

RESEARCH ARTICLE

## A Comparative Study on Potentials of Sustainable Tourism at Banshbaria and Guliakhali Sea Beaches, Chittagong

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### Abstract

Tourism is an essential revenue stream for numerous nations and encompasses both public and private sector initiatives that enable travel for diverse objectives, including leisure, spirituality, and relaxation. This study assesses the tourism potential of Banshbaria and Guliakhali sea beaches in the Chittagong area, highlighting sustainable techniques to conserve natural and cultural resources while attracting numerous vacationers and adventure enthusiasts. We selected a total of 200 respondents from the sample sites, 100 individuals from each location, representing a diverse array of age groups, genders, vocations, and educational backgrounds. The research indicates a gender imbalance in visitor engagement, with 66% of participants being male in Banshbaria and 58% in Guliakhali. The predominant age range of tourists is 16–30, with students constituting the most prevalent segment. They generally arrive with friends and family. Tourist satisfaction ratings vary, with 67% favoring Guliakhali for its lush landscapes and coastline views, while 33% select Banshbaria for its mesmerizing sunsets and enhanced road conditions. The study delineates obstacles in Banshbaria and Guliakhali and emphasizes the imperative for sustainable tourist development. The result of the study will guide the responsible authority to develop sustainable tourism in the study areas and other similar sites.

**Keywords:** Tourism; Banshbaria; Guliakhali; Sustainable Tourism

### Introduction

Tourism is a leisure activity that involves allocating time and resources for recreational purposes, primarily through travel to different areas. It includes the route to the destination as well as the length of stay, and provides travelers with information, transportation, accommodations, and other services (Rahman et al., 2010). According to Pearce et al. (1998), Tourism includes governmental and private sector endeavors that address the demands and impacts of travel, such as leisure, business, and several other pursuits. It may be internal or worldwide and serves as a significant source of revenue for numerous governments. Definitions differ, although Guyer Feuler initially defined tourism in 1905. The World Tourism Organization defined “tourism” as follows in order to avoid definitional disputes: “Tourism includes the activities of persons traveling and staying in places outside their usual environment for not more than one consecutive year for leisure, business, and other purposes” (Couto et al., 2021). Tourism is distinct from travel and requires displacement for its existence. Three criteria are employed concurrently to define travel as tourism (Radhi, 2022), such as, (i) it involves a displacement outside the usual environment; (ii) the travel must occur for any purpose; and (iii) only a maximal duration is mentioned, not a

minimal. Usually, tourism displacement can be with or without an overnight stay (Roy & Roy, 2015). According to Sugiyama (2014), a place can become a tourist destination if it meets four tourism components, which are attractions, accessibility, amenities, and ancillary services. Rizaldi et al. (2024), on the other hand, say that there are six components of tourism: attraction, amenities, accommodation, activity, accessibility, and ancillary services. According to Sunaryo (2013), tourist destinations are distinct regions or geographical areas within one or more administrative jurisdictions, characterized by interlinked elements: tourist attractions, tourist services, accessibility, community, and tourists that collectively enhance the execution of tourism activities. Sustainable tourism, an alternative paradigm for tourism development, prioritizes the conservation of natural marine resources alongside fostering economic advancement (Adocon et al., 2024). It is a vital concept that aims to balance the exploitation of natural resources while limiting social and environmental impacts (Battaglia, 2017). It involves satisfying economic, social, and aesthetic needs while preserving natural, social, cultural, and historical heritage (Petrović & Marković, 2013). Sustainable tourism development requires understanding stakeholders' perceptions, including local leaders and policy-makers, who play a crucial role in facilitating mutual benefits and mitigating negative impacts on the economy, society, and environment (Kattiyapornpong et al., 2018). The tourism industry's growth, especially in South Asian countries, presents opportunities for sustainable tourism development, emphasizing the need for comprehensive strategies to enhance destination competitiveness and achieve long-term growth while considering environmental protection, economic development, and social equity (Mathew, 2009).

The efficacy of sustainable tourism initiatives is contingent upon tourist behavior (Confente et al., 2024). Recent research indicates that while tourists express a significant interest in integrating sustainability into their travel experiences (Confente & Scarpi, 2021; Dolnicar et al., 2017), their actual behaviors often diverge from this intention (Agag et al., 2020). The study Hiariey et al. (2024) delineates three categories of tourism potential: natural, cultural, and human. Natural potential pertains to the distinctive flora and fauna of a place, whereas cultural potential encompasses human contributions such as customs and the arts. Physical potential encompasses geographical circumstances and tourism facilities. Non-physical potential pertains to cultural potential. The economic revenue generated from tourism is affected by attractions, accessibility, public infrastructure, and amenities. The efficient handling of these aspects enhances tourists' duration of stay and revenue (Achmad et al., 2023; Rizaldi et al., 2024). The significant economic benefits that tourist development brings are probably the main reason why so many nations are pursuing it. The contribution of tourism to the world economy is substantial (Ennew, 2003). Ecotourism, a sustainable tourism management approach, fosters sustainable growth via community engagement and the preservation of natural resources. In Kurdistan, Iraq, heightened community engagement amplifies the beneficial impacts of ecotourism (Ahmad & Balisany, 2023). Green tourism emphasizes eco-friendly methods such as waste reduction and water conservation, guaranteeing fair economic advantages and environmental responsibility (Daneshwar & Revaty, 2024). In Punjab, India, ecotourism initiatives safeguard biodiversity, enhance local welfare, and foster sustainable tourism via responsible construction, strategic water management, and rewilding endeavors (Chaudhary, 2024). Environmental protection is crucial in tourism due to the interdependence between tourism development and the preservation of natural resources, forming a sustainable ecosystem (Platon et al., 2023; Todorov et al., 2023; Xiao, 2022). The rapid growth of tourism (Lee, 2022) has led to detrimental effects on the ecological environment of tourist destinations, necessitating the implementation of strategies to protect these areas for sustainable development (Cheng & Chen, 2022). Environmental security measures are essential to prevent losses and maintain the natural beauty of tourist locations because of the influence tourism has on the environment through development, transportation, and operations (Arya et al., 2022). Overall, sustainable tourism is a multi-dimensional approach

that seeks to optimize resource usage, maintain ecological processes, and ensure long-term sustainability in tourism development (Butowski, 2012).

The Banshbaria and Guliakhali sea beaches in Chittagong are drawing tourists and adventure enthusiasts because of their natural beauty and distinct cultures. Their tourism potential may enhance earnings, boosting the local and regional economy. Tourism development can create employment opportunities and improve the livelihoods of local residents in these areas. Identifying sustainable tourism practices is essential to preserve the natural and cultural assets of these coastal areas. However, there is no such study so far to understand and compare the potentials of tourism in these areas in order to conserve the natural settings, recommend better facilities for the tourists to appreciate and ample opportunities for the locals to earn their livelihoods. So, this study is to assess the tourism potential of Banshbaria and Guliakhali sea beaches with the purpose of fostering sustainable tourism development. It seeks to conserve natural habitats, propose appealing amenities, and offer chances for residents to generate income. The objectives encompass reviewing the current status, challenges, and potentials of tourism, assessing its environmental and community impacts, and formulating suggestions for sustainable tourist development.

## **Methodology**

### **Study area**

The study area includes Banshbaria and Guliakhali sea beaches in Sitakunda Upazila (Figure 1). Sitakunda Upazila occupies an area of 483.97 square kilometers located between 22°22' and 22°42' north latitudes and between 91°34' and 91°48' east longitudes. Of this total area, 61.61 square kilometers (12.73%) are covered by forests. It is bordered by Mirsharai to the north, Pahartali to the south, Fatikchhari, Hathazari and Panchlaish to the east, and the Sandwip Channel in the Bay of Bengal to the west. The Sitakunda range is a 32-kilometre-long ridge in the center of the Upazila, which reaches an altitude of 352 meters above sea level at Chandranath or Sitakunda peak, the highest peak in Chittagong District.

### ***Banshbaria sea beach***

This beach is mostly muddy and located fifteen minutes from Banshbaria bazar in Sitakunda Upazila, Chittagong (Figure 1). A Jhauban (a forest full of planted *Casuarina equisetifolia* trees) and a newly emerged sandy field are among the main attractions of the beach (Nobi & Majumder, 2019). Banshbaria Sea Beach, nestled along the coastline, stands as a serene and picturesque destination that captivates the hearts of its visitors. Located in proximity to the bustling city of Chittagong, Banshbaria offers a tranquil retreat from urban life, drawing tourists seeking solace in the lap of nature. One of the distinctive features of Banshbaria Sea Beach is its mesmerizing sunset views. The beach becomes a canvas painted with hues of orange and pink as the sun dips below the horizon, creating a spectacle that leaves a lasting impression on those fortunate enough to witness it. The tranquility of Banshbaria, coupled with the soothing sound of waves gently lapping the shore, provides a perfect setting for relaxation and contemplation. Banshbaria's charm lies in its beauty and the relatively less crowded atmosphere compared to some other popular beaches. For those who prefer a more secluded and peaceful environment, Banshbaria offers a haven where one can enjoy the beauty of nature undisturbed.

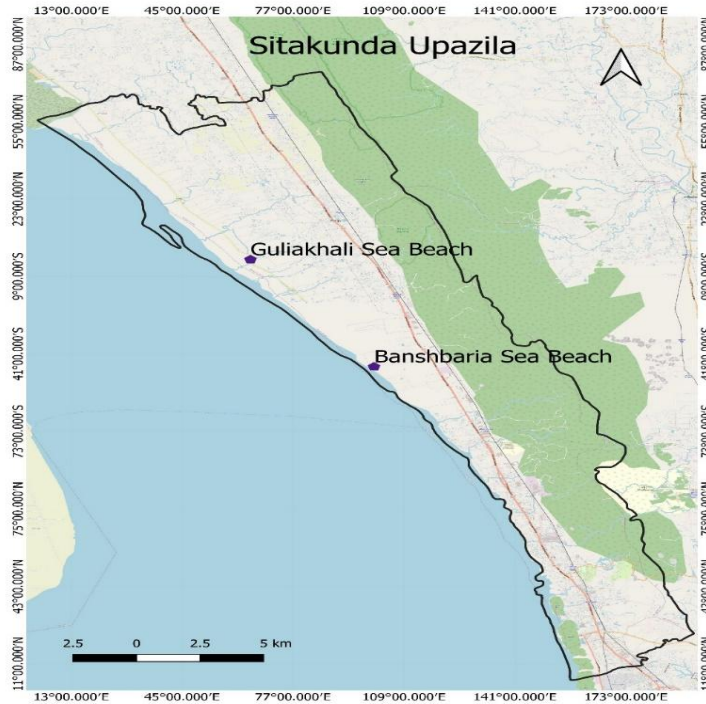


Figure 1: Map of the study area

### ***Guliakhali sea beach***

This beach is located in Sitakunda Upazila, Chittagong, 5 km west of Sitakunda bazar (Figure 1). The beach's lush, grassy environment is one of its many wonderful features. This sets the beach apart from other conventional sand beaches. This beach has a vast potential for development (Nobi & Majumder, 2019). It is located in  $22^{\circ}36'40.09''$  north latitudes and in  $91^{\circ}37'32.05''$  east longitudes. Its aesthetic and structural features set it apart from other beaches. The water is seen on one side of the horizon, while the Keora (*Sonneratia apetala*) forest is seen on the other side. This forest went deeper into the sea. Its surrounds resemble mangrove and swamp forests. The wide grass green carpet across the beach has grown bigger than other beaches. In the middle of the green, the narrow groove was pierced. During the tide, the rivers are full of water. The seashore region is home to only one kind of tree, Keora, and several bird species, as well as Lal Kankra or red crab, among the fauna. Rarely, deer are occasionally spotted in the dense Keora forest.

### **Research design**

A comprehensive study was undertaken to evaluate the geography, tourist conditions, and available amenities of Banshbaria and Guliakhali sea beaches, emphasizing their natural and cultural characteristics. The research performed a field survey in October 2023, interviewing residents and tourists in the study area. The survey was conducted between 9.30 am and 1.30 pm and 2.30 pm and 5.00 pm. A semi-structured questionnaire survey was

executed randomly, involving 200 respondents from each location, encompassing diverse age groups, gender, vocations, and educational backgrounds from the sample areas.

**Data collection**

Surveys and in-person interviews were executed to collect data on tourism-related activities, challenges, possibilities, tourist facilities, and the effects of tourism in designated areas, employing a semi-structured questionnaire.

**Data Analysis**

Data analysis entails the collection and presentation of gathered information via questionnaires, tables, and graphs, employing statistical tools for quantitative analysis and qualitative analysis, as well as generating visual representations.

**Results and Discussion**

**Tourist attribute**

Visitors’ analysis shows that most of the tourists visiting the study locations are from the youth group (16-30), which constitutes 72% at Guliakhali and 70% at Banshbaria. The reason may be the young are more adventurous and nature-freak. During the study, the number of male tourists was found 66% at Banshbaria and 58% at Guliakhali (Table 1).

**Table 1.** Distribution of tourists by their personal attributes in the study area

Variable	Category	Responses (%)		
		Banshbaria (n=100)	Guliakhali (n=100)	Total (n=200)
Age Group	16 – 30 years	70	72	71
	31 – 45 years	26	24	25
	46 – 60 years	4	4	4
Gender	Male	58	66	62
	Female	42	34	38
Marital Status	Married	32	43	37.5
	Unmarried	68	57	62.5
Level of Education	Illiterate	6	2	4
	Primary	6	2	4
	SSC	6	8	7
	HSC	10	4	7
	Graduate	58	64	61
Occupation	Postgraduate	14	20	17
	Student	66	68	67
	Service holder	14	20	17
	Businessman	10	5	7.5
	Housewife	6	5	5.5
	Others	4	2	3

This suggests that a lack of security and sanitation facilities is the reason behind the lower than anticipated and optimistic involvement of female visitors visiting both the study sites. Based on the educational background of the visitors, it was found that graduates (64% at Guliakhali and 58% at Banshbaria) were the most likely to travel, followed by postgraduates (20% at Guliakhali and 14% at Banshbaria), secondary and higher secondary school students (small percentage), and primary and illiterate people (very negligible percentage). The study also revealed that students formed the major occupation group (68% at Guliakhali and 66% at Banshbaria) followed by service holders (20% at Guliakhali and 14% at Banshbaria), businessmen (5% at Guliakhali and 14% at Banshbaria) and housewife (5% at Guliakhali and 6% at Banshbaria). Students were higher in numbers as they get more time to visit than others and always move in a group (Table 1).

**Seasons and Purpose of visiting these places**

There is a distinct seasonal preference among tourists for Guliakhali and Banshbaria (Figure 2a). More precisely, 66% of tourists in Guliakhali and 50% of tourists in Banshbaria prefer traveling during the winter season (Figure 2a). The main reason for this preference is, essentially, the ideal climatic conditions and the ease of access during winter seasons. On the other hand, 34% of tourists in Banshbaria and 26% of tourists in Guliakhali choose to visit during the rainy season, while the remaining tourists prefer to travel during the summer (Figure 2a). As seen by the majority of visitors, Figure 2b shows that taking nature walks and appreciating the stunning scenery are the main reasons people visit these locations. The remaining visitors come here for relaxed get-togethers.

(a)

(b)

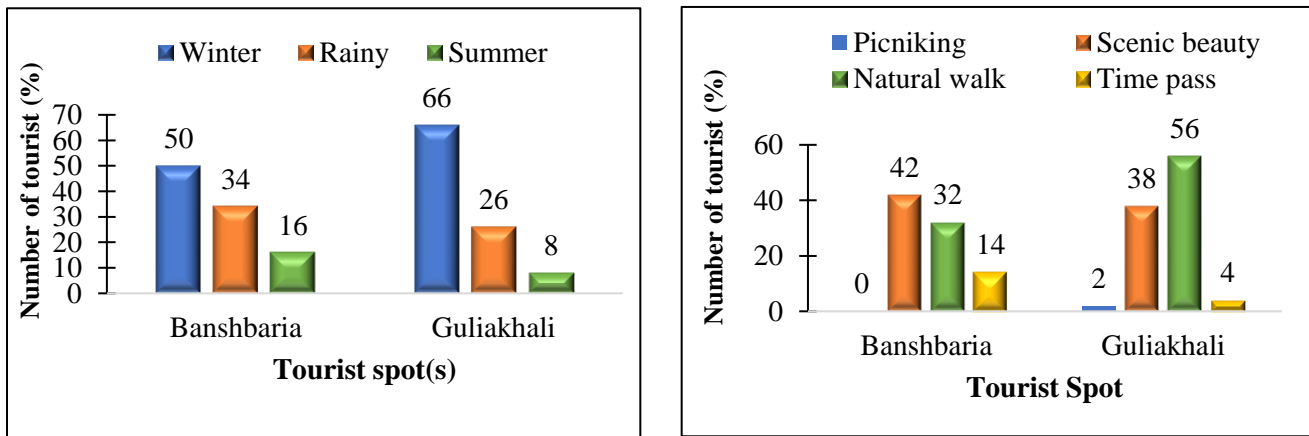


Figure 2: Distribution of visitors by (a) Seasons in which tourists prefer to visit and (b) Purpose of visiting the destinations

**Tourist Origin and Cost Comparison**

The survey indicates that majority of the tourists (63%) that visit the sea beaches in Guliakhali and Banshbaria originate from Chittagong. In addition, residents from Dhaka (11%), Cumilla (10%), Feni (9%), and Noakhali (8%) are regular visitors to these beaches (Table 2). However, due to the considerable distance and lack of knowledge about the place, visitors from other parts of the country hardly ever make the trip. The fact that Chittagong is located near these beaches adds to its appeal as a vacation spot. In addition, the total travel expenses are greater for Guliakhali (BDT 394) in comparison to Banshbaria (BDT 567), mostly due to the fact that visitors to Guliakhali frequently engage in shopping at Sitakunda Bazaar, an opportunity that is not accessible to tourists

in Banshbaria (Table 2). Again, the travel expenses are dependent on the distance visitors travel to visit the destination. As a result, tourists who come from faraway places, like Dhaka, have to spend more money (BDT 1379), while those who come from nearby areas, like Chittagong, have to pay less (BDT 481) (Table 2).

**Table 2.** Comparison between origin and cost in both spots

Tourist Origin	Banshbaria		Guliakhali		Average	
	% of visitor (n=100)	Cost (BDT)	% of visitor (n=100)	Cost (BDT)	% of visitor (n=200)	Cost (BDT)
Chittagong	68	394	58	567	63	481
Cumilla	10	860	10	1250	10	1055
Dhaka	9	1133	12	1625	11	1379
Feni	7	520	10	660	9	590
Noakhali	6	850	10	1100	8	975
Total/average	100	751.4	100	1040.4	100	896

Note: BDT = Bangladesh Taka

### Tourists' Opinions about nature deterioration by tourism introduction

According to this study, a majority of tourists in Banshbaria (74%) and Guliakhali (64%) believe that the environment is declining due to tourist's visitation (Table 3). The results suggest that approximately half of the tourists in Banshbaria (49%) and Guliakhali (45%) tend to dispose of their waste in the nearby places followed by 24% of tourists in Banshbaria and 38% in Guliakhali carry their dry waste in bags. In addition, a total of 27% of tourists from Banshbaria and 17% from Guliakhali do not produce any garbage (Table 3).

**Table 3.** Distribution of tourists by ways of disposal of wastes

Tourists' opinion about nature deterioration	Banshbaria (%) (n=100)	Guliakhali (%) (n=100)	Total (%) (n=200)
Yes	74	64	69
No	26	36	31
Ways of disposal of waste			
Throws in the surroundings	49	45	47
Carrying in bag	24	38	31
Generate no waste	27	17	22

### Level of satisfaction

The study indicates that a majority of tourists (52%) at both the sites are satisfied followed by moderately satisfied (27%) and highly satisfied (17%). However higher percentage of visitors from Guliakhali (78%) were found satisfied or highly satisfied compared to Banshbaria (60%) (Table 4).

**Table 4.** Distribution of tourists by their level of satisfaction

Level of Satisfaction	Banshbaria (%) (n=100)	Guliakhali (%) (n=100)	Total (%) (n=200)
Highly Satisfied	15	19	17
Satisfied	45	59	52
Moderately Satisfied	33	21	27
Poorly Satisfied	7	1	4

### Problems faced by tourists in both spots

Almost all tourists identified some problems which should be taken into consideration for immediate action for development of tourism in these places. The major problems identified by tourists at Banshbaria are lack of quality food (29%) followed by lack of sanitation facilities (22%), lack of security (13%), lack of essential goods (12%) etc. (Table 5). The major problems identified by tourists at Guliakhali are lack of quality food (30%) followed by lack of sanitation facilities (22%), Communication problem (12%), lack of security (10%) etc. In addition, visitors from Guliakhali encounter an additional challenge: the narrow roads that make local CNG the only means of transportation from Sitakunda bazaar to Guliakhali sea beach severely impede their ability to visit the area. This can be remedied by widening the roads.

**Table 5.** Distribution of tourists by the problems faced in both the study areas

Problems faced by tourists	Responses (%)		
	Banshbaria (n=100)	Guliakhali (n=100)	Total (n=200)
Lack of quality food	28.7	30.0	29.35
Lack of sanitation facilities	21.8	22.0	21.90
Lack of security	12.7	10.0	11.35
Lack of essential goods	12.0	4.6	8.30
Communication problem	0.0	12.0	6.00
Lack of parking space	6.0	6.0	6.00
Destruction of trees	5.8	3.8	4.80
Over populated	0.0	4.0	2.00
Noise pollution	4.3	0.0	2.15
Waste pollution	3.5	2.1	2.80
Lack of benches	3.2	3.0	3.10
Others	2.0	2.5	2.25
Total	100	100	100

### Development needs according to tourist

Local tourists at Guliakhali and Banshbaria sea beaches place a high value on improving amenities, despite the fact that there are noticeable variations in their preferences (Table 6). Within Guliakhali, 30% of tourists prioritize improving restaurants to ensure exceptional cuisine, while 27% stress the need for improved restrooms and sanitary facilities, particularly focusing on meeting the needs of women. In addition, 14% of tourists



specifically desire improved communication services in order to navigate challenging road conditions, 12% emphasize security measures, 11% desire benches to fully enjoy the natural surroundings, and 6% propose constructing a watch tower or lookout for a panoramic view of the beach. Conversely, individuals from Banshbaria place a high importance on security, with 26% advocating for it to ensure unrestricted movement, particularly for women. In addition, 25% of respondents propose the creation of eateries, 21% prioritize improving restroom and sanitation facilities, and 16% recommend strategic planting to increase the visual attractiveness of the beach. Furthermore, 12% of people express a desire for benches to enhance their beach-view experience (Table 6). This comparison emphasizes the diverse yet intersecting preferences of tourists at both destinations, emphasizing the necessity for customized enhancements to optimize their overall satisfaction.

**Table 6.** Distribution of tourists by their responses on the development needs in the study areas

Development needs according to tourist	Response (%)		
	Guliakhali (n=100)	Banshbaria (n=100)	Total (n=200)
Restaurant	30	25	27.5
Washroom	27	21	24
Communication	14	0	7
Security	12	26	19
Benches	11	12	11.5
Watch tower	6	0	3
Tree plantation	0	16	8
Total	100	100	100

**Problem identified by Local people**

Residents in both Guliakhali and Banshbaria have noted considerable problems arising from tourist activity, with waste pollution being the primary worry in both places (Table 7). In Guliakhali, 58% of the surveyed individuals identify inadequate waste management as a problem, whereas 59% of the population in Banshbaria shares this concern. Unethical actions account for 15% in Guliakhali and a higher 19% in Banshbaria, making them the second greatest worry.

**Table 7.** Distribution of local people by their responses on the problems identified in the study areas

Problem identified by local people	Responses (%)		
	Guliakhali (n=100)	Banshbaria (n=100)	Total (n=200)
Waste Pollution	58	59	58.5
Unethical Activities	15	19	17
Damaging trees by Tourists	14	0	7
Cultural changes	0	6	3
Noise Pollution	7	12	9.5
Crowdedness	6	4	5
Total	100	100	100

In Guliakhali, tourists cause tree damage at a rate of 6% and noise pollution at a level of 7%. In comparison, Banshbaria experiences a higher level of noise pollution (12%) due to the use of high-volume microphones. In both Guliakhali and Banshbaria, there are occasional minor problems. For instance, 6% of people in Guliakhali mentioned overcrowding during vacations, while 6% in Banshbaria occasionally noted cultural changes (Table 7).

**Development needs according to local people**

People in both areas are shown to support facility improvements, but at different priorities according to the survey as depicted in Table 8. For instance, there is a population of approximately 30% residents living in Guliakhali who would be ready pay outright store rents with a view on enduring cyclones and storms. Also, 26% desire electricity to be more reliable, and while 20% believe that a bridge should be built for people wanting to go to the beaches during monsoon time, 13% insist that dustbins must be put up to collect litter from visitors whereas others demand clean public toilets. Likewise, 20% of Banshbaria’s inhabitants feel power supply should improve while another 22% are concerned about having tree species which suit their environment. Meanwhile, security measures and staying trash cans for proper waste management are claimed by nearly one fifth (19%) of all respondents. Furthermore, 15% emphasize the need for structured stores, while 5% emphasize the importance of improved law enforcement (Table 8).

**Table 8.** Distribution of local people by their responses on development needs in the study areas

Development needs according to local people	Responses (%)	
	Guliakhali (n=100)	Banshbaria (n=100)
Structured Shop	30	15
Tree Plantation	0	22
Electricity	26	20
Bridge	20	0
Increase Security	0	19
Dustbin	13	19
Washrooms	11	0
Enforcement of law	0	5
Total	100	100

**Local employment in the study areas**

The study revealed that 40% people of Banshbaria and 45% people of Guliakhali were involved in permanent business or occupation (Figure 3). On the other hand, a total of 60% people of Banshbaria and 55% of Guliakhali were involved in floating or temporary business which indicate the potentiality of tourism area (Figure 3). Here floating business are more than permanent business because no infrastructural development has taken place in these areas (Figure 3). And the socio-economic conditions of the people are not in that position to afford permanent shops so they depend on floating business.

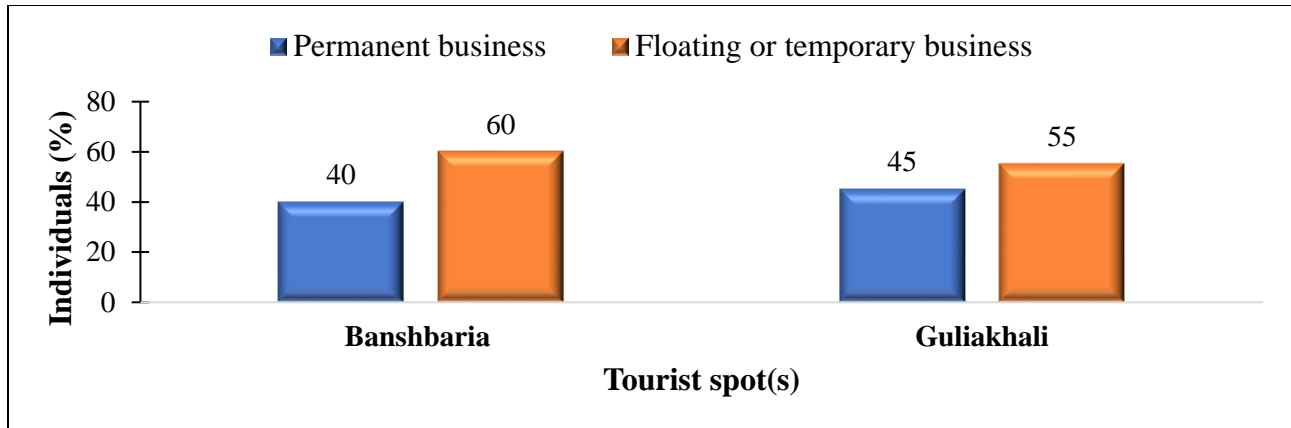


Figure 3. Distribution of local people on the type of employment in the study areas

### Challenges of the study areas

#### Banshbaria

The study identified several issues that are preventing tourists from being fully satisfied with their visit to the Banshbaria beach. One of the main factors that has hindered female tourists' participation is security worries. Other major obstacles are lack of shops, restaurants, hotels and poor sanitation facilities. The inaccessibility of parking facilities and basic supplies made it challenging for the visitors. There is greater pollution when there aren't enough garbage bins because people throw rubbish everywhere. A visitor's comfort might also be negatively impacted by inappropriate seating arrangements and noise pollution. Aside from the misbehavior of tourists, the cutting of trees and the lack of drinkable water are other factors that exacerbate these problems. These factors work together to make the overall visitor experience challenging, which is why extensive environmental and infrastructure improvements are required at Banshbaria Beach.

#### Guliakhali

Tourists who have visited Guliakhali Beach have reported certain serious issues that have hampered their overall enjoyment and experience. Security concerns, which are also evident in Banshbaria, are a major cause for the limited number of female travelers. The lack of good food and poor sanitary facilities are the key-challenges. The communication problems that exist between Sitakunda Bazar and Guliakhali beach and the unavailability of the basic goods also make the tourists' experience less enjoyable. Scarcity of parking spaces and sometimes overcrowding are other problems. The environment is at risk due to the wrong way of waste disposal, cutting down of trees, sand extraction from the seabed, and beach erosion due to continuous anchoring. Besides that, the shortage of seating facilities and the immoral activities by some tourists, as well as the lack of drinking water, are the main reasons why the visitors are so unhappy.

### Recommendation for the development of the study areas

#### Banshbaria

Addressing the various problems opined by the tourists at Banshbaria beach necessitates a holistic strategy. Improving safety with concrete tactics can allay the fears of those who see the beach as dangerous, particularly

women. Tourist satisfaction and economic growth are dependent on the establishment of shops and other amenities such as snack bars, restaurants, and motels. Parking and sanitation facilities must be adequate, with enough washrooms for all visitors. People are growing more aware and making a difference, as seen by proper waste disposal systems and dustbins; however, the use regarding such dustbins must be enforced and properly followed in order to prevent pollution. Solving the problem of a scarcity of essential resources, such as drinking water, will go a long way towards improving visitors' experiences.

### **Guliakhali**

In order to resolve the issues in Guliakhali sea beach, the following broad strategies are needed. It becomes important to ensure security and enhance the level of tourist participation where women should be considered. Thus, increasing the quality of the available food by promoting local producers and sellers will enhance the level of tourists' satisfaction. There should be a sufficient number of well-maintained washrooms with distinct areas designated for men and women. Tourism experience of Sitakunda Bazar to Guliakhali beach would be easier if the communication and transportation system of the two regions is well developed. The concerns with waste disposal require proper methods of waste disposal and management, as well as information sharing where the general public is educated about the conservation of the environment. For Guliakhali to be sustainably conserved, it is imperative that the aforementioned unethical activity, tree-cutting, sand extraction, and beach erosion be avoided. In order to prevent future exploitation of the current Keora Forest, it is also necessary to engage competent personnel.

### **Conclusion**

The study on the potentiality of tourism development in both Banshbaria and Guliakhali has unveiled a spectrum of challenges that currently hinder the optimal development of these promising tourist destinations. Guliakhali seems to have a slight edge because of its natural attractions and higher preference among visitors. Both the places boast immense tourism potential, each offering a unique array of attractions that could appeal to diverse visitor preferences. The demographic insights, revealing a concentration of young and adventurous tourists, underscore the potential for adventure and nature-based activities in both locations. With a majority of tourists being students, there is an opportunity to develop educational and recreational offerings that align with their interests. The destinations, primarily attracting visitors from Chittagong, can strategize to increase accessibility and appeal to a broader geographical audience. Both locations face common issues such as security concerns impacting female tourist participation, insufficient infrastructure, inadequate sanitation facilities, shortage of essential goods, challenges related to waste disposal and environmental degradation need to be addressed through collaborative efforts between local communities and tourism stakeholders. Recognizing and building upon these potentials can lead to sustainable tourism development, ensuring memorable experiences for visitors while preserving the natural beauty of Banshbaria and Guliakhali. Addressing common issues, promoting responsible tourism, and involving the local community in development are critical for the long-term success of both destinations. The potentiality of tourism in both Banshbaria and Guliakhali is substantial, but unlocking this potential requires a concerted effort from local authorities, businesses, and the community. By implementing the recommended measures, these coastal destinations can transform into sustainable and attractive tourist spots, offering memorable experiences while safeguarding their natural resources for future generations.

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**Authors contribution:** Mehera Sultana led the conceptualization, data analysis, and writing and visualization; Mohammed Jashimuddin provided supervision, reviewed and revised the manuscript; Rafia Rahman handled statistical analysis and manuscript preparation; Ainun Nahar managed data collection and statistical analysis.

## **Reference**

- Achmad, F., Prambudia, Y., & Rumanti, A. A. (2023). Improving Tourism Industry Performance through Support System Facilities and Stakeholders: The Role of Environmental Dynamism. *Sustainability (Switzerland)*, 15(5). <https://doi.org/10.3390/su15054103>
- Adocn, T. M. C., Ordinario, A. M. T., & Teña Jr, G. E. (2024). Towards A Sustainable Livelihood Tourism Development and Economic Prosperity : A Case Study of Tagalag Fishing Village Ecotourism Zone in Valenzuela City , Philippines. *Global Sustainability Research*, 30–47. <https://doi.org/10.56556/gssr.v3i4.1045>
- Agag, G., Brown, A., Hassanein, A., & Shaalan, A. (2020). Decoding travellers' willingness to pay more for green travel products: Closing the intention–behaviour gap. *Journal of Sustainable Tourism*, 28(10), 1551–1575. <https://doi.org/10.1080/09669582.2020.1745215>
- Ahmad, A. F., & Balisany, W. M. khalid. (2023). Sustainable Tourism Management and Ecotourism as a Tool to Evaluate Tourism's Contribution to the Sustainable Development Goals and Local Community. *OTS Canadian Journal*, 2(5), 33–45. <https://doi.org/10.58840/ots.v2i5.32>
- Arya, I. P., Utama, A., & Yamin, M. (2022). Implementasi tri hita karena sebagai strategi pariwisata bali berbasis environmental security. *Review of International Relations*, 4(1), 67–86.
- Battaglia, M. (2017). Sustainability in the Tourism Business. *Symphonya. Emerging Issues in Management*, 3, 122–134. <https://doi.org/10.4468/2017.3.11battaglia>
- Butowski, L. (2012). *Sustainable Tourism – A Model Approach*. 445–466. <https://doi.org/10.5772/37718>
- Chaudhary, K. O. (2024). Sustainable Eco-Tourism Practices and Environmental Impact Analysis: A Case Study of Various Sites in Punjab, India. *International Journal For Multidisciplinary Research*, 6(2). <https://doi.org/10.36948/ijfmr.2024.v06i02.16385>
- Cheng, Z., & Chen, X. (2022). The Effect of Tourism Experience on Tourists' Environmentally Responsible

- Behavior at Cultural Heritage Sites: The Mediating Role of Cultural Attachment. *Sustainability (Switzerland)*, 14(1). <https://doi.org/10.3390/su14010565>
- Confente, I., Mazzoli, V., Camatti, N., & Bertocchi, D. (2024). Integrating tourists' walk and talk: a methodological approach for tracking and analysing tourists' real behaviours for more sustainable destinations. *Journal of Sustainable Tourism*, 1–21. <https://doi.org/10.1080/09669582.2024.2322120>
- Confente, I., & Scarpi, D. (2021). Achieving environmentally responsible behavior for tourists and residents: A norm activation theory perspective. *Journal of Travel Research*, 60(6), 1196–1212. <https://doi.org/10.1177/0047287520938875>
- Couto, G., Castanho, R. A., Santos, C., Pimentel, P., Sousa, Á., Faria, S., & Batista, M. da G. (2021). Guidelines for tourism sustainability in ultra-peripheral territories: A research based on the azores region's touristic companies' analysis. *Sustainability (Switzerland)*, 13(7). <https://doi.org/10.3390/su13073895>
- Daneshwar, D., & Revaty, E. V. (2024). A Paradigm Shift towards Environmental Responsibility in Sustainable Green Tourism and Hospitality. *International Journal of Social Science and Human Research*, 7(05), 2795–2798. <https://doi.org/10.47191/ijsshr/v7-i05-33>
- Dolnicar, S., Knezevic Cvelbar, L., & Grün, B. (2017). Do pro-environmental appeals trigger pro-environmental behavior in hotel guests? *Journal of Travel Research*, 56(8), 988–997. <https://doi.org/10.1177/0047287516678089>
- Ennew, C. (2003). Understanding the Economic Impact of Tourism. *World*, 477, 463–466.
- Hiariey, L. S., Papolaya, R. L., Hiariey, J., & Abrahamsz, J. (2024). Study of Beach Tourism Potential in Ambon City Study of Beach Tourism Potential in Ambon City. *International Journal of Arts and Social Science*, 7(2).
- Kattiyapornpong, U., Ditta-Apichai, M., Kanjanasilanon, C., & Siriyota, K. (2018). Sustainable Tourism Development: An Application of Social Exchange Theory in Thailand. *Asia Proceedings of Social Sciences*, 2(3), 123–126. <http://www.utm.my/asia/our-team/>
- Lee, S. (2022). Classifying Tourist Destinations in Japan for Overtourism. *Journal of Advanced Research in Social Sciences*, 5(4), 27–34. <https://doi.org/10.33422/jarss.v5i4.663>
- Mathew, V. (2009). Sustainable Tourism: A Case of Destination Competitiveness in South Asia. *South Asian Journal of Tourism and Heritage*, 2(1).
- Nobi, M. N., & Majumder, M. A. (2019). Coastal and marine tourism in the future. *Journal of Ocean and Coastal Economics*, 6(2). <https://doi.org/10.15351/2373-8456.1101>
- Pearce, P. L., Morrison, A. M., & Rutledge, J. L. (1998). *Tourism : bridges across continents*. McGraw-Hill Co. <https://cir.nii.ac.jp/crid/1130282273086490112>
- Petrović, M. D., & Marković, J. J. (2013). Sustainable tourism as a part of comprehensive environmental monitoring. A study of Serbia. *Journal of Environmental and Tourism Analyses*, 1(1), 30–42. [http://jeta.rev.unibuc.ro/wp-content/uploads/2013/03/2013\\_1\\_3.pdf](http://jeta.rev.unibuc.ro/wp-content/uploads/2013/03/2013_1_3.pdf)
- Platon, N., Zaporozhan, F., & Cabac, E. (2023). *Management of the tourist destination through the lens of green tourism development*. 218–224. <https://doi.org/10.53486/icspm2023.33>
- Radhi, A. A. A. H. (2022). Contemporary Concepts of Tourism (Article Review). *The Peerian Journal*, 10, 38–48. [www.peerianjournal.com](http://www.peerianjournal.com)
- Rahman, M. L., Nawshad Hossain, S. M., Sifat Miti, S., & Kalam, A. (2010). An Overview of Present Status and Future Prospects of the Tourism Sector in Bangladesh. *Journal of Bangladesh Institute of Planners*, 3(November), 65–75. [www.mocat.gov.bd](http://www.mocat.gov.bd)
- Rizaldi, A. S., Rumanti, A. A., & Andrawina, L. (2024). Sustainable Tourism Industry in Indonesia through Mapping Natural Tourism Potential: Taxonomy Approach. *Sustainability (Switzerland)*, 16(10).

<https://doi.org/10.3390/su16104201>

Roy, S. C., & Roy, M. (2015). Tourism in Bangladesh: Present Status and Future Prospects. *International Journal of Management Science and Business Administration*, 1(8), 53–61.

<http://researchleap.com/category/international-journal-of-management-science-and-business-administration>

Sugiama, A. G. (2014). *Pengembangan Bisnis dan Pemasaran Aset Pariwisata, Edisi 1, Guardaya Intimarta, Bandung*.

Sunaryo. (2013). *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif dan R&D)*. Bandung: Alfabeta.

Todorov, P., Mihailović, B., & Brzaković, P. (2023). Environmental aspects of sustainable tourism development. *Turisticko Poslovanje*, 31, 71–82. <https://doi.org/10.5937/turpos0-43367>

Xiao, H. (2022). Analysis of the Combination of the Regional Natural Environment and Local Characteristics of the Tourism Industry under the Perspective of Synergistic Development. *Journal of Environmental and Public Health*, 2022, 1–10. <https://doi.org/10.1155/2022/2955401>