

Exploring Tourism Opportunities in Protected Areas of Bangladesh: A Thematic Analysis

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Abstract

Despite having tourism potential, research on identifying and utilizing tourism opportunities for tourism development is minimal. Hence the study aims to explore tourism opportunities in protected areas of Bangladesh. The study employs in-depth interviews under a qualitative research approach to achieve the objective. A total of 34 respondents from the stakeholders of different protected areas have been selected purposively. The forest department staff, NGO representatives, local community leaders, hotel and restaurant owners, and tourists are the respondents of this study. Thematic analysis has been applied to analyze the collected data. After analyzing respondents' responses collected through in-depth interviews, five main themes and 15 sub-themes of tourism opportunities have been identified. Based on the findings, the notable theme, information and communication technology, has been explored as a new dimension of tourism opportunity. The study findings will benefit the concerned authority in understanding tourism opportunities and help to take necessary steps for tourism development.

Key words: *Tourism opportunities, Protected area, Ecological environment, Physical facilities, Socio-cultural environment, Information and Communication Technology (ICT)*

1. Introduction

In many countries around the globe, tourism, especially in protected areas, has been recognized as a tool for community development and biodiversity conservation due to the diverse features of protected areas (Melita & Mendlinger, 2013; Spenceley et al., 2021; Zachrisson et al., 2006). Protected areas are considered sustainable and suitable tourism destinations (Bhammar et al., 2021). Due to the COVID-19 pandemic, people are more conscious about health & hygiene and avoid gatherings and crowded places. As people were restricted from going out for an extended period, now they are looking for a natural, genuine, and secure place to refresh themselves individually or with friends and family. In addition, an increase in domestic visits to the protected areas has been noticed as people have been choosing parks for their overall well-being during the pandemic (Spenceley et al., 2021). Protected areas in different countries are attracting tourists as the safest tourism destination.

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Tourism in protected areas plays a role in community development as it is considered a tool to generate foreign exchanges for countries with protected areas, national parks, wildlife, and forests (Bhammar et al., 2021). Protected area tourism contributes to GDP and is a source of revenue and local livelihood (Balmford et al., 2015; S. L. Snyman, 2017). Countries dependent on tourism are now emphasizing physical facilities, economic restructuring, socio-cultural issues, and nurturing ecological characteristics of protected areas to attract tourists and give maximum satisfaction (Bhammar et al., 2021). Furthermore, the potential for protected area tourism expansion could be significant and increase local income and meet ecological development if managed properly (Ahmed & Bartlett, 2018).

Different countries have been earning a handsome amount of foreign currency and solving the unemployment problem. In East Africa, Vietnam, Tanzania, Malaysia, and New Zealand, job opportunities have been created due to protected area tourism development, reducing the communities' dependence on natural resources. Hence, protected area tourism is considered a key component of export income for such countries (Markowski et al., 2019a). In addition, a study conducted in the Andes in South America reveals that although it is a protected area, it has become popular with increased tourism, recreation, and visitation (Barros et al., 2015). Thus, it is important to recognize the tourism opportunities in protected areas and utilize them for tourism development. However, opportunities may vary based on the features and characteristics of the country and the protected areas.

The protected area of Bangladesh is full of different species and habitats and has the potential for tourism development (Dey et al., 2020a; Hossain & Khanal, 2020). However, studies undertaken in the protected areas of Bangladesh mainly focus on biodiversity conservation, forest land concession, land rights, governance, forest dependency, co-management, and local communities' perceptions towards tourism (K. Islam et al., 2019; K. K. Islam & Hyakumura, 2019). There is some evidence of a few more studies that mainly focus on the present and future of tourism, a quick look at the economic contribution of the tourism sector, and tourism marketing in Bangladesh (Al-Masud, 2015; Roy & Roy, 2015), while research on identifying and utilizing tourism opportunities in the protected area for tourism development is limited. Therefore, this study is undertaken to locate and explore diversified tourism opportunities that may attract tourists and fill the existing literature gap. Thus, the main objective of the present study is to identify and explore the tourism opportunities in protected areas of Bangladesh. Due to its abundance of tourist attractions, protected areas are crucial for national tourism. Therefore, analyzing its tourism potential can help to effectively foresee demands, fill up gaps, and grow the tourism industry.

2. Literature Review

Tourism Opportunities Related to Ecological Environment

The protected areas as tourism sites offer many opportunities for tourism development (Puppim de Oliveira, 2005). Tourism in protected areas provides financial benefits for the protected areas and the local communities (Bushell & Bricker, 2017; S. Snyman & Bricker, 2019). Among diversified attractions, excursions, wildlife watching, sightseeing, pleasure and adventure trips, exploring indigenous culture, and observing various mammal species are most common (M. W. Islam, 2010; Lyngdoh et al., 2017; Markowski et al., 2019a). Moreover, the protected areas' rich biodiversity attracts tourists to such places. Pirkko Siikamäki et al. (2015) find a positive relationship between biodiversity and the number of visits. They also mention that the protected area with high biodiversity, species and habitat richness is highly visited. Thus, the biodiversity values of the national parks are rated high (Siikamäki et al., 2015). Moreover, along with rich wildlife tourists often visit protected areas to relieve their daily boring life or feel the calm and quietness of nature that is only possible in protected areas (Ghosh & Uddhammar, 2013; Zachrisson et al., 2006).

Many authors declared that protected area conservation and tourism are conflicting (aduabuchi Ijeomah, 2012; Zachrisson et al., 2006), whereas others claimed tourism is a tool for conservation because there is an enormous scope of generating alternative income along with creating awareness regarding natural resources conservation (Islam 2010). So tourism in protected areas has been encouraged, taking into consideration of carrying capacity.

Tourism Opportunities Related to Physical Facilities (Infrastructure, health, hotel/restaurant)

Before deciding to visit any destination, tourists consider different facilities such as infrastructure, washrooms, and safety. Protected areas should have some basic facilities and core tourism opportunities to attract tourists (HOSSAIN, 2020). Cape Range National Park, Australia, permits overnight stays along with day through camping with limited facilities (Moore & Polley, 2007). A. S. A. Ferdous Alam (October 2014) claims that respondents prefer a destination with proper transportation, accommodation, and available health and hygiene facilities. Moreover, tour guides and tour operators play crucial roles and act as a bridge between tourists and destinations. They utilize their knowledge and resources to provide the best services and motivate tourists to responsible tourism (Chan & Tay, 2016). However, tour operators need to have their own motivation. Many researchers concluded that avoiding a negative image or building a positive reputation is a motivator for tour operators (Adriana, 2009; Khairat & Maher, 2012).

Socio-economic opportunities

The availability of socio-cultural and economic opportunities attracts tourists to visit a destination. A. S. A. Ferdous Alam (October 2014) discovered three factors, namely, economy, environment, and community, which are important to develop tourism. Economic elements include money exchange facilities, tourist shopping, availability of gift and souvenir shops that attract tourists to visit. Community factors mostly focus on host-guest interaction, easy access to the local community, and good cooperation where local culture is exchanged. HOSSAIN (2020) revealed that safety and security are important when visiting a destination, whether solos or group visits.

Tourism Opportunities Related to ICT

Information and communication technology (ICT) is also important in tourism in this modern era. All credits go to technology; nowadays, people can access all needed information before visiting a place. Therefore, rich internet facilities are prerequisites, along with infrastructure and convenient communication for sustainable tourism (A. F. Alam et al., 2014). As ICT has offered a new platform for the tourism sector, the application of ICT has increased in this sector. The tourism distribution channels are now trying to improve their business performance by increasing communication across the channel members (Berné et al., 2015).

3. Research Methods

Interpretivism has been applied in the present study to explore and understand different tourism opportunities in protected areas from the point of view of participants (Cohen et al., 2007). The present study is descriptive and exploratory in nature. In this study, researchers attempted to uncover and evaluate respondents' views on envisioning tourism prospects in protected areas of Bangladesh. Hence, the sample was chosen from the three designated protected areas; the Sundarbans, Lawachara National Parks, and Satchari National Parks. A sample size of 10 is acceptable for qualitative research (Haque et al., 2016). A qualitative inquiry might also be carried out with the help of twenty respondents (Sandelowski, 1995). The researchers used a non-probability purposive selection strategy to pick 34 respondents. Respondents were selected from the protected area's key stakeholders as representatives of (the forest department, NGOs, community leaders, tour operators/guides, hotel/restaurant owners, and experienced tourists). The data were collected through face-to-face in-depth interviews with the respondents. A prior brief regarding the research topic was presented before the respondents, and oral and written consent was signed before starting the interview. The question paper was distributed before the interview so the respondents could mentally prepare themselves. The average duration of the interview was approximately 35 minutes. The entire interviews have been recorded with the due consent of the interviewees. Furthermore, in addition to obtaining prior consent from the participants before each interview, they had the freedom to discontinue their participation at any moment. After conducting 34 interviews, the researchers decided to stop as the information saturation took place.

As the study is qualitative in nature, the analysis of data follows inductive data analysis methods. The taped interviews were promptly transcribed into Bengali and subsequently into English. Following that, English language specialists reviewed the translated transcripts for reliability and validity, as well as to determine the genuine meaning of the participants' points of view. Later, the six stages of conducting thematic analysis were used to analyze the data. The researchers conducted the thematic analysis process manually. First, the researchers were gone through the transcripts line by line. The researcher used highlighters in different colors to identify every similar, dissimilar, relevant, and seemingly unrelated item and coded them based on respondents' references to different tourism opportunities and facilities to develop tourism in the protected areas. Here, various themes were identified based on the data collected. Verbatim quotations have been inserted instead of participants' real identities using pseudonyms to maintain confidentiality and anonymity.

4. Findings and Discussions

After analyzing respondents' responses collected through in-depth interviews, several issues regarding tourism opportunities in protected areas have been found. A detailed list of items of tourism opportunities has been presented in Table 1 below.

Table 1: Items of Tourism Opportunities

Items	Items
Vegetation	Availability of parking spaces
Soil	Conditions of walking trails
Water	Washroom, rest room and changing rooms
Fresh air/Oxygen	Waste disposal facilities
Carrying Capacity	Jetties for boats
Natural and Scenic Beauty	Food and beverage service provisions
Sightseeing	Tourist center, souvenir shops
Pleasure trip	The extent of use of transport
Sustainability of ecosystem	Shelters and leisure spot
Hiking	Cafeteria
Enjoyment	Safari park
Study tour	Eco-vehicle
Family tour	Signage
Corporate Picnic	Lack of onsite interpretation and animation
Seasonality	Information and signposting
Honey Collection	Security and safety
Houllok Gibbon	Health and governance
Wildlife	Exchange of cultural view
Bird watching	Indigenous community supports
Migratory birds	Conflicting tourists' behavior
Angling	Overcrowding

Items	Items
Calm and Quite an Environment	Tourists' experience, satisfaction & expectation
Pollution of water via human wastes	Money Exchange
Quality of roads	Tourists' shopping
Quality of existing maps and guides	The overall financial condition of the locality
Accommodation facilities	Sources of revenue
Restaurants and other shops	Contribution of tourism to the economy
Travel agencies	Profitability and satisfaction of tour operators
Transportation services	Tourists purchase a local commodity
Tour operating organizations	Economic benefits to the community
Convenient communication	Easily accessible information
Local community support	Mobile network

A total of 64 items were discovered primarily. Afterwards, based on the outcomes of the 34 in-depth interviews with key stakeholders, as well as the secondary literature study, all 64 items were consolidated and updated into 51 items, which were then grouped into five themes and fifteen sub-themes to explore tourism opportunities in the protected area of Bangladesh. Table 2 below represents the respondents' responses during the interview session and relevant themes related to tourism opportunities in the protected areas.

Table 2: Revised Tourism Opportunities and Relevant Themes

SL	Main items	Main themes
	Vegetation	Opportunities Related to the Ecological Environment
	Soil	
	Water	
	Fresh air/Oxygen	
	Carrying Capacity	
	Pleasure trip	
	Hiking	
	Enjoyment	
1	Study tour	
	Family tour	
	Corporate Picnic	
	Honey Collection	
	Houllok Gibbon	
	Wildlife	
	Bird watching	
	Calm and Quite an Environment	
	Quality of existing maps and guides	

SL	Main items	Main themes
2	Accommodation facilities	Opportunities Related to Physical/Other Facilities
	Restaurants and other shops	
	Transportation services	
	Tour operating organizations	
	Availability of parking spaces	
	Conditions of walking trails	
	Washroom, rest room and changing rooms	
	Waste disposal facilities	
	Jetties for boats	
	Cafeteria	
	Safari park	
	Eco-vehicle	
	Signage	
	Lack of on-site interpretation and animation	
	Information and signposting	
3	Security and safety	Opportunities Related to Socio-cultural Components
	Exchange of cultural view	
	Indigenous community supports	
	Conflicting tourists' behavior	
	Overcrowding	
4	Tourists' experience, satisfaction & expectation	Opportunities Related to Economic Benefits
	Money Exchange	
	Banking	
	ATM	
	Traditional shop	
	Entry fee	
	Tourists' shopping	
5	The overall financial condition of the locality	Opportunities Related to Technological Facilities
	Profitability and satisfaction of tour operators	
	Easily accessible and informative website	
	Active in social media	
	Availability of mobile network	
	Digital Displays	
	Computer-assisted Problem Solving	

The following section summarizes significant results in implementing tourism opportunities dimensions and their relevant measurement variables in protected areas across five themes and fifteen subthemes. The first theme, ecological environment, creates sub-themes such as excursions, wildlife, a break from everyday life, forest trail hiking, and carrying capacity, all of which are reasons why tourists visit protected areas. The second theme, physical and other facilities, are connected to infrastructure, health and hygiene, and hotels/restaurants/cafeterias that motivate tourists. The third theme is socio-cultural components associated with safety, cultural viewpoint sharing, and communal behavior. The fourth theme, economic benefits, concerns financial transaction facilities and the exchange of monetary benefits. Finally, information and communication technology allows access to information and internet connection in protected areas.

4.1 Opportunities Related to the Ecological Environment

The protected areas of Bangladesh, especially forest-protected areas, are famous for their ecological richness. The evergreen nature and calm, quiet environment always be the center of attraction (M. Alam et al., 2010; Dey et al., 2020b; Hossain & Khanal, 2020; Mukul et al., 2018). Moreover, the protected areas are the habitat of various known and unknown animals. From the interview, it has been found that almost all the respondents agree that ecological components are the primary motivating factor to visit the protected areas. The variety of trees attracts nature lovers. Respondents argue that the protected areas' unique and diversified characteristics offer opportunities to develop tourism. Respondents express their opinions regarding ecological diversities as,

One of the main attractions of the protected areas is the countless trees. The trees have disappeared in many places, but here, they still survive. There was a tree of two hundred years in the Lawachara National Park. Tourists would come to look for that trees. People come here to see wildlife. In the early morning, animals come near the trail. There are a lot of wild roosters, and they can be found on the road if you arrive early in the morning. They go out to eat the rice or grains that fall in the middle of the road. (Interview No. 19, 20)

While conducting interviews, multiple ecology-related factors come in front of the researchers, which could be utilized for successful tourism development. These factors have been grouped under a few sub-themes, such as excursion, wildlife, forest trail hiking, escape from routine life, and carrying capacity.

4.1.1 Excursion

People visit national parks for multiple purposes, along with friends and family. Most respondents express that national parks are perfect for visiting with friends and family to refresh oneself. They like the fresh air and calm, quiet environment. Some of the respondents express their opinions in this regard,

I have come here with my family. I came to see nature; I really like the green nature around me. This kind of green nature is not usually seen. (Interview No. 30)

When you arrive, you are getting pure oxygen. Many people may never get attached to the soil and never get pure oxygen. There are many benefits to walking barefoot here. (Interview No. 8, 19)

Along with the national park, famous mangrove forests, the Sundarbans also offer outstanding features of the plantation to attract tourists. The most mentionable one is respiratory roots which are only found in saline areas. However, visiting the Sundarbans Forest Reserve at any time is difficult as it is open only for a few specific months of the year. The respondents, during the interview, describe the beauty of the Sundarbans as,

The tourism of the Sundarbans is mainly dependent on tides. The mangrove forest of the Sundarbans is that the evergreen forest does not shed the leaves of the trees here as the wave swells. Because the trees have access to the water it needs, their leaves do not need to be discarded. Due to high tide, they change themselves to breathe. There are some Gewa trees in Khulna, but those trees have no roots. Again, the same Gewa trees in Sundarbans have their roots. The reason is that the water of Khulna is pleasant, and tides are there, but the water is not going up and down in the locality. Due to this, the trees are not changing themselves. But inside the Sundarbans, the trees change their system to save themselves. It is a matter of observation. (Interview No. 3, 13)

4.1.2 Wildlife

The world heritage site SFR, LNP, and SNP are filled with assorted wildlife. As the Sundarbans are famous for the Royal Bengal Tiger, the world's most endangered animal Hoolock Gibbons exists in Lawachara National Park. The wilderness of Lawachara National Park (LNP) and Satchari National Park (SNP) are pretty much the same. The notable one is the ape, which is a tailless monkey. It is not seen anywhere in Bangladesh. Respondents explain,

There are six species of monkeys in Lawachara National Park. Other than this, there are wild pigs, deer, bears, leopards, wild boar, meso tigers, sajaru, almost all animals, 39 species of snakes, six species of spiders, 246 species of birds are also found in Lawachara National Park. The most endangered wild animal, Hoolock Gibbons habitat, is there in LNP (Interview No. 8)

About 60 to 61 species of birds are found in the Sundarbans, of which 20 are Kingfishers. A rare duck species is in the Sundarbans; whose legs are green. Then, there are three to four types of Hawks. In addition, I will say there is a rare animal, the rarest being (more than the tiger) forest rooster, and they do not come in front of tourists; they go deep inside when they understand the presence of people. Another specialty is the spotted deer; its eyes are so beautiful that it is impossible to express in words. (Interview No. 13)

Various salted fishes, and crocodiles, are always the center of attraction for tourists in the Sundarbans. Tourists come here and enjoy the beauty of deer, monkeys, crocodiles, and dolphins. Another tourist attraction is Karamjol Crocodile Breeding Center in the Sundarbans. Crocodiles of different ages are found there. According to one respondent,

Since it is a crocodile breeding center, crocodiles of different ages are available. Tourists get a chance to see one year to different years aged crocodiles. Besides, it is also a deer reproduction center. The primary purpose was to rescue injured deer from illegal hunters and treat them well. However, it also turned into a deer breeding center after a certain period. It is near Mangla Port, and there is no need to take prior permission before entry. (Interview No.5)

Though wildlife is the main attraction for some tourists to visit SNP, LNP, or the Sundarbans, it is seldom happening that they watch or feel the presence of wildlife. Even tourists rarely get a glimpse of the Royal Bengal Tiger in Sundarbans because animals are open here and do not come near the foot trail during day time. Respondents say,

I heard that the Sundarbans is famous for the Royal Bengal Tiger. I tried to look, but we had entered the forest in groups, and there was no opportunity to see in such an environment. It was a pity that I did not see the tiger. Although it is said that deer, monkeys, and different species of animals can be seen here, we do not see any such animals while trekking in the forest. (Interview No 29, 11)

However, a few small creatures sometimes attract tourists as they are not spotted elsewhere. Red Crabs and a particular type of squirrel are among them who have the power to stop tourists for a few minutes. In this regard, one respondent expresses his feeling as,

I have seen a lot of red crabs, but the problem is that whenever I go to see them, four or five people walk by me; that is why they go into the hole and do not come out. I, too, could not see anymore. Moreover, I saw a special type of squirrel today that I haven't seen anywhere else. I have visited India, and I have visited various protected forests in Bangladesh. I have not seen such squirrels anywhere. (Interview No. 28)

4.1.3 Forest Trail Hiking

According to respondents, tracking in the forest for a certain period is an astonishing feeling. LNP, SNP, and the Sundarbans have some specific hiking trails. The trails are categorized as 'half an hour,' 'one hour,' 'two hours,' or 'three hours.' Government officials from different protected areas say,

We generally have 7/8 trails here in LNP. Most of the time, tourists walk on 'half an hour's trail and don't want to walk inside the forest. (Interview No. 1)

There are three specific trails in SNP, though the first one, which is the half an hour trail, has been damaged due to flood. (Interview No. 2)

There is a foot trail that is 1226 meters in length, and you can walk through the Sundarbans. (Interview No. 5)

The foot trail that covers a distance of one and a half kilometers takes 40 minutes, and walking around the office compound takes about 20 minutes. Our ecotourism center can be visited within an hour. (Interview No. 3)

There is not much to see on the half an hour and one-hour track. Tourists, especially college and university students, visit protected areas for educational purposes. They loved to walk in the forest for a long time and sometimes enter the deep forest. Respondent expresses,

Honestly, it was wonderful! After arriving at such a location, we did not experience fatigue since the atmosphere inside the forest prevented us from noticing the passing of time. (Interview No. 34)

4.1.4 Escape from Routine Life

Travelling is a way to keep oneself away from daily routine life. Some people visit to stay away from the workload, avoid monotonous routines, or prefer tranquility. From the interviews, it has been confirmed that sometimes people revisit the destination only to spend some time with nature. The respondents make the following statements to express the reason for a repeat visit.

I have come here to relax and stay away from work stress for a while. I have visited the Sundarbans six more times before. It is a great place to stay away from the workload. The whole Sundarbans is a complete package of beauty. Every time I went to the Sundarbans, I felt new. Though trekking is risky, but silence in the Sundarbans is a huge thing (Interview No. 14, 28)

I have come here for five days with my family. I just wanted to break my monotonous daily routine and stay near the green nature. I like the tranquility of the place; there is no substitute for Lawachara National Park to soothe yourself for a while from the hustle and bustle of the city. I think I am successful. (Interview No.10, 31)

4.1.5 Carrying Capacity

Several hundred people enter LNP, SNP, and Sundarbans daily as tourists. They enter protected areas individually, in groups, or sometimes with friends and family. Again, when school, college, or university students come for a picnic or study tour, the group size becomes large, though the number of tourists should be limited in the protected area. However, there is no explicit instruction from the ministry regarding the carrying capacity. Responsible persons from the forest department say,

Tourists should be limited here. But the number of tourists is high, so the place sometimes becomes crowded. We cannot control the number of tourists. (Interview No. 1)

I do not have specific instructions from the government or Bangladesh Tourism Board about how many tourists are allowed together per square kilometer. To my knowledge, I have not yet received such a policy, or I have not seen it. Suppose we can ensure that the number of tourists visiting our national park will be determined by carrying capacity. In that case, the harmful effects can be easily controlled, and the disturbance will be less. (Interview No. 2)

Furthermore, the Sundarbans is open only for a limited time (Nov to Feb). Tours can be done all year round, but the problem is that travel spots are very coastal. Due to the coastal location, travel spots are in dangerous conditions for most of the year. The water is turbulent and too risky to visit. Due to this, tourists visit Sundarbans during the four months from November to February. There is a little bit of pressure at this time, and not possible to maintain carrying capacity always. Moreover, being crowded may hamper the tourists' level of satisfaction.

Tourists travel in very limited places for a limited time. We cannot take a group of 10 people this way and another group of 10 people that way. It is not possible to make such an arrangement. However, we try to go with as few tourists as possible. (Interview No. 14)

First of all, the impression is lost; why so many people? So many people destroy the calmness of the destination. Then, it seems that there is no such thing as a quiet environment, and the purpose for which I came is remaining unfulfilled". (Interview No. 32)

4. 2 Opportunities Related to Physical/Other Facilities

Two-thirds of the respondents opined that opportunities related to physical/other facilities are essential to protected area tourism development. Infrastructure, health and hygiene, restaurants, and cafeterias could be included in those facilitating opportunities (Ho et al., 2017). Respondents further emphasize that utilizing or adding those facilities will not only ensure tourism development in protected areas but also improve the livelihood of local communities. Diverse views regarding the facilities' utilization can be found during the interview session.

4.2.1 Infrastructural Facilities

Several factors are included in the infrastructural facilities based on the respondents' opinions during the interview session. The most notable ones are walking trails, adequate signage, the number of tour guides, transportation, and accommodation. As tourists walk on the trail or go hiking for a long time and enjoy nature, the condition/quality of walking trails with adequate direction and signage is essential to tourists. One of the respondents says,

If there is a trail, you have to walk through it. It will not harm nature, but tourists move around here and there when there is no trail, damaging nature. So it is vital to have a specific walking trail with sufficient direction. It should be

such that people can easily recognize this is the way. When we went inside, there was no marked road near the sea and no direction to go; there was a chance of getting lost. There was no signage. I have seen an arrow sign with a tin sheet lately, but nothing is written on it. It would have been better to have written directions. (Interview No. 28)

The condition and quality of walking trails are not good in LNP, SNP, and even in the Sundarbans. Though there are 3 to 7 walking trails in LNP, and SNP, only half-an-hour and one-hour trails are usable. However, every ecotourism center in the Sundarbans has at least one waking trail. The walking trails inside the forest are not good enough to walk on and have broken at some points, made of wood. Talking about this issue, respondent expresses opinions as,

The quality of the walking trail is average. When walking towards Khasia community, we have to pass two small ditches. We faced difficulties as we had children with us. My 6-year-old son asks me, 'Mom, why is there no bridge? (Interview No. 30)

One of the government officials informs in this regard,

The foot trails inside the forest have broken down somewhere; repairs are underway; we need to repair them twice or thrice every year. See, this is a natural forest. The walking trail here will remain the same. We will not do anything to disturb nature here. We have tried our best without disturbing wildlife. (Interview No. 4)

It is challenging for tourists to identify the plantation as there is no or rarely used name or sign on the specific plant(s). Tourists query the guides about vegetation, sometimes to the gunmen, and answers do not always satisfy the tourists. According to one of the tourists,

There are many nature lovers like me. When we see a plant, the question arises about the tree. Those with me, who are also tourists, cannot talk about it; many of them are in the same situation as me. Then I ask Gunmen or a guide. They may say a local name but can't tell the botanical or scientific name. (Interview No. 28)

According to respondents, at every entry point of the protected areas, there should be a map of that area and a skilled guide to interpreting. Maps and tour guides are vital for entering and visiting the protected areas. There are limited tour guides in the protected area; they must have gone through some training to introduce themselves to some basic activities, such as how to operate the tour, behave with the tourists and motivate them to act sustainably inside the protected area during the visit. There are 15 listed tour guides in LNP, 6 in SNP, and 126 in the Sundarbans forest reserve. They are trained enough to guide the tourists. Skilled and professional tour guides help tourists to know the park

better as they have training and knowledge about how to represent nature to the tourists. The government officials express,

We have 15 eco-tour guides trained and approved by the forest department. They are not salaried from FD. Their remuneration is the amount of money they receive after each guiding. (Interview No. 1)

We have 126 listed tour guides who are not salaried but attached to different tourist ships and launches. Sometimes they have been called by the forest department for 1day long tour. (Interview No. 3)

Exploring the protected areas is not possible without guides. Re-visitors are unwilling to take guides as the place is known to them and consider guides an extra expense.

It is impossible to represent the park in a well-organized way without the tour guides. We request tourists to take along a tour guide, but most of them deny it as they are from places adjacent to the park. I think tour guides should make tourists understand the advantages of taking a guide and the disadvantages of not taking guides with tourists while entering the park. (Interview No. 2)

Moreover, guides are not self-motivated to perform as they do not receive any fixed monthly salary from the forest department. Their honorarium is based on the number and duration of entry into the park. They are listed but not salaried persons in the forest department. They are doing the job as part-time, not interested in taking it as a profession. Tour guides say,

It could be taken as a profession, but tourists do not always come, and not all tourists want to take a guide. We do not have a fixed salary system. Get an honorarium from tourists based on the duration of the trails. For example, for half an hour trail, BDT TK. 200, for one-hour BDT TK. 300, and for three hours BDT TK. 600. (Interview No. 12)

I have been working in tourism since 2009, but after ten years, my saving is zero. What is happening here is that if we work, we get paid; if we don't, we don't get paid. We do not have a fixed income system. Then why should I be interested in tourism? (Interview No. 8)

The person from government officials agrees that there is a lack of motivation and refreshment of tour guides. Visiting with a tour guide is not mandatory in other protected areas, but tourists cannot enter the Sundarbans without prior contact with tour operators/guides. The ship or launch that desires to enter the Sundarbans first must be licensed under BIWTA and separately from the forest department. Otherwise cannot enter the Sundarbans. Sometimes guides have been trained by the forest department and or tour operating organizations with whom they are working.

No accommodation facilities are available for tourists in the protected areas. There are Bungalows and dormitories, especially for government personalities and researchers, which are not open to all. People from other parts of the country or abroad want to spend a few days observing the wildlife. However, there is no hotel to provide such accommodation. Wild animals go to the deepest forest during the day and come nearest

to the trails after sunset, tourists wander around the park the whole day, yet they do not see wildlife other than nature. A person from government official says,

It is a national forest, a place for research; researchers and research students can stay here with limited facilities. However, we cannot allow tourists in bungalows and dormitories as these are for government officers, teachers, and students who come for research purposes. We cannot provide accommodations to those interested in staying and enjoying nature. (Interview No. 1)

As protected areas are geographically somewhat isolated, transportation systems to reach the destinations are not sound either. However, The transportation facilities to get LNP is much better. Since it is situated near the Sreemangal-Kamalgonj highway, it is easy to reach from Sreemangal by bus, auto, CNG, or micro. Public transport is available there. One of the respondents says,

We have come from Sreemangal by auto rickshaw, but I have found that it is possible to come by bus or CNG. We had a little kid with us, so we wanted to come in a little more comfortably. (Interview No. 31)

This scenery is not common in every protected area of Bangladesh. Though there is good highway condition, due to the absence of passenger-carrying public transport, tourists coming to SNP face problems. One of the respondents says,

Passenger transport is limited. There is no easy access to transportation here. Sometimes tourists somehow manage to come to Satchari but cannot get any other vehicle when they return. (Interview No. 21)

4.2.2 Health and Hygiene

Under this category, the respondents have considered washrooms/restrooms/ changing rooms, prayer rooms, parking space facilities, and waste disposal systems. The availability of the washroom is more important than the restroom and changing room. Few of the protected areas have these facilities to some extent. Tourists are disturbed due to the inadequateness of the washroom. The forest department has arranged washrooms separately for male and female tourists 10 to 15 minutes away from the entry gate inside the forest in LNP. Furthermore, FD has also set up a few 'roundabouts' and a few 'benches' beside trails where tourists can sit and rest if they want. One of the respondents says,

I noticed separate washrooms for males and females here, but these are far from the entry. After reaching any destination, one needs to freshen up. It would be better if some washrooms were close to the entrance. There are a few benches arranged at specific distances, but there is no canopy on the benches; it can be improved. Tourists can get a little tired after walking a long way. In that case, the bench arrangement seems to help rest for a while. The seating area is tiny except for one or two roundabouts. (Interview No. 31)

It has been observed that there are not enough dustbins for dumping the garbage. However, there are dustbins in many places, but there is indifference among tourists to use them. There are no sufficient parking spaces as well.

You will notice that we have bins here after a short distance for dumping garbage, but many do not use it. Tourists need to be more aware of using the dustbin instead of throwing dirt here and there. (Interview No. 4)

The parks are just beside the highway. But I did not notice any specific parking there. The place was crowded. One of my friends wanted to use the washroom, but it was too dirty to use and had a water supply shortage. (Interview No. 30)

4.2.3 Restaurant/Hotel/Cafeteria

People come from different places and usually feel hungry after spending some time in the park. There is no restaurant under the protected area authority or any other food hotel owned by locals. Two/three tea stalls are there in front of the entrance. However, there is not enough space to sit in front of the tea stall, and the staff numbers are insufficient to serve the tourists. Tourists must wait in long queues, even with small kids. According to a CEO of a tour operating group, the availability of restaurants, hotels and cafeterias are also needed for successful tourism development. He says,

We need to have lunch on a day trip, but there is no good hotel restaurant to eat in or around Lawachara. You have to go to Srimangal for lunch, and the hotel restaurants in Srimangal are expensive and not affordable for everyone. In addition, when tourists went inside, they saw no drinking water or restaurant, so they hurried back. (Interview No. 10)

The forest department is not interested in setting up a cafeteria or hotel in or outside the park. Even they do not think of doing it. The government official replies,

No, we really don't think it's necessary to set up a cafeteria, because it's going to be dirty here, it's going to be more trouble, so it's not necessary. (Interview No. 1)

Another interviewee adds,

If a restaurant is offered here, there will be much shouting. In fact, it is not right to have such a crowd. If people need food, they will bring it from outside and eat inside. There may be fast food shops but no restaurants. You will come and eat and make noise, which is not part of ecotourism. (Interview No. 8)

4.3 Opportunities Related to Socio-cultural Components

More than half of the respondents agreed that Socio-cultural opportunities significantly influence tourism development. According to respondents, the destination should be safe enough to visit alone or with a group. Along with the destination's safety and security, other factors, such as cultural view exchange and local community behavior, are also

considered important. Under this theme, respondents emphasize safety and security, exchange of cultural views, and community behavior as opportunities to develop tourism in protected areas.

4.3.1 Safety and Security

There is no debate among the respondents on the safety issue. They agreed that the destination should be safe enough to visit. Whether on a solo or group tour, tourists want to ensure safety at any cost. As the forest-protected areas are mostly isolated, tourists could be attacked by wild animals or involved in an unwanted conflict with the local communities. Thus, there should have sufficient safety measures. The following statement has been given by a CEO of a tour operating organization that organizes regular tours in various destinations, including the protected areas.

When we organize a group tour, the responsibility of the whole group rests on us. Sometimes women in groups are teased by the locals or attacked by hijackers or theft. However, the situation is now improving, and I personally do not think it is unsafe in Lawachara National Park; I think the place is secure enough. That's why I think you should go in with a guide to avoid unforeseen events. (Interview No. 10)

Another interviewee says,

Once 3/4 of our team members were attacked by a group of monkeys and injured. We did not receive any primary treatment. (Interview No. 33)

The security of protected areas is improving gradually. Every protected area has some listed tour guide. Because tour guides have training on different issues tourists may face during the visit. Taking along a tour guide is wise to ensure safety and avoid other unwanted events. In addition, a group of four to five tourists police is seen on duty in the protected areas, but it is far less than required. Though hijacking or theft incident does not occur as before, there are no official arrangements for primary medical facilities. However, some personal initiatives from the forest department are there, which are not adequate. For any unexpected incidence or accident, the victim must go to Thana Sasthay Complex, which is far from the destination. Talking about these issues, the responsible person from the forest department replies,

It is a safer place to visit, and tourists can enter and enjoy the natural beauty and wildlife of the park freely. There is no problem with security, and tourist police are here. The environment is secure, and incidents like hijacks and thefts do not occur. For a safe visit, there is no alternative to visiting with an eco-tour guide; he can make understand the tourists about do's and not to do's inside the protected areas. (Interview No. 1 and 2)

Another interviewee says,

First of all, we want the safety and security of tourists who come here; we provide gunmen. The gunmen not only act as a guard to the tourists but also act as guides to the tourists. They instruct where to go and brief about various plants and animals. (Interview No. 3)

Regarding primary medical facilities, the interviewee replies,

As for the first aid system, we have a prescription for first aid, not an official one; we do it out of our sense of responsibility. If someone suddenly has an accident like a monkey attack, then there is nothing more we can do than clean up and dress it up. There is no medical camp here, we only do it on our own initiative, but such accidents are not expected. (Interview No. 4)

4.3.2 Exchange of Cultural Views

The forest-protected areas offer the opportunity to exchange cultural views as diverse indigenous communities live there. Communities contain Muslim, Hindu, and Christian families. However, there is no religious conflict among them. Tourists visit the indigenous community and observe their culture and way of living. One respondent says,

I really like the community living in the forest. People live in such places in the jungle. Life is hard, but I like the way I see them. They seem to be very happy with their life. Their houses are made of clay but beautifully painted. (Interview No. 31)

The female members of the community prepare the clothes they wear. They have their own clothing culture. Besides, they also prepare different types of handicrafts that represent their own culture. One of the community leaders says,

We prepare traditional clothes and various things made of bamboo, such as Jhuri, Khara, and showpieces. There was a tremendous demand for bamboo showpieces at one time, but these have disappeared. We still prepare a few items made of bamboo for our use. (Interview No. 23)

Furthermore, talking about this topic, a tour guide says,

Tourists come from different parts of the country; they exchange their views. Tourists who contact me before coming sometimes demand to enjoy Manipuri Nritya (a particular form of dance performed by the Manipuri community). I arrange for that. (Interview No. 8)

4.3.3 Community Behavior

During the interview, it was observed that as an important stakeholder, the local community holds a positive attitude toward tourism. They welcome tourists into their community. Overall, the attitudes of the communities towards tourists are friendly enough. One of the respondents says,

When I visited Khasia community living inside the forest, they were very friendly and offered me betel too. (Interview No. 30)

One of the respondents from the community expresses,

Yes, we support tourism if there is responsible behavior. A group of 10 to 15 people will come and see what we are doing. We feel good when people come to see us. However, 80/100 people often enter our community, enter our houses, and tear down or pull down the betel leaf. This type of incident disturbs us a lot. (Interview No. 22)

Local communities are supportive enough as they benefit from tourism in the parks. However, they feel disturbed, too, due to some problematic tourists' behavior. One of the community leaders says,

The behavior of tourists is annoying wildlife. This is only because of a lack of awareness. Again, there are foreign tourists who try not to make a sound when they come to visit, even if they walk barefoot so that they cannot make a sound. The problem here is individual tourists, not tourism. (Interview No. 4)

Another respondent replies,

If a person sees one thing every day, he will not like it anymore. Tourists are entering here without guides, and tourists are also entering with guides. Those who enter with a guide are going through a process. If they want to talk, they say, and if they want to drink water, they give water. But when they come in a disorderly manner, they actually feel confused; this is their home. People come to the house daily; it is natural to feel disturbed. (Interview No. 8)

4.4 Opportunities Related to Economic Benefits

People prefer to buy locally made-traditional items when visiting protected areas. More than 70% of the respondents agree that there should be a financial transaction facility at the destination, whereas 99% of the respondents agree that economic benefits are exchanged due to tourism.

4.4.1 Financial Transaction Facilities

Now a day, people do not carry cash as various options like debit/credit cards, bkaash, rocket, and or nagad services are available everywhere. Respondents agree that there should be such facilities in every destination. One of the respondents who come to visit SNP says,

There is no bank in the nearest of 5/6 miles. There is no mobile network at all, so services like bkaash, rocket, nagad, or something like this are unavailable here. In today's age of technology, is it wise to carry too much cash? How much money is it possible for a person to carry? (Interview No. 34)

Another respondent who comes to visit Sundarbans makes the following statement.

I came with a tour operating organization, so I probably didn't need much money yet. But it may be necessary because my personal expenses are not included in the tour package. No financial transaction facilities are available here. (Interview No. 28)

4.4.2 Exchange of Economic Benefits

99% of respondents agree on the issue that tourism benefits not only the locals but also the whole economy. One respondent explains,

Having tourism is good and necessary for the people here. The reason is that when tourists enter the area, they benefit not only one person but also the entire community. They are renting local cars; it is benefiting many people. The shopkeepers in the area are also benefiting. So economic benefits are being exchanged. (Interview No. 6)

The indigenous community's handmade handicrafts also have tourist demand. One of the tour guides says,

Occasionally indigenous girls make traditional items such as garlands, flower vases, and shawls; if tourists like, they are ready to pay three times more than the price. (Interview No. 9)

Tourists often prefer to buy various things indigenous women prepare, especially clothes, showpieces, and shawls. Moreover, indigenous products are preferable by foreign tourists to domestic tourists. Few members of the community own a few shops beside the parks. They get excited when tourists come to see the park and visit their shops, buy cheeps, chanachur, chocolates, and drinks, and have tea and coffee. They support tourism and welcome tourists wholeheartedly as their business mainly depends on tourists. One young man from Baligaon (a village near LNP) who own a shop beside the LNP entrance says,

Our income solely depends on tourists. Tourist entry was restricted in the park during the Covid-19 pandemic. To be honest, we were having a hard time at that time. Our income was also cut off due to the closure of tourism. We don't want to recall that time. I had no money, could not go to the market to buy anything, and my family was starving. (Interview No.18)

Tourism in the Sundarbans lasts for four months of the year (Nov-Feb). Many people involved in tourism have to spend the rest of the year with the income of this period. One of the respondents expresses,

I work on a tourist ship for four months of the year. It saves some money. I can eat with my family and live with dignity. (Interview No. 26)

Similarly, a lot of people are related to tourism, such as launch/ship drivers, trawler drivers, tour operators, guides, and the workforce of tourist ships, who serve the tourists

wholeheartedly. Here a person does not mean a person alone; the whole family depends on him. They can take care of their family through their involvement in tourism.

4.5 Information and Communication Technological (ICT)

More than half of the respondents agreed that technological support is crucial in today's advanced world. Respondents argue that the application of technology can enrich tourism development opportunities in the protected areas of Bangladesh. Respondents also regret not fully utilizing technology in tourism, especially in protected areas. There is no well-informed website of Bangladesh Porjoton Corporation. Under technological facilities, two themes have been clustered based on the issues raised by the respondents during the interview session.

4.5.1 Easy Access to Information

There is no detailed information regarding the protected areas of Bangladesh on the government website or any strong web link at all from where people get information before visiting. Tourists who want to visit for the first time and do not know about the places want to know information regarding the location of the destination, direction to go there, communication, booking, and security of the destination. Unfortunately, no detailed information regarding such issues is available anywhere. Respondents make the following statements on easy access to information,

If you search on Google, you may get a few private links or blogs, but those who upload things to Google do it on their own initiative. This is what the tourism corporation has to do. If you access the tourism corporation's website, you will not find anything; often, you will not be able to access the website. (Interview No. 28)

We have not received any such detailed information about Lawachara from the website. All the information I have received has come from different Facebook groups or people. But if there was a website where there would be a complete map of the Lawachara area. The map will give the direction to see which way to go. Moreover, information about how to come to Lawachara from Srimangal or Moulvibazar, there may be information about how tourists will behave, or safety issues can also be added. (Interview No. 31)

I love to travel. Before visiting a new place, I search for information on the website if I get any information from the tourism corporation. There needs to be a definite source of information from which I can know that I am going there, what danger I have, what advantage I have, and what barriers are there. I started without knowing the obstacles. I got in trouble when I got there. Then these issues need to be cleared. Or, in such a situation, what should be done? (Interview No. 32)

4.5.2 Availability of Mobile Network

Due to restrictions, the protected areas are out of mobile network coverage. Mobile networks are unavailable within a few kilometers inside or around the protected areas. A mixed opinions regarding mobile network availability can be observed during interviews. Some respondents favor the unavailability of mobile networks inside the protected areas, whereas some respondents view the unavailability of mobile networks as a problem. Respondents express the opinions as,

Having a mobile network was not important to me at that time. I just wanted to enjoy nature with my family for a while. I didn't notice whether there was a mobile network or not. However, the radiation may harm animals if there is a mobile network in the jungle. (Interview No. 32)

I do not want anyone to disturb me for three or four hours during a relaxing trip. The unavailability of the mobile network makes the task easy. (Interview No. 34)

However, some people are disheartened and worried about not having a network. They reply in this regard,

I do not find the mobile network. I planned to come in and have a video conference with my mother to show her the cultivation of betel. But it was not possible as there is no mobile network here. (Interview No. 31)

I indeed wanted to take a break from work and stay out of the network for a while. It is suitable for a moment but not always. That may not be the case for everyone. I would definitely like to be connected not only within the country but also in other parts of the world. There must be a system here so that everyone can communicate. (Interview No. 28)

We are here for three days' package. Today, three days later, I can contact my family. My family is very worried. It is normal to be worried if no one is found for three days in this age of communication. This is not a one-day affair; initiatives should be taken so that people are not faced with such problems. (Interview No. 29)

4.6 Discussion

The study has extracted multiple opportunity variables which are clustered under five themes: ecological environment, physical facilities, sociocultural components, economic benefits, and information and communication technology. Moreover, the themes have been further grouped into 15 sub-criteria. Findings reveal that the protected areas offer substantial opportunities for tourism development mainly related to ecological balances. The study has observed that the most cited ecological opportunities are diversified plants, green nature, calm and quietness of the destinations suitable for a visit with family. People choose to visit when they want a relief from their daily monotonous routine life. Moreover, observing wildlife is also a considerable opportunity that attracts tourists to

visit protected areas. Tourists look for Royal Bengal Tiger while visiting Sundarbans, whereas they look for Hoolok Gibbons in LNP and SNP. The items identified under the ecological environment from the in-depth interviews were also supported by tourism literature (Ahammed, 2010; M. Alam et al., 2010; Dey et al., 2020b; Markowski et al., 2019b; Mukul et al., 2016).

Moreover, the study has identified important physical facilities as tourism opportunities, include walking trails, accommodation, hotels/restaurants, washrooms, waste disposal facilities, transportation and tour guides. As tourists walk in the park for a long period of time, the quality of walking trails matters. Most respondents emphasize transportation and accommodation as many tourists come from different parts of the country and even from other countries. Other opportunities, such as directions to the walking trails, and names and labels of different plants and waste disposal facilities, are also important. Along with ecological opportunities, tourism development is influenced by a destination's physical facilities (HOSSAIN, 2020). However, there is a notable lack of infrastructural and other supporting facilities for sustainable tourism development. There is no washroom facility in some places, especially for female tourists; it is challenging due to the lack of washrooms. In addition, there is no seating arrangement besides the walking trails, as the roads are one and a half to two hours. Tourists sometimes get tired and look here and there to find a place to sit.

Furthermore, this study has revealed safety and security, observing indigenous culture and local community behavior under socio-cultural components as significant tourism opportunity variables. This is because of the diverse characteristics of protected areas. In addition, financial transaction facilities, shopping facilities, available gift and souvenir shops, and economic benefits exchange are discovered as important economic opportunities for tourism development. Finally, a significant number of respondents mentioned that easy access to information and available mobile network are crucial factors and could act as considerable opportunities related to technology that make the process easy for everyone. The literature identifies and emphasizes a few variables associated with ICT in tourism in relationship building (A. F. Alam et al., 2014). However, the application of technology in tourism development in protected areas has been ignored. During in-depth interviews, respondents emphasized that adapting technology in the protected area will speed up tourism development.

5. Conclusion

People visit protected areas not only for recreation but also for research and education purposes. Moreover, people feel peace and refresh themselves in a calm, quiet environment. Based on the above discussion, it can be concluded that the Sundarbans, LNP, and SNP have potential tourism opportunities to attract tourists. However, most of these opportunities are neither utilized nor have any initiative to utilize. Hence, the performance of protected areas as tourism destinations is not at the expected level. Based on the above findings, it can be said that on the edge of technology, Bangladesh is still not ensuring the complete application of technology in the tourism sector. Tourism in

protected areas could be more attractive and enjoyable to tourists if concerned authorities consider investing in protected areas' infrastructure to support tourism. This is largely a public sector responsibility; when the government invests in its protected areas, it can be hoped to be followed by the private sector.

The research represents a practical scenario of tourism opportunities in the protected areas of Bangladesh in detail which will serve as a tool for both academic and managerial levels to better understand the tourism opportunities in the protected areas. The findings will aid academic scholars in their comparative analysis, satisfaction assessment, and measurement of the link between tourism opportunities and tourism development. On the other hand, the research indicates that tourists evaluate not only the natural habitat while visiting protected areas but also other facilities. Tourists become more concerned about accommodations, cleanliness and hygiene, and the use of contemporary technologies. The results of this investigation could assist management or the authority in identifying the significant indicators of tourism opportunities that tourists value and encourage them to visit protected areas. Moreover, the findings might assist in determining the best strategy for developing tourism in the protected areas while also conserving nature based on tourist needs and demands which will improve both the public perception and the brand values of the protected areas.

This research identified a total of 51 scale items under five dimensions of tourism opportunities based on pertinent literature and in-depth interviews. This will serve as a baseline for researchers interested in examining the relationship between tourism opportunities and tourism development, tourists' satisfaction level with protected area tourism, and the participation of different stakeholders in protected area tourism. Moreover, the study introduces ICT as a dimension of tourism opportunities based on the findings which have been ignored in protected area tourism literature. It would, however, have certain advantages and disadvantages. The advantages and disadvantages of ICT application in protected area tourism might be further investigated.

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