3) High Potential	(2) Moderate Potential	(1) Weak Potential	Rating
Availability of public transport	16	2	2	2.70
Safe to the public	12	5	3	2.45
Sustainability of ecotourism activities	9	9	2	2.35
Travel time to the waterfall	10	6	4	2.30
Panoramic appeal	7	9	4	2.15
Passable pathways	2	7	11	1.55
Average				2.25 (Moderate Potential)

Regarding availability of public transport, there is a good transport system from the City of Ormoc to the place where Sayahan falls geographically belongs. The road from Ormoc City up to Sitio Maglahug are well-cemented and in good condition. However, the pathways from the nearest road in Sitio Maglahug to the waterfall site itself is very arduously challenging. The pathways only consist of very narrow and highly irregular passage. Moreover, the tourists need to undergo a series of uphill and downhill climbing and passing through some rocky streams of clear flowing water. The kind of terrain in reaching out to the waterfall makes the trekking time quite longer even if the waterfall is only about one and half kilometer from the road. The above finding is highly related to that in Orale where accessibility in reaching to the waterfall is also a big issue due to poor access [9].



<https://youtu.be/IKqcpWLPyOU>

Figures 2a to 2c Kind of pathways to go through Sayahan falls. A video clip on the kind of pathways going to Sayahan falls is provided using the link below

On the panoramic appeal aspect, data showed that the respondent-informants rated Sayahan falls as moderately potential for ecotourism. Perhaps, the overall look of the waterfall did not superbly invite the attention of the goer-informants to consider the waterfall as highly potential. However, proper government interventions through the right agencies, e.g., Department of Tourism as well as the different local government units concerned, Sayahan falls may still be enhanced panoramically.



<https://youtu.be/VIWUuco9xIM>

Figures 3a-c Appearance of Sayahan falls at different angles

Lastly, on the aspect of public safety (Table 3), it appears that going to Sayahan falls is moderately safe with a rating of 2.45. Based on the narrations of experience of the informants, no major interventions or harms were encountered by them along the way when they visited the waterfall at different times. Thus, the place is considered by the locals as generally peaceful and free from encroachments or trespassing from outside forces either due to wild animals or to threats from other human beings.

Table 3 Livelihood potential of Sayahan falls, Ormoc City, Philippines.

Livelihood Criteria	Level of Livelihood Potential			Rating
	(3) High potential	(2) Moderate Potential	(1) Weak Potential	
Tour guiding by locals	18	2	0	2.90
Peaceful surroundings	17	2	1	2.80
Expected number of goers	16	2	2	2.70
Fruits & vegetables supply	13	4	3	2.50
Eco-friendly souvenir shops	12	5	3	2.45
Sustained tourists visit	10	7	3	2.35
Accommodation & food	9	5	6	2.15
Average				2.55 (High Potential)

Data on livelihood potential above (Table 3) showed that four (4) out of the seven (7) criteria for livelihood potential revealed a high rating. These criteria were Tour Guiding by Locals (2.90), Peaceful Surroundings (2.80), Expected Number of Goers (2.70), and Fruits & Vegetables Supply (2.50). While three (3) livelihood potential criteria (Eco-friendly Souvenir Shops, Sustained Tourists Visit, and Accommodation & Food) had a moderate rating of 2.45, 2.35, and 2.15, respectively. However, it was interesting to note that on the whole it was found that Sayahan falls obtained a High Livelihood Potential rating of 2.55.

It is worth emphasizing that Sitio Maglahug and Brgy. Gaas are located in high-altitude area, such that the temperature in the surroundings is very cool. This condition is much favorable to growing fruits (such as watermelon) and vegetables like pechay, cabbage, carrots, potato, onions, and others. These products are highly saleable to the tourists who visit Sayahan falls. The above data may be deduced by saying that at this point in time Sayahan falls may not have a high ecotourism potential (Table 3) due to natural and artificial disturbances of the area. But it is believed that with financial and proper development support from concerned GOs or NGOs, Sayahan falls may likewise become a good ecotourism site for travel enthusiasts. The high livelihood potential of Sayahan falls could be used in developing the area into a full-blown destination site in Ormoc City which would benefit the local residents by providing the opportunity to earn a living. The foregoing finding is closely related to the results in Ayaji and Hidrawati [10], [11]. The people believed in both cases that tourism has a positive impact on trade and business which may benefit the locals.

A destination site like a waterfall should not only serve the desires of the visiting tourists. Likewise, it should help the locals by way of creating some livelihood opportunities which could generate income for them [12]. All the material and non-material requirements put alongside with proper planning, staffing, budgeting, and continuous search for improvement, may produce another popular destination hub of Ormoc City. It is worth emphasizing, however, that in any community development effort including ecotourism and livelihood of the locals, peace and order is an essential factor for its success [13].

4. Conclusion

- Most of the respondent-informants are younger married males who have been to high school whose income are derived mostly from farming.
- Transport system is good from Ormoc City proper to Sitio Maglahug, Brgy. Gaas where Sayahan falls is located.
- Locationwise, Sayahan falls is geographically situated in a place which requires too much physical exertion on the part of the visitors or tourists.
- Trekking through the narrow uphill and downhill pathways is the most challenging part of the journey to Sayahan falls.

- For people who have no health problem, visiting to Sayahan falls could be a good exercise or hobby which may improve their physical, emotional and mental well-being.
- Improving the pathways to Sayahan falls may suddenly increase the number of goers to the area.
- Sayahan falls has a high potential to provide livelihood opportunities for the locals due to its cool environment that would let them grow and sell fruits and vegetables.
- Adequate planning and financing May eventually change the overall picture of the area by transforming Sayahan falls into a full-blown tourism site.

Recommendation

- Take advantage the high livelihood potential of Sayahan falls in order to help the locals earn a living.
- Local transport systems may provide a regular or on-call trips to the nearest site of Sayahan falls.
- Only visitors or tourists who have no health issues may consider or attempt to visit Sayahan falls.
- Hikers should bring their own provision such as potable water, food, medicine, etc. when visiting Sayahan falls.
- People may consider trekking to a challenging place such as Sayahan falls as a means of maintaining or improving a healthy body and mind.
- Improving the pathways going to Sayahan falls would be a good support for the locals and to the visiting public.
- Developing the waterfall area such as planting more trees adjacent to the site or planting various fruits and vegetables along the way, and maintaining its cleanliness may improve the panoramic appeal of Sayahan falls.
- Effective planning and financing may be used by concerned agencies as a means to gradually convert Sayahan falls into a full-blown tourist site.

Compliance with ethical standards

Acknowledgments

Sincere gratitude is due to STI College of Ormoc, for providing the researcher the opportunity to undertake this study. Also, to the Brgy. Chairman of Brgy. Gaas, Ormoc, City for allowing the researcher to visit Sayahan falls and gather the needed data and to some concerned residents who served as respondent-informants. Indeed, the researcher was very thankful to all those who have in one way or the other, directly or indirectly have helped complete this research endeavor. To you all, the researcher sincerely salutes your unfading support and goodness.

Disclosure of conflict of interest

No conflict of interest of the author whatsoever is found applicable in this article.

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