Online, <u>https://dergipark.org.tr/tr/pub/jttr</u> Volume: 11(1), 2025



Developing tourism in Wetland Destinations: A study based on Tanguar Haor, Sylhet, Bangladesh

Tanvir Ahmed¹, Sanjoy Kumar Acharjee² and Ummy Hany Urmila³

¹Noakhali Science and Technology University, Department of Tourism and Hospitality Management, Bangladesh. https://orcid.org/0009-0002-4104-6059 ²Noakhali Science and Technology University, Department of Tourism and Hospitality Management, Bangladesh. https://orcid.org/0009-0002-0270-5293 ³Cox's Bazar International University, Department of Hospitality and Tourism Management, Bangladesh. https://orcid.org/0009-0002-8023-6250

Abstract

This paper investigates the tourism potential of Tanguar Haor, a Ramsar-designated wetland in Bangladesh, in light of its increasing importance as a destination. Qualitative methodology was employed to conduct semi-structured interviews with 15 participants to understand visitor perceptions, infrastructure deficiencies, and environmental concerns. Thematic analysis of the collected data indicates that sustainable tourism strategies should be integrated to reconcile ecological protection with developmental aspirations. Community engagement, improved infrastructure, and pollution mitigation are essential to implementing sustainable tourism practices. By tackling these multidimensional challenges, Tanguar Haor has the potential to be a model wetland tourism destination that integrates biodiversity conservation and socioeconomic benefits. This study enhances academic discourse on sustainable tourism in environmentally vulnerable wetland destinations.

Keywords: Wetland tourism, Sustainability, Tanguar Haor, Ramsar site, Tourism development, Bangladesh Wetlands

1. Introduction

*Corresponding author

Bangladesh has abundant tourism-related resources, including rivers, canals, lakes, ponds, and beaches. Water-based tourism is a novel type of travel, allowing the nation to improve its tourism industry. Tourists are keen to visit Bangladesh and experience its natural and constructed beauty (Kamruzzaman & Uchinlayen, 2019). *TraveldailyNews.com* reports that over US\$ 1 trillion was made in worldwide tourism earnings in 2011 when 982 million foreign tourists arrived. This number is predicted to surpass 1 billion in 2012. According to estimates, half of the visitors go to wetlands, especially coastal regions (TraveldailyNews, 2015).

Water resources and wetlands have been essential to human existence. Natural wetlands are found in places where the soil is submerged in water. The mix of biological and chemical processes occurs in an ecosystem comparable to constructed wetlands (Zhang et al., 2010). Bangladesh is a country with several rivers and extensive waterways. Every year, 22 and 30 percent of the nation is submerged during the rainy season. The Bangladesh Inland Water Transport Authority (BIWTA) manages port operations, but policies and guidelines are needed to manage water resources effectively (UNDP, 2012). She is a land of many splendors. She boasts hundreds of rivers and lakes filled with pristine water, sandy beaches, forests, verdant paddy fields, hills, and a wealth of cultural and historical sites. Her uniqueness on the globe map resulted from all these factors.

It is essential to support the value of wetlands in the community for their various services and functions. Additionally, the sustainable use of wetlands for each activity is referred to as the "smart use" of wetlands because of this. According to Lamsal et al. (2016), wetlands offer significant tourism prospects and socioeconomic benefits to local communities, governments, and the tourism sector, with the money generated from these ventures being utilized to fund their conservation. It is crucial to preserve the balance and ecological equilibrium of wetlands. Proper use can benefit everyone if knowledge is shared. The ecosystem must be understood, and sensible use tactics should be implemented.

E-mail: ummyurmila@gmail.com	
Article info: Research Article Received: 22 October 2024 Received in revised form: 8 February 2025 Accepted: 22 February 2025	Ethics committee approval: * This study has complied with the Research Publication Ethics stated in "Wager E & Kleinert S (2011) Responsible research publication: international standards for authors. A position statement was developed at the 2nd World Conference on Research Integrity, Singapore, July 22-24, 2010. Chapter 50 in Mayer T & Steneck N (eds) Promoting Research Integrity in a Global Environment. Imperial College Press / World Scientific Publishing, Singapore". Ethics committee approval is sub- ject to the practices of the authors' institution. For this reason, the author states that he conducted the research within the framework of ethical principles. All responsibility belongs to the authors.

Citation: Ahmed, T., Acharjee, S. K. & Urmila, U. H. (2025). Developing tourism in Wetland Destinations: A study based on Tanguar Haor, Sylhet, Bangladesh. Journal of Tourism Theory and Research, 11(1), 27-37. <u>https://doi.org/10.24288/jttr.1561821</u>

In recent decades, the study of the tourism industry has grown in interest in the search for the remarkable compared to an individual's regular life and environment. Unlike other tourism industry sectors, ecotourism and nature-based tourism cater to those who want to travel for various reasons, such as relaxation, learning, exploration, and other aspects of daily life (Alaeddinoglu & Can, 2011; URRY, 1992). However, there are currently only a small number of works and publications on wetland management and sustainable tourism destination development (Avi, 2017). Lee and Hsieh (2016) also stated that few studies have integrated environmental management and stakeholder factors to provide indicators for sustainable tourism that will help with wetland tourist planning and management.

This study investigates the current state of Tanguar Haor, a Ramsar Site in Bangladesh, and its potential as a natural resource and wetland tourism growth. The area is experiencing a surge in tourism due to its unique biodiversity and cultural significance. However, sustainable tourism strategies are needed to balance development with ecological preservation. The increasing popularity of tourism activities, driven by social media, highlights the need for a structured approach to tourism management in this destination. Further research is needed to create a sustainable framework that promotes tourism while safeguarding the ecosystem. This paper can be helpful to for ecotourism practitioners, off-thebeaten-path travelers, and sustainable tourism stakeholders, helping them understand the potential negative effects of harbor tourism on the economy, society, and environment.

2. Literature review

2.1. Wetland tourism

Wetlands, with diverse names and organizational structures, gained scientific attention in the mid-19th century due to their intriguing structures in the United States and Europe. Wetlands are ecologically sensitive and fragile adaptive systems that provide many essential benefits to mankind. These explain relevant processes and problems and demonstrate how natural and social sciences can improve understanding (Turner et al. 2000). Regarding the significance of establishing suitable protection measures with substantial environmental consequences, there are two different viewpoints on tourism in these areas (Tufford, 1993). A wetland is defined as areas of marsh, fen, peatland, or water with static or flowing, fresh, brackish, or salt water, including marine waters with a depth of less than six meters at low tide, as published by the Ramsar Convention in Iran in 1971 (Williams, 1991).

Tourism revenue promotes natural resource conservation, environmental education, and urbanization while contributing to environmental deterioration and water contamination. Economically, it enhances local infrastructure and life quality while potentially increasing living costs and financial obligations (Andereck & Nyaupane, 2011; Vaz, 2016; Pratt, 2015). Wetland tourism is a rapidly growing sub-sector of the global tourism industry. Wetlands have become increasingly popular among tourists due to their unique ecological, cultural, and recreational significance. According to Khoshkam & Marzuki (2011), environmentally friendly tourism, including cultural, eco, and wildlife tourism, focuses on conserving natural resources and understanding the environment. Wetland areas offer various tourism activities like bird watching, fishing, boating, hiking, and camping. These destinations, ranging from small ponds to vast coastal lagoons, are globally recognized as sites of global importance under the Ramsar Convention, providing enhanced protection and making them popular tourist destinations.

However, Wetland.Org observed that the interaction between tourism and wetlands is complicated and occasionally antagonistic. Tourism may adversely affect wetlands in various ways, including habitat loss, pollution, noise, and excessive water use. However, with careful planning, tourism can also be a cutting-edge means of supporting the preservation of the environment and the growth of local economies. Wetlands are crucial for maintaining ecological harmony and preserving biodiversity, but they are also essential because they help support the livelihoods of many people worldwide. Wetlands can deteriorate and become permanently destroyed if wetland resources are not appropriately managed (Hasan, 2015).

According to a press release from the UNWTO on May 7, 2012, global tourist spending reached USD 1 trillion in 2011. The economic impact of wetland tourism is immense, with half of all international visitors going to wetlands, especially in coastal areas, and the added benefit of domestic tourism and leisure day visits (Ramsar and UNWTO, 2012). On the other hand, the World Tourism Organization (UN-WTO) and the Ramsar Convention on Wetlands estimate that many international tourists visit wetlands, particularly areas near the shore. The 11th meeting of the Ramsar Parties conference in 2012 analyzed the relationship between wetlands, tourism, and recreation. The conference aimed to answer three questions: factors influencing the success and sustainability of tourism in wetlands, best practices for preserving wetlands, and how stakeholders contribute to wetlands conservation (WTO, 2012).

Diaz-Christiansen et al. (2016) illustrate that wetland tourism may have both beneficial and harmful consequences. Positive features include economic growth, community socio-cultural heritage conservation support, and wetland resource generation. Although wetlands can generate revenue and employment opportunities, they can also have unfavorable effects, like infrastructure development and direct impacts from tourism. About \$450 million is spent on tourism in the United States, only in the Everglades (Rodríguez & Martínez, 2013).

2.2. Tanguar Haor as a Wetland Destination

Tanguar Haor, a significant freshwater wetland in Bangladesh, spans over 10,000 hectares and supports at least 60,000 people. Recognized as a Ramsar Site in 2000 and an 'Ecologically Critical Area' in 1999, it is known for its high population, livelihoods, and diverse biodiversity of 140 fish species. It is located in the Surma River floodplain, one of the Meghna's main tributaries, and in the northeastern part of the country. Despite several hundred kilometers from the sea, Tanguar Haor is only 2.5–5.5 meters above sea level, and water movement is generally slow. Tanguar Haor is wholly flooded during the wet monsoon season, except for hilltop communities. In the dry season, only 50 beels cover 25-30% of the haor, which are heavily fished and attract waterfowl. During the monsoon season, these beels merge into a single massive body of water in a natural depression formed by river levees (Alam et al., 2012).

Tanguar Haor is a wetland environment located in Bangladesh's northeastern region. It is a classified Ramsar site certified by BirdLife International as an Important Bird Area (IBA). In recent years, there has been an increase in interest in promoting Tanguar Haor's tourism to foster the area's economic growth. However, Sun, Zhen, and Miah (2017) compared the biodiversity of the Poyang Lake Wetlands and the Tanguar Haor Wetlands. They show that the Poyang Lake wetland provides better biodiversity services than the Tanguar Haor wetland. These changes result from variances in land use policies, planning, population growth patterns, and economic development. Additionally, the development of further wetlands appears to provide prospects for diversifying the tourism sector while protecting environmentally and economically vital ecosystems (Bacon, 1987).

Tourism and wetlands have complex interactions that foster development, conservation, health, community

involvement, and education. Tourist advice, restoration, handcrafting, and cultural performances are examples of stakeholder activities in this economic venture (Ling et al. 2013). Wetland ecotourism is primarily practiced in North America and Europe, with most sites located in underdeveloped countries. These countries hope to turn wetland ecotourism into a thriving commercial sector to raise awareness and education (Campbell, 1999; Weaver & Lawton, 2007). Mbaiwa (2005) & Shikida et al. (2010) show in their study that China's Wetland Protection Action Plan prioritizes sustainable wetland tourism, balancing economic benefits and environmental costs, as an alternative to mass tourism in developed countries. The Ramsar Convention on Wetlands of International Importance seeks to prevent the worldwide degradation of wetlands while preserving those that remain through appropriate use and management (Lim & McAleer, 2002). According to Orams (1995), ecotourism management techniques should aim to transform ecotourism experiences into a more active role that includes behavior modification, attitude modification, and learning. However, wetland areas have the potential to become popular tourist destinations due to their rich resources. Effectively managing these places can provide economic, social, and environmental advantages (Bego & Malltezi, 2011). Therefore, this study seeks to fill a gap in research on wetland tourism in Tanguar Haor, Bangladesh. It aims to investigate sustainable development in this region, emphasizing balancing environmental conservation, community engagement, and economic progress. The study focuses on the relevance of wetlands in Bangladesh, which are essential for biodiversity and livelihoods.



Figure 1. Full map of Tanguar Haor by IUCN Bangladesh Office

Source: IUCN Bangladesh Country Office

Author	Year	Title	Focus area	Result of the study
Khadka et al.	2021	Ecotourism in Ghoda Ghodi Wetland Sukhad, Kailali, Nepal	This study examined Nepal's Ghoda Ghodi Lake ecotourism status and possible inferences.	Local participation is necessary to en- hance local ecotourism for local people and the environment.
Khoshkam, et al.	2012	Strategies for sustainable wetland tourism in Iran and its environmental Im- pact.	This study reviews the association between local people and their pos- sible role in wetland tourism opera- tions in the Gandoman wetland area.	Wetland tourism advancement in the Gandoman wetlands necessitates admin- istrative collaboration, coordination, and local community training. More research is needed to mitigate adverse effects.
Lupei et al	2017	Mapping of tourism suita- bility regarding wetlands.	This article discusses cultural ser- vice mapping approaches based on the potential of wetlands for tourism purposes.	Tourism suitability of localities near wetlands is determined by economic de- velopment, accommodations, attrac- tions, and promotion.
Aazami M. &Shanazi K.	2020	Tourism wetlands and ru- ral sustainable livelihood: The case from Iran.	Wetlands have a significant impact on people's livelihood, with natural capital having the greatest effect.	Wetlands improve economic, social, and human capital, leading to sustainable livelihoods.
Lee T.H. & Hsieh H.	2016	Indicators of sustainable tourism: A case study from Taiwan's Wetland.	This study identified indicators for sustainable wetland tourism, with the stakeholder dimension being the most important factor.	They are assessing indicators for sus- tainable wetland tourism using stake- holder theory and environmental impact theory.
Dhakal, S.P.	2014	An Exploratory Perspec- tive on Sustainable Tour- ism as Wise use of a pro- tected wetland in Thai- land.	A community capital approach is used to evaluate sustainable tourism in a Bangkok-area wetland.	Tourism in a central Thai protected wet- land has been hampered by village and outside forces, and legislative rights are needed to institutionalize community participation.
Avi, A. R.	2017	Destination Development through Sustainable Tour- ism Management (Tan- guar Haor as a case study)	The purpose of this research paper is to create a sustainable management and destination development plan for Tanguar Haor that will ensure long-term economic viability.	Expanding tourism spans will give the local population more economic pro- spects and should be proclaimed a unique protected tourist zone.

 Table 1. List of literature on Wetland tourism

3. Materials and methods

This study has complied with the Research Publication Ethics stated in "Wager E & Kleinert S (2011) Responsible research publication: international standards for authors. A position statement was developed at the 2nd World Conference on Research Integrity, Singapore, July 22-24, 2010. Chapter 50 in Mayer T & Steneck N (eds) Promoting Research Integrity in a Global Environment. Imperial College Press / World Scientific Publishing, Singapore". Ethics committee approval is subject to the practices of the authors' institution. For this reason, the author states that he conducted the research within the framework of ethical principles. All responsibility belongs to the author.

This study aims to discover Tanguar Haor as a wetland tourism destination through a qualitative research methodology. Through in-depth, independent interviews with openended questions that lead to new insights and have practical and theoretical implications, qualitative research collects data in a planned way (Veal, 2006). Semi-structured interviews were the primary data collection method, as they are inherently flexible, providing room for both the researcher and participant to engage in a real-time interaction of questions and responses, which leads to richer and more nuanced data as they explore individual perspectives and experiences (Yin, 2014). An interview guide was carefully prepared to ensure the interviews stay relevant and consistent. By Bryman's (2016) suggestions, the guide contained clear language, requested basic demographic information, and provided opportunities for in-depth questioning of the key themes through balanced discussion and probing questions. This iterative data collection and interpretation approach fosters the emergence of novel and significant concepts (Collins & Stockton, 2018). The participants were chosen based on their relevance and alignment with the study using purposive sampling, a non-probability sampling technique (Saunders et al., 2016). The selection criteria included: Specifically, participants (a) visited Tanguar Haor within the last year, (b) showed some interest in wetland tourism, and (c) were willing to share experiences and insights. Domestic and international tourists and local community members involved in tourism activities were recruited as participants to provide diverse perspectives on wetland tourism development. Interviews were conducted in Bangla to allow participants to express their thoughts comfortably and naturally. Fifteen interviews were conducted, which were approximately 30 to 40 minutes long. The sample size was chosen to permit meaningful inferences about the population. The selection was carried out using the principles of purposive sampling as defined by Bryman (1989) and Silverman (2021), in which the population parameters were carefully assessed to select cases that were directly in line with the research objectives.

The interviews were recorded with the consent of the interviewees and transcribed verbatim. Interviewees were encouraged to express themselves freely and without interruptions (Harvey-Jordan & Long, 2001). The transcripts were then translated into English by the researcher, who was fluent in both Bangla and English. The data analysis was conducted using thematic analysis to identify, analyze, and report patterns or themes within qualitative data (Braun & Clarke, 2006). The themes were derived from the research questions and the data using an inductive approach. The replies were categorized, and the linkages between topics were identified. The complete process supported the analysis, which was then consolidated and conceptualized in the findings and discussion section (Kallio et al., 2016).

4. Analysis and discussion

This section covers the findings and discussion of a study investigating tourism dynamics in Tanguar Haor, a wetland attraction in Sylhet, Bangladesh. The study's primary goal was to comprehend the numerous facets of tourist development, their impact on the local environment and community, and the problems and opportunities they bring. Based on the collective experiences of Tanguar Haor travelers, we can produce a thorough understanding of the insight of traveling to that location. The study surveyed participants who visited Tanguar Haor at least once, with a maximum of 2 days and 1 night. Most traveled in groups, with eight traveling once, four traveling twice, and three more than twice. Visits during the rainy season, especially the monsoon period, were the most popular visit time, with three participants traveling during other seasons.

Table 2. Demographic information

Partic-	Age	Profession	Income	Travel frequency
ipants			(BDT)	(yearly)
1	26	Student	5000	2
2	27	Employee	< 10000	3
3	25	Student	>5000	2
4	25	Student	>5000	1
5	26	Student	>5000	1
6	25	Student	>5000	1
7	26	Student	< 10000	2
8	29	Teacher	< 10000	2
9	28	Student	< 10000	1
10	33	Tour guide	< 10000	3
11	32	Tour guide	< 10000	1
12	29	Teacher	< 10000	3
13	27	Employee	< 10000	1
14	22	Student	>5000	1
15	24	Student	>5000	1

Figure 2. Mind map of interconnected themes in Tanguar Haor tourism development



Source: Author's synthesis based on qualitative research findings

4.1. Tourist experience

4.1.1. Accommodation

Transportation to Tanguar Haor is a series of stages. People from Dhaka usually come to Sylhet by bus or train, then local transport to the Haor region, and then by boat to the destination. Most participants noted significant road and rail infrastructure deficits, with 11 out of 15 wanting better train and bus services. Participant 8 suggests that dredging waterways might improve navigability and allow direct boat travel from Sylhet to Tanguar Haor. Participant 8 states, *"Govt. should look into the possibility of establishing a smooth waterway from Dhaka to Haor."* There are no resorts or hotels nearby Tanguar Haor, and accommodation in the area is only available through houseboats. Most reservation services are done through Mobile, Website booking, or, in some cases, via personalized Facebook pages (Ahmed et al., 2023). They have houseboats, which are 60 to 85 feet long and 30 feet wide, with cabins, washrooms, and essential electronic services. They carry 15–20 visitors and provide facilities for country walks, fishing, wildlife observation, and trekking (Ramele Ramli, 2022). The growing popularity of houseboats goes from simple to luxurious and makes tourism more enjoyable. But even as many participants considered themselves budget travelers, many chose modern, well-equipped houseboats that made for much more satisfying stays (Ahmed, Shuvo, Rifat, Hasan, & Akter, 2024). One of the participants described that spending the whole day and night in Tanguar Haor by houseboat is what attracted him to this place. According to Participant 10, "While booking the houseboat on the the website, I was happy to see all the amenities available in my room. But seeing the negative effects they are causing, I feel sad. Generators that are used to provide electric support to houseboats are causing noise pollution. The lights of the boats are disrupting the ecosystem, and there is also oil leakage."

Participant 6 also resonates with the Idea of preservation. He thinks we need to increase our sustainability efforts by saying, *"This place is suitable for adventure tourism. And we must become more aware and take responsible steps to protect the sustainability of this place. I visited this place a few years back; the water was clearer, and there were fewer tourists here. Unplanned developments are destroying everything good in this country.*

Waste disposal in rivers and streams harms the ecosystem. When underwater activities are undertaken, marine life must be taken very seriously (Taylor, 2014). Simultaneously, participant 1 shared their thoughts saying that "Oil discharged from the engine, various residual wastes of houseboats, and plastic, substances pollute the water of Haor which is a threat to the environment of Haor."

4.1.2. Food service

Before boarding the boat, most visitors shop for their food. Then they cook on the boat through an excellent cooker and dine on it. About 9 of the participants, or those who travel on a budget, have this kind of food service experience. Participant 6 thinks that this problem is a little troublesome. He explains, "From this distance, it is challenging to remarket them. Also, the variations of food were limited."

However, the scenario is a little different in the updated luxury houseboats that we see now, which provide luxury services. Tourists won't have to worry about any market or cooking-related issues there. Menus come in a variety of forms. Visitors pick the meal they prefer. Then the tour operators and servers of the houseboat will prepare and serve the meal. Everyone mentioned how much they enjoyed the food's flavor and quality. Throughout the tour, they get to experience the genuine flavor of the regional cuisine. They are incredibly pleased with it.

Participants 2, 3, 5, 7, 14, and 15 argue for the establishment of a market near Haor. This would enable budget tourists, who typically purchase and prepare their food on the boat, to easily purchase fresh food and transport it to their vessel.

4.1.3. Safety and security

Ryglova et al. (2015) underline the significance of awareness of safety as a quality destination element, which encompasses local security concerns, health hazards, safe natural conditions, and crime rates, among other things. Yet, there have been no serious security incidents at Haor. Every participant has used Safety while traveling. Nobody has experienced any unpleasant events. Participant 14 claims that nobody leaves the boat, and everyone stays there. Therefore, there is no chance for unfavorable outside incidents unless there are issues among the travelers. Participant 12 explains the situation bu saying, "The intriguing part is that I believe that tourist police have become more important at all tourist destinations. To avoid risky situations, it's essential to authenticate each guest entering the Haor area, as we did with Bandarban. Due to its proximity to the border between Meghalaya (India) and Bangladesh, this region demands the presence of the army or Border Guard Patrol and their authentication program. This approach to assuring safety and security will be very effective."

The sentiment of Participant 15 resonates with the previous statement and states that, "If boat owners want to boost safety, they should obtain and record all visitor information, including a copy of their National ID Card (NID), and then send it to the proper authorities. Everyone is responsible for the spot's safety."

Furthermore, when asked if traveling by boat presents any risks to them, all participants answered negatively. The lessened presence of waves and the reduced water flow are believed to lower the probability of drowning accidents. The probability of an accidental death is relatively reduced. Moreover, these houseboats are generally anchored nearer to the shoreline. Consequently, even if the water current intensifies, it will still require approximately 15 to 20 minutes for the vessels to arrive at the shore. All tourists and boat operators are authorized to use the available life jackets. In this specific location, the dangers posed by natural disasters are minimal.

4.1.4. Attractions and activities

Every subject in this study agreed that Haor's beauty captivated them. In addition to Tanguar Haor, Sunamganj has other attractions such as Tekerghat, Niladri Lake, Lakmachra, Jadukata River, Watch Tower, and Shimul Bagan. Everyone goes to Haor and has the opportunity to visit these places, too. Although there are limited chances for outside activities, visitors mainly stay on houseboats and can only take part in indoor games, swimming, and kayaking.

The cost of the tour varies based on whether the tourists are luxury or economy travelers. According to Rahman et al. (2023), higher prices make tourists less likely to revisit destinations in Bangladesh, like Cox's Bazar. The participants noted that economy tourists share the same tendency for Haor destinations. However, luxury tourists are willing to pay more, and all participants agree that the Haor tour offers excellent value for money. They are pleased to have visited such a beautiful place.

4.2. Community involvement

Everyone expressed positive feedback about the community's support, despite the fact that the locals are not heavily engaged in tourism. Many more are impoverished and rely on fishing for a living. Egresi et al., (2020) discovered that sociodemographic and economic factors influence locals' views toward tourist growth in a wetland region, with gender, age, and satisfaction all impacting opinions. However, factors such as education and the perception of rewards may not have an impact. Participant 3 raises the issue of the poor conditions of the locals during floods, suggesting that their participation in this tourism could greatly benefit them. Aside from that, Participant 11 said, "In my opinion, boating is a major industry in that area. Visitors can choose from a wide variety of boats, both big and tiny. The boating industry is only one of many small businesses that could benefit from the backing of the Bangladesh Tourism Board or microcredit institutions."

The next comment of Participant 2 resonates with the statement of Participant 11. Participant 2 says, "Providing training to the locals is another way to assist sustainable tourism development. Because of this, they will be able to acquire new skills and efficiently involve themselves in the tourism industry. More effective community involvement should be considered by the government. We must investigate potential strategies for community-based tourism. "

4.3. Environmental concerns

The participants gave a variety of suggestions. Awareness programs for tourists should be taken seriously. Every houseboat should have an adequate number of waste bins, and waste should be managed properly. Tourists should be made aware of this so that they, too, may contribute to Haor's long-term growth. Tourists, as well as everybody, should behave responsibly. Dolnicar et al, (2008) suggest that environmentally friendly visitors focus on studying inhabitants' interactions with natural resources to encourage sustainable tourism development in natural areas while reducing environmental damage. All the participants agreed that there is no doubt that the environment has an impact on this. The water in Haor is most affected. The level of water pollution is rising in parallel with the growth of tourism. Since houseboats with engines have become more prevalent, oil pollution of the water has increased.

4.4. Sustainability issues

Environmentally friendly tourism encourages sustainable growth and eco-friendly travel by aiding visitors and travelrelated businesses in safeguarding the environmental, sociocultural, and economic needs of their destinations and the globe (Krahenbuhl & Mullis, 2002). Most of all, the participants show their concern about the environment. Tourism growth is contributing to an increase in sound pollution. Water biodiversity is negatively impacted by engine noise. The Haor ecosystem's biodiversity is being lost to water and noise pollution; as a result, fewer fish are available than before. Participants thought that plastic pollution is a significant issue as well. Tourists that throw various plastics or packets into water or where there's a chance, they'll tumble into it are frequently endangering the ecosystem. These plastic wastes are floating because of the water's movement, making them difficult to see. However, over time, this pollution will harm this area, which will obstruct sustainable growth.

Tourists visiting Haor tend to have less interaction with locals. Since most of the major investors in the travel industry reside outside of that rural area, the economic benefits of tourism don't affect them; as a result, their main interaction with and participation in tourism services is on the journey to Haor. Wood et al. (2013) suggest that the connection between community and wetland remains strong as provisioning services improve, and wetlands become more important for impoverished people's livelihoods. However, tourism growth has had some beneficial effects on them. They make a lot of money from the boat or timber business. On a large scale, no effect has yet been observed. The growth of various houseboats has a positive impact on the economy of the people of this area. Tourism product quality can be improved by collaboration among the tourism sector, local communities, and related organizations. It is critical to involve the host community in the development process and arrange for appropriate education and personnel training (Edgell 2019). Aazami & Shanazi (2020), explore in their study how communities on wetland margins improve their livelihoods through tourism and agricultural activities, focusing on ecotourism and agriculture as sustainable livelihood strategies. Moreover, all the tourists go there and buy the necessary goods from the local market, which increases their profit. Even they sell the goods at a slightly higher price, which helps to increase the profit. Although no major impact can be observed, their quality of life is improving day by day. Andriotis & Vaughan (2003) also stated that understanding locals' perceptions of tourism growth and its implications can assist planners and decision-makers in identifying real concerns and implementing appropriate policies to avoid difficulties and maximize benefits.

Finally, the participants were asked for their opinions and perspectives on tourism development in Tanguar Haor. Everyone contributed their thoughts. There are differences in their viewpoints. Some individuals believe that, in addition to sightseeing, other activities in Tanguar Haor should be expanded to improve tourist stay time, which will contribute to overall tourism development. Participant 9 stated that going around on a boat like this in the Haor was very pleasant to them. In his opinion, "If the destination management authority office takes the initiative to make this location more beautiful and organized, more tourists will be interested in visiting it. If this place is developed and promoted properly with adequate planning, this place can even attract foreign tourists."

However, many people believe that increasing the number of tourists will have a detrimental impact on the destination, so it is vital to limit it. The carrying capacity should be taken into consideration when managing the number of tourists. It is feasible to achieve sustainable development. The authorities must be more aware of this issue and act. It should be done in collaboration with the neighborhood, according to the participants. Both the growth of the local population and the growth of tourism will be impacted by this. According to Bacon (1987), wetlands' recreational uses shouldn't conflict with their conservation objectives. Planning for recreational activities should come first, though, when it comes to wetlands protection. The participants suggest that funds could be raised from the district commissioner to benefit the locals, meaning that tourism would be beneficial.

Every participant shared their thoughts. In summary, previously, fewer tourists came to this area. However, nowadays the number of tourists has increased due to social media. This place has gained a lot of popularity organically. However, tour operators are now promoting this place in various ways, which has resulted in a significant increase in the number of tourists interested in visiting. Also, other authorities, including BTB and the District Commissioner, are currently promoting various tourist spots in the area. In addition to the integrity of biodiversity and visual beauty, the study suggests that Tanguar Haor is ideal for wetland tourism. However, problems like deteriorating infrastructure or the environment still exist. Although there isn't much local involvement, potential microcredit initiatives and tourist training could improve these people's quality of life and promote sustainable development. To preserve the environment of the Haor, stricter laws are needed, and sustainability is crucial. Building infrastructure, fostering an environmentally conscious culture, and involving the local community are a few possibilities.

4.5. Theoretical implications

This research fills an important gap in the discussion on sustainable tourism development in the Tanguar Haor Ramsar site of Bangladesh, which contributes to wetland tourism literature. This paper provides a qualitative analysis that supports the results of previous studies that show that Tanguar Haor is valued by tourists for its biodiversity, cultural heritage, and natural beauty. The analysis also ties together what people think about the people who play a role in tourism with what is known about sustainable tourism by looking at the environmental and social risks and benefits for the participants.

Data from the study demonstrates strong links between tourism developments and ecological protection implementation. Indicators of sustainable tourism can be found in the wetland ecosystems, as confirmed by the public observations of engine oil contamination and garbage disposal patterns. Moreover, the findings suggest more environmentally friendly ways of doing tourism and help manage the growth of tourism and protect the environment at Tanguar Haor and other similar places. The conflict between tourism growth and environmental preservation was reinforced as participants expressed worries about noise pollution and waste management.

4.6. Practical implications

The findings of this study have important practical implications for policymakers, local stakeholders, and tourism destination developers. This study elicited consistent complaints about the infrastructure, workable ideas for cleaning up the waterways to make them easier to navigate, and that the destination as a whole needed to be sustainable. In addition, increased tourism activities in Haor have also resulted in increased waste and oil pollution in recent years, which have affected wetland biodiversity. Many participants complained about generator noise and water pollution from poor waste management, but most said they liked the overall houseboat experience. The study's results show that ecofriendly transportation and community-based activities could help lessen the negative effects of wetland tourism. However, it seems very hard to keep up with sustainable projects. Participants in this study expressed concern that unplanned tourism activities could increase waste and oil pollution, posing a primary threat to wetland biodiversity. Additionally, the findings indicate that participants desire lowemission generators and regulated waste disposal. Tanguar Haor's natural and authentic cultural assets could serve as a model for promoting sustainable tourism practices. By prioritizing environmental conservation and fostering local engagement, stakeholders can ensure that the unique ecological and cultural heritage of Tanguar Haor is preserved for future generations.

4.7. Limitations and future research directions

Despite the value of the study, it is accompanied by numerous limitations. The semi-structured interviews employed in this qualitative study provide significant insights; however, they do impose limitations on the generalizability of findings. The thematic analysis did a good job of looking at transportation and environmental issues, but the results could be more reliable if they came from a bigger, more varied sample. The applicability of the study is constrained by its specific wetland setting. Evaluating a project in the absence of ecological impact assessments or metrics related to visitor satisfaction presents considerable challenges. These gaps could be effectively addressed and the study findings corroborated through the application of mixed methods.

Various fields of study yield results and impose limitations. Initially, a longitudinal study could examine the ways in which alterations in infrastructure and policy influence the beliefs and behaviors of tourists. It is important to assess transportation and waste management strategies not only in terms of tourist satisfaction but also with regard to their implications for environmental protection. Moreover, the examination of wetland areas can provide valuable insights into both shared and unique challenges associated with sustainable tourism development. The integration of ecological and cultural data can enhance and expand existing theoretical frameworks. Finally, the results of the qualitative study also indicate that technology can improve destination management procedures. It is necessary to investigate how digital marketing and intelligent tourism applications affect the sustainability choices of future tourists. The emergence of social media has greatly enhanced the popularity of Tanguar Haor as a site for ethical tourism, enabled by technological improvements. Tourists need to be educated about environmental consciousness. The qualitative results presented here can help researchers come up with long-term tourism plans for wetlands, which would protect the environment and boost the economy at the same time.

5. Conclusion

The paper explores the potential of Tanguar Haor, a location in Bangladesh, for increasing tourism. The growing number of domestic visitors to the area suggests it could be suitable for developing wetland tourism. Wetlands benefit tourism and recreation by interacting with coastal ecosystems and being explored by visitors. Training residents on environmentally friendly wetlands can increase tourism and reduce negative impacts. The study highlights the unique biodiversity and scenic beauty of Tanguar Haor but also warns of potential threats to freshwater basins due to tourism. It suggests targeted training and microcredit to increase local community participation in tourism. Stronger pollution regulations and environmentally friendly tourist infrastructure are essential components of a sustainable tourism development vision.

References

- Aazami, M., & Shanazi, K. (2020). Tourism wetlands and rural sustainable livelihood: The case from Iran. *Journal of Outdoor Recreation and Tourism*, 30, 1-14. https://doi.org/10.1016/j.jort.2020.100284
- Ahmed, T., Acharjee, S. K., & Nidhi, U. H. (2023). Influence of online reviews on hotel reservation intentions: Insights from Bangladeshi travellers. *International Journal of Management* and Accounting, 5(6), 99–113. https://doi.org/10.34104/ijma.023.00990113
- Ahmed, T., Mohhamad Shuvo, M. I., Imam Rifat, M. H., Hasan, M., & Akter, N. (2024). The interplay of price, word-of-mouth, and tourist satisfaction in marine tourism. *International Research Journal of Engineering, IT and Scientific Research*, 10(6), 137–152. https://doi.org/10.21744/irjeis.v10n6.2477
- Alaeddinoglu, F., & Can, A. S. (2011). Identification and classification of nature-based tourism resources: Western Lake Van basin, Turkey. Procedia - *Social and Behavioral Sciences*, 19, 198-207. https://doi.org/10.1016/j.sbspro.2011.05.124
- Alam, A. B. M. S., Chowdhury, M. S. M. & Sobhan, I. (2012). Biodiversity of Tanguar Haor: A Ramsar Site of Bangladesh. Volume I: Wildlife, IUCN, Dhaka, Bangladesh. xi+234 pp.
- Andriotis, K., & Vaughan, R. D. (2003). Urban residents' attitudes toward tourism development: The case of Crete. *Journal of Travel Research*, 42(2), 172–185. https://doi.org/10.1177/0047287503257488

- Andereck, K. L., & Nyaupane, G. P. (2010). Exploring the nature of tourism and quality of life perceptions among residents. *Journal of Travel Research*, 50(3), 248–260. https://doi.org/10.1177/0047287510362918
- Avi, A. R. (2017). Destination development through sustainable tourism management (Tanguar Haor as a Case Study). *Case Studies Journal*. 1-17.
- Bacon, P. R. (1987). Use of wetlands for tourism in the insular Caribbean. *Annals of Tourism Research*, 14(1), 104–117. https://doi.org/10.1016/0160-7383(87)90050-8
- Bego, F., & Malltezi, J. (2011). Ecotourism opportunities and challenges in Butrint, Albania, a Unique UNESCO and Ramsar Site. *Journal of Coastal Research*, 61, 150–157. https://doi.org/10.2112/si61-001.9
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa
- Bryman, A. (1989). *Research Methods and Organization Studies* (1st ed.). Routledge. https://doi.org/10.4324/9780203359648
- Bryman, A. (2016). *Social Research Methods*. Oxford university press
- Campbell, L. M. (1999). Ecotourism in rural developing communities. *Annals of Tourism Research*, 26(3), 534–553. https://doi.org/10.1016/s0160-7383(99)00005-5
- Collins, C. S., & Stockton, C. M. (2018). The central role of theory in qualitative research. *International Journal of Qualitative Methods*. 1-14.
- Dhakal, S. P. (2014). An exploratory perspective on sustainable tourism as wise-use of a protected wetland in Thailand. *International Journal of Tourism Policy*, 5(3), 159-170. https://doi.org/10.1504/ijtp.2014.063079
- Diaz-Christiansen, S., López-Guzmán, T., Pérez Gálvez, J. C., & Muñoz Fernández, G. A. (2016). Wetland tourism in natural protected areas: Santay Island (Ecuador). *Tourism Management Perspectives*, 20, 47–54. https://doi.org/10.1016/j.tmp.2016.07.005
- Dolnicar, S., Crouch, G. I., & Long, P. (2008). Environmentfriendly tourists: What do we really know about them? *Journal of Sustainable Tourism*, *16*(2), 197–210. https://doi.org/10.2167/jost738.0
- Edgell, D.L. (2019). *Managing Sustainable Tourism*. Routledge. https://doi.org/10.4324/9780429318122
- Egresi, I., Prakash, S. L., Maduraperruma, B., Withanage, A., Weerasingha, A., Dezsi, Ş., & Răcăşan, B. S. (2020). What affects support for Wetland tourism? A case study from Sri Lanka. *Sustainability*, *13*(16), 1-12.
- Harvey-Jordan, S., & Long, S. (2001). The process and the pitfalls of semi-structured interviews. *Community Practitioner*, 74(6), 219-230.
- Hasan, S. R. (2015). Sustainable management of Tanguar Haor resources: Community-based tourism as an alternative. IUCN Bangladesh. https://www.iucn.org/sites/default/files/import/downloads/4th_operational_report_th_may11.pdf (Accessed at 15.09.2024).
- Kallio, H., Pietilä, A., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: developing a framework

for a qualitative semi-structured interview guide. *Journal of Advanced Nursing*, 72(12), 2954–2965. Portico. https://doi.org/10.1111/jan.13031

- Kamruzzaman, M. & Uchinlayen (2019). Tourists' perception towards the water-based tourism: A case study on cox's bazar, Bangladesh. *Journal of Business Studies*, 10(1), 1-17.
- Khadka, D., Chaudhary, A., Karki, R., Sharma, B., & Bhatta, S. (2021). Ecotourism in Ghoda Ghodi Wetland Sukhad, Kailali, Nepal. *Journal of Tourism and Hospitality Education*, *11*, 22– 42. https://doi.org/10.3126/jthe.v11i0.38237
- Khoshkam, M., & Marzuki, A. (2012). Strategies for sustainable wetland tourism in Iran and its environmental impact. *Current Issues in Hospitality and Tourism*, 595–599. https://doi.org/10.1201/b12752-116
- Krahenbuhl, P., & Mullis, B. (2002). Reader on sustainable travel and tourism. *Development Copyright Sustainable Travel International*. 1-16.
- Lamsal, P., Pant, K. P., Kumar, L., & Atreya, K. (2015). Sustainable livelihoods through conservation of wetland resources: a case of economic benefits from Ghodaghodi Lake, western Nepal. *Ecology and Society*, 20(1). https://doi.org/10.5751/es-07172-200110
- Lee, T. H., & Hsieh, H.-P. (2016). Indicators of sustainable tourism: A case study from a Taiwan's wetland. *Ecological Indicators*, 67, 779–787. https://doi.org/10.1016/j.ecolind.2016.03.023
- Lim, C., & McAleer, M. (2002). Use of wetlands for sustainable tourism management. *In Proceedings of the 1st International Congress on Environmental Modelling and Software*. Retrieved from https://scholarsarchive.byu.edu/iemssconference/2002/all/258/ (Accessed at 15.09.2024).
- Ling, S. M., Ramchandran, S., Shuib, A. H. M. A. D., Nair, M. A. D. H. A. V. A. N., Syamsul Herman, M. A., & Prabhakaran, S. (2013). Rural resources as tourism capital: The case of Setiu Wetlands, Terengganu, Malaysia. *The Malaysian Forester*, 76(1), 27-39.
- Lupei, T., Ciobotaru, N., Badea, G., Zamfir, S., Matei, M., Boboc, M., & György, D. (2017). Mapping of tourism suitability regarding wetlands. *International Journal of Tourism*, 2, 1-9. https://doi.org/10.2991/ijt.2017.2.1
- Mbaiwa, J. E. (2005). The problems and prospects of sustainable tourism development in the Okavango Delta, Botswana. *Journal of Sustainable Tourism*, 13(3), 203–227. https://doi.org/10.1080/01434630508668554
- Orams, M. B. (1995). Towards a more desirable form of ecotourism. *Tourism Management*, *16*(1), 3–8. https://doi.org/10.1016/0261-5177(94)00001-q
- Pratt, S. (2015). The economic impact of tourism in SIDS. *Annals* of Tourism Research, 52, 148–160. https://doi.org/10.1016/j.annals.2015.03.005
- Rahman, M., Sahera, B., & Farzana, T. (2023). Constraints to repetitive visits in cox's bazar as a tourist destination: An empirical study. *American Journal of Tourism Management*, 12(1), 10–18. https://doi.org/10.5923/j.tourism.20231201.02
- Ramele Ramli, R., Ahmad Kamal, N., Abdul Adis, A., & Amir, A. (2022). Houseboat as a new tourism product in Royal Belum State Park. *Built Environment Journal*, 19(2), 102-110.

- Ramsar, U. N. W. T. O. (2012). Destination wetlands: Supporting sustainable tourism. Secretariat of the Ramsar Convention on Wetlands, Gland, Switzerland, & World Tourism Organization (UNWTO), Madrid, Spain. https://www.unwto.org/archive/global/publication/destination-wetlands-supporting-sustainable-tourism (Accessed at 15.09.2024).
- Rodríguez-Labajos, B., & Martínez-Alier, J. (2013). The economics of ecosystems and biodiversity: Recent instances for debate. *Conservation and Society*, *11*(4), 326-340. https://doi.org/10.4103/0972-4923.125744
- Ryglova, K., Vajcnerova, I., Sacha, J., & Stojarova, S. (2015). The quality as a competitive factor of the destination. *Procedia Economics and Finance*, *34*, 550-556. https://doi.org/10.1016/S2212-5671(15)01510-4
- Shikida, A., Yoda, M., Kino, A., & Morishige, M. (2010). Tourism relationship model and intermediary for sustainable tourism management: Case study of the Kiritappu Wetland Trust in Hamanaka, Hokkaido. *Tourism and Hospitality Research*, 10(2), 105–115. https://doi.org/10.1057/thr.2009.29
- Silverman, D. (2021). Doing qualitative research. *SAGE Publications*. https://doi.org/10.4135/9781473906006.n5
- Sun, C., Zhen, L., & Giashuddin Miah, M. (2017). Comparison of the ecosystem services provided by China's Poyang Lake wetland and Bangladesh's Tanguar Haor wetland. *Ecosystem Services*, 26, 411–421. https://doi.org/10.1016/j.ecoser.2017.02.010
- Taylor, C. (2014). Towards a new tourism: A new tourism manifested architecturally in Duisburg, Germany (Doctoral dissertation, Carleton University). Carleton University. Retrieved from https://repository.library.carleton.ca/concern/etds/j38607609?locale=en (Accessed at 15.09.2024).
- TraveldailyNews. (2015). *TravelDailyNews International*. Retrieved from https://www.traveldailynews.com/ (Accessed at 15.09.2024).
- Tufford, D. L. (1996). Wetlands in danger: A world conservation atlas. *Electronic Green Journal*, 1(6). https://doi.org/10.5070/g31610265
- Turner, R. K., van den Bergh, J. C. J. M., Söderqvist, T., Barendregt, A., van der Straaten, J., Maltby, E., & van Ierland, E. C. (2000). Ecological-economic analysis of wetlands: scientific integration for management and policy. *Ecological Economics*, 35(1), 7–23. https://doi.org/10.1016/S0921-8009(00)00164-6
- United Nations Development Program (UNDP). (2012). *Rio+ 20: National report on sustainable development. United Nations.* https://www.undp.org/publications/synthesis-national-reportsrio20 (Accessed at 15.09.2024).
- Urry, J. (1992). The tourist Gaze "revisited". *American Behavioral Scientist*. https://doi.org/10.1177/0002764292036002005
- Vaz, E. (2016). The future of landscapes and habitats: The regional science contribution to the understanding of geographical space. *Habitat International*, 51, 70–78. https://doi.org/10.1016/j.habitatint.2015.10.004
- Veal, A. J. (2006). *Research Methods for Leisure and Tourism* (3rd ed.). Pearson Education Ltd.
- Weaver, D. B., & Lawton, L. J. (2007). Twenty years on: The state of contemporary ecotourism research. *Tourism Management*, 28(5), 1168–1179.

- Williams, M. (1991). The human use of wetlands. Progress in Human Geography. 1-14.
- Wood, A., Dixon, A., & McCartney, M. (Eds.). (2013). Wetland Management and Sustainable Livelihoods in Africa. Routledge. https://doi.org/10.4324/9780203128695
- World Tourism Organization. (2012). *Destination wetlands: Supporting sustainable tourism. Madrid: WTO Publication Service*. Retrieved from https://oceantourism.org/blue_tourism_tools/destination-wetlands-supporting-sustainable-tourism/(Accessed at 15.09.2024).
- Yin, R. K. (2014). Case study research: Design and methods (5th ed.). Thousand Oaks, CA: *Sage Publications*. (Accessed at 15.09.2024).
- Zhang, L., Wang, M.-H., Hu, J., & Ho, Y.-S. (2010). A review of published wetland research, 1991–2008: Ecological engineering and ecosystem restoration. *Ecological Engineering*, 36(8), 973–980. https://doi.org/10.1016/j.ecoleng.2010.04.029

Author contribution

The authors conducted the research design and implementation, analysis, and article writing equally without using AI applications.

Disclosure statement

The authors reported no potential competing interest.

Ethics committee approval

This study has complied with the Research Publication Ethics stated in "Wager E & Kleinert S (2011) Responsible research publication: international standards for authors. A position statement was developed at the 2nd World Conference on Research Integrity, Singapore, July 22-24, 2010. Chapter 50 in Mayer T & Steneck N (eds) Promoting Research Integrity in a Global Environment. Imperial College Press / World Scientific Publishing, Singapore". Ethics committee approval is subject to the practices of the authors' institution. For this reason, the author states that he conducted the research within the framework of ethical principles.