

Riverine Tourism Development in Bangladesh: An Empirical Study

By

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Under the

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Master of Philosophy

Dedicated

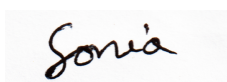
To

My Parents

Acknowledgements

I would like to convey my heartfelt gratitude to the Almighty Allah for granting me the strength and determination to complete this M. Phil thesis. My sincere appreciation goes to my honorable supervisor, Professor Dr. Md. Badruzzaman Bhuiyan, Department of Tourism and Hospitality Management, University of Dhaka, for his dedicated support and invaluable supervision. I am especially thankful to him for assisting in the preparation of the questionnaire and for his guidance throughout the field survey. The successful completion of this thesis would not have been possible without his close mentorship and expert advice.

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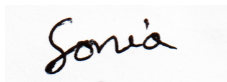
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Declaration

It is a great honor for me to submit my M. Phil thesis to the authority of the University of Dhaka as a partial requirement for the fulfillment of the M. Phil degree. This thesis has been prepared under the guidance of my supervisor, Professor Dr. Md. Badruzzaman Bhuiyan, Department of Tourism and Hospitality Management, University of Dhaka. Some contents and references have been drawn from previously published or unpublished reports, articles, theses, and other online or offline sources, all of which have been duly cited and acknowledged.

Despite my sincere efforts, the thesis may still contain certain limitations or unintentional errors. However, I have endeavored to compile it with accurate information, appropriate analysis, and necessary descriptions. To the best of my knowledge, this thesis represents my original research work, and I hereby declare that it has not been submitted elsewhere for the award of any other degree or diploma.



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Letter of Endorsement by the Supervisor

This is to certify that the thesis entitled “*Riverine Tourism Development in Bangladesh: An Empirical Study*” has been carried out by Sonia Akter under my supervision and guidance. The content, analysis, and arguments presented in the thesis are consistent with the title, align with the stated objectives, and fulfill the requirements for the M. Phil degree. Throughout the research process, she demonstrated sincerity, dedication, and commitment to her work.

I have thoroughly reviewed the thesis and found it to be well-written, properly structured, and academically sound. Therefore, I recommend her submission of this thesis to the authority of the University of Dhaka for necessary consideration and completion of formalities toward the award of the M. Phil degree. I extend my best wishes for her continued success in future endeavors.



Dr. Md. Badruzzaman Bhuiyan

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Abstract

Bangladesh, a riverine country with over 700 rivers, tributaries, and canals, has long depended on its waterways for livelihoods, communication, and the preservation of natural beauty and cultural identity. These rivers have shaped the country's geography, culture, economy, and social life for centuries. Within this context, riverine tourism presents a high-potential avenue to diversify Bangladesh's tourism sector by connecting visitors directly with rivers and their surrounding environments. While the country is widely recognized for coastal, hill, and heritage tourism, riverine tourism remains largely underdeveloped. This study investigates the scope, challenges, and sustainability dimensions of riverine tourism, emphasizing its contributions to socio-economic empowerment, community development, cultural preservation, and environmental sustainability.

Guided by the positivist paradigm, the study employed a quantitative research approach to ensure objective, replicable, and evidence-based findings. Primary data were collected through structured questionnaires, semi-structured interviews, focus group discussions, field observations, and case studies across key riverine destinations. A purposive sample of respondents including tourists, local residents, tourism service providers, and policymakers was used to ensure representativeness. Secondary data were drawn from government reports, policy documents, academic literature, and comparative case studies from other riverine countries. The survey instrument was validated for content and construct validity, and reliability were confirmed via Cronbach's Alpha. Data were analyzed using descriptive and inferential statistics, including frequencies, percentages, means, and regression analysis, ANOVA and diagnostic tests.

Findings indicate that riverine tourism can significantly enhance national economic development, diversify livelihoods, and create local employment. Activities along rivers provide income opportunities for boat operators, guides, artisans, hospitality providers, and associated businesses such as restaurants, handicraft shops, and homestays. Riverine tourism also fosters cultural preservation by promoting traditional practices, festivals, boat-building techniques, indigenous music, and local heritage, while facilitating cultural exchange and reinforcing community identity. Environmentally, sustainable river-based tourism encourages responsible waste management, protection of river ecosystems, and development of eco-parks and regulated recreational activities.

Key challenges include inadequate infrastructure, limited safety measures, poor transport connectivity, weak policy support, low promotion, and limited community engagement, alongside environmental threats such as pollution and riverbank erosion.

To address these challenges, the study advocates for a holistic and integrated approach to riverine tourism development. Key recommendations include strategic investment in infrastructure to improve accessibility and service quality; capacity-building programs to empower local communities to actively participate in tourism management; the implementation of eco-friendly practices to minimize environmental impacts; policy reforms to provide clear regulations, incentives, and frameworks for sustainable tourism; enhanced collaboration among stakeholders, including government agencies, private operators, and local communities; and targeted domestic and international marketing strategies to increase awareness and attract tourists.

With strategic planning, investment, and active stakeholder participation, riverine tourism has the potential to become a cornerstone of Bangladesh's sustainable tourism sector. By balancing economic growth with cultural preservation and environmental conservation, the development of riverine tourism can foster inclusive development, improve livelihoods, promote ecological sustainability, and position Bangladesh as a unique destination for nature-based and cultural tourism experiences.

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List of Acronyms

- **ANOVA** – Analysis of Variance
- **BDT** – Bangladesh Taka
- **BBS** – Bangladesh Bureau of Statistics
- **BPC** – Bangladesh Parjaton Corporation
- **BTB** – Bangladesh Tourism Board
- **CBT** – Community-Based Tourism
- **EFA** -Exploratory Factor Analysis
- **FE** – Financial Express
- **Gob** – Government of Bangladesh
- **GDP** – Gross Domestic Product
- **GNP** – Gross National Product
- **IFTO** – International Federation of Tour Operators
- **IUCN** – International Union for the Conservation of Nature and Natural Resources
- **KMO** – Kaiser-Meyer-Olkin
- **MOCAT** – Ministry of Civil Aviation & Tourism
- **NHTTI** – National Hotel & Tourism Training Institute
- **NGO** – Non-Governmental Organization
- **OECD** – Organization for Economic Co-operation and Development
- **OIC** – Organization of Islamic Cooperation
- **PATA** – Pacific Asia Travel Association
- **SPSS** – Statistical Package for the Social Sciences
- **STD** – Sustainable Tourism Development
- **TBS** – The Business Standard
- **TDAB** – Tourism Developers Association of Bangladesh
- **TIES** – The International Ecotourism Society
- **TOAB** – Tour Operators Association of Bangladesh
- **TTCI** – Travel & Tourism Competitiveness Index
- **UK** – United Kingdom
- **UN** – United Nations
- **UNCED** – United Nations Conference on Environment and Development
- **UNDP** – United Nations Development Programme
- **UNESCO** – United Nations Educational, Scientific and Cultural Organization
- **UNWTO** – United Nations World Tourism Organization
- **USD** – United States Dollar
- **VIF** -Variance Inflation Factor
- **VAT** – Value Added Tax
- **VIP** – Very Important Person
- **WTTC** – World Travel and Tourism Council
- **WTO** – World Tourism Organization

Chapter 1

Introduction

Introduction

1. Background of Research

Being the largest delta in the world, Bangladesh has a huge river network consisting of the Jamuna, Padma, Meghna, Brahmaputra and Buriganga rivers. Such waterways provide enormous prospects to the development of river tourism, which is one of the areas that has not been fully developed despite its potential to promote sustainable rural development (Nekmahmud & Hassan, 2021). Through river tourism, tourists enjoy unique opportunities to learn about the natural landscape, cultural heritage, and other historical sites and experience leisure and environmental friendly activities along the rivers (UNWTO, 2023). The country possesses over 700 rivers that provide the world with one of the most rich river systems and this supports the development of riverine tourism (Islam, 2023).

The rivers of Bangladesh play crucial transportation and agricultural purposes as well as they have cultural, historical and economic value. A lot of towns and cities were established along the banks of rivers, where they served as the centers of trade and commerce (Sarker and Dey, 2019). Such historical legacy enhances the popularity of river tourism, offering opportunities to experience cultural and eco-tourism, potentially demonstrating the local traditions, lifestyles, and history (Chowdhury et al., 2016).

Riverine tourism has a lot of potential in generating employment and improving the income of the communities situated at the rivers. Cultural gatherings, river tours, and fishing can boost the revenues of the locals and strengthen the rural economies. In addition, tourism contributes to the necessity of hospitality, transportation and local crafts, which supports the general socio-economic development (Rahman and Choudhury, 2018; Hossain et al., 2020). Given such a possibility, the Bangladesh Government has undertaken to include river tourism in the national tourism policies and development plans (Bangladesh Tourism Board, 2021).

Despite these opportunities, river tourism faces a great number of challenges. Such environmental factors as water pollution, wetlands loss, overconsumption of natural resources, etc. require careful planning to ensure sustainability (Ali and Islam, 2021). These challenges are important to be tackled by governance structures, sustainable tourism approaches and community engagement (Khan et al., 2019). The inadequacy of infrastructure, such as bad roads, inadequate accommodation, and inaccessibility, hinder the growth of river tourism, as well as a poor marketing and promotion effort (Rahman and Haque, 2020; Sarker, 2022).

The Bangladesh river tourism needs a holistic approach of improving infrastructure, engaging the community, and effective marketing strategies (Talukder et al., 2024). Eco-tourism and cultural tourism are useful in providing significant experiences and preserving both natural and cultural resources (Chowdhury and Ahmed, 2020). Community-based tourism initiatives enable community residents, which facilitates ownership, generation of incomes, and sustainable resources management (Rahman et al., 2023; Uddin and Rahman, 2021).

1.2 Riverine Tourism of Bangladesh

Riverine tourism has recently become a significant area of tourism study, especially in nations where rivers are a prominent aspect of the natural scenery. Bangladesh is frequently showcased as a prime illustration of the advancement of river-based tourism, due to its extensive system of rivers and waterways (Rahman & Hossain, 2014). Rivers are a significant natural resource that merges aesthetic charm, cultural importance, and economic opportunities, rendering them an appealing target for tourism growth (Ali & Islam, 2021; Nekmahmud & Hassan, 2021).

Historically, rivers have facilitated trade, enabled transportation, and influenced settlement patterns. In modern tourism, they function as locations for relaxation, recreation, and cultural enjoyment (Hall & Page, 2014). Riverine tourism includes various activities such as cruises, water sports, eco-tourism, and cultural heritage exploration. These varied applications illustrate that rivers serve multiple functions, integrating environmental resources with cultural significance. The assessment aims to emphasize how rivers boost tourism by providing natural scenery, genuine experiences, and chances for cultural conservation (Ali & Islam, 2021).

A key aim of riverine tourism studies is to evaluate its economic and social impacts. Tourism centered on rivers can create job opportunities, encourage small businesses, and result in infrastructure growth in rural and less developed areas (Nekmahmud & Hassan, 2021). In numerous developing nations, this positions river tourism as a possible catalyst for sustainable economic development. Apart from economics, rivers hold social and cultural importance as well. They frequently possess spiritual, historical, and symbolic significance for local communities. Encouraging tourism along rivers can protect heritage, rejuvenate traditions, and enable genuine cultural interactions between locals and travelers (Karim et al., 2020).

Sustainability remains a critical issue of tourism on rivers. Rivers are very sensitive ecosystems, and tourism activities can threaten biodiversity, pollute water bodies, and alter natural landscapes (Gössling & Hall, 2019). To be sustainable, riverine tourism must be ecologically oriented and ensure that economic gains do not come at the cost of environmental degradation. Eco-tourism has been identified as a key approach to attracting environmentally conscious tourists and promoting conservation (Das & Chatterjee, 2015). It is also essential to link river tourism with other environmental policies, such as river management and pollution prevention, to maintain ecological balance (Islam & Bhuiyan, 2020).

Nevertheless, there are significant opportunities for riverine tourism growth. Rising global interest in sustainable and cultural tourism provides a favorable climate for river-based projects (Butler, 2018). The diversity of cultures and unique river experiences can attract visitors seeking authenticity, while local residents benefit through employment, entrepreneurship, and improved facilities (Nekmahmud & Hassan, 2021). Properly managed, riverine tourism can contribute to economic development, cultural conservation, and environmental protection (Ali & Islam, 2021).

Despite its potential, river-based tourism faces numerous challenges, particularly in developing countries. Infrastructure is still insufficient in many regions, and seasonal variations in river water levels create practical problems for navigation and leisure (Rahman, Karim, & Akter, 2023). Contaminated water and poor waste disposal mechanisms threaten the sustainability of rivers and the viability of tourism activities (BBS, 2020). These challenges highlight the necessity for integrated planning and policy initiatives that address infrastructure, environmental protection, and community engagement (UNWTO, 2018).

Riverine tourism represents a promising yet complex sector. It offers significant benefits in economic empowerment, cultural preservation, and environmental awareness—particularly in regions where rivers remain underutilized (Rahman & Hossain, 2014). However, environmental degradation, inadequate infrastructure, and seasonality must be addressed comprehensively. An integrated approach—combining economic, cultural, and ecological perspectives—is essential to ensure that river tourism develops sustainably and equitably. Continued academic attention and well-designed policy frameworks are crucial for guiding the sustainable development of riverine tourism (Hall & Page, 2014; Gössling & Hall, 2019).

1.3 Riverine tourism in Bangladesh's cultural and economic context

Bangladesh, with its enormous river networks, offers a unique location for the development of river-based tourism. This sector has recently experienced increased interest, as it can significantly contribute to the country's cultural, environmental, and economic systems (Rahman & Hossain, 2014). Rivers such as the Padma, Meghna, Jamuna, and Brahmaputra are not only vital to agriculture and transportation but also represent vast, underutilized potential for the tourism industry (Nekmahmud & Hassan, 2021). Riverine tourism can promote sustainable rural livelihoods, preserve cultural heritage, and attract both domestic and international tourists seeking authentic experiences (Ali & Islam, 2021). Therefore, this thesis explores the cultural and economic dimensions of river tourism in Bangladesh by evaluating the current state of the sector, identifying challenges, and highlighting future growth opportunities (Rahman, Karim, & Akter, 2023).

The rivers in Bangladesh are deep-rooted to the heritage, culture-identity, and history of the country. The dense system of rivers (more than 700) is not only the source of natural wealth but also gains great religious-, cultural-, and social values. Rivers have a long history of involvement in local traditions (boat races, fishing and religious observances) which has given them a great connection with the lives of the people (Nekmahmud & Hassan, 2021).

The United Nations World Tourism Organization (UNWTO) remarks that river tourism offers a unique opportunity for tourists to experience local culture through visits to riverside communities, participation in boat-building activities, and attendance at river-based festivals (UNWTO, 2018).

Such tourism not only promotes cultural exchange but also has the capacity to preserve and highlight local cultural heritages as valuable assets and sources of attraction for both national and international visitors (Nekmahmud & Hassan, 2021). Periodic cultural events, such as traditional boat races on the Padma River and riverside fairs, represent important cultural expressions that can be strategically utilized to attract tourists seeking authentic cultural experiences (Rahman & Hossain, 2014).

Besides, spiritual and eco-tourists can find the serenity that they desire at such peaceful rivers. The idea of blue tourism on water-related leisure activities matches the culture of Bangladesh and its application given that water is the centre of making philosophy and lifestyle in the country (UNWTO, 2022).

Riverine tourism can boost the economy of Bangladesh particularly in the rural and under developed areas in a big way. It can improve local economies through creation of jobs and inspiration to entrepreneurship by focusing on water-based activities such as boating, river tourism and ecology tourism (Dowling, 2006). The tourism industry can generate employment opportunities in various sectors such as hospitality, travel services, guided adventure aqua tours, handicrafts, and local community enterprises located along the rivers. These rivers also support the livelihoods of nearby communities through coastal fisheries and related activities, thereby creating a strong linkage between river-based tourism and local economic development (Rahman, Karim, & Akter, 2023). As noted by the UNWTO (2018), river tourism can diversify rural economies by integrating cultural and ecological resources into the tourism value chain.

Foreign investments might also be attracted by the expansion of river tourism, as many investors aim to establish infrastructure such as river resorts, eco-lodges, and recreational amenities (UNWTO, 2018). Because river tourism promotes environmentally friendly methods of economic development, McKean et al. (2005) highlighted it as an opportunity to achieve sustainable economic growth. This form of tourism appeals to eco-conscious travelers, offering them opportunities to contribute to the local economy while supporting conservation efforts. Moreover, riverine tourism strengthens local culture by integrating traditional practices, crafts, and lifestyles into tourism services and products, ensuring that economic benefits remain within local communities (Ali & Islam, 2021).

Riverine tourism is still at an early stage in Bangladesh. To enable the sector to flourish, collaboration between the government, private sector stakeholders, and non-governmental organizations (NGOs) is essential for developing strategic policies and attracting investment (Rahman, Karim, & Akter, 2023). Improving infrastructure — including transportation systems, safe navigation channels, and tourist facilities — will be critical to realizing the full potential of river-based tourism (Ministry of Water Resources, 2021).

Riverine tourism in Bangladesh presents a strong prospect for both cultural preservation and economic enhancement. The country's vibrant river culture and heritage, if combined with sustainable tourism strategies, can position Bangladesh as a leading destination in South Asia (Nekmahmud & Hassan, 2021). To fully harness this potential, challenges such as inadequate infrastructure, environmental degradation, and limited policy coordination must be addressed. A comprehensive approach emphasizing community participation, environmentally friendly initiatives, and infrastructural improvements can help river tourism emerge as a cornerstone for economic growth and cultural integrity in Bangladesh (Rahman & Hossain, 2014).

1.4 Significance of the study

The river tourism in Bangladesh has significant economic development, cultural preservation, environmental conservation, and social development potential. River tourism strengthens the local economies in such regions as boat services, hospitality, and handicraft through increased GDP, employment, and diversification of incomes, particularly in rural societies (Rahman and Choudhury, 2018; BBS, 2020; Hossain et al., 2020). It also provides an exchange of culture between communities, as it encourages them to maintain traditional values, festivities, and performances in the process of socializing with visitors (Chowdhury and Ahmed, 2020; Phuong and Ward, 2020).

The benefits of the environment are evident, since river-based tourism encourages conservation, sustainable activities, and awareness campaigns. The quality of water and biodiversity protection can be enhanced by regulated boating and fishing (Ali and Islam, 2021; Khan et al., 2019; Chowdhury et al., 2021). By bringing the rural population closer to markets, access to training

opportunities, and participation in tourism management, community-based tourism can improve life in rural areas (Rahman et al., 2023; Uddin and Rahman, 2021).

However, there are still barriers, including a lack of proper infrastructure, environmental risks, and weak regulatory frameworks. The gaps need to be closed with the help of targeted policy measures, strategic investments, and collaboration between the government, the private sector, and local populations (Rahman & Haque, 2020; Sarker, 2022).

The river tourism presents a significant opportunity to Bangladesh in achieving economic, cultural and environmental objectives. The proposed study will address the current state of river tourism, identify challenges and prospects, and propose ways of sustainable development. The research aims at providing policy recommendations and local participation that will enable the stakeholders of the tourism sector, including policymakers, tourism operators, and local communities to maximize the potential of river tourism in Bangladesh (Islam, N., 2023).

1.5 Statement of the problem

Bangladesh is a river based nation with an extensive network of waterways that provide immense tourism development opportunities. Riverine tourism can also act as a major catalyst to economic development, job creation, conservation of cultural heritage and environmental conservation. However, the development of the river tourism in Bangladesh remains limited and underutilized regardless of its potential.

Lack of infrastructure is a huge phenomenon. Transportation, accommodation, safety measures, and other basic services are often inadequate around river-based attractions, which merely discourage local and foreign tourists. Other threats to the sustainability of river ecosystems and degradation of the tourism experience include environmental problems, including water pollution, unmanaged boating, and overfishing.

Bangladesh has a rich culture in which rivers are closely intertwined with the heritage, traditions and societal livelihood. But there is lack of adequate initiatives to protect and promote cultural practices, festivities and handicrafts in tourism ventures. Agriculture and fishing continue to play

an important role in the livelihood of many riverine communities and there are few opportunities to diversify their incomes by incorporating activities related to tourism.

Another weakness is that there is no effective policy support and coordinated planning. Weak regulatory frameworks and lack of governmental and non-governmental funding contribute to the inability to develop riverine tourism. In addition, there is a low level of community participation in tourism planning and management, which leads to inequity in the distribution of benefits and lack of ownership by locals.

These points highlight the core need to address the infrastructural, environmental, cultural, and policy related challenges that hinder the growth of riverine tourism. Lack of strategic planning, sustainable practices and community participation means that the full potential of river tourism in Bangladesh will remain unrealized.

1.6 Research Gap

Despite being a country with rivers, and having one of the largest deltas systems in the world, the riverine tourism development is immature and fragmented. Recent studies tend to focus on tourism expansion in general or rivers and particular aspects of rivers such as transport, or eco-friendly features, overlooking the network of economic, social, cultural, and environmental outcome of river tourism.

Limited literature exists comparing the socio-economic impacts of river tourism on the local communities including generation of income, employment, and livelihood diversification. Similarly, researchers have not adequately investigated the importance of river tourism in the protection of cultural heritage and community participation. Environmental concerns such as pollution, ecological destruction and ecologically friendly approaches in river tourism are also not adequately addressed.

As well, one can also notice the lack of extensive study to examine the opinions and attitudes of local people towards the development of river tourism, which is critical in the context of sustainable planning and policy formulation. There is a dearth of research to provide strategic clues on how to overcome infrastructural, regulatory, and environmental challenges to achieve the best

out of riverine tourism.

To summarize, the research gap is explained by the non-existence of the multifaceted assessment of riverine tourism in Bangladesh which will involve not only economic and social, cultural and environmental aspects but also consider the local perspectives and approaches to sustainable development. The gap in the filling will provide the much-needed information to the policymakers, practitioners, and researchers to develop effective approaches to the future development of river tourism as a sustainable solution to rural development, cultural conservation, and environmental preservation.

1.7 Objectives

The key objective of this research aims to enhance the riverine tourism development in Bangladesh. In this regard, to gain a comprehensive understanding of the subject, the study addresses the following points:

Objective 1: To Evaluate the Existing Condition of tourism and Opportunities for Advancing Riverine Tourism in Bangladesh.

Objective 2: To Examine the Effects of River Tourism in Bangladesh.

Objective 3: To Investigate the Challenges Confronting Riverine Tourism in Bangladesh.

Objective 4: To Propose Strategies for the Sustainable Advancement of Riverine Tourism in Bangladesh.

1.8 Rationale of the Study and Bridging the Gap

The rich network of rivers and the rich cultural heritage that Bangladesh boasts of are promising the immense potential of river tourism development. However, despite this potential, the industry remains underdeveloped due to a number of challenges, including inadequate infrastructure, lack of skilled labour force, and lack of financing (Islam, 2023). Addressing such challenges is critical to the realization of the economic, social and environmental benefits that river tourism might bring.

Research is crucial in influencing policy and promoting sustainable development. Empirical studies indicate that research offers crucial evidence for making informed decisions (Islam, 2023; Uchinlayen et al., 2023). Recent research on river tourism in Bangladesh provides important insights into effective practices, highlights challenges that hinder growth, and proposes methods to achieve enduring sustainability (Ahmed et al., 2025)

The study aims to fill the gap in the existing literature by studying the current situation of river tourism in Bangladesh, its challenges, and providing viable guidelines to enhance it. Based on the approach to sustainable practices, community interaction, and infrastructure development, the study will contribute to the creation of policies that promote responsible and inclusive tourism.

Also, the findings of this study will seek to give a foundation to future research in the field of river tourism. The given work is intended to stimulate further academic research and practical work that will enhance the viability and sustainability of river tourism in Bangladesh by establishing a comprehensive vision of the dynamics in the sector.

1.9 Scope and limitations

Riverine tourism in Bangladesh is a potentially high-growth industry due to the country having rich cultural heritage, dense and intricate network of rivers and varied eco-systems. Though Bangladesh has great potential in riverine tourism, it is faced with quite a number of challenges in the development of tourism. Presenting issues like inadequate infrastructure, environmental deterioration, safety, and inadequate marketing and policy programs as the problems to be addressed is crucial to the potential realization. A responsible and viable strategy that balances environmental conservation, involvement of local people and structuring of sound infrastructure will play a significant role towards the progressive development of riverine tourism in Bangladesh.

1.10 Structure of the thesis

This thesis paper is divided into nine (09) chapters, each examining a unique facet of the thesis subject. The outline and framework of that chapter are presented below:

Chapter	Chapter Name	Discussed topics
1	Introduction	• Background of Research • Riverine Tourism of Bangladesh • Riverine tourism in Bangladesh's cultural and economic context • Significance of the study • Statement of the problem • Research Gap • Objectives • Rationale of the Study and Bridging the Gap • Scope and limitations: • Structure of the thesis • Conclusion of the introduction
2	Literature review	• Introduction • Historical Context • Definitions of Riverine Tourism • The Evolution of Riverine Tourism as a Concept and Practice • Geographical Overview • Unique Features of Riverine Destinations That Attract Tourists • Types of River-Based Tourism • Case Studies of successful Riverine Tourism Projects • Previous research on Riverine tourism in Bangladesh • Future Trends and Opportunities of Riverine Tourism in Bangladesh • Conclusion of literature review
3	Theoretical Frameworks	• Concept of Riverine Tourism in Bangladesh • Concept of Sustainable tourism • Sustainable Tourism Development • Sustainable Riverine Tourism Development • Community-Based Tourism (CBT) • Cultural Preservation and Authenticity • Tourism Infrastructure and Service Quality • Policy and Governance • Theoretical Models and Frameworks in Riverine Tourism • Hypothesis Modeling • Hypothesis Development

4	Methodology	• Introduction • Research Design • Research Approach • Population and Sampling • Research Instrument • Data Collection Procedure • Validity and Reliability • Data Analysis Techniques • Hypothesis testing • Ethical Considerations • Limitations of the Methodology
5	Present Scenario of Tourism in Bangladesh	• Introduction • Historical Background of Tourism in Bangladesh • Overview of Bangladesh tourism • Current state of Tourism Industry • Popular Tourist Destinations in Bangladesh • Types of Tourism in Bangladesh • Growth in the Tourism Sector • Contributions of Tourism to Bangladesh's Economy and Society • Future Plans of the Bangladesh Government to Promote Tourism
6	Contextualizing Riverine Tourism in Bangladesh	• Introduction • Tourism Growth Trends in Bangladesh • Riverine tourism growth trends • Major rivers in Bangladesh • Key Riverine destinations that attract tourists • Activities of Riverine Tourism • Key stakeholders and their roles in Bangladesh's riverine tourism development

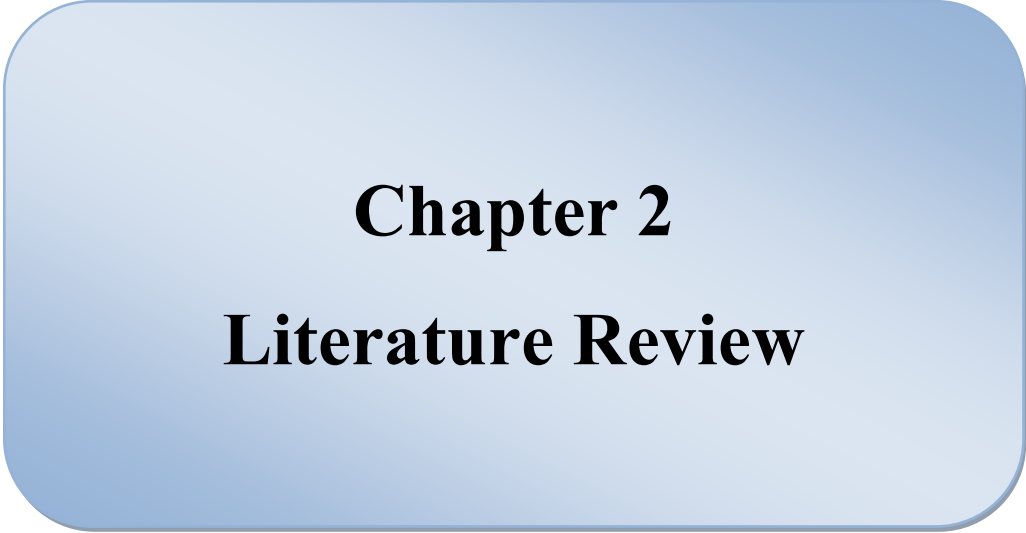
7	Analysis of Riverine Tourism in Bangladesh	• Strengths of Riverine Tourism in Bangladesh • Impacts of Riverine Tourism Development in Bangladesh • Necessity of identifying the challenges of Riverine Tourism Implementation • Challenges of Riverine Tourism Development • Infrastructural Challenges • Financial and Economic Constraints • Environmental Challenges • Socio-Cultural Challenges • Stakeholder Collaboration Challenges • Institutional and Policy Barriers • Technological and Informational Barriers • Analysis of the barriers to effective riverine tourism development in Bangladesh • Main Challenges of riverine tourism Development in Bangladesh
8	Data analysis, Interpretation and Discussion of Result	• Demographic profile • Hypothesis testing • Descriptive Statistics • Regression Coefficients • Model Summary • Regression Coefficients (Key Hypotheses Driving the R^2) • ANOVA^s (H) • Reliability Statistics • Path Analysis • Variance Inflation Factor • Exploratory Factor Analysis (EFA) • Discussion of result
9	Findings, Recommendation and Conclusion	• Introduction • Findings of the study • Implications of research findings • Recommendations for Sustainable Riverine Tourism in Bangladesh • Conclusions

1.11 Conclusion

Bangladesh is a unique mixture of river culture, environmental diversity and economic potential. River network forms a highly significant source to local communities and presents unparalleled opportunities that can be tapped locally in regard to the development of tourism. By taking advantage of this potential, Bangladesh will be in a position to develop interesting experiences that will emphasize its cultural assets and result in sustainable tourism.

But to make this possible, the challenges that would have to be addressed are poor infrastructure, environmental degradation, as well as, the need to be vigilant with the development of effective policy frameworks. The local community should be also involved into the tourism project so that the benefits of fast-developing tourism industry could be distributed equally and the cultural authenticity is not lost.

The present introduction serves as the prelude to a more in-depth discussion on the sphere of river tourism in Bangladesh when knowledgeable processing can assist in elaborating a strategic roadmap. By giving a considerable emphasis to interplay of cultural, ecological, and ecological concepts it is possible to build a model of sustainable tourism that can be used to improve visitor experiences of the country, preserve natural and cultural resources which identify Bangladesh riverine areas.



Chapter 2

Literature Review

Literature Review

2.1 Introduction

Riverine tourism has become a key element within the wider context of tourism development, especially in Bangladesh, home to one of the most complex and extensive river systems globally. The riverscape possesses considerable cultural, ecological, and economic importance for numerous communities nationwide and serves as a crucial tourism resource, featuring over 700 rivers traversing its land (Islam, 2023). Additionally, the relationships between these waterways, along with their diverse cultural, historical, and ecological aspects, create a distinctive chance to enhance affordable tourism growth while fostering environmental preservation and community health (Ahmed et al., 2025; Uchinlayen et al., 2023)

Rivers of Bangladesh have a close relationship to the culture of the country. Historically, these rivers also served as the predominant routes of trade, transportation and communication, with an impact on the social and economic makeup of the regions (Patwary, I. A. 2025). A study carried out by Chowdhury (2019) demonstrates the role of the river in the folklore, customs, and festivals of Bangladesh and their role in the unity between people, and the establishment of community identity. Riverine tourism can hence serve as a means of cultural exchange and in the preservation of it where the tourists can indulge in the experiences that are directly related to the local lifestyle.

The environmental entitlements that are available in riverian areas and in particular in such a landscape as Sundarbans which is also a UNESCO world heritage site hold great prospects in terms of eco-tourism (Liang & Rajuroy, 2025). According to the works by Akter (2017) and Rahman et. al. (2021), the safeguarding of bio-diversity and establishing sustainable tourism activities should be encouraged.

However, a series of challenges that have to be dealt with to make riverine tourism successful is also presented. Weak infrastructure such as bad transportation, accommodation, and facilities is also a setback to the growth of the sector (Hossain & Zaman, 2017). There is also the serious challenge of environmental degradation caused by pollution and climate change to tourism and the resources that sustain tourism (Karim, 2021).

The other important aspect covered by the literature is the fact that the local communities should take place in the construction of riverine tourism. Engagement of local people can help to enhance the true experience of tourism and bring monetary benefits to such communities (Halim, 2019). There are, however, fears of cultural erosion and the need of the communities to control these cultural and natural resources.

2.2 Historical Context

Definitions of Tourism

Tourism has been defined in various ways based on different disciplinary viewpoints and contexts, highlighting its complex nature. The United Nations World Tourism Organization (UNWTO) describes tourism as the actions of individuals traveling to and residing in locations away from their regular surroundings for up to one continuous year for leisure, business, or other reasons (UNWTO, 2020). This definition highlights the transient relocation of people and the combined motivations of pleasure and commerce that define tourism activities.

Tourism is acknowledged as one of the most rapidly expanding and dynamic sectors worldwide in economic terms. Gössling and Hall (2019) state that tourism plays a major role in gross domestic product (GDP), job creation, and regional development, acting as an essential catalyst for economic growth. This economic viewpoint emphasizes the transformative influence of tourism as a driver for development and social advancement.

In addition to its economic significance, tourism produces deep cultural and social effects. Smith and Richards (2013) highlight that tourism acts as a social exchange system that encourages interaction between hosts and travelers, promoting cultural learning and shared understanding. This sociocultural viewpoint shows that tourism goes beyond economic benefits—it significantly

contributes to cultural exchange, identity development, and social unity both within and between communities

Key Concepts in Tourism

Tourism is a complex experience that involves feelings, viewpoints, and individual involvement during a traveler's adventure. Within the contemporary "experience economy," tourism is more frequently regarded as a type of significant consumption, emphasizing memorable and interactive experiences over conventional products and services (Pine & Gilmore, 2019). Among the different types of experiential travel, adventure tourism has raised as a significant area, highlighting thrill, discovery, and individual growth through nature-focused and physically demanding endeavors (Akaho, 2024; Giddy & Webb, 2016; Rantala et al., 2016).

Sustainability continues to be a key issue in modern tourism discussions. The idea of sustainable development, defined by the United Nations World Commission on Environment and Development (1987) emphasizes fulfilling current needs while ensuring future generations can meet theirs. In the context of tourism, this principle emphasizes reducing environmental harm while encouraging social fairness and sustainable economic growth (Gössling & Hall, 2019).

Ecotourism, an essential aspect of sustainable tourism, entails responsible journeys to natural regions that promote environmental protection and enhance the welfare of local populations (Weaver, 2020).

Cultural tourism focuses on engaging deeply with local customs, traditions, and heritage. As noted by Smith and Richards (2013), it promotes intercultural understanding and genuine interaction between tourists and local communities, thus reinforcing cultural identity and reciprocal respect. Adventure tourism, conversely, emphasizes discovery and physical challenges that attract travelers in search of novelty and personal growth through experiences in natural and remote settings (Varley & Semple, 2015).

Collectively, these varied types of tourism demonstrate the intricacy of the tourism phenomenon—covering economic, cultural, environmental, and experiential aspects. Grasping these interconnected elements is crucial for creating sustainable approaches that improve visitor

experiences, support local communities, and protect both cultural and natural heritage (UNWTO, 2021).

2.3 Definitions of Riverine Tourism

Riverine tourism refers to tourism activities centered on rivers and their surroundings, highlighting the scenic beauty, ecological value, and cultural heritage associated with these waterways (Rahman & Hossain, 2014; Ali & Islam, 2021). It encompasses diverse activities such as river cruises, ecotours, fishing, kayaking, and other recreational or cultural engagements that often involve local communities and their traditional practices (Singh & Rana, 2022; UNWTO, 2023).

Definition in General

Riverine tourism is simply considered as a special branch in the greater tourism that focuses on river settings and activities. The report of Baker and Clawson (2021) defines riverine tourism as activities, experiences and encounters which are largely based in and around rivers and include leisure, adventure and cultural tourism.

Sustainability is a concern to river tourism. According to that Cottam (2020), sustainable river tourism should be considered sustainable tourism that brings economic returns without having a negative impact on the environment (the river), and not only that, but it should also hold the benefit of improved human well-being of its inhabitants. This explains why the responsible tourism practice is as important as it guarantees the maintenance of natural resources and the empowerment of the local communities (UNWTO, 2020).

Key issues of Riverine Tourism

Cultural Heritage and people contact: Riverine touring is usually through the experience of people and their culture. Rivers serve as cultural channels that make people relate to their past and history according to Smith (2019). It is a factor that points to the need to create authentic interactions with locals and tourist cities that can expose the traveler to local customs, crafts, and lifestyles (Richards, G. 2018).

Adventure and Recreational activities: Adventure tourism is also another important aspect in riverine tourism where entertaining factors include rafting, kayaking and fishing among other fun types of activity. In line with this, Higgins and Stoker (2021), write that riverine tourism creates the opportunity to experience adventure activities that take advantage of the special aspects of river settings, which appeal to the varied interests of tourists.

Environmental Sustainability: Maintaining the ecological intactness of the river eco-systems is a prime issue in river tourism. Majumdar et al. (2020) encourage the use of sustainable measures to prevent the negative impacts of tourism on river ecosystems and they embrace activities of tourism that enhance conservation.

Economic Impact and Development: Local economies just like local incomes may be enhanced, as tourism in the river generates income and employment. As Williams and Hays (2020) point out, river tourism can be used sustainably to create significant economic benefits among the local people, particularly in underdeveloped or isolated regions. This economic dimension reminds us of the need to integrate tourism planning with the local development actions.

Riverine tourism is a highly dynamic concept including adventure, artistic gestures, environmental sustainability, and profitable development (Dowling, 2006; McKean et al., 2005). Its fundamental values are focused on not only providing the trippers with enriching and unique gestures but also preserving swash habitats towards long- term sustainability(Nekmahmud & Hassan, 2021). As the world increasingly seeks unique and sustainable trip, awareness of the complexities of riverine tourism, both in terms of environmental functioning and socio-artistic interaction, is central to its inchoate emergence and adoption into the wider tourism policy (Phuong & Ward, 2020). Riverine tourism can achieve sustainable development with the implicit of preserving ecology and conditioning the tourism, hence contributing to the increased satisfaction of callers and the original community benefit (Gössling et al., 2012; Sharpley & Telfer, 2015; UNWTO, 2021).

2.4 The Evolution of Riverine Tourism as a Concept and Practice

River tourism has evolved over a period of time influenced by the value of culture, economic prospects, and their awareness of the environment. In the past rivers and canals served as key trade routes and transport corridors and shaped the culture and society of its locals (Smith, 2015). Over

the last few decades, rivers have been converted into recreational and cultural tourism locations and the activities involving them, such as river tours, ecotourism, heritage tourism, and adventure sports have emerged (Dowling, 2006; McKean et al., 2005; Phuong and Ward, 2020).

Historical Context

Throughout history, rivers have facilitated trade, farming, and the development of human communities. Ancient societies like those in Mesopotamia, Egypt, and the Indus Valley thrived near rivers, using these waterways for trade, irrigation, and cultural interactions (Macklin & Lewin, 2015). As the Industrial Revolution began in the 18th and 19th centuries, innovations such as steam-driven ships and railroad networks increased access to inland waterways. This era additionally signified the rise of river cruising as a luxurious leisure activity in Europe and North America, mainly serving upscale tourists, establishing the foundation for contemporary river tourism (Hall, 2008; Prideaux & Cooper, 2009)

Origins and Evolution

By the late 20th century, tourism focused on rivers had grown to include a broader range of activities, such as cultural involvement, ecotourism, and adventure travel. Its attraction arises from providing varied experiences that blend relaxation, thrill, and cultural engagement (Gössling & Hall, 2019). From the 1990s onward, the expansion of ecotourism amplified river tourism by advocating for sustainable methods, wildlife viewing, and community involvement, thus reinforcing the connection between tourism and environmental conservation (Weaver, 2020; Holden, 2016)

Contemporary Developments

Modern day river tourism is a factor of changing consumer preferences and technology. The advertisement and experience of destinations have been altered due to digital marketing and social media, with specific markets of gourmet cruises, wellness getaways, and tailor-made tours (Kozak, 2018). The COVID-19 pandemic accelerated the development of domestic and nature-based tourism because rivers offered safe and socially distanced outdoor activities (Gretzel et al., 2020).

Future Directions

The future trends emphasize sustainability, community care, and cultural preservation. There is also an increase in demand of environmentally friendly tourism activities that incorporate the local culture and interest in nature considered together (Matthieson and Wall, 2006). Riverine tourism is also expanding into blue tourism, which focuses on the sustainable management and conservation of freshwater and coastal environments; it recognises the interdependence between rivers, coasts and oceans (Beaumont and Bessy, 2019).

Finally, the river tourism is a complex of social, economic, and ecological relations. The emphasis on the environmental sustainability and community engagement, as well as the integration of technology can contribute to the formation of a strong and sustainable tourist market that allows balancing the economic growth with the preservation of the culture and ecology (Nekmahmud & Hassan, 2021; Phuong and Ward, 2020).

2.5 Geographical Overview

Bangladesh is located in South Asia and has an extensive river system with an intricate drainage system, having over 1,500 rivers and over 700 major rivers (Rahman and Choudhury, 2018; BBS, 2020). Ganges-Brahmaputra-Meghna (GBM) delta plays a vital role in determining ecology, culture and economy of the country. On these water bodies, agriculture, fisheries, transport, commerce, and cultural activities occur along the shores (Chowdhury and Ahmed, 2020; Ali and Islam, 2021).

The Ganges River, also known as the Padma in Bangladesh, originates in the Himalayas, and flows through the Indian Territory, finally meeting the rivers Brahmaputra and Meghna in Bangladesh. It supports myriads of farming families, sustains livelihoods along its banks, and is vital to irrigation (Kundu & Chowdhury, 2019). The river has cultural and spiritual significance to the neighbouring communities (Rahman, 2017). However, the Padma faces such issues as pollution and the accumulation of sediment, which also need to be managed in a sustainable manner to preserve its ecological and social value (Zaman et al., 2020).

Brahmaputra River which is locally known as Jamuna originates in Tibet, flows in India and drains to Bangladesh, and is one of the largest rivers in the world in terms of discharge. It is an important part in agriculture, transportation and food safety (Ali, 2016). The dynamic nature of the river, particularly frequent floods, causes problems to the community living along the river, which explains the significance of effective flood management and resilience programs (Hossain and Zaman, 2018).

The confluence of the Padma and Brahmaputra form the Meghna River which serves as a trade and transportation route in eastern Bangladesh. It supports freshwater and brackish water fisheries, which are fundamental to the local economies and livelihoods (Islam et al., 2020). However, the ecological stability of the river is threatened by pollution, habitat loss, and climate change, and measures should be taken to ensure sustainable fisheries and the protection of the communities that depend on the river (Rahman et al., 2019).

2.6 Unique Features of Riverine Destinations That Attract Tourists

River destinations are a unique combination of beauty, culture and adventure, and this will culminate in their increased attractiveness to tourists (Jovanovic et al., 2021; Gössling et al., 2012; Richards, 2018). These places attract tourists with different features that include scenic formation, diversity of wildlife, cultural experiences, activities and peaceful environments.

Scenic Landscapes

Riverine areas have aesthetical beauty that is a major tourist attraction. Rivers create stunning scenery with greens, animals, and water that is serene and relaxing to take photographs, paint, and relax (Wang et al., 2019). This visual appeal also has seasonal changes, and the visual experience is diverse throughout the year (Nguyen, 2020). Geographical peculiarities such as riverbanks, deltas, and estuaries as well as dynamic water flows make these landscapes particularly attractive to nature enthusiasts and photographers (Dey et al., 2018).

Ecological and Natural Value

River ecosystems are centers of biodiversity which accommodate a great number of species of flora and fauna. This diversity attracts environmental tourist visitors to observe wildlife, watch birds, and learn about the environment (Rahman et al., 2021). Bright rivers are crucial to water quality and ecosystems, which also increase the ecological significance of such places (Islam and Rahman, 2020).

Cultural Experiences

Rivers are also inherently tied to the culture of the neighboring communities, giving the visitors a true insight into the life of local traditions and celebrations, artisans, and cuisine (Ali, 2019). Tourism in Riverine generates very strong ties between the tourists and the locals and promotes cultural appreciation. Festivals, boating, and directed tours provide interesting opportunities to meet local traditions (Hossain and Sultana, 2020).

Adventure Activities

Another significant attraction in the river sites is adventure tourism. Kayaking, rafting, fishing, and boating are activities that provide fun and adventure to different kinds of guests (Jehan et al., 2020). These are accompanied by beautiful sceneries, which enhance the aesthetic appeal and economic sustainability of the river communities in terms of attracting tourists in both local and foreign markets (Hossain, 2018).

Peace and Wellness

River destinations offer a respite to urban life due to the quiet and tranquil nature of the areas. The visitors will be able to engage in relaxation, yoga, and meditation and enjoy the tranquility that flowing water produces (Rahman and Hossain, 2019). Wellness retreats and eco-lodges promote environmentally friendly approaches to tourism, drawing more eco-conscious tourists (Islam et al., 2021).

2.7 Types of Riverine Tourism

Being the country of rivers, Bangladesh has over 700 rivers, with major ones such as Ganges, Brahmaputra, and Meghna (Islam, 2023). These rivers have different opportunities in terms of tourism, and they can be broadly divided in ecotourism, adventure tourism, cultural tourism and community oriented tourism. Each type has certain peculiarities, benefits, and challenges.

Ecotourism

Ecotourism is based on ecotourism and is more oriented towards the sustainable tourism of the natural areas aimed at conservation of the eco-systems and the local communities (Honey, 2008). The Sundarbans in Bangladesh is one of the most important ecotourism destinations due to its biodiversity, where it harbours endangered species of the Bengal tiger and migratory birds (Rahman et al., 2021). Sundarbans Community-based projects involve locals in tours, crafting, and homesteads to generate income and promote the conservation of the environment (Zaman and Hossain, 2021; Hassan et al., 2020). However, these efforts are negated by ecological problems such as pollution, climatic changes, and unsustainable tourism activities (Islam and Rahman, 2020).

Adventure Travel

Physically active activities such as kayaking, canoeing, fishing, and boating are included in the list of adventure tourism in riverside areas (Hossain and Rahman, 2020). Padma and Meghna rivers that have sandbanks, waterways, and unique scenery attract both domestic and international tourists (Jehan et al., 2021). Adventure tourism contributes to the livelihoods of locals through the realization of earnings by the guides and operators, although it requires close management to minimize the environmental and social impact (Ali, 2019).

Cultural Travel

In the past, rivers in Bangladesh have influenced settlement pattern, trade and even culture. Cultural tourism is focused on heritage, festivals, rituals, and performances of the riverine communities (Chowdhury et al., 2016).

Community-Based Tourism (CBT)

Community-oriented tourism emphasizes the role of local people in the management and planning of tourism so that the development should serve the local needs and values (Rahman and Sultana, 2020). CBT in the river areas is a hybrid of ecotourism and adventure tourism, which is not only more economically and socially beneficial to the community but also promotes sustainable behaviors (Hasan et al., 2022).

2.8 Case Studies of successful Riverine Tourism Projects

The Sundarbans, the largest mangrove timber in the world has become one of the key attractions of riverineeco-tourism in Bangladesh with its enterprises backed by associations such as Relief International establishing ecotourism lodges and guides boat tenures, focusing on the wildlife viewing, artistic gestic, and environmental education. These systems have enabled original communities by making them attendants and service providers, thus encouraging profitable positive gains and conservation mindfulness (Rahman & Choudhury, 2018).

Barisal, a south-western Part of Bangladesh has utilized its swash networks to come up with tourism openings, such as swash sails, artistic carnivals, and community based tourism enterprise. Through involving original dwellers in tourism conditioning and preservation of traditional ways, Barisal has increased original profitable development without either breaking artistic integrity (Sarker, 2021).

The Cox Bazar which is widely recognized as the sand tourism has also increased the water- based tourism with the swash excursions and lifts of boats. These conditioning provide excursionists with exclusive gestures of the natural beauty and primitive groups of the region. yet, the research shows that it is necessary to have improved structure and services to fully take advantage of this prospective(Rahman et al.,2020).

The Ganges- Brahmaputra- Meghna(GBM) Basin which contains a large system of gutters presents enormous potentials in transboundary swash tourism. Collaborative sweats between Bangladesh and the neighboring nations are looking to promote sustainable tourism along such aqueducts, bonding themselves on artistic exchange, environmental conservation, and community

building (Ali & Islam, 2021).

Buriganga River has been in the centre of the trade and transport of Dhaka and has been struggling with serious pollution. Recent restoration efforts are an effort to improve the water quality and build seaside landmarks, which eventually transforms the swash into a sustainable tourism spot that echoes the literal and artistic heritage of Dhaka (Rahman & Choudhury, 2018).

2.9 Previous Research on Riverine Tourism in Bangladesh

Bangladesh is generally referred to as the nation of rivers and has a massive network of rivers that has a significant potential in river tourism (Patwary, 2025; Islam, 2023; Baten & Dey, 2023). However, this sphere of development is faced with a plethora of challenges and opportunities as pointed out by different research studies.

Islam (2023) identifies essential challenges that hinder the growth of river tourism in Bangladesh, namely the absence of skilled manpower, safety and security issues, inadequate tourism infrastructures, and funding. These are the obstacles that hinder the sector to attract the local and international tourist market.

A research study by Ahmed and Rahman (2024) aims at determining the factors that determine visitor satisfaction in the domain of river tourism particularly in Chandpur. Their analysis shows that some attraction factors of the destination, security and safety, good management, and accessibility are decisive attributes that determine the satisfaction of the visitor. These findings indicate why it is important to pay attention to these areas in order to enhance the river tourism experience.

Talukder (2024) evaluates the economics of river tourism in Bangladesh, and how this tourism product has the potential to contribute enormously to the national economy. The study highlights the contrast between tourism in rivers and conventional tourism whereby proper development could help shift the industry into a large economic engine.

On an environmental perspective, Nobi et al. (2021) assess the economic implication of tourism in

Sundarbans mangrove forest. In their analysis, the annual economic impact of tourism was estimated at USD 53 million and there is need to adopt sustainable practices in tourism to ensure sustainability of such sensitive regions.

2.10 Future Trends and Opportunities of Riverine Tourism in Bangladesh

Riverine tourism in Bangladesh represents a sector with substantial growth potential, owing to the country's rich cultural heritage, biodiversity, and distinctive landforms. With evolving global tourism trends, the riverine tourism industry in Bangladesh is expected to undergo significant development and transformation (Rahman, Karim, & Akter, 2023).

Sustainability may be a key focus area in the emergence of tourism development in the world and the same is being true of tourism growth in river zones in Bangladesh. According to research by Rahman et al. (2021), there is an increasing realization that there needs to be a series of compatibilities between economic growth and environmental conservation. Future riverine tourism development would be geared on sustainable actions like use of eco-friendly accommodation plans, proper wastage handling systems, as well as preservation of water ecosystems (Gössling et al., 2012; Weaver, 2006; UNWTO, 2021).

Community-based ecotourism frameworks have powerful potential of strengthening local people and preserving natural resources, as Ali and Zaman (2022) assert. Such initiatives have the capacity of enhancing sustainability of riverine tourism given that the local residents are involved in the decision-making process and through awareness of the adoption of responsible tourism practices (UNWTO, 2020).

Technology developments are also predicted to have major bearing over the future of the riverine tourism in Bangladesh. Hossain et al. (2022) analyze how digitized resources, including mobile applications and online sources, can improve the tourist experiences. The above technologies make access to information concerning the riverine attractions much easier, enabling the travelers to streamline their visits in a better way.

In addition to that, such smart technologies, as boats equipped with the Global Positioning System or those that track the ecological changes are able to enhance safety and mitigate environmental

harm (Gössling et al., 2012). According to Zaman and Hossain (2021), technology is also possible to collect real-time data on tourist preferences and behaviors and thus help direct more targeted marketing and better service delivery.

Community involvement is a key to the sustainable development of the riverine tourism in Bangladesh. Future trends are that it is more likely that there will be increased moves to empower the local communities in planning and implementation of tourism. Rahman and Sultana (2020) also argue that communities should be involved in the planning and decision-making practices as it can enhance the socio-economic benefits of tourism without harming cultural identities.

The entrepreneurship in the tourism sector can be encouraged by training and skill building programs of the local citizens. Hossain and Rahman (2021) suggest that projects aimed at training people in the spheres of hospitality, guiding, and cultural expressions can not only provide the population with jobs but also add even more value to the overall experience the visitors can get.

Another positive development in Bangladesh's tourism sector is the diversification of riverine tourism products. The growing demand from international travelers for unique experiences provides riverine destinations with opportunities to leverage and showcase their cultural, historical, and natural resources (Nekmahmud & Hassan, 2021). As Islam et al. (2021) observe, the incorporation of river activities that comprise music, dance, local foods into cultural tourism will promote riverine tourism.

Moreover, adventure tourism activities, i.e. kayaking, fishing and wildlife watching, will be able to serve more people. Rahman et al. (2021) note that any increase in the promotion of such diversified offers will be able to attract different types of tourists, including domestic, adventure-seekers, and cultural tourists.

Marketing strategies will have to be developed to the highest levels in order to promote riverine tourism in Bangladesh. Hossain et al. (2022) present the usefulness of using social media and digital networks as a way of reaching a wider audience. Engaging stories with historic cultural and ecological features of places at the river may create a strong emotional connection with the prospective tourists.

Further, associating with travel influencers and bloggers will also raise awareness about riverine tourism and attract more people. It has been observed that interconnected promotional activities that include the local communities, businesses, and government bodies can succeed in creating a unified brand image of riverine tourism in Bangladesh (Zaman and Hossain 2021).

The future of riverine tourism in Bangladesh appears promising as it evolves under the influences of sustainability, technological integration, community-based participation, diversification of tourism products, and innovative marketing strategies. Stakeholders can enhance the appeal of riverine tourism while ensuring environmental conservation and directing economic benefits to local communities by capitalizing on these opportunities (Rahman, Karim, & Akter, 2023).

2.11 Conclusion of literature review

The literature on riverine tourism in Bangladesh brings to fore the enormous potential of the industry as a driver of growth in the economy, cultural exchange and environment protection. This review highlights a number of key areas of riverine tourism starting with aspects of attractions, community involvement, environmental impacts and the challenges it faces. The problem of sustainability is particularly prominent, with the common perception of the need to pursue responsible practices, which aim at balancing tourism and ecology preservation. Engaging of the local communities does not only create economic benefits but also helps to preserve cultural identities and natural resources. In addition, use of technology comes with fresh and innovative approaches to enhance the interactions of tourists, operational efficiency and marketing activities. Nevertheless, at this point, there are still a lot of challenges, including poor infrastructure, environmental degradation, and policy shortcomings. These topics will require joint efforts on the part of different stakeholders including the government bodies, local population, and the business community.

To spell it out, despite the positive signs that surround riverine tourism in Bangladesh, the success of the industry will depend on a strategic multi-faceted approach that puts a lot of emphasis on sustainability, community participation, and innovation.

Chapter 3

Theoretical Frameworks

Theoretical Frameworks

3.1 Concept of Riverine Tourism in Bangladesh

Riverine tourism involves activities centered on rivers, including cruises, riverfront recreation, cultural visits, fishing tourism, and wildlife or eco-tours. Bangladesh's dense river network and deltaic landscape make it particularly suitable for riverine tourism, as it integrates natural heritage, cultural traditions, transport practices, and local livelihoods (Nekmahmud & Hassan, 2021). The scholars point out that riverine tourism must not be seen as a mere recreational practice of waterways but rather a complex socio-ecologic system in relation to the dynamics of the river, societal benefits, and environmental protection World Bank (2019). By pointing out that Bangladesh is a riverine country and the present development in river tourism is hampered by infrastructural, human-resource and financing problems, Islam (2023) stresses that the potential of river tourism in Bangladesh remains unexplored.



Figure 3.1: Riverine Tourism Development (Developed by author)

(Md, Rahman, & Islam, 2022) emphasizes Bangladesh's major rivers (Padma/Ganges, Jamuna/Brahmaputra, Meghna and their tributaries) have historically shaped settlement, transport and culture. The literature highlights that these rivers create a diverse set of tourism products — from short urban riverfront activities and floating markets to multi-day cruises and Sundarbans-based wildlife tours — making riverine tourism a potentially high-value, distinctive niche for the

country's tourism sector. Authors also stress that the highly dynamic geomorphology of these rivers (bank erosion, channel migration) and strong seasonality must be central considerations in planning and product design (Islam, 2023; Baten & Dey, 2023; Patwary, 2025).

Recent research underscores the major ecological issues confronting river tourism in Bangladesh. Remote sensing and morphodynamic studies indicate swift erosion of riverbanks, changes in river paths, and bedload shifts in the Padma, Jamuna, and Meghna systems. These changing processes create obstacles for the sustainable development of infrastructures, elevate safety risks, and require adaptable planning for long-term tourism funding (Akhter et al., 2024). Moreover, issues related to water quality and pollution in rivers close to urban areas render river-based recreational activities less appealing and safe, unless tackled with extensive pollution management and monitoring approaches (Hasan et al., 2021)

Policy analyses and sector reviews point to governance fragmentation (multiple agencies responsible for ports, environment, forestry and tourism), weak enforcement of safety standards for boats, and inadequate shore-side facilities (piers, sanitation, waste management) as persistent barriers to scaling riverine tourism. The Bangladesh Tourism Master Plan explicitly recommends branding and promotion (e.g., a “Bangladesh River Cruise” product) alongside investments in safety certification and multi-agency coordination — but the literature notes gaps between plans and on-the-ground implementation (Bangladesh Tourism Board, 2022).

3.2 Concept of Sustainable tourism

The idea of sustainable tourism has become crucial in research and policy-making, providing a way to lessen the adverse environmental, social, cultural, and economic effects linked with traditional mass tourism (Gössling et al., 2018). Sustainable development, as outlined by the Brundtland Commission, highlights fulfilling current needs without jeopardizing future generations' capacity to fulfill their own needs, acting as a foundational principle for planning sustainable tourism (United Nations, 1987). This method emphasizes attaining equilibrium among ecological conservation, societal welfare, and financial sustainability, guaranteeing that tourism growth is both accountable and enduring (Halim, 2019).



Figure 3.2: Sustainable tourism (ST) (Jehan et al., 2023)

Initial studies in sustainable tourism mainly centered on reducing environmental harm and preserving natural resources at tourist sites (Fennell, 2001). Gradually, the focus grew to include safeguarding cultural heritage, improving community welfare, and fair allocation of tourism advantages (UNEP & UNWTO, 2005). Currently, sustainable tourism is acknowledged not only for its goals related to ecological preservation but also for its ability to meet community requirements and enhance socio-cultural values (UNWTO, 2021)

A key difficulty in the literature on sustainable tourism is putting its principles into practice. Although global organizations have created guidelines and indicators, critics contend that these criteria frequently lack detail and do not consider local circumstances (Saarinen, 2006). Research from developing countries shows that without genuine community engagement and robust governance structures, sustainability efforts might lead to mere compliance instead of significant transformation (Liu, 2023).

Current studies highlight adaptive management, collaboration with stakeholders, and ongoing monitoring as critical elements for achieving sustainability in tourism (Dodds & Butler, 2023). Cutting-edge approaches, such as carrying capacity evaluations, eco-certification, and low-carbon tourism initiatives, are being incorporated into destination management strategies (Richards, 2018).

The growing effects of climate change highlight the necessity of sustainable tourism, especially in at-risk areas like Small Island Developing States (SIDS) and coastal regions. These regions encounter increased dangers from climate-related events, requiring strong adaptation and mitigation measures (Scott, Hall, & Gössling, 2018).

3.3 Sustainable Tourism Development

From the late 1980s, sustainable tourism development has become a key framework in tourism planning and policy, shaped by worldwide discussions on sustainable development started by the Brundtland Commission (United Nations, 1987). This idea highlights fulfilling the requirements of present visitors and locals while not hindering future generations from addressing their own needs. It consists of three linked pillars: ecological preservation, socio-cultural consistency, and economic sustainability (Gössling et al., 2023).

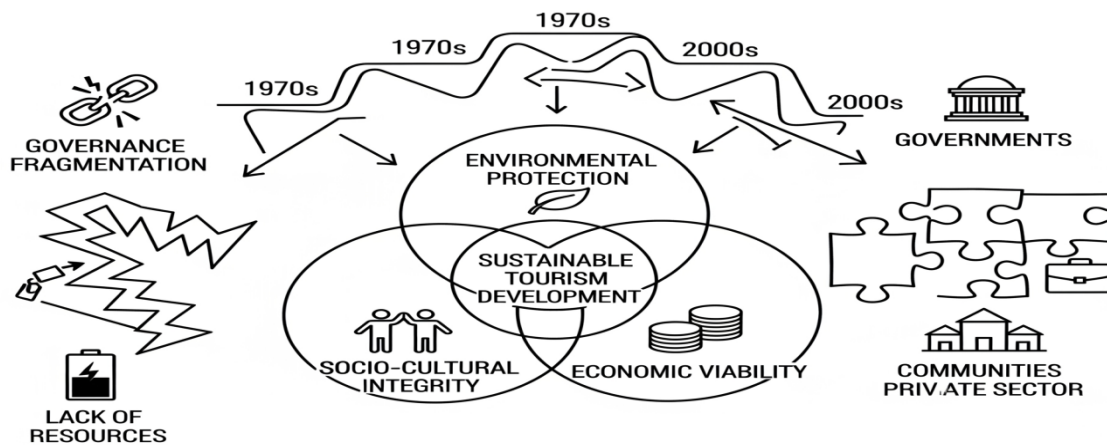


Figure 3.3 Indicators of Sustainable Tourism Development (Adapted from Scott, Hall, & Gössling, 2018)

Initial studies in sustainable tourism mainly concentrated on preserving natural resources and lessening environmental damage at tourist locations (Hunter, 1997). As time progressed, the focus broadened to include the preservation of cultural heritage, the well-being of communities, and the fair distribution of tourism advantages (Sharpley, 2000). Sustainable tourism is acknowledged not only for its environmental conservation objectives but also for its ability to aid community requirements and maintain socio-cultural principles (Hall, 2011).

Even with the broad acceptance of sustainable tourism principles, various obstacles impede their successful execution. Unmanaged tourism expansion, opposing stakeholder interests, and insufficient governance frameworks frequently hinder the achievement of sustainable results (Kurniawan, 2024). Moreover, the ever-changing characteristics of tourism destinations, such as seasonality and environmental shifts, necessitate flexible management approaches to guarantee enduring sustainability (Kurniawan, 2024).

To address these difficulties, optimal strategies in sustainable tourism development have been recognized. These encompass community participation in decision-making, the use of sustainable technologies, and the establishment of responsible tourism certifications (Kurniawan, 2024). New trends also emphasize the importance of digital advancements, including artificial intelligence and intelligent technologies, in improving sustainability and resilience in different areas of the tourism sector (Hall, 2011)

3.4 Sustainable Riverine Tourism Development

Sustainable Tourism Development (STD) aims to balance economic growth, social equity, and environmental protection, often referred to as the Triple Bottom Line (TBL) approach (Elkington, 1997; Gössling et al., 2012; UNWTO, 2021). This model ensures that tourism meets the needs of present generations without compromising the ability of future generations to meet their own needs. It involves managing resources in a way that fulfills economic, social, and aesthetic needs while preserving cultural integrity, essential ecological processes, and biological diversity (Nica, I., et al., 2025).

Riverine tourism, a subset of sustainable tourism, plays a pivotal role in achieving these objectives. It provides income-generating activities for local communities, fosters community development, and promotes the conservation of natural and cultural resources. By emphasizing the environment as a key stakeholder, river tourism underscores the importance of maintaining the health of river ecosystems, as their condition directly influences the quality and sustainability of tourism experiences (Chan, J.K.L., et al., 2024).

Community participation is central to sustainable tourism development. Engaging local communities in the planning and management of tourism ensures that economic benefits are shared equitably and social welfare is enhanced. In river tourism, this participation often involves activities such as guided river tours, sustainable boating, cultural festivals, and homestays, all of which help preserve cultural traditions and provide alternative sources of income for locals (Hutnaleontina, Bendesa, & Yasa, 2022)

Destinations that practice sustainable tourism development typically achieve better outcomes in environmental conservation, social justice, and economic prosperity. For instance, involving locals in decision-making processes related to tourism improves perceptions of legitimacy and equity, fostering a sense of ownership that facilitates the protection of cultural and ecological resources. Similarly, tourism projects along river basins that embrace sustainability principles have been observed to reduce environmental degradation, conserve biodiversity, and generate significant earnings for locals (Nica, I., et al. ,2025).

However, achieving sustainable tourism requires supportive institutional frameworks, policy guidelines, and capacity-building initiatives to enable local communities and stakeholders to utilize resources prudently. Without these frameworks, tourism development may lead to environmental destruction, social imbalances, or economic losses for the host destination. Therefore, the success of sustainable riverine tourism depends on strategic planning, inclusive governance, and adherence to sustainability principles, aligning economic, social, and environmental objectives (Chan, J. K. L., et al., 2024).

3.5 Community-Based Tourism (CBT)

Community-Based Tourism (CBT) emphasizes the active involvement of local communities in the planning, management, and decision-making processes of tourism development (Jackson, 2025). This approach ensures that communities are not merely passive recipients but active participants, leading to a more equitable distribution of economic, social, and cultural benefits (Jackson, 2025).

Engaging communities in tourism development positively influences their perceptions of tourism, fostering a sense of legitimacy and support for tourism initiatives. When local residents are incorporated into the planning process, they are more likely to view tourism as beneficial and aligned with their interests (Obradović, 2023).

CBT also plays a crucial role in preserving cultural heritage and traditional livelihoods. By developing tourism experiences that reflect local cultural identities and social practices, communities can protect their heritage while benefiting economically (Wijayanti, 2023).

Recognized as a tool for achieving sustainable tourism growth, CBT addresses issues related to poverty reduction and environmental conservation. Participatory approaches enable communities to manage cultural and natural resources responsibly, minimizing negative environmental impacts and maximizing social and economic benefits (Rasoolimanesh et al., 2017).

However, the success of CBT hinges on supportive policy frameworks, institutional support, and capacity-building measures that enhance local governance and decision-making. Without adequate support and training, communities may struggle to manage tourism sustainably, leading to inequalities or environmental degradation (Jackson, 2025).

3.6 Cultural Preservation and Authenticity

Cultural preservation and authenticity in river tourism emphasize safeguarding the cultural expressions, heritage, and local identities of riverine communities while providing authentic experiences to visitors (Zhu et al., 2025). The core principle is that local culture should not be commercialized or altered through tourism development but should be preserved in its original

form (Li & Zhou, 2021). Cultural authenticity can enhance social cohesion, strengthen local identity, and foster community pride through riverbank tourism (Richards, 1996).

Cultural preservation positively influences tourist perceptions, aligning with studies indicating that tourists increasingly seek meaningful and authentic cultural experiences (Cohen, 1988; MacCannell, 1976). Riverine tourism activities such as traditional boat construction lessons, riverbank festivals, folk music performances, and craft workshops offer tourists the opportunity to engage with local culture in a respectful and interactive manner (Timothy & Boyd, 2003). For instance, regions along the Padma, Jamuna, and Meghna rivers in Bangladesh have incorporated cultural narration, traditional fishing, and craft shows into their tourism packages, ensuring that tourism development is both economically empowering and a mechanism for cultural preservation (Rahman & Hossain, 2014).

Riverine tourism in countries like Bangladesh contributes to cultural conservation and sustainable development by preserving heritage, enhancing livelihoods, and preventing cultural erosion (Hall & Page, 2006). Communities are more likely to engage in socially and environmentally responsible tourism activities when empowered to manage and showcase their heritage (Scheyvens, 1999; Stronza & Gordillo, 2008). Authentic cultural experiences can positively impact tourist satisfaction, increase the intention to revisit, generate economic benefits for the host community, and maintain cultural integrity (Zapata et al., 2011).

However, ensuring cultural authenticity in tourism requires meticulous planning, community engagement, and supportive policy environments (McKercher et al., 2005). Without these measures, culture risks being exploited or superficially showcased, leading to a loss of authenticity and potential resentment within the community (Cohen, 1988). Therefore, sustainable river tourism focused on cultural conservation depends on integrating participatory governance, local empowerment, and tourism management attuned to cultural contexts (Zhu et al., 2025).

3.7 Tourism Infrastructure and Service Quality

Sustainable river tourism necessitates robust infrastructure and high-quality service facilities, as these elements significantly influence visitor satisfaction, destination competitiveness, and local economic benefits (Munir, 2025). Infrastructure encompasses transportation, accommodation, recreation, and security provisions, while service quality pertains to the effectiveness, reliability, timeliness, and overall experience offered to travelers (Parasuraman et al., 1988).

Studies have shown that well-designed facilities and high-quality services enhance visitor satisfaction levels and encourage repeat visits (Kozak & Rimmington, 1999). In Bangladesh, river tourism requires well-maintained river docks, navigable rivers, river tours, personal protective equipment, and easily available accommodation to facilitate growth (Islam, 2023). Similarly, proficient service personnel, high levels of hospitality, and good management of tourist services contribute to a positive visitor experience and the development of the destination as a reliable and professional location (Baker & Crompton, 2000).

In developing countries, sustainable development goals are directly related to investments in tourism infrastructure and service quality. Enhanced infrastructure can increase the economic benefits of tourism to localities in terms of employment, enhanced market penetration, and local entrepreneurship (Hall & Page, 2006). By improving infrastructure in riverine tourism through eco-friendly docking, waste management, and guided tour services, the environment, culture, and community can be improved in Bangladesh (Islam & Bhuiyan, 2016).

However, the development of infrastructure should be carefully planned to avoid negative environmental and social impacts. Unregulated construction on the banks of rivers, over-utilization of water transport, and commercialization of tourism services may damage the ecosystem and jeopardize community livelihoods (Vanhove, 2017). Therefore, sustainable river tourism requires a balanced approach that includes high-quality services, adequate infrastructure, and environmental and social safeguards (Butler, 1999).

3.8 Policy and Governance

Effective governance and policy frameworks are essential for the sustainable development of river tourism, providing the necessary institutional support, regulatory management, and strategic direction. Governance encompasses governmental policies and regulations, investment incentives, and collaboration among stakeholders, including local communities, tourism operators, and non-governmental organizations (Bramwell & Lane, 2011). Good governance ensures that tourism growth is ecologically sound, economically viable, and socially equitable, whereas poor governance can lead to resource mismanagement, inequitable benefit distribution, and unsustainable practices (Ashley & Roe, 2002).

In Bangladesh, the development of riverine tourism faces challenges due to limited institutional support and fragmented policy implementation. The National River Conservation Commission (NRCC), established in 2014, is tasked with protecting the country's rivers but has faced criticism regarding its independence and effectiveness (National River Conservation Commission, 2023). Additionally, the Bangladesh Water Act (2013) and the National River Conservation Strategy (2005) provide a legal framework for river management; however, their enforcement and integration into tourism development remain inconsistent (The Climate Watch, 2024).

Participatory governance, involving local communities, authorities, and the private sector, enhances decision-making, accountability, and the effective implementation of sustainable tourism projects (Scheyvens, 1999; Stronza & Gordillo, 2008). Integrated river basin management and cross-sector collaboration are crucial for aligning environmental, social, and economic objectives in river tourism (Butler, 1999). Successful policies in other countries have demonstrated that developing institutional capacity, providing training programs, and monitoring regulations lead to robust and sustainable tourism systems (Hall & Page, 2006).

In Bangladesh, the policy formulation process that explicitly reflects cultural heritage conservation, environmental protection, and community empowerment is still in its infancy, limiting the potential for sustainable riverine tourism (Hossain & Islam, 2022). Recent initiatives, such as the River Tourism Guidelines (2021) introduced by the Bangladesh Tourism Board, aim to promote

sustainable practices; however, their implementation and impact require further assessment (Observer, 2024).

3.9 Theoretical Models and Frameworks in Riverine Tourism

Riverine tourism, a special segment of tourism based on rivers and other water bodies is a focus of scholarly writing because of the special characteristics of tourism in the area with regard to its nature, culture, and social-economic aspects (Smith, 2015). Critical theoretical models and frameworks are important to the development and sustenance of riverine tourism in formulating the knowledge, planning and management of such a tourism destination. This review summarizes the most important theoretical perspectives and models that guide the underpinning of riverine tourism.



Figure 3.4: The key Theoretical Models and riverine framework in context of sustainable riverine tourism development in Bangladesh (Adapted from Literature review)

The Community-Based Tourism (CBT) Framework

Engaging local communities in river tourism is essential, as the livelihoods and cultures of riverine areas are inherently local. The Community-Based Tourism (CBT) approach emphasizes the active involvement of local populations in tourism planning and development, ensuring that benefits are equitably distributed and that cultural heritage is preserved. This model not only empowers riparian communities but also sustains indigenous knowledge and promotes equitable economic participation in river-based tourism projects (Zahra et al., 2020).

A recent study by Jackson (2025) highlights the evolution and trends in the scientific literature on the social and economic impacts of rural community-based tourism. The study emphasizes that CBT initiatives contribute significantly to the well-being of local populations by fostering economic inclusion and preserving cultural heritage.

Furthermore, a proposed sustainability framework for Community-Based Rural Tourism (CBRT) suggests that for CBT to play a role in sustainable development, it must focus on competitive management, resource conservation, and benefit creation for the community. These elements should be supported by community involvement and commitment (Kayat, K. ,2025)

In the context of river tourism, such frameworks can guide the development of sustainable tourism practices that not only attract visitors but also enhance the quality of life for local communities. By integrating local knowledge and ensuring equitable economic involvement, river-based tourism can serve as a catalyst for preserving cultural identities and promoting sustainable development. (Suriyankietkaew, S., 2025)

The shown illustration represents the framework of how to underrect sustainable community-based rural tourism (CBRT).

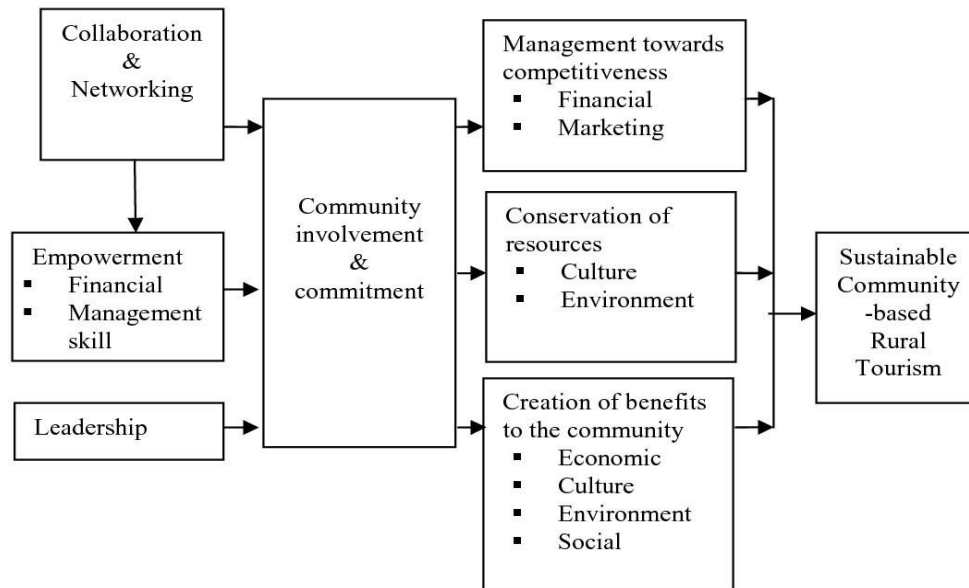


Figure 3.5: A Framework for Understanding Sustainable CBRT (Kayat, 2025)

Kayat (2025) proposed a structure of understanding the concept of the sustainable community-based tourism (CBRT) that highlights three major concepts of sustainability. The centre of such a framework is the community and this gives focus to the way in which they are engaged and involved in development. A balanced development of the community can only be achieved with active participation of the tribe members in the development process of tourism.

The community needs to have outside influence such as support of cooperation and networking and they also need another force to guide the development; financial, managerial power to regulate sustainable change.

Tourism Infrastructure and Service Quality framework

The diagram illustrates that although riverine tourism in Bangladesh offers considerable economic and social advantages, it similarly presents environmental and cultural issues if not properly managed. Consequently, attaining sustainability necessitates enhancements in infrastructure and service quality, in addition to environmental protections and policy actions (Hall, 2011; WCED, 1987).

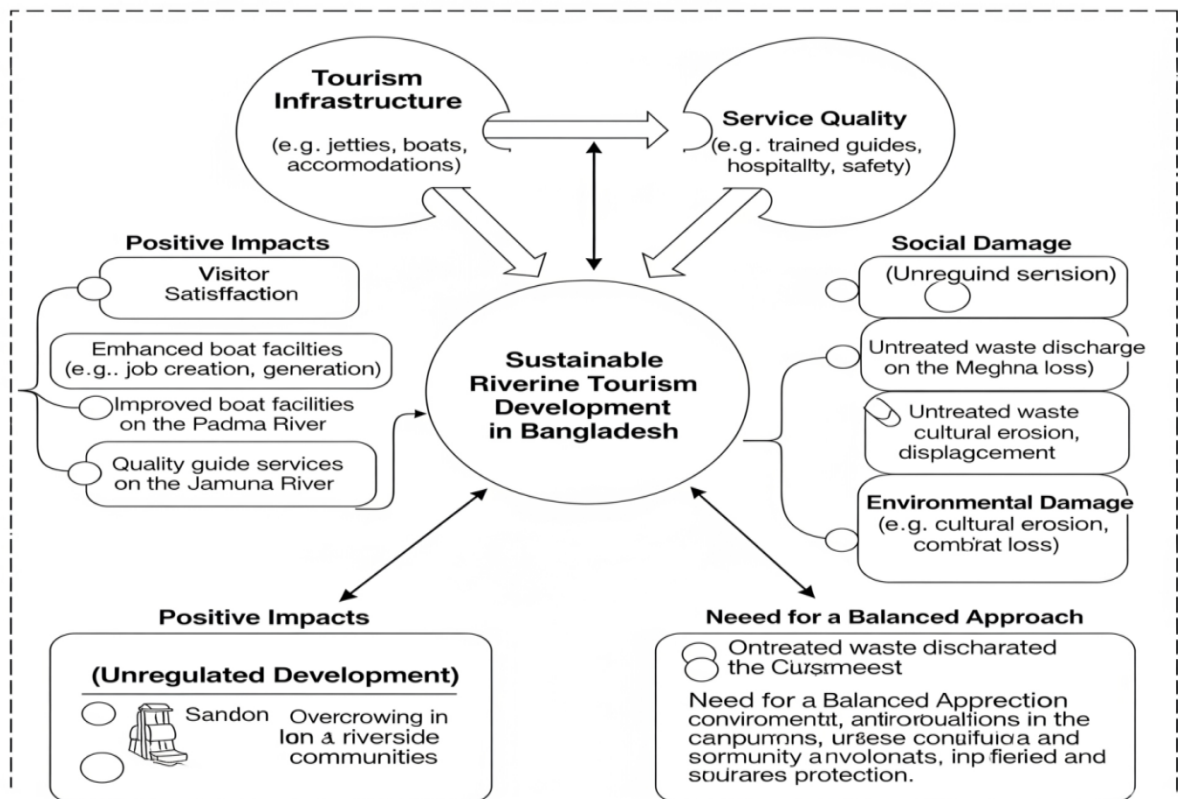


Figure 3.6: A Framework for Understanding Tourism Infrastructure and Service Quality (Adapted from Bhuyan, 2023; Rahman, 2024; Islam, 2023).

The core objective of sustainable riverine tourism development in Bangladesh is to achieve a balanced integration of economic growth, social equity, and environmental conservation. This holistic approach aligns with the principles outlined in the Brundtland Report (WCED, 1987), which emphasizes meeting present needs without compromising the ability of future generations to meet their own.

Bangladesh's rivers, including the Padma, Jamuna, and Meghna, are vital cultural, ecological, and economic lifelines. Their involvement in tourism can generate employment, enhance local living standards, and facilitate cultural exchange. However, without proper management, these rivers risk becoming zones of environmental degradation and cultural erosion (Bhuiyan, 2023; Rahman, 2024; Islam, 2023).

Policy and Governance Framework

Policy and Governance lies at the heart of the structure as a moderator between the three elements of sustainability; economic, social, and environmental. In this regard, governance refers to organizational setups, enforcement and decision making frameworks that govern the operations in tourism. Hall (2011) argues that the issue of governance determines whether sustainability remains an imaginary or a reality.

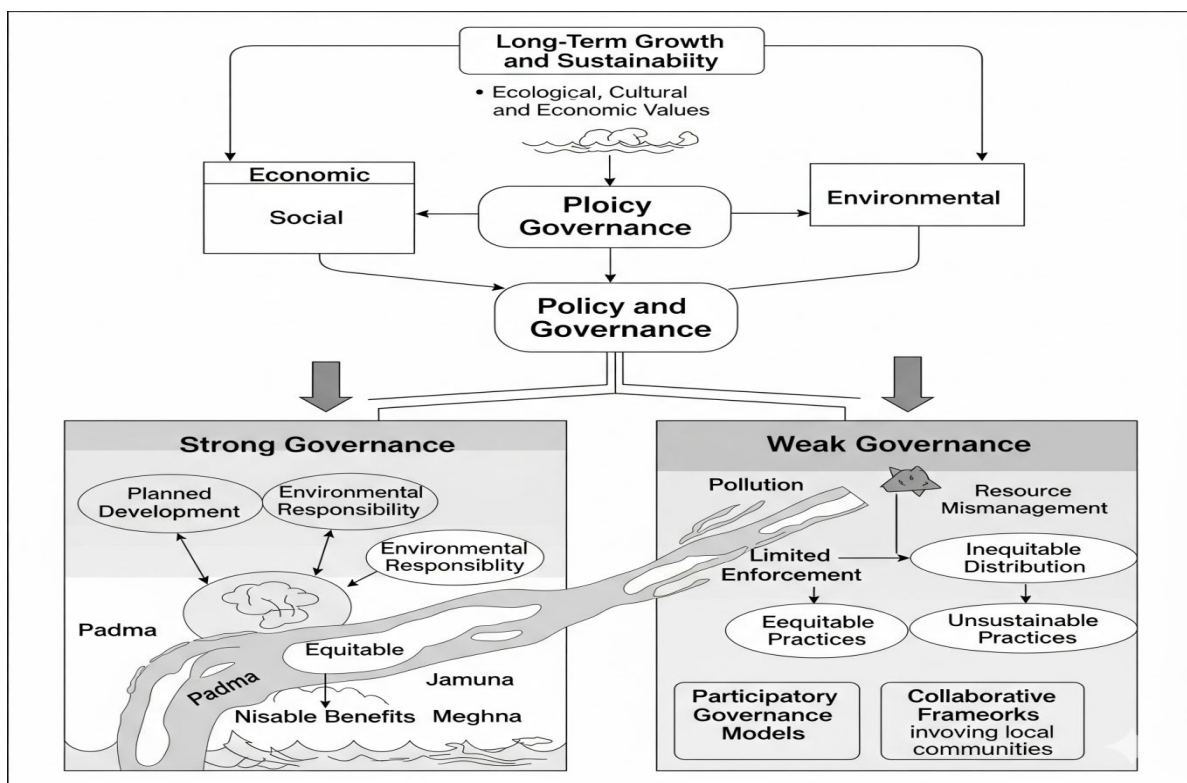


Figure 3.7: A Framework for Understanding Tourism Infrastructure and Service Quality (Adapted from Bramwell, B., & Lane, B. 2011; Hall, C. M. 2011; Scheyvens, R. 1999)

The framework indicates the role played by governance in the long-term development and sustainability of river tourism in Bangladesh. The main objective at the top of the framework is identified as the Sustainable Long-Term Growth that is based on the integration of the ecological, cultural, and economic concepts. Such a goal reflects the sustainable development model that was

given by the World Commission on Environment and Development (WCED, 1987), which states that development should balance the environmental, social, and economic needs of both the present and the future generations.

The framework also suggests solutions to poor governance through participatory governance frameworks and partnership with the local communities. Such approaches provide inclusivity, responsibility and empowerment of local stakeholders, which are fundamental in ensuring success of sustainable tourism (Scheyvens, 1999).

Cultural Preservation and Authenticity Framework

The framework is based on Cultural Preservation and Authenticity which is a foundation of sustainable tourism. Cultural authenticity is fundamental to sustainable tourism, particularly in riverine communities where traditions are deeply rooted in daily life. This authenticity encompasses both tangible and intangible heritage, including traditional songs, crafts, ceremonies, celebrations, and fishing practices unique to these communities. Safeguarding these elements ensures that tourism remains a genuine reflection of local cultures, preventing the erosion of cultural identities and promoting a sustainable tourism model (Halder, 2021; Sharmin, 2021; UNESCO, 2023). Authenticity will protect against the loss of cultures, and tourism based on rivers would remain unique in Bangladesh.

Cultural Preserraticity in Sustainable Riverine Tourism Development

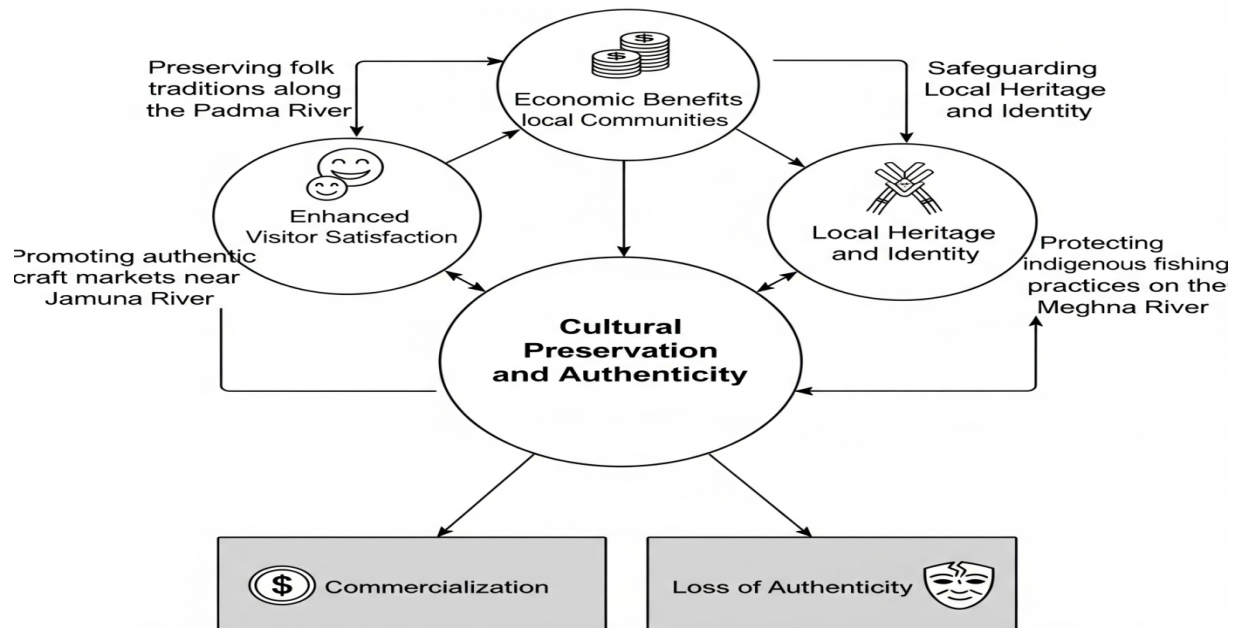
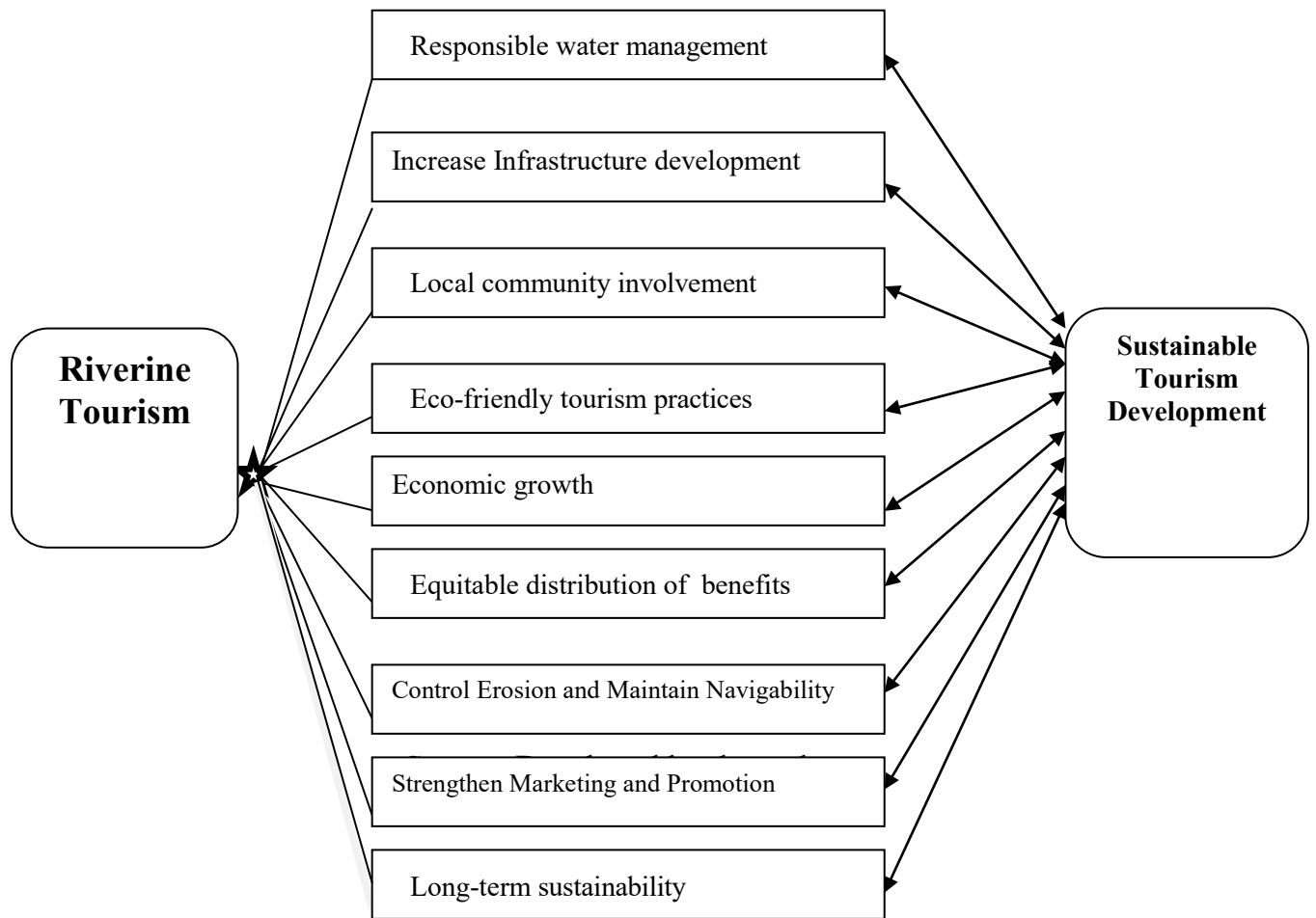


Figure 3.8: A Framework for Cultural Preservation and Authenticity (Adapted from Halder, 2021; Sharmin, 2021; UNESCO, 2023)

According to the framework, sustainable river tourism is based on the establishment of the balance between economic benefits and cultural authenticity. Even though the cultural heritage may be used in the development of the tourism industry, it is important that it is managed well and the communities are involved so that there is no over commercialization and cultural erosion (UNESCO, 2023).

3.10 Hypothesis Modeling:

The researcher has suggested a model for riverine tourism development in Bangladesh. The figure below illustrates the proposed model corresponding to the hypotheses established by the researcher.



Source: Developed by the author

3.11 Hypothesis Development:

H0: The development of riverine tourism in Bangladesh has no significant potential for development.

H1: Riverine tourism in Bangladesh has strong potential for sustainable development.

H2: Riverine tourism contributes significantly to national economic development.

H3: Riverine tourism improves the livelihoods and income of local communities.

H4: Existing infrastructure (roads, jetties, restrooms) adequately supports tourism in riverine areas.

H5: Transportation facilities to and within riverine areas are convenient for tourists.

H6: Riverine tourism zones are safe and secure for tourists.

H7: Riverine tourism does not harm the environment.

H8: Riverine tourism supports the preservation of local culture and heritage.

H9: Local communities are actively involved in riverine tourism activities and decision-making.

H10: Tourism operators provide high-quality services (e.g., boats, guides, accommodation).

H11: There is effective collaboration between government, private operators, and local communities.

H12: Government policies adequately support the development of riverine tourism.

H13: Training and skills development programs for tourism workers are available and accessible.

H14: Promotion and marketing of riverine tourism destinations are effective.

H15: Investments in riverine tourism, both public and private, are increasing.

Chapter 4

Methodology

Methodology

4.1 Introduction

The methodology section is a key section of this research as it explains the philosophical position, research framework, data collection procedure, and data analysis procedures that guide the research. It essentially serves as a guide to the entire research process, which ensures that the findings are reliable, precise and ethically acceptable. This chapter describes the methodological framework that provides transparency and rigor that would enhance the plausibility of the study and its implications to theory and practice.

A well planned methodology will be vital in a research project that investigates the concept of riverine tourism and its role in sustainable tourism development (STD) in Bangladesh because of the nature of tourism that should be taken into consideration in terms of economic, social, cultural, and ecological factors. Riverine tourism is particularly related to environmental protection, social welfare and cultural heritage and, to comprehend the relationships between these concepts, it is important to adopt a framework that is methodologically sound (Creswell & Creswell, 2018; Gössling et al., 2012; Zahra et al., 2020).

The nature of tourism studies often requires diverse and flexible approaches to methods of investigations because it applies to the interaction between people, culture, and the natural environment. According to Tribe and Liburd (2016), the ability to understand sophisticated tourism systems effectively is an added benefit of having methodological variety in tourism research. Even though qualitative research methods provide significant insights into experienced life, the given study deliberately chooses the quantitative survey-based research. A quantitative approach would enable the researcher to gather structured data, objectively evaluate perceptions and test hypotheses statistically. This enhances generalization and ensures that an organized understanding of the perspectives of the stakeholders is achieved and this is essential in policy recommendations (Creswell & Creswell, 2018; Sekaran & Bougie, 2020; Bryman, 2016).

The given chapter is divided into several key parts, the purpose of which is to explain one or

another aspect of the research process. It begins with the research design and methodology which forms the foundation of the research. This part on the study area has been used to emphasize the importance of the river systems in Bangladesh. The sampling and population strategy is then described to explain the way the respondents have been selected in order to ensure representativeness. The research tool, which is the structured questionnaire, is analyzed together with data collection process. Further on, the chapter provides the steps taken in order to ensure validity and reliability, which is followed by methods of data analysis used to achieve a sense of the results. The final parts address the ethical considerations and methodological limitations, and are transparent and scholarly.

4.2 Research Design

A research design presents a methodological guide that will guide the collection, measurement, and analysis of data in respect of the effective achievement of the objectives of the investigation and the attainment of reliable and legitimate results (Creswell and Creswell, 2018). The study of river tourism in Bangladesh is descriptive-explanatory. The approach will help the research to determine the characteristics of the target population as well as the causal relationships of riverine tourism and sustainable tourism outcomes. This two-fold approach can be really useful in the study of tourism, because it is important to understand the general tendencies and to prove the theoretical statements (Jennings, 2010).

Component	Focus / Purpose	Data / Variables	Analysis Techniques
Descriptive	Describe population characteristics and perceptions	Age, gender, education, occupation, income, tourist & local perceptions	Frequencies, percentages, means, standard deviations
Explanatory	Examine causal relationships between tourism & sustainability	Economic: revenue, employment; Social: participation, cultural preservation; Environmental: resource management, ecosystem preservation	Regression analysis, ANOVA

Table 4.1 Descriptive-explanatory research design

The descriptive section focuses on the definition of the demography, as well as the socio-economic

characteristics of the participants and their perspectives and experiences of riverine tourism. Data on age, gender, education, occupation and income of tourists and the locals is collected to provide contextual understanding. This data is summed up in descriptive statistics, including frequencies, percentages, means, and standard deviations. As an example, the disaggregation of tourists based on age or the income levels of households involved in tourism activities can provide valuable trends. Moreover, this approach includes general impressions, such as the way visitors rate the tourism related attractions and how the local people perceive the benefits of tourism in terms of economics and social success, which are crucial building blocks of subsequent analyses.

The explanatory facet explores causal relationships between river tourism and the aspects of sustainable tourism namely economic, social, and environmental. The economic ones include revenue generation and employment opportunities; social ones include community participation and cultural preservation; environmental ones include resource management and ecosystem preservation. The evaluation of hypotheses through theoretical framework is done by using statistical techniques such as regression and Analysis of Variance (ANOVA). Regression analysis assesses the effect and the significance of predictor variables, and ANOVA allows making comparisons between different groups, e.g., the differences between the perception of tourists of various ages or the members of a community with different backgrounds.

4.3 Research Approach

It is based on the quantitative methodology that emphasizes measurement, objectiveness, and replicability when studying social phenomena (Bryman, 2016). Quantitative research is particularly suitable in cases when one wants to test the relationship between variables and test hypothesis using the statistical procedures. Quantitative methods also allow precise measurement, systematic comparison, and generalization of findings on a given population through numerical data that has been obtained out of observations (Sekaran, U., & Bougie, R. 2020). This approach can be used in the context of river tourism to conduct an evidence-based assessment of the impact of tourism activities on sustainable outcomes, including economic benefits, community cohesion, and environmental conservation.

The positive side of quantitative over qualitative approaches in tourism studies is not a new issue

(Decrop, 1999). Though qualitative research is needed in the study of specific tourist experiences, perceptions, and motivations, it is inadequate in its ability to generate statistically generalized results. In this study, however, special focus is on the structural effects of riverine tourism on sustainable development outcomes. To illustrate, such questions as whether the participation in tourism activities connected with rivers enhances attitudes towards the cultural conservation or increases household income require quantitative data that can be and should be analyzed among different respondents. Quantitative methods provide a way of methodically evaluating these relationships and determining their significance thereby supporting evidence-based results.

Positivist paradigm is associated with the adoption of quantitative research and it assumes the measurement, observation and analysis of social phenomena in an objectively determined manner. In this perspective, human behaviors and social outcomes are considered quantifiable factors influenced by identifiable factors. The positivist approach is particularly appropriate in Bangladesh where tourism planners and policymakers are increasingly interested in measurable data to make decisions. The approach enables informed recommendations on how to use riverine tourism to achieve sustainable economic, social and environmental benefits through generation of statistically valid outcomes. Overall, the quantitative approach is rigorous, replicable, and practically significant, which makes it very suitable within the objectives of the current study.

4.4 Population and Sampling

The population of this study consists of diverse stakeholders who are directly or indirectly connected to riverine tourism:

1. **Tourists** who engage in river-based activities.
2. **Local residents** whose livelihoods depend on riverside economies.
3. **Tourism service providers** (boatmen, guides, hotel operators).
4. **Policy actors** including government officials, local administrators, and NGO representatives.

Because of the heterogeneity of this population, a non-probability sampling that is targeted was employed. Purposive sampling is also most appropriate when some sub-groups are critical to the research objectives, and this gives the researcher the opportunity to select participants purposely

and directly related to the topic (Etikan et al., 2016). Engaging tourism operators, local leaders, local community, tourist and policymakers proves to be a better method of understanding the dynamics of tourism as opposed to just picking up random citizens who may have little to no connection to the activity related to the river.

The sample size of the distributed surveys was 221 to the stakeholder groups. After data cleaning to remove incomplete or contradicting responses 210 valid questionnaires were retained to carry out the analysis. Sample size determination is a critical step in quantitative research to ensure representativeness and reliability. For a medium-sized population, a sample of approximately 200 respondents is generally sufficient when using a 95% confidence level and a 5% margin of error (Sekaran & Bougie, 2020; Israel, 2023).

Stakeholder Group	Number of Respondents	Percentage of Total Sample
Tourists	90	42.9%
Local Residents	70	33.3%
Service Providers	30	14.3%
Policymakers	20	9.5%
Total	210	100%

Table 4.2: The breakdown of sample by stakeholder group

The table shows sample size comprised about 90 tourists, 70 locals, 30 service providers and 20 policy makers. This range of opinions improves the representativeness of the findings even in a non-probability sampling situation as it reflects the most important stakeholder groups.

4.5 Research Instrument

The research tool in this study was the survey questionnaire which was designed in such a way that it would collect the perceptions, attitudes, and experiences of the different stakeholder groups involved in the riverine tourism in a systematic manner. This survey was structured in three main parts to ensure that it was able to examine the demographic characteristics, tourism-related perceptions, and sustainable tourism outcomes.

Section A: Demographic Variables' purpose was to gather the necessary socio-economic data

concerning respondents. This included age, sex, education level, type of work, and income level as well as frequency of involvement in tourism activities. The collection of these variables was critical to place the stakeholder feedback in a certain context, as well as investigate potential unique perceptions of various groups of individuals. An example would be how regular travelers may perceive the impacts of tourism as opposed to local residents or the workers of the services.

Section B: Riverine Tourism Perceptions included questions intended to assess the viewpoints of the stakeholders as to the short-term impacts of the riverine tourism. The key issues that were discussed were the role of tourism in creating employment opportunities, boosting cultural heritage, and preserving the environment. These aspects facilitated the study to obtain comprehensive information on the effects of river related tourism activities on the economic, social and ecological lives of the people on the ground.

Section C: Indicators of Sustainable Tourism Development was designed in the Triple Bottom Line (TBL) model (Elkington, 1997) that consists of economic, social, and environmental factors. The economic dimension assessed such aspects as income diversification, development of small business, and tourism income. The social one focused on the participation of the community, preservation of cultural identity, and improving the overall social welfare. The environmental dimension aimed at protecting the environments, proper waste management, and protecting the biodiversity.

Every construct was assessed using a five-point Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree). This scale is well-known in tourism studies for its ability to collect attitudinal and perceptual information (Likert, 1932; Boone & Boone, 2012).

Measurement Scale	Scale Points
Five-point Likert scale	1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Table 4.3 Measurement Scale

The organized layout of the questionnaire guaranteed uniformity, aided in statistical examination, and offered trustworthy data to evaluate hypotheses related to the impacts of riverine tourism on sustainable development.

4.6 Data Collection Procedure

The data collection procedure for this study on riverine tourism development in Bangladesh was designed to ensure the validity, reliability, and comprehensiveness of the data. Both primary and secondary data sources were used to explore the economic, social, cultural, and environmental dimensions of river-based tourism.

Primary Data Collection Tools

To investigate the development of riverine tourism in Bangladesh, the researcher employed a range of quantitative data collection tools. These tools included interviews, survey questionnaires, focus group discussions, experiments, and document analysis. The combination of these instruments ensured a comprehensive understanding of the socio-economic, cultural, and environmental dimensions of river-based tourism development (Rahman & Sultana, 2023; Khan et al., 2024).

Interviews

Interviews were conducted to gather in-depth insights from local community members, tourism officials, boat operators, and other stakeholders. These semi-structured interviews allowed for open-ended discussions, helping the researcher to explore participants' experiences, perceptions, and opinions about riverine tourism initiatives. Interviews were conducted both in person and via digital platforms, ensuring inclusivity across different geographic regions (Islam, 2023).

Survey Questionnaire

A structured survey questionnaire was designed to collect quantitative data from a broader sample of respondents in riverine communities. The questionnaire consisted primarily of closed-ended questions, enabling the collection of measurable data on tourism practices, environmental

perceptions, and socio-economic benefits. This approach facilitated statistical analysis and comparison across different river regions (Haque et al., 2024).

Focus Group Discussions (FGDs)

Focus group discussions were organized with small groups of 6–10 participants, including local entrepreneurs, policymaker, community leaders, and other stakeholders involved in tourism-related activities. The discussions aimed to uncover shared perspectives on tourism development, challenges faced, and opportunities for sustainable growth. The researcher served as a moderator to facilitate productive and inclusive dialogue (Uchinlayen et al., 2023).

Case Studies

Case studies were conducted in selected riverine tourism destinations such as Tanguar Haor, Chandpur, and Barishal to provide detailed contextual analysis. Each case examined the community's approach to tourism management, the impacts of tourism on livelihoods, and sustainability initiatives. This method was particularly effective in exploring complex socio-environmental interactions within specific river systems (Saha & Hossain, 2022).

Experiments

Experimental methods were minimally used but included pilot testing of eco-tourism activities and community training programs. These small-scale initiatives aimed to assess the effectiveness of community participation and environmental awareness campaigns. Such experimental approaches provided empirical data on potential behavioral and attitudinal changes within local populations (Rahman & Sultana, 2023).

Document Analysis

Document analysis was used to gather and evaluate secondary data from government policy reports, tourism development plans, NGO publications, and academic research articles related to riverine tourism. Reviewing these sources helped validate primary data and provided historical and institutional perspectives on tourism development in Bangladesh (Islam, 2023; Khan et al., 2024).

Secondary Data Collection

Secondary data were gathered from relevant government and institutional sources, including reports from the Bangladesh Tourism Board, Ministry of Civil Aviation and Tourism, and Department of Environment. Additional materials such as academic journals, tourism policy documents, published research papers, and local community records were also reviewed. This helped triangulate findings and provide contextual understanding of existing tourism development frameworks (Haque et al., 2024).

4.7 Validity and Reliability

Validity and reliability of research tools is a critical procedure to the tourism research, as it enhances the credibility of the findings and limits potential sources of bias. In this study, different approaches were used to make sure that the survey questionnaire was effective in measuring the opinion of the stakeholders concerning riverine tourism and its contribution towards sustainable development.

Content Validity

The content validity was established through the intensive review of the literature sources on sustainable tourism and riverine tourism, as well as the conversations with specialists, such as tourism researchers, local authorities, and experienced specialists. Each element in the questionnaire was carefully aligned to known indices of sustainable tourism to ensure that the content reflected the economic, social and environmental dimensions of the Triple Bottom Line (TBL) model in the most appropriate way (Elkington, 1997). This approach ensured that the items were relevant, exhaustive and reflective of the concepts under consideration.

Construct Validity

Construct validity was tested using exploratory factor analysis (EFA). This statistical technique confirmed that the items of questionnaires formed the clusters as intended based on the associated constructs, economic, social, and environmental sustainability. Factor loadings were interpreted to ensure that all items had significant effects on its corresponding construct hence justifying the

theoretical framework underpinning it. EFA helped to identify and narrowly avoid any list of items that were not clearly correlated with the expected factors, which makes the survey instrument even more accurate.

Reliability

Reliability pertains to how consistently a measurement tool yields the same results across multiple trials or among items within the same tool (Field, 2018). High reliability signifies that the tool is consistent, reduces random errors, and yields reproducible results (Tavakol & Dennick, 2011). Cronbach's Alpha was used to measure reliability, also referred to as internal consistency.

Cronbach's alpha (α) is a statistical measure that assesses internal consistency, showing how closely connected a group of items are together (Cronbach, 1951). The alpha coefficient varies between 0 and 1, where higher values indicate increased internal consistency. A widely recognized threshold is 0.70 or more for exploratory research, whereas values exceeding 0.80 are favored for confirmatory studies (Nunnally & Bernstein, 1994).

Cronbach's Alpha is well-suited for this research as it measures the relationship among a collection of items, suggesting whether these items together reflect the underlying aspect of interest. For instance, inquiries regarding local community participation in river tourism or perceived ecological advantages need to be uniform to yield significant and reliable outcomes. Calculating Cronbach's Alpha allows the study to confirm that the measurement scales are dependable, understandable, and reproducible, thus instilling confidence in further analyses and policy suggestions (Gliem & Gliem, 2003; Field, 2018)

4.8 Data Analysis Techniques

Data collected were also evaluated through the SPSS version 25 and evaluated using the descriptive and inferential statistical tools to provide a comprehensive understanding of the findings of the research. Such a multi-tier approach allowed the study to determine common trends among the stakeholders yet at the same time test causal relationships between the river tourism and the sustainability outcomes.

Descriptive Statistics

The statistical descriptions were first used to summarize the demographic and socio-economic characteristics of the respondents. Critical statistics such as frequencies, percentages and averages were calculated to present an overview of the sample characteristics. Other trends that were identified in the descriptive analysis included the frequency of participation in the tourism activities and disparities in the perspectives of different groups. These summaries provided important background to subsequent inferential analysis.

Inferential Statistics

The inferential statistics then were applied to test the study hypotheses and analyze the correlation between variables. The regression analysis was conducted to examine the impact of riverine tourism on economic, social, and environmental factors of sustainable tourism development. This approach made it possible to consider the effects and significance of the predictor variables and take other factors into consideration. ANOVA was used to establish if demographic aspects such as gender, age or income influenced perceptions on the effects of riverine tourism. In addition, the correlation was analyzed to determine the relationships between tourism development and specific outcomes, such as cultural preservation and community involvement.

Diagnostic Tests

The validity and the strength of the regression models was tested by conducting diagnostic tests such as tests on multicollinearity, test of normality of the residual values, and the homoscedasticity. The above procedures confirmed that the data met the assumptions required to make reliable statistical inferences.

Such an analytical methodology represented a combination of descriptive summaries and inferential testing, providing an overall picture of the characteristics of the stakeholders and detailed results regarding the causal relationships, which allowed the study to make evidence-based conclusions on the role of riverine tourism in sustainable development in Bangladesh.

4.9 Hypothesis testing

This study is designed to test fifteen different hypotheses. The hypothesis mainly focuses on the effects of different aspects of Riverine Tourism development in Bangladesh.

This hypothesis is tested through regression analysis; here, the dependent variable is the Riverine Tourism Development in Bangladesh (Y), and the independent variables (Xi) are listed below with the sources.

H0: *The development of riverine tourism in Bangladesh has no significant potential for development.*

H1: *Riverine tourism in Bangladesh has strong potential for sustainable development.*

H2: *Riverine tourism contributes significantly to national economic development.*

H3: *Riverine tourism improves the livelihoods and income of local communities.*

H4: *Existing infrastructure (roads, jetties, restrooms) adequately supports tourism in riverine areas.*

H5: *Transportation facilities to and within riverine areas are convenient for tourists.*

H6: *Riverine tourism zones are safe and secure for tourists.*

H7: *Riverine tourism does not harm the environment.*

H8: *Riverine tourism supports the preservation of local culture and heritage.*

H9: *Local communities are actively involved in riverine tourism activities and decision-making.*

H10: *Tourism operators provide high-quality services (e.g., boats, guides, accommodation).*

H11: *There is effective collaboration between government, private operators, and local communities.*

H12: *Government policies adequately support the development of riverine tourism.*

H13: *Training and skills development programs for tourism workers are available and accessible.*

H14: *Promotion and marketing of riverine tourism destinations are effective.*

H15: *Investments in riverine tourism, both public and private, are increasing.*

Y=Dependent Variable is Riverine Tourism Development in Bangladesh

Y=Dependent Variable	X _i =Independent	Sources from literature
Riverine Tourism Development in Bangladesh	X1 Economic Contribution	(Hossain, M. (2022).
	X2 Livelihood Improvement	(Islam, M. S., & Hossain, M. (2020).
	X3 Infrastructure Development	(Calderón, C., & Servén, L. (2010)
	X4 Transport Accessibility	(Geurs, K. T., & van Wee, B. (2004)
	X5 Safety and Risk Management	(Hossain, M. (2018).
	X6 Environmental Sustainability	(Alam, M. S., & Hossain, M. (2021).
	X7 Cultural Preservation	(Mason, R. (2002)
	X8 Community Participation	(Tosun, C. (2000)
	X9 Service Quality	(Rahman, M. M., & Islam, M. S. (2021).
	X10 Stakeholder Collaboration	(Byrd, E. T. (2007)
	X11 Policy Support	(Hall, C. M., & Jenkins, J. (1995)
	X12 Capacity Building	(Ashley, C., & Haysom, G. (2006)
	X13 Tourism Promotion	(Kotler, P., Bowen, J. T., & Makens, J. C. (2016).
	X14 Investment Growth	(Sinclair, M. T. (1998).
	X15 Sustainable Development Potential	(Stevens, C., & Kanie, N. (2016)

Table 4.4: Dependent and independent variables (Source: Mention in the last column of the table)

4.10 Ethical Considerations

Ethical integrity was central to this research:

- a) Informed Consent: Participants were made aware of the research aims.
- b) Voluntary Involvement: No participant was pressured to take part.
- c) Confidentiality: Personal identifiers were not gathered; answers were anonymized.
- d) Academic Integrity: Appropriate citations were used for secondary data sources, and any form of plagiarism was not accepted.

These ethical standards correspond with the guidelines for social science research (Israel & Hay, 2006).

4.11 Limitations of the Methodology

There is no methodology that cannot be limited. This study recognizes the following:

- i.* Sampling Bias: Purposive sampling can also be constraining in terms of generalization because it does not represent all groups of stakeholders equally.
- ii.* Geographic Scope; The research was only conducted on three large riverine sites; the results might not be similar in other areas.
- iii.* Self-Reported Data: The data can be affected by a social desirability bias.
- iv.* Time Limits: Field work that will be carried out in three months may fail to record seasonal changes in tourism flows.

Notwithstanding these drawbacks, the methodology offers a solid foundation about the potential of riverine tourism development in Bangladesh.

Chapter 5

Present Scenario of Tourism in Bangladesh

Present Scenario of Tourism in Bangladesh

5.1 Introduction

Tourism in Bangladesh has grown to be an ever growing industry that has immense effects on the national economy. In 2023, this sector contributed to GDP in the amount of about 4.0 percent, comprising almost BDT 1.02 trillion (USD 9.5 billion), and the growth rate was 10.6 percent compared to the previous year (World Travel & Tourism Council [WTTC], 2024). In 2023, the country welcomed approximately 650,000 foreign visitors, which is higher than the circumstances of the year before the pandemic, and the local tourist industry attracted more than 30 million visitors (The Business Standard, 2024; United Nations Development Programme [UNDP], 2024).

The diverse Bangladesh offers places of attraction that include Sundarbans mangrove forest, a UNESCO World Heritage site, and Cox's Bazar, the world longest natural sea beach, among others, remain attractive even to both local and international travelers. Despite such challenges as limited global branding and insufficiency of infrastructure and security concerns, recent advancements like the Tourism Master Plan (2024-2041) and the launch of e-visa options indicate a promising growth in the future (UNDP, 2024).

5.2 Historical Background of Tourism in Bangladesh

Bangladesh is highly related to tourism because of the richness of its river systems which have played a central role in shaping economic, cultural as well as social developments. River tourism is an emerging area of concern, which helps in the economic growth, community participation, and environmental awareness (Rahman and Islam, 2019; Hossain et al., 2021). The numerous rivers of the country such as the Ganges, Brahmaputra, and Meghna provide stunning landscapes and river-related activities such as river cruises, boating, and cultural tourism around the rivers, bringing income and employment opportunities to the locals (UNDP, 2024; Haque, 2020).

Many of the rivers in Bangladesh have a strong relation to the past and the culture. Indicatively, waterway routes along with historic structures like Paharpur or the ancient city of Dhaka connect tourists with relevant cultural and architectural locations in the city. River-based tourism enhances

the local guiding industry, crafts, and hospitality industry in addition to fostering cultural exchange between tourists and host communities (Rasheed et al., 2022; Ahmed and Karim, 2021).

River tourism has been influenced by geography. The deltaic landscape is a terrain formed due to the confluence of major rivers and has historically been known as a place of trade, agriculture, and cultural activity, creating natural and cultural resources that are now the attraction of tourists (Chowdhury and Dey, 2020). Riverine tourism helps create awareness on ecology and heritage conservation through promoting the sustainable utilization of riverways and protecting the cultural activities that relate to life on the riverside. Nevertheless, despite these challenges such as riverbank erosion, pollution, and insufficient infrastructure, the sector offers a significant potential to enhance the livelihoods of local communities, conserve the cultural identity and enhance the overall economic development (Sultana, 2021).

5.3 Overview of Bangladesh tourism

There are positive and negative trends within the tourism sector in Bangladesh. Over the recent past, the country has witnessed tremendous increase in the number of tourists who whether local or foreign are expressing increased interest in exploring its diverse destinations. In 2023, Bangladesh has approximately 650,000 foreign tourists, which is higher than the numbers before the pandemic and the domestic tourism industry over passed 30 million travelers (The Business Standard, 2024; UNDP, 2024). The Bangladesh Government has been undertaking several measures to promote further growth, such as developing infrastructure and offering on-arrival visa to particular nationalities, and promoting the unique natural and cultural resources of the country by inviting specific target groups as a part of a specific marketing campaign (Bangladesh Tourism Board [BTB], 2023).

Parallel to this, the role of the private investment has also played a significant role, and the contemporary hotels, resort, and entertainment centers have been established in the preferred sites like Cox Bazar, Sundarbans and Sylhet. The government has been basing its tourism strategy on the development of infrastructure. There are major projects to provide access to essential tourist destinations, including the Padma Multipurpose Bridge, Bangabandhu Sheikh Mujibur Rahman Tunnel (Karnaphuli Tunnel), Chattogram-Coxs Bazar railway line, and the Coxs Bazar-Teknaf

Marine Drive (Asian Development Bank [ADB], 2023; Dhaka Tribune, 2023). Similarly, the four-lane expansion of the Dhaka-Chattogram Highway along with the construction of the Dhaka-Mawa Expressway has helped to reduce the travel time and facilitate movement of tourists across regions (Roads and Highways Department [RHD], 2023).

Besides that, wide-ranging state projects, such as Jamuna Multipurpose Bridge, Jamuna Railway Bridge, Dhaka Metro Rail, and recently constructed expressways in Dhaka and Chattogram have increased connectivity (World Bank, 2023). These efforts, combined, will create a favorable environment in which tourism can develop, through allowing people to move, enhancing tourism satisfaction, and promoting economic cooperation in regions. The following chart presents a comprehensive overview of tourism in Bangladesh.

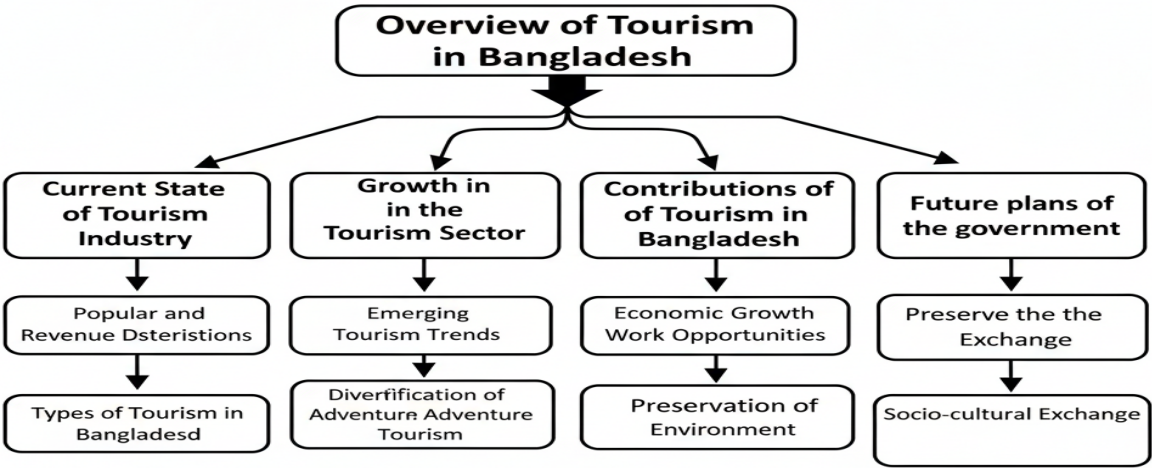


Figure 5.1: Overview of Bangladesh Tourism (Self-developed)

5.4 Current state of Tourism Industry

5.4.1 Number of international and domestic tourists

In 2023, Bangladesh received around 655,000 international visitors, representing a 23% rise compared to the prior year and exceeding pre-pandemic figures. The nation saw a notable surge of more than 30 million local tourists, indicating an increasing enthusiasm among residents for discovering national attractions (Bangladesh Tourism Board).

Type of Tourist	Number of Arrivals	Source
International	655,000 (6.5 lakh)	Bangladesh Tourism Board
Domestic	Over 30 million	United Nations Development Programme

Table 5.1: Tourist Arrivals in Bangladesh (2023)

5.4.2 Annual growth rates of visitor arrivals

Bangladesh's tourism industry has been gradually bouncing back after the COVID-19 pandemic. In 2023, the nation received around 923,611 international visitors, indicating a 43.5% rise from 2022, which had 643,747 arrivals (Risingbd, 2023). Domestic tourism experienced significant growth as more than 30 million local travelers explored different destinations in 2023, marking a 20% rise compared to the prior year (TBS News, 2024; UNDP, 2024). These statistics reflect a strong recovery in both international and local tourism, fueled by enhanced infrastructure, government efforts, and an increasing fascination with Bangladesh's natural and cultural sites.

Year	International Tourists	Growth Rate (YoY)	Domestic Tourists	Growth Rate (YoY)	Source
2019	1,093,000	—	~28,000,000	—	WTTC, 2024
2020	450,000	-58.8%	15,000,000	-46.4%	WTTC, 2024
2021	520,000	+15.6%	18,000,000	+20%	Bangladesh Tourism Board, 2022
2022	643,747	+23.7%	25,000,000	+38.9%	Risingbd, 2023

2023	923,611	+43.5%	30,000,000	+20%	TBS News, 2024;UNDP, 2024
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Table 5.2: Annual Growth Rates of Tourist Arrivals in Bangladesh

5.4.3 International Tourist Arrivals and Revenue in Bangladesh

The country welcomed 923,611 international tourists, marking a 43.5% rise compared to 2022. These guests contributed around \$1.4 billion in tourism income, with the highest share allocated to lodging (41.48%), succeeded by food and drinks (19.16%), retail (12.84%), and road passenger transport (5.65%). The revenue is expected to rise to \$1.66 billion by 2028, reflecting consistent growth in the industry (TBS News, 2024; Reportlinker, 2024).

Indicator	Value	Notes / Breakdown	Source
International Tourists	923,611	43.5% increase compared to 2022	TBS News, 2024
Tourism Revenue	\$1.4 billion	Projected to reach \$1.66 billion by 2028, CAGR 2.7%	Reportlinker, 2024
Revenue by Category			
Accommodation	41.48%	Largest share of tourist spending	TBS News, 2024
Food & Beverage	19.16%	Second-largest spending category	TBS News, 2024
Shopping	12.84%	Includes souvenirs and local goods	TBS News, 2024
Road Passenger Transport	5.65%	Spending on domestic travel/shuttles	TBS News, 2024

Table 5.3: International Tourist Arrivals and Revenue in Bangladesh

5.4.4 GDP and Employment contribution of tourism sector

As the economic priorities of the government vary on the annual basis, the development of the tourism industry in Bangladesh also changes. Every year, a part of the national budget is allocated to the work associated with the tourism industry, including improvement of infrastructure and other facilities, conduction of promotion campaigns, and training of local people. In this respect, the study mentions the total GDP input of the tourism sector in order to show its economical significance and prospects of increasing growth.

Year	GDP Contribution	GDP in BDT (trillion)	GDP in USD (billion)	Employment (million jobs)	Notes
2019	2.2%	0.86	8.1	1.73	Pre-pandemic level
2022	2.1%	0.92	8.7	1.99	Post-pandemic recovery
2023	2.3%	1.02	9.5	2.14	Significant growth, 23% increase in foreign tourists
2024*	2.35%	1.09	10.2	2.23	Projected
2034*	2.7%	1.77	16.7	2.85	Projected, CAGR ~5%

Table 5.4: GDP and Employment contribution of tourism sector (WTTC)

5.4.5 Seasonal Trends in Bangladesh Tourism

International and domestic tourism reach their highest levels from November to March, as the cooler, drier weather and significant holidays draw in more tourists. On the other hand, the off-peak season from April to October experiences a notable drop in arrivals because of elevated temperatures, humidity, and the monsoon. Roughly 80% of local tourism takes place in the peak season, emphasizing the significant impact of seasonal weather on travel behaviors (Hossen et al., 2021; Gaaribd, 2024).

Type of Tourist	Peak Season	Off-Peak Season	Key Characteristics & Impact	Source
International	November–March	April–October	Peak season coincides with cooler, drier weather; off-peak affected by high temperatures & monsoon.	Hossen et al., 2021; Gaaribd, 2024
Domestic	November–March	April–October	~80% of domestic tourist activities occur in peak season due to favorable weather & holidays; <20% in off-peak due to hot/humid climate and monsoon.	Hossen et al., 2021; Gaaribd, 2024

Table 5.5: Seasonal Trends in Bangladesh Tourism

5.5 Popular Tourist Destinations in Bangladesh

This country has many popular tourist destinations which reflect the pristine beauty, cultural heritage, and history of Bangladesh. An important site is the Sundarbans, the largest mangrove forest in the world which has been recognized as a UNESCO world heritage site because of its ecological and cultural importance (UNESCO, 2023). There is also another key attraction, Cox Bazar, whose biggest attraction site in the world is the long natural sandy beach, with both local and foreign tourists visiting it because of its beautiful environment and recreational facilities (Rahman and Islam, 2021).

Dhaka is a historic city with an exciting cultural mix of busy markets, old Mosques and the stunning buildings of the Mughal period with such attractions as Lalbagh Fort, Ahsan Manzil. These are places where one can see the historical and architectural past of the country, making Dhaka one of the vibrant heritage tourism locations (Haque, 2020; Rasheed et al., 2022). Overall, Bangladesh is a place with a range of attractions, both in terms of natural wonders and other cultural and historical places, which together form a very inviting tourist destination.

5.6 Types of Tourism in Bangladesh

Bangladesh has a wide range of tourism attracting a wide range of interests and preferences. Rivers, mountains, and coastline of the country provide the country with a variety of adventure tourism opportunities, including river tours, kayaking, hiking, and wildlife discovery in the national parks and hills. Places such as the Chittagong Hill Tracts, Sylhet tea estates and Cox's Bazar beach are particularly popular with adventurous tourists, with a mix of scenic appeal in addition to adventure (Haque, 2024). Bangladesh is rich in historical and cultural heritage that attracts tourists who go there to learn about ancient buildings, traditional food and cultural festivals, and cultural interaction with the local people. The key places include the Lalbagh Fort, the Ahsan Manzil, and the villages of the Chittagong Hill Tracts, where visitors get to experience the local crafts, traditions, and legends (Global History Dialogues, 2024). There is growing popularity of eco-tourism where tourists want to experience sustainability that leads to conservation and environmental awareness. The Sundarbans mangrove forest, Ratargul swamp forest, and Srimangal tea plantations are only notable ecotourism sites due to offering a setting rich in biodiversity to

watch wildlife, explore rivers, and enjoy sustainable leisure (Abtahee, 2023).

The tourism sector in Bangladesh is an integration of adventure, cultural and ecological tourism experiences, which provide tourists with a number of opportunities to help local communities, protect the cultural heritage and promote sustainable development (Chan et al., 2024).

5.7 Trends in the Tourism Sector

Tourism emerging trends

The new global trends affecting the traveler preferences and changing consumer needs will benefit the tourism sector in Bangladesh. Modern tourists are increasingly seeking cultural and heritage travel, spiritual and health travel and immersive experience travel. These trends can also be synchronized with the development of tourism, and by doing so, Bangladesh will be able to attract a diverse range of tourists seeking unique and meaningful experiences (Rahman, 2021; Kawsar et al., 2024).

Broadening of Tourism Choice

The diverse landscapes and attractions of the country, including its untouched coast of beaches, mangrove flats, historical places, and bustling urban markets provide opportunities to increase tourism products. It is also possible to develop focused products such as adventure travel, food tourism, and rural or countryside tourism to diversify the market; introduce new classes of visitors and earn local communities more revenue (Benur and Bramwell, 2015; Abtahee, 2023).

Adventure Tourism and Ecotourism

Due to its rich biodiversity and natural scenery, Bangladesh boasts of good unexploited potentials in ecotourism and adventure tourism. Places such as the Sundarbans which is the largest mangrove forest in the world and a UNESCO world heritage site as well as other national parks offer opportunities to watch wildlife, to do hiking, river touring, and other eco-friendly adventure related activities. By encouraging more tourists to adopt sustainable tourism and ethical approaches toward tourism activities, Bangladesh has a chance to ride the global trend of environmental-

conscious and experience-based travel (Abtahee, 2023; USAID, 2021).

5.8 Contributions of Tourism to Bangladesh's Economy and Society

Bangladesh tourism has been significant in economic development, creation of employment, preservation of culture, protecting the environment, social-cultural interaction and regional development. The tourism sector in the country offers the local and the foreign tourists the opportunity to interact with the diverse culture, history, and natural landscape of the country. By applying sustainable and responsible tourism practices, it will be possible to increase the benefits of the tourism industry in Bangladesh and protect its unique cultural-natural heritage (Siddiqui, 2023; Han et al., 2016).

A) Economic Growth

Tourism plays a major role in the economic development of Bangladesh. The tourists spending on accommodation, transport, dining out, domestic arts and entertainment generate revenue which contributes to national GDP and supports different industries such as hospitality, retail and agriculture. This spending creates a ripple effect of promoting broader economic growth and business development (WTTC, 2025; Rahman, 2022).

B) Employment Generation

Tourism also generates big employment. Thousands of people are directly employed in the hospitality, the food service, transport, and tour operation industry, but indirect jobs are in the crafts, agricultural sector, and retail sectors that supply products and services to visitors. It is particularly important in rural and poorly developed areas where tourism is a powerful source of livelihood and income (Morrison, 2022; Telfer and Sharpley, 2015).

C) Cultural Preservation

Another important impact of tourism is preservation of culture. The cultural heritage sites, traditional crafts, arts, festivals and rituals attract tourists and generate revenue that could be used in the maintenance of historical and cultural resources. Due to this, tourism provides incentive to

the local communities in order to maintain and preserve their cultural identity (McKercher and Du Cros, 2002; Horaira and Devi, 2021).

D) Environmental Conservation

Ecotourism activities in places such as Sundarbans and some national parks promote the conservation of the environment. The green practices of tourism help protect the ecosystem and biodiversity as well as the natural environments and educate both locals and tourists on the importance of environmental sustainability. Such efforts also focus on the development of sustainable infrastructure and responsible garbage disposal (Han et al., 2016; Abtahee, 2023).

E) Socio-Cultural Exchange

Tourism fosters social-cultural exchange as it creates an opportunity to the locals and visitors to interact and learn through each other. Through such interactions, people understand, accept, and appreciate diverse cultures and get a preview of the practice, lifestyle, and cultural heritage of Bangladesh by the visitors (Horaira and Devi, 2021; USAID, 2021).

F) Regional Development

Finally, the tourist activity helps in the development of regions. It promotes infrastructure development, exploitation of resources, and jobs in the rural and less developed areas by encouraging them to travel to other destinations beyond large cities. This kind of decentralization helps to reduce the level of regional inequalities and encourage fair national development (Telfer and Sharpley, 2015; Siddiqui, 2023).

5.9 Future Plans of the Bangladesh Government to Promote Tourism

In an effort to state it as the third-largest industry in the country, the government of Bangladesh has launched the widest Tourism Master Plan over the next 25 years (2023-2047). The plan will attract millions of foreign tourists and create a great number of workplaces in the tourism sector (Bangladesh Tourism Board, 2023).

Improvement of infrastructure is one of the major aspects in this project. Infrastructure such as roads, airports, railways, electricity and other important infrastructures are being invested in big tourist destinations. This project aims at enhancing the total experience of visitors and supporting the development of the hospitality and leisure sectors (The Financial Express, 2023).

The Tourist Police units are being established by the government to ensure the safety of visitors as well as protection of the natural environment and wildlife in the popular tourist destinations. These departments will guarantee the safety in the places, and promote responsible, ethical tourism in Bangladesh (Bangladesh Tourism Board, 2023).

Moreso, the plan promotes development of special tourism zones such as the Sabrang Tourism Park in Cox's Bazar with high-quality hotels, resorts and environmental friendly sites. The purpose of those areas is to attract high-level tourists and present the cultural and nature legacy of Bangladesh (Wikipedia, 2023a)

With these strategic plans in place, better infrastructure, emphasis on visitor safety, and creating dedicated tourism areas, Bangladesh aims to support its tourism sector, drive its economy, and position the country as an attractive tourist destination on the global scene (UNDP, 2024; The Business Standard, 2023).

Chapter 6

Contextualizing Riverine Tourism in Bangladesh

Contextualizing Riverine Tourism in Bangladesh

6.1 Introduction

Bangladesh is a country that has over 700 rivers, commonly known as the Land of Rivers, and determines the geography, culture, and lifestyles. Besides transportation, agriculture, and fishing, these rivers offer significant opportunities of river-based tourism which include recreation, culture, and ecotourism. The major rivers, such as the Ganges, Brahmaputra, and Meghna, can allow the tourists to find the biodiversity, stunning scenery, and local culture, including local folk music and traditions like the Baul (Miah, 2018). Wetlands and mangrove especially the Sundarbans, which is a UNESCO World Heritage site, attract eco-tourists to enjoy wildlife and adventure tours (Hossain, 2020).

Sustainable river tourism requires community participation because local guides and artisans obtain a financial benefit of the tourism activities (Kabir, 2019). Some of the activities include river tours, fishing, bird watching, and cultural practices that promote the conservation of nature and local welfare.

However, there are still challenges. Pollution, loss of habitats and climate change are a threat to the ecosystem and the experiences of visitors, whereas the inadequate infrastructure can discourage tourists. These fragile ecosystems also require the introduction of good policies, encouraging sustainable forms of tourism, and investing in infrastructure that will help in the conservation of such ecosystems and avoid over-tourism (Choudhury, 2019).

River tourism in Bangladesh can also play a very important role in improving the economic growth, cultural exchange, as well as environmental sustainability, with proper management.

6.2 Tourism Growth Trends in Bangladesh

Tourism in Bangladesh has in the recent past exhibited a high rate of development due to a combination of various forces such as the enhanced infrastructure, international marketing and the rich history of Bangladesh in terms of both culture and natural resources.

Statistic	Value	Year
GDP Contribution (USD)	~\$8.1 billion	2019
GDP Contribution (BDT)	BDT 1.02 trillion (~USD 9.5 billion)	2023
Tourism Employment (jobs)	~1.74 million	2019
Tourism Employment (jobs)	~2.14 million	2023
International Visitor Spending (BDT/USD)	BDT 34.7B / USD 326.8M	2019
International Visitor Spending (BDT/USD)	BDT 42.7B / USD 401.5M	2023
Domestic Visitor Spending (BDT/USD)	BDT 729.4B / USD 6.9B	2019
Domestic Visitor Spending (BDT/USD)	BDT 843.6B / USD 7.9B	2023

Table 6.1 Tourism growth trends in Bangladesh (WTTC)

Overview of Tourism Growth Trends

In 2023, Bangladesh saw a notable recovery in its tourism industry. The nation drew around 6.5 lakh (650,000) international tourists, indicating a 23% rise from the prior year and exceeding pre-pandemic figures (WTTC,2023). This expansion was mainly fueled by business travelers and non-resident Bangladeshis (NRBs).

Nonetheless, the Asian Development Bank (ADB) indicated a decrease in tourism revenue, falling from \$453 million in 2023 to \$440 million in 2024, citing insufficient diversification in tourism options.

Domestic travel has emerged as an important factor in the country's economy. In 2023, more than 30 million local tourists traveled to different locations across Bangladesh, demonstrating the industry's strength and growth potential. The domestic tourism sector has attained an average yearly growth rate of 15%, adding roughly 3% to the national GDP, with earnings estimated at \$13.8 billion (WTTC, 2023).

The World Travel & Tourism Council (WTTC) indicated that in 2023, the tourism industry added BDT 1.02 trillion (USD 9.5 billion) to Bangladesh's GDP, reflecting a 10.6% growth from the prior year and a 17.9% increase relative to 2019 figures.

Even with this expansion, the industry encounters obstacles like poor infrastructure, minimal marketing initiatives, and lacking safety protocols, which obstruct its complete potential.

One of the patterns is the new focus on sustainable and cultural tourism. Eco-conscious tourists can also be tapped by many governments and personal organizations who have taken the initiative to invest on heritage sites, ecotourism and community based venturing. Studies have revealed that sustainable tourism practices maintain both the nature and the culture resources as well as ensure sustainability of the destination in terms of its competitiveness in the long-run (Becken & Hay, 2020).

The Bangladesh Tourism Board projects that the country will receive 0.21 million foreign tourists in 2023, with expectations to reach 0.32 million by 2028, indicating a gradual recovery to pre-pandemic levels.

The current trend of tourism growth is predicted to continue in the future with the focus on digital modernization, climate change resilience, and sustainability. Scientists assert that the post-pandemic recovery is a unique opportunity to rebuild tourism models so that they are more inclusive and environmentally sustainable (Sigala, 2020).

6.3 Riverine Tourism Growth Trends

Despite the vast flow of rivers within the Bangladeshi landscape, the river based tourism is a sector that has been poorly developed in the country. The potential is immense but still the development compared to the possibilities is minuscule as the private companies launch packages of river tourism (Hossain, M., Failler, P., & Hussain, S. 2017).

In 2021, the Bangladesh Tourism Board published official River Tourism Guidelines, the idea behind which is bringing navigability to rivers, creating green buffers along the banks, and development of tourist attraction on the riverbanks. These directions are an important high-level measure to realize the potential of river tourism.

A study from 2024 called Economic Impact of River Tourism: Evidence of Bangladesh by Talukder and Kaiser explores the economic opportunities of river tourism in Bangladesh. The study emphasizes the nation's abundant river resources and the significant economic advantages that may arise from enhancing this industry. Nonetheless, it highlights that the complete potential is not realized because of structural issues like insufficient infrastructure, regulatory restrictions,

and restricted marketing initiatives. The writers highlight the importance of strategic planning and investment to capitalize on the economic possibilities offered by river tourism (Talukder, M. B., & Kaiser, F. 2024).

A similar analysis can be seen on another work *River Tourism in Bangladesh: Present Status and Future Prospects* by Nora Islam (2023), which states that in spite of high interest to the development of river tourism, the major factors considered to, to slow down the industry growth are absence of skilled labour, safety and security issues, poor tourism infrastructure, inadequate funding.

The travelers increased to about 117,000 in 2010: quite an ascent compared to the number in 2002 of around 50,000. It implies that customised riverine eco-tourist markets are capable of attracting tourists in high numbers. Such developments however present threats such as destruction of the environment, pollution and degradation of ecosystems, which are the main reasons why eco-tourism strategies must be adopted (Wikipedia, 2025).

A 2021 economic analysis deemed the Sundarbans to be making annual contributions to the national economy amounting to 53 million USD with wildlife viewing and visitor infrastructure improvements being the most important contributors.

Another notable rise in tourism is also witnessed in Nikli Haor, which is one of the largest freshwater wetlands in Bangladesh, mostly during monsoons. Upgraded road and railway services, as well as overnighting facilities have made it far more attractive (Daily Sun, 2023).

In Chandpur, a visitor satisfaction survey, observed destination attractiveness, safety and security, efficient management and ease of access as the most crucial factors that determine tourist satisfaction. Such understandings are worthwhile in planning river tourism strategies in the future (Akter, Gafur, & Hossien, 2024).

The Muhuri Project- an irrigation scheme which was finished in the mid-1980s now plays host to such an activity as a prominent recreation destination. Its manmade bodies of water, wooded slopes, boating, and birdwatching have made it a winter paradise amongst the tourists (The Daily Post, 2023).

6.4 Major rivers in Bangladesh

The Land of Rivers, as usually referred to by outsiders, Bangladesh has one of the most elaborate and largest river system in the whole world with more than seven hundred rivers flowing across the fertile plains. Not only are these waterways important to the country in terms of both the economy, ecology and culture of the country but also have an untapped potential to become major tourist attraction placed in these regions. The rivers are highly differentiated in size, flow structures, and landscapes, and this provides varied scope to recreational, cultural, and ecologically friendly tourism.

Image 6.1. Map of tourists spot in Bangladesh



Source: Google photos, retrieved from https://www.researchgate.net/figure/Map-of-Tourist-Spots-in-Bangladesh_fig4_344518546

6.4.1 The Padma River

The Padma River the main branch of the Ganges enters Bangladesh and flows through South east until it joins the Meghna. The Padma is renowned for its large expanse, its fast flows, and fisheries, thus offering the potential of luxury cruising along the river, developing local stretches of leisure as well as fishing spots especially Hilsa fish. In addition to its already existing popularity as a tourist attraction site, the construction of the Padma Bridge has increased the popularity of the site as a tourism destination with visitors flocking there to see, photograph, and experience the river front dining.

6.4.2 Jamuna River

The Jamuna River, the primary course in Bangladesh of the Brahmaputra River is striking in its width and its mobile sandbar structures termed chars. With these drifting islands, visitors will get a different kind of seasonal tourism as they enjoy rural lives, take part in the agricultural activities, and camp in the open air. The Bangabandhu Bridge over the Jamuna is one of the largest infrastructural constructions and provides the best view of the river. Planned thoroughly, char-based eco-tourist resorts and floating markets would make the Jamuna a centre of nature-based and cultural tourism.

6.4.3 Meghna River

The Meghna River flows all through central Bangladesh, flowing out of confluence of Surma and Kushiya rivers out into the Bay of Bengal. It has an extensive system of islands at its lower reaches with different landscapes and culture and some are Bhola Island, Hatia Island, and Sandwip Island. The Hilsa fishing is very popular in the waters of the Meghna around Chandpur, tourists like to see or to take part in the pastime of fishing. The scenic ferry rides along the Meghna are highly potential for leisure cruising, whereas the island-hopping tours can be used to connect the non-tourist coastal communities with the visitors, and promote their heritage.

6.4.4 The Surma and Kushiara rivers

Two rivers flowing within the Sylhet region, Surma and Kushiara rivers, are a part of the Barak River which begins in India. There are tea gardens lining their banks as well as rural settlements and cultural sites. Their smooth eddy and beautiful sceneries suit more mini-tourist purposes, like canoeing, guided culture tours and eco-lodges that incorporate traditional lifestyles. Cruise tours down these rivers can be complemented with tea tourism so as to provide a smooth ride and engulfing experiences in nature and culture.

6.4.5 Karnaphuli River

Karnaphuli River is in the south east and it originates Lushai hills and the Chittagong Hill Tracts before draining into the Muslim Bay of Bengal. It is the most prominent feature of its Kaptai Lake which is an artificial reservoir created by the Karnaphuli Dam. The calm waters of the lake situated amid wavy landscapes are perfect to be enjoyed by boat, fishing, and sightseeing. This is being enjoyed in Chattogram where a commercial riverfront promenade, restaurants and night-cruises can cater both local and foreigners. The strategic location of the river gives it an opportunity to connect the tourism in the coastal regions and hill districts.

6.4.6 The River Teesta

The Teesta River in northern Bangladesh originates in the Himalayas and it brings along with itself, a cool and picturesque climate that contrasts to tropical lowlands. The Teesta Barrage is another favourite haunt with visitors to gaze over the lake at the rural landscape beyond, or perhaps to take to the quiet waters in boats and to picnic alongside. Agro-tourism projects have potential to be fruitful here given the right infrastructure in place that can accommodate aspect of farming along with river based leisure.

Other smaller but noteworthy waterways like the Buriganga, Kirtonkhola and the Halda all provide other exclusive touring experiences. The Buriganga, which passes by Dhaka, is a river full of traditions and acts as a real plan of demonstrating the nature of transport and river commerce in Bangladesh. The Kirtonkhola at Barishal offers a relaxing boat ride and a lot of rural life along the river; the Halda at Chattogram was the breeding place of unique types of carps and hence is

economically and academically taken as an important tourism destination.

6.5 The key Riverine attractions in Bangladesh

Bangladesh boasts of a number of riverine attractions, especially in their natural beauty, cultural meaning and recreation. Here are some of the major riverine destinations:

6.5.1 Sundarbans mangrove Forest (Passur and Raimangal Rivers)

The largest in the world is the Sundarbans which is a mangrove forest that spreads across the Khulna, Bagerhat and Satkhira district and has been declared a UNESCO World Heritage Site.

Image 6.2.Sundarbans National Park,Bangladesh.



Source: Google photos, retrieved from https://en.wikipedia.org/wiki/Sundarbans_National_Park

Sundarbans National Park is a national park located in the Sundarbans area near the Sunderbans in Bangladesh. Sundarbans National Park is the first of a series of parks to be established in Bangladesh.

The complex web of tidal rivers, creeks and canals can be explored by boat and during which it is possible to observe the Royal Bengal Tiger, salt water crocodiles, spotted deer, and Irrawaddy dolphins. The tourism is attracted by its exceptional biodiversity, the idyllic trips by boat and visual natural magnificence.

6.5.2 Kuakata & Payra River Estuary

Known as the "Daughter of the Sea," Kuakata in Patuakhali offers rare panoramic views of both sunrise and sunset over the Bay of Bengal. The confluence of the Payra River and the sea creates a captivating seascape. Visitors enjoy boat rides, exploring fishing villages, and experiencing coastal-river interactions that define the region's culture

Image 6.3. Kuakata beach, Kuakata, Barishal.



Source: Google photos, retrieved from https://www.tripadvisor.com/Attraction_Review-g11801518-d7365160-Reviews-Kuakata_Beach-Kuakata_Barisal_Division.html

6.5.3 Chandpur (Confluence of the Meghna, Padma, and Dakatia Rivers)

Chandpur has been known to be one of the biggest river junctions in Bangladesh and the most accurate hub of hilsa fish in Bangladesh.

Image6.4. Dhaka Cruise,Chandpur,Bangladesh



Source: Google photos, retrieved from <https://dhakadinnercruise.com/>

The meeting point of these mighty rivers creates a dramatic water landscape. Tourists visit for river cruises, fish markets, and to witness the power of the Meghna's currents.

6.5.4 Dhaka & Narayanganj River Routes (Buriganga, Shitalakshya, Meghna)

Around Dhaka and Narayanganj, short river cruises are popular among domestic and foreign visitors.

Image 6.5. Port of Narayanganj, Dhaka.



Source: Google photos, retrieved from https://en.wikipedia.org/wiki/Port_of_Narayanganj

The Buriganga offers glimpses into Dhaka's historic waterfront, while trips on the Shitalakshya lead to heritage spots like Panam City. The bustling river ports give tourists a firsthand look at Bangladesh's traditional boat culture and urban river life.

6.5.5 Barisal Backwaters (Kirtankhola & Arial Khan Rivers)

Image 6.6. Guava Market, Barishal, Bangladesh



Source: Google photos, retrieved from <https://barishaltourismcenters.wordpress.com/floating-market-guava-market/>

Often called the “Venice of the East,” Barisal is a water-rich region crisscrossed by rivers and canals. Tourists flock to see the famous floating guava markets, travel by small boats through rural waterways, and immerse themselves in the lush greenery of the delta.

6.5.6 Saint Martin's Island & Naf River Estuary

Image 6.7. Saint Martin Island, Bangladesh



Source: Google photos, retrieved from <https://steemit.com/bangladesh/@habib28rahman/st-martin-s-island-bangladesh>

At southern Bangladesh, the Naf River separates from Myanmar. Boat rides from Teknaf to Saint Martin's Island have got the raft of picturesque estuarine waters short and sweet way country's only coral island. The crystal clear blue water and beach account for the eco-tour weekends region.

6.5.7 Sylhet–Sunamganj Haor Wetlands (Surma, Kushiya, Baulai Rivers)

The haor (floodplain wetland) areas like Tanguar Haor are famous for extensive waters in the monsoon. Tourists go on boat safaries to spot migratory birds, fishing communities and floating villages. The scenic tea garden views surrounding the garden gouncill waters makes these boat tours quite scenic.

Image 6.8. Tanguar Haor, Sylhet, Bangladesh



Source: Google photos, retrieved from <https://tanguarhaor.com/>

6.5.8 Rangamati and Kaptai Lake (Karnaphuli River Basin)

The Karnaphuli River is a tributary of the Chittagong Hill Tracts that drains in Kaptai Lake, a large artificial lake with the hills. They have tricked up scenic boat trips, visits to aboriginal villages and attractions such as the Hanging Bridge. It's still waters off the backdrop of the green hills drive it to

remain an attraction throughout the year.

6.5.9 Padma Riverfront, Rajshahi

Rajshahi is called famous due to the tranquillising scenes of Padma River in sunset. Some of the attractions that the tourists enjoy are boat rides, riverside parks and silk production villages. It is a resort where relaxation can be done because a mixture of cultural heritage and riverscape scenery is fruitful. These water systems serve as tourist attraction because they offer new and exotic experiences to their tourists. Some of the most common riverside tourism is wildlife tours to the Sundarbans, cultural tours along the Buriganga, tours to seek solitude on the Meghna and others.

6.6 Activities of Riverine Tourism

Bangladesh tourism is rich in rivers and the activities that abound through the rivers mirror a number of activities that revolve around the culture, beautiful scenery and river network in the country. These tourism activities give tourists the opportunity to have exclusive experiences with an amalgamation of adventure, relaxation and cultural experiences. Here is a bullet list of most and potential activities of riverine tourism in Bangladesh:

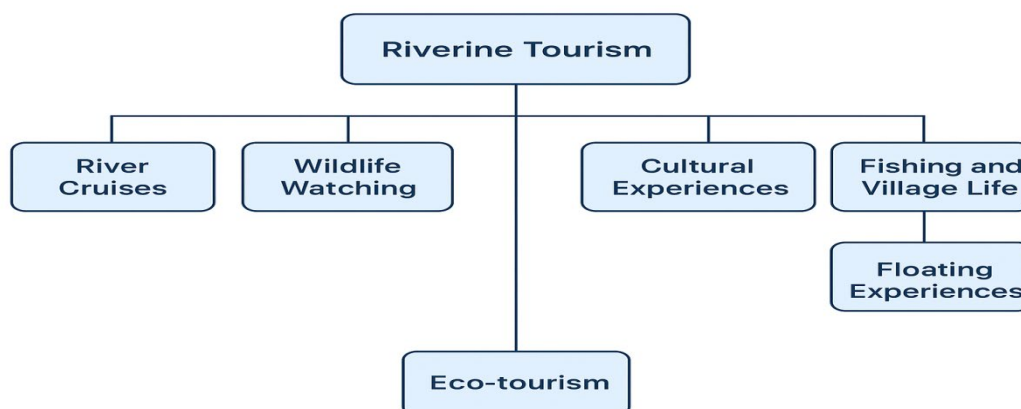


Figure 6.1 Activities of Riverine Tourism (self-developed)

6.6.1 River Cruises

Tourist can explore picturesque and historical river routes, especially on the Buriganga, Padma and Meghna rivers, learning local history and culture of river people. Tourists Enjoy upscale cruise options on major rivers, including the Padma or Jamuna, with amenities to include fine dining, comfortable cabins and guided tours of important landmarks. They may take a short river excursion out to nearby islands, villages and places of historic interest. They may also take a multi-day river cruise through the Sundarbans, largest mangrove forest in the world, to discover its unique biodiversity, including Bengal t

6.6.2 Bird watching and Wildlife watching

Tourist visit wetlands and rivers, like Meghna and Padma where the endangered Ganges River Dolphin can be spotted. They explore rivers and wetlands to observe migratory birds, including storks, kingfishers and eagles, especially Hakaluki Haor or Tanguar Haor. They can discover the wildlife and flora and fauna of Sundarbans, where there are guided tours which focus on the aspect of biodiversity and conservation.

6.6.3 Adventure Activities in Water

Tourist can take boat rides along more calm routes along rivers, with peaceful views of the surrounding countryside and an opportunity to cruise through winding rivers. Traditional boat rides bring a peaceful way of enjoying the natural beauty of the rivers, mainly in the hilly regions or rivers with more rapids. They can take advantage of river rafting especially in the areas that have more rapids, by taking opportunities of river rafting, as an adventure experience.

6.6.4 Historical and Cultural tours

Tourist travel to historically important towns and cities along the rivers, including Sonargaon and Puran Dhaka, where people can learn about ancient architecture, museums, and trade routes through the ages. They may visit boat-building workshops and promote the boat-building tradition in Bangladesh, which is known to people around the world, but is no longer practiced solely by the use of traditional methods. They can see ancient religious monuments on the banks of rivers, such as mosques, temples, and even churches of colonial times. They can also feel the liveliness of floating markets like the ones in Barisal where foods, fish, vegetables are sold by the vendors

directly on their boats.

Category	Activities
River Cruises	- Heritage Cruises
	- Sundarbans Wildlife Cruises
Wildlife Watching	- Dolphin Watching
	- Bird Watching in Haors
Water-based Adventure	- Kayaking and Canoeing
	- River Rafting
Cultural Experiences	- Riverside Heritage Tours
	- Traditional Boat Races (Nouka Baich)
Fishing and Village Life	- Traditional Fishing
	- Riverside Village Homestays
Floating Experiences	- Floating Restaurants
	- Houseboat Stays
Eco-tourism	- Mangrove Walks (Sundarbans)
	- Island Hopping

Table 6.2 Activities of Riverine Tourism (BIWTC)

6.6.5 Fishing and Aquaculture Tours

Tourists could also receive information on fishing, or be shown some methods, most likely net fishing, by local fishermen along rivers like Meghna or Halda. Visitors could also observe fish farms and sustainable practices of the fish farms, which play a vital role in the local economy.

6.6.6 Community-based Experiences

Tourist may live in the rural village, and share the intriguing traditions and practices with the friendly people there, cook the local food. Learn to farm, cook or fish with the villagers. They can participate in local festivals that celebrate life near the river such as boat race during the Bengali New Year (Pohela Boishakh), which is common in major rivers like the Buriganga or Padma. They

can attend local folk music and dancing-geared performances near the river side, including Baul songs, which happen usually inspired by the river and nature.

6.6.7 The floating restaurant and the houseboats

Tourists are free to enjoy a cuisine in floating restaurants (in rivers such as the Buriganga or the Padma) where they can have a dinner even when they move on the river along with the band sceneries. They can stay the night in a house boat and that too in a place like the Sundarbans or the Meghna River where it can be a night to remember as people get to spend the night in all the beauty of nature that the water has to offer.

6.6.8 Eco tourism and Nature Walks

In sites such as Sundarbans, tourists on guided nature walks are taken deep into the mangrove forests to view wildlife and plants, and experience unique ecosystems. Haors (wetlands) like Tanguar Haor can be explored by boat or foot. These regions are the hotspots of biodiversity and are major tourist attraction points especially to those environmental conscious tourists. This kind of tourist visits river islands (chars) where he or she experiences quietive natural environment, studies rural organizations and participates in the farming activities of the locals.

6.6.9 Tours Photography and Filmmaking

The various landscapes in the riverine area, wild life and rural life along rivers can be utilized as locations by professional or amateur photographers. The rivers of Bangladesh, especially Sundarbans and Meghna can also serve as striking backgrounds in documentary or feature film making, particularly in a project which focuses on nature and culture, history etc.

6.6.10 Educational/Awareness Programs

Educational tours dedicated to the conservation of rivers, where tourists can familiarize themselves with the idea that rivers are important to the environment, threats to them (pollution), and what is being done to protect rivers. Visit museums and exhibitions that depict the history of rivers in Bangladesh, the tradition of building boats and the role of rivers in the economy of this country and

its culture.

6.6.11 Boat Races and Festival

Visitors are free to observe or even take part in exciting boat races that are the main forms of attraction at tourist festivals such as Durga Puja or Pohela Boishakh. Attend river festivals that express the cultural and economic significance of rivers which are usually festooned with boats parades, music and food.

6.6.12 Sunset & Sunrise cruises

Tourists can enjoy a relaxing boat ride at dusk to enjoy the sunset over the rivers of which countryside Bangladesh is so beautiful. Early morning boat rides bring a beautiful sight of the sun rising over water, calm surroundings and birds beginning their day.

6.6.13 Rural Craft Shopping

The artisans peddle various local handicrafts, e.g., woven goods, pottery and textiles, to tourists on river banks. A lot of these crafts incorporate river-based subject matter or age-old patterns impacted by the culture of the waterways. The variety of available activities will enable riverine tourism in Bangladesh to accommodate any needs of tourists such as adventure, leisure, culture, or sustainable tourism in general but at the same time spotlighting the key role rivers play in the nation.

6.7 Key stakeholders and their roles in Bangladesh's riverine tourism Development:

Stakeholder theory, as defined by Freeman (1984), suggests that organizations impact and is impacted by different groups or individuals who have an interest in the organization's operations. In Bangladesh's tourism development, stakeholders include a wide variety of entities, all of which significantly influence the tourism environment. As stated by Islam and Al-Amin (2019), significant tourism stakeholders in Bangladesh encompass government entities such as the Ministry of Civil Aviation and Tourism, the Bangladesh Tourism Board, and the Bangladesh

Parjatan Corporation; private sector participants including tour operators, travel agencies, and hoteliers; non-governmental organizations (NGOs); local populations; and the tourists themselves. These stakeholders are essential for the advancement and sustainable progress of tourism in the nation.

Successful tourism growth requires a cooperative strategy among these parties. Islam and Al-Amin (2019) highlight the significance of stakeholder cooperation in promoting tourism, indicating that effective tourism development depends on the engaged involvement and collaboration of all parties concerned. This joint endeavor guarantees that tourism projects correspond with the desires and requirements of the local communities, thus promoting sustainable tourism practices.

Moreover, engaging stakeholders is essential in tackling the challenges and opportunities brought by tourism development. Amin (2018) emphasizes the importance of engaging all relevant stakeholders in the entire tourism development process, as their joint contributions lead to more efficient and inclusive tourism planning. Acknowledging and incorporating the viewpoints of different stakeholders can guide tourism development towards results that are advantageous for everyone concerned.



Figure 6.2 Key stakeholders in tourism development (Constructed by Author)

Stakeholders play a crucial role in implementing riverine tourism development in a given destination. The local or host community typically takes the lead in providing accommodation and meals for visitors, offering guiding services when needed, participating in tourism development initiatives, and showcasing cultural performances for tourists. Business partners contribute by supplying tourism products and services, generating revenue in the process. State governments and non-governmental organizations (NGOs) often spearhead riverine projects, delivering skill development and training programs to enhance the capacity of local human resources. Tourists, in turn, visit the destination, spend money, and seek memorable, lifelong experiences. For riverine tourism to thrive, all stakeholders must coordinate their efforts, adopting an integrated and coherent approach to foster community development and implement effective strategies for its growth. To secure the sustainable implementation of tourism development, input is compulsory from all the stakeholder groups (Ritchie, 1993).

Chapter 7

Analysis of Riverine Tourism in Bangladesh

Analysis of Riverine Tourism in Bangladesh

7.0 Introduction

The analysis of river tourism in Bangladesh is split into two key segments: knowledge obtained from current literature and results gathered from primary data collection. The initial section examines and consolidates academic research, policy papers, and secondary materials to assess the present situation, possibilities, and obstacles of river-based tourism growth in the nation. This establishes a contextual basis for evaluating critical themes like strengths of riverine tourism, impacts of riverine tourism, stakeholders' view and various challenges of riverine tourism. The second segment emphasizes the examination of primary data gathered from different stakeholders, such as local communities, visitors, government representatives, and tourism businesses. This part seeks to document on-the-ground truths, views, and experiences that enhance and support the conclusions drawn from the literature review. Collectively, these analyses provide an in-depth understanding of the elements affecting riverine tourism growth in Bangladesh and assist in pinpointing routes for its sustainable advancement.

7.1 Strengths of Riverine Tourism in Bangladesh

Bangladesh has great potential in the development of riverine tourism due to the tremendous amount of rivers and the diversity of ecosystems as well as the rich heritage of the country. The country has over 8,000 kilometers of navigable rivers and this gives it a unique opportunity to engage in cruise tourism, eco-tours and cultural activities along its shores. The scenic views, traditional river based lifestyles and vibrant localities contribute to a special tourism draw. These strengths make Bangladesh emerge as an emerging destination of sustainable river tourism with the aim of promoting economic growth and preserving its natural or cultural legacy. In this study, the main Strengths of Riverine Tourism in Bangladesh identified by the researcher are pointed below:

7.1.1 Natural Capital and the Biodiversity

Located in Bangladesh, Sundarbans are the largest mangrove forest on the face of the earth, with a reputation as a UNESCO World Heritage Site and constant pillars of riverine tourism in the

country. It is well known for its high biodiversity, beautiful sceneries, and unusual deltaic character. Current research that has evaluated its value points out that the Sundarbans have a recreation and tourism value of approximately US\$130/hectare per year as a cultural ecosystem service (Rahman et al., 2022).

7.1.2 Economic Contribution

Economic significance of river destinations is displayed in research. The Sundarbans contributes about US\$53 million annually to the economy of Bangladesh in terms of tourism services, which is indicative of the extent of demand and economic value to a nation (Rahman & Asaduzzaman, 2021). These findings support the observation of river tourism as high value economy with the potential of growth.

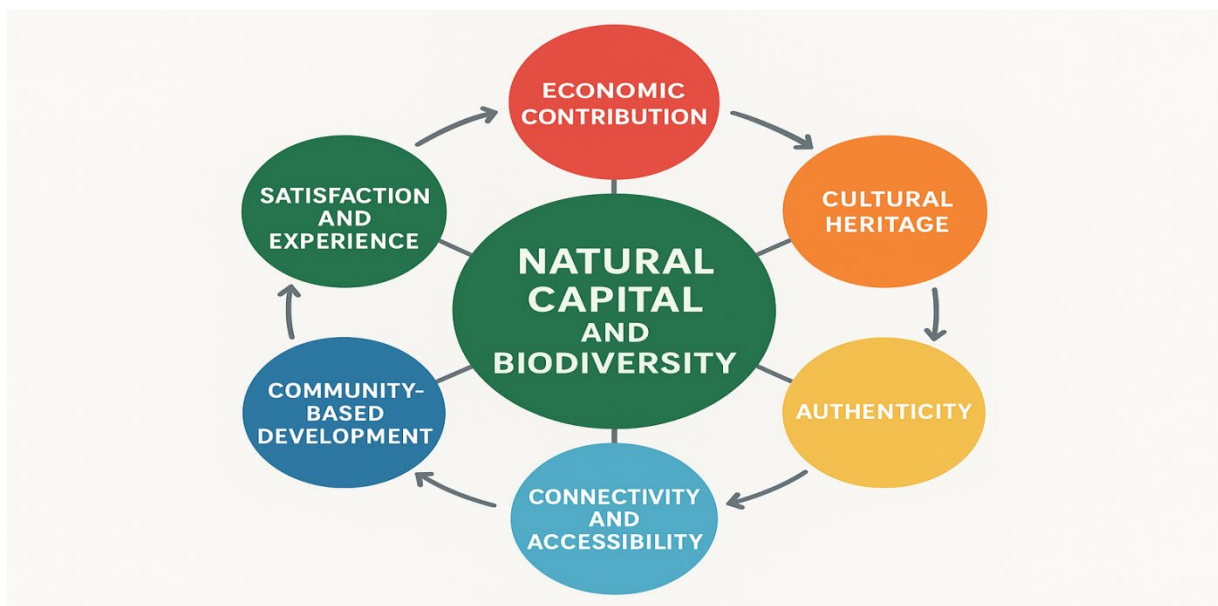


Figure 7.1 Strengths of Riverine Tourism (Bangladesh Tourism Board)

7.1.3 Cultural Heritage, Authenticity

Rivers are also cultural heritage vessels. Vintage paddle steamers (Rockets), riverside settlements, and river markets can be taken as special cultural tourism resources. The example of heritage paddle-steamer cruises establishes how river tourism connects tourists with nostalgia, contemporary tradition and interpretation of landscape (Chowdhury & Ahmed, 2019).

7.1.4 Connectivity and Accessibility

The inland water transport (IWT) provides support to river tourism given the availability of relevant infrastructure. The Protocol on Inland Water Transit and Trade (PIWTT) allows regulating the transit of shared waterways between India and Bangladesh and ensuring their navigability, and the recent updates made with financial support of the World Bank on navigability, safety, and port facilities (World Bank, 2016). This enhances cross-nation tourism and diverse travel schedules as a competitive gain.

7.1.5 Community-Based Development

Studies on CBET in the Sundarbans indicate that tourism in rivers can transform local economies as they can have boat operators, guides, and hosts in homestays etc., and the increased knowledge about conservation (Islam & Bhuiyan, 2018). The sentiments in local communities are positive regarding their involvement in tourism, and benefit-sharing and capacity building.

7.1.6 Community and Community Sustainability

Destination assessments in line with the UNWTO indicators on sustainable tourism demonstrate that managed tourist pressures within Sundarbans can serve health and safety, zonation, and protection efforts making river tourism a relatively good conservation segment (Alam and Sarker, 2017). It is also observed that eco-tourism provides a way to spread environmental education and awareness to local tourists (Baten & Dey, 2022).

7.1.7 Satisfaction and experience

Recent study in Chandpur, one of the main destinations of river tourism, specifies such indicators as the level of attraction, safety, destination management, accessibility as the strongest predictors of visitor satisfaction (Uddin et al., 2024). What this implies is that as with natural and cultural resources, high-quality service is important to unleashing the potential of riverine tourism.

The riverine tourism in Bangladesh has enduring comparative advantages; such as; exceptional natural resources, rich culture heritage, well developed inland transport infrastructure, formative

development capabilities, and consistency with conservation and climate goals (Islam, 2023; Nobi et al., 2021). The strategic analysis is self-explanatory, that is, safeguarding such resources and improving visitor management procedures would transform their natural assets to sustainable competitive advantages in the market.

7.2 Impacts of Riverine Tourism Development in Bangladesh

Riverine tourism in Bangladesh—which includes the Sundarbans, haor wetlands, river-city corridors like Chandpur and Barishal, as well as inland waterways—has garnered increasing interest due to its potential to create revenue, diversify the livelihoods of rural communities, and aid in conservation efforts. Nevertheless, researchers point out that the accompanying economic benefits often bring about social conflicts and environmental challenges that necessitate careful management and planning (Rahman & Asaduzzaman, 2021). The following Figure 7.2 illustrates Economic Impacts of Riverine Tourism development in Bangladesh.

7.2.1 Economic Impacts

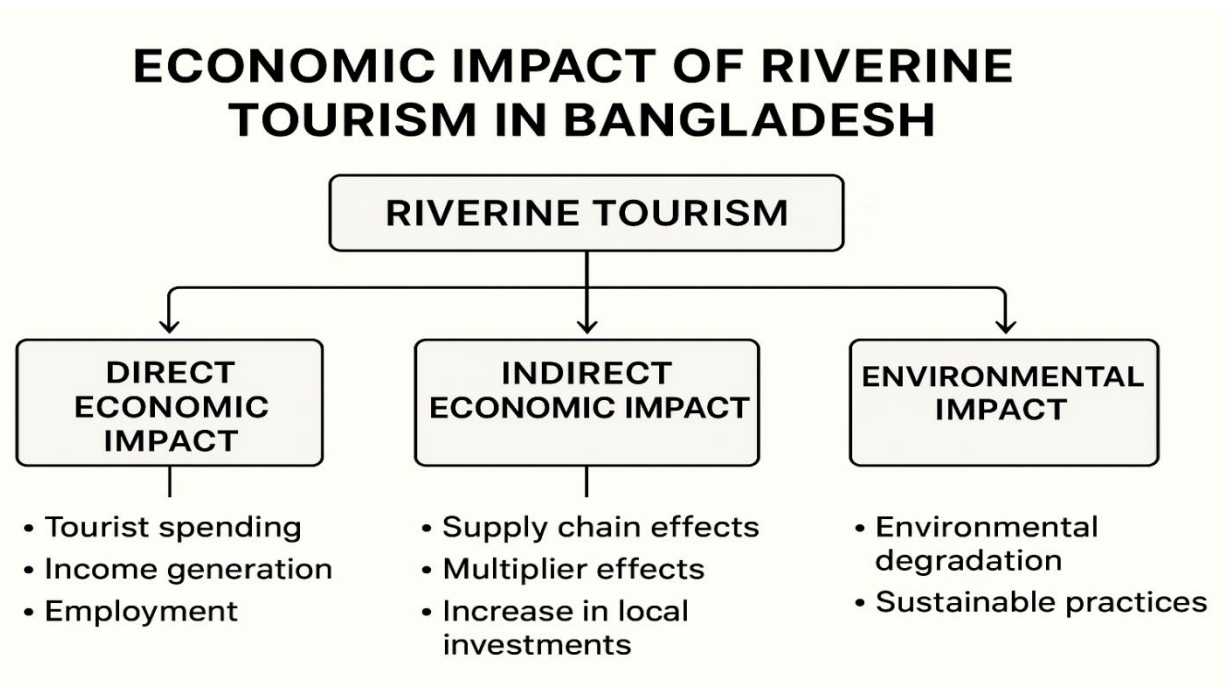


Figure 7.2 Economic Impacts of Tourism

Source: (Developed by Author)

Receipts of direct respectively indirect income generating activities

Studies have found out that tourism in riverine regions is a powerful source of revenues. Through the travel-cost methods, Rahman et al. analyze that tourism contributes to Sundarbans directly and indirectly in the range of about US\$53 million annually (Nobi et al., 2021). At both the national and sectoral level, it is evident that tourism is also developing into a significant contributor to the GDP and foreign-exchange earnings of Bangladesh alongside the potential policies of benefits in the hospitality, transportation, and handicraft industries (Rahman, 2024).

Diversification of employment and living engineering

Studies in the Sundarbans and wetland areas indicate that tourism in riverine ecology leads to micro-enterprises including boats-men, vendors, guide operators, food suppliers, and sellers of crafts, who generate more jobs and provide alternative income in the rural economy (Islam, Howlader, & Islam, 2011; Ahmed et al., 2025). Community-based ecotourism (CBET) projects seem to offer a promising way of directly transferring tourism revenues to households and of providing alternative employment that can lessen pressure on natural resources, when benefit-sharing processes are conducted properly.

Multiplier and infrastructure multiplier

Investment in infrastructure to promote the inland water transport (IWT) such as dredging, jetties and terminals offer two-fold benefits both transporting cargo/passengers and tourism accessibility. Beneficiaries of World Bank-funded projects involving IWT and their related environmental and social reviews have expressly identified tourism as a likely beneficiary in terms of the improved navigability and higher port facilities to promote the private sector investment in tourism services.

7.2.2 Social Impacts

The social effects of riverine tourism growth in Bangladesh encompass better livelihoods and job prospects for local communities, increased cultural interaction between visitors and locals, and heightened community pride in local customs. It fosters social unity, maintains cultural traditions, and enhances awareness of environmental and cultural preservation. The following Figure 7.3 shows the different types of social impacts of riverine tourism development.



Figure 7.3 Social Impacts of Tourism
Source: (Developed by Author)

Community livelihoods, empowerment and tensions

Livelihoods can be enhanced, and a sense of community pride increased when local people take an active role in the planning of riverine tourism and sharing the revenues (Islam et al., 2011; Rahman, 2020). Studies conducted on CBET in Sundarbans show that there is a general feeling of positivity among most residents who enjoy either employment or income generation that occurs in tourism (Islam et al., 2011). Yet, certain reports have shown that social tensions may exist where

benefits are perceived to be unfair or where traditional access to resources is prejudiced by tourism thus resulting in resistance and a possible compromise in long term support of tourism (Siddique et al., 2024).

The culture change and commodification

Tourism introduces cultural contact as well as market forces that have the potential to simultaneously revitalize and commercialize local customs. Boat building crafts, Rivermarkets and riverside festivals have come to be more visible and profitable through tourism, but scholars have warned that there is a risk of performative or exploitative relationships where the authenticity of social life and cultural contexts is threatened (Chowdhury & Ahmed, 2019).

Safety, well-being and services to people

The community benefits of tourism may be put into balance by issues of safety and missing access to civil services. Conditions of overcrowding, lapses in safety equipment installed on the vessel and paucity of emergency response measures pose risks to both tourists and indigenous population. Experimental studies carried out in Chandpur show that the attitude towards safety and service quality is a critical aspect that determines the level of satisfaction in visitors and the possibility of interest by local residents in tourism (Uddin et al., 2024). Hence, an important part of investment in the development of tourism should be directed to the key infrastructure (sanitation, waste, jetties and first-aid).

7.2.3 Environmental Impacts

The Environmental impacts of river tourism development in Bangladesh have both positive and negative impacts. It is able to positively stimulate the environmental awareness, river conservation, and the sustainable utilization of resources. However, unplanned tourism may lead to water pollution, generation of wastes, disturbance of habitat, and deterioration of the ecosystem. The development of tourism should be balanced between the environmental conservation and sustainable management. The following Figure 7.4 illustrates Environmental Impacts of Tourism in Bangladesh.

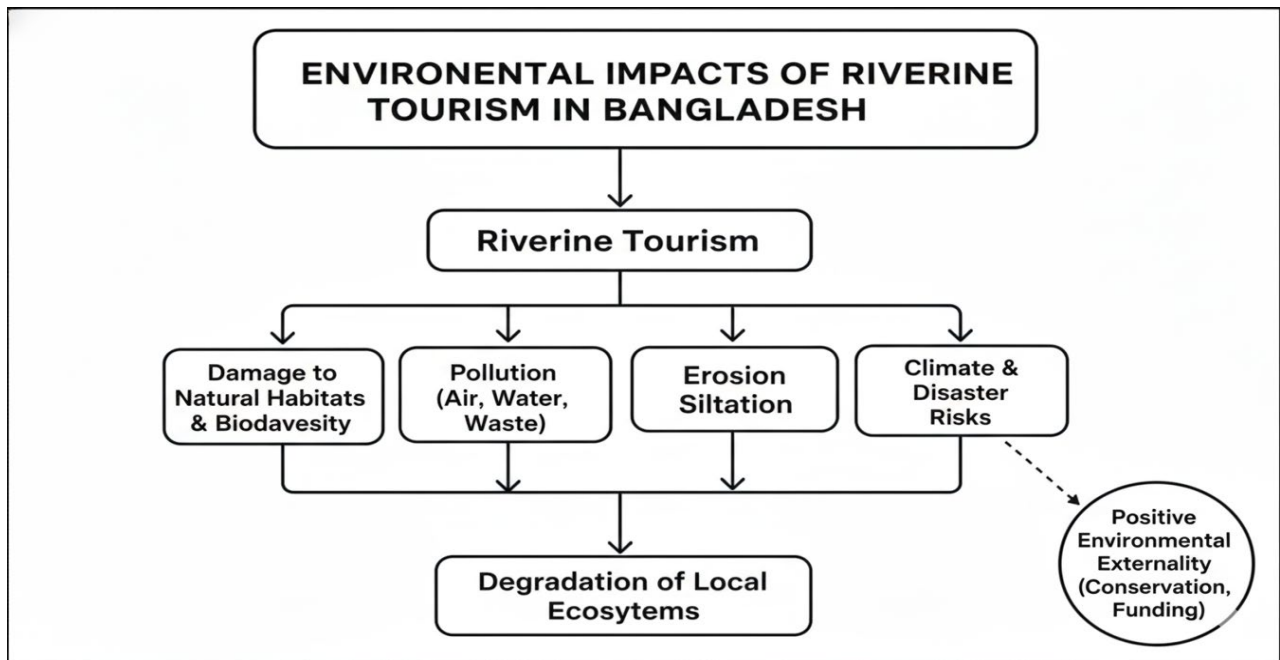


Figure 7.4 Environmental Impacts of Tourism

Source: (Developed by Author)

Damage to natural habitats and threat to biodiversity:

Riverine fragile zones such as Sundarbans and Ramsar-listed haors (e.g., Tanguar Haor) which have attracted tourism can also end up disrupting wildlife due to noise and boat motor activity, trampling vegetation and imposing pressure on species that are sensitive to human presence. Researchers stress the need to plan the carrying capacity, put in place zoning, and implement tight visitor policies to reduce disruptive effects of visiting the habitats on crucial species and untouched habitat (Mahmood et al., 2021; Zahin & Shammi, 2024).

Air pollution, garbage problems, and the deterioration of water pollution:

There is poor waste management linked to tourism boats and onshore facilities which increases river pollution in already compromised waterways. When joined with the industrial and urban effluents (such as in the Buriganga/Turag systems), tourism-associated litter and sewage can only worsen water quality and diminish the attractiveness that attracts tourism to begin with (Hossain et al., 2020; Rahman & Alam, 2021).

Erosion, siltation and navigability problem

Improperly designed docking stations and increased boat traffic can accelerate erosion on the shore and interfere with sediment processes. On the one hand, natural siltation and changes in navigable channels - exacerbated by climate change - put the navigability and safe tourism operation at risk, and lead to a self-reinforcing feedback loop that can drive up costs and derail seasonal operations (Shahjahan & Chowdhury, 2020).

Exposure to threats to climate and disaster risks

The environmental risk with river tourism increases due to cyclones and storm surges and changing patterns of water management. Monitoring of the ecosystems post-cyclones will show damages to mangrove systems, loss of shore facilities, and hence loss in ecological resiliency and carrying capacity of the tourism industry of the particular region unless clear mitigation and adaptation processes are conducted (Islam et al., 2021).

Positive environmental externality

When properly regulated, the tourism earnings can subsidize the conservation activities, surveillance as well as the environmental education. The literature provides some cases, such as entrance fees and guided tourism experiences that led to protective measures, interpretive efforts, and local stewardship and thus, made tourism a source of financial support and awareness of conservation (Nobi et al., 2021).

7.3 Necessity of identifying the challenges of Riverine Tourism Implementation

Aids Enduring Growth

Identification of the challenges will enable tourism planners to ensure long term sustainability by coming up with measures to curb it. Being aware of socio-economic, environmental and managerial risks can avoid the adverse effect on the local community, as well as on the environment (Haque & Sultana, 2022).

Increases Community Engagement

Clarifying the obstacles including the perception of lack of ownership or the limitation of decision-making predisposition can help the design of the program that actively involves local communities. Fair distribution of benefits, and strengthening local support to riverine tourism initiatives are possible when meaningful participation has been achieved (Chowdhury & Kabir, 2021).

Increases Livelihood and Job creation

Many of the riverine projects in tourism fail to create enough employment because of seasons work, lack of training or foreign ownership of the companies. Being aware of these problems will help to create strategies that will maximize the employment opportunities, and support local livelihoods (Islam & Rahman, 2020).

Lowers the threats on the environment and resources Riverine tourism is based very much on the dependence on natural resources such as rivers, wetlands and other abutting ecosystems. When these challenges are identified early, it translates to the enactment of measures that would protect the environment and help instill sustainable management of its resources (Das & Khatun, 2017).

Facilitation of efficient policy and planning

Knowledge would lead to empowerment of policymakers and developers in designing specific interventions, legal frameworks and infrastructure development strategies. This makes implementation of projects in tourism sector more streamlined and reduces the chances of failure (Siddique et al., 2019).

7.4 Challenges of Riverine Tourism Development

The researcher points towards the idea that a sense of ownership should be encouraged in the local communities to ensure that they contribute to the tourism processes (Chowdhury & Kabir, 2021; Islam & Rahman, 2020; Siddique et al., 2019). The experiences of riverine tourism projects indicate that where communal ownership is weak, intragroup interaction suffers and this handicaps both the effectiveness of tourism schemes. The surveys carried out in riverine areas of Bangladesh indicate that a significant portion of adults and youth do not have sufficient knowledge on how to

manage tourism business, which also indicates the low perception of ownership (Haque & Sultana, 2022). Therefore inadequate community ownership is one of the major hindrances to sustainable growth of riverine tourism in the country.

Challenges of developing river tourism in Bangladesh include lack of adequate infrastructures, low standards of safety, lack of qualified personnel, lack of investment, and weak institutional cooperation. Sustainable development of the sector is also brought down by environment degradation, seasonal accessibility problems, absence of marketing and policy support. Some of these key challenges are outlined below.

7.5 Infrastructural Challenges

Infrastructure plays a key role in the growth of tourism because tourism determines accessibility, connectivity, and overall experience of the visitors. Inadequate infrastructures can limit the amount of access to destinations and lead to tourist dissatisfaction (Rahman and Islam, 2022). There are still many major Infrastructural Challenges to the growth of riverine tourism in Bangladesh

Inadequate Accessibility/Transportation:

Inadequate road networks, lack of river transport, and a lack of an effective connection between tourist attractions generate poor visitor access and an uninterrupted functioning of the tourism operations (Haque & Sultana, 2022; Islam & Rahman, 2020).

The lack of quality lodging and hospitality alternatives:

Lack of high quality hotels and guesthouses and other accommodation facilities along the rivers limits the ability to host tourists and thus the growth potential of tourism in the riverine areas (Chowdhury & Kabir, 2021).

Loss Detailed Utility Services:

Unreliable sources of electricity, water, sanitation and communication infrastructure are either detrimental to the experiences of tourists or have adverse impacts on the profitable production of tourism activities (Siddique et al., 2019).

Inadequate Safety and Emergency Services:

The shortage of quality medical services and safety measures, emergency rescue services increases the risks to the tourists and the local population (Karim & Hossain, 2019).

Lack of Infrastructure in Tourism:

The lack of information outposts, decent signage, docking stations, and recreational facilities reduce the allure and ease of managing tourism offerings along rivers (Das & Khatun, 2017).

7.6 Financial and Economic Limits

The expansion of riverine tourism is facing a major challenge in the form of financial and economic constraints. They restrict ability of communities to invest in infrastructures, conduct business, destinations and proper running of activities related to tourism. Below are some major Financial and Economic challenges in Riverine tourism development.

Capped Resources of Funding and Investment:

The small business and the local communities often fail to access loans, grants, and private investments and this limits the development and growth of riverine tourism (Haque & Sultana, 2022; Siddique et al., 2019). Inadequate Revenue Distribution:

The revenue earned through tourism has a tendency to richly benefit external operators or a few stakeholders and may result in economic spillage and little economic advantage to local people (Chowdhury & Kabir, 2021).

Unsteady Income and Job:

The tourist activities in riverine areas are often seasonal and as such cause uneven income, and therefore restrict the sustainability of the economies of individuals in these regions (Islam & Rahman, 2020).

Market Discrepancies:

Irregular demand, inefficient marketing activities, and ineffective tourism promotion decrease the profitability and thwart the long-term economic viability of river tours (Karim & Hossain, 2019).

High Operating Costs:

To participate in the pool of tourism, the high costs of transport, maintenance of boats and infrastructure can be a depositor of the small-scale operators within the local community (Das & Khatun, 2017).

7.7 Environmental Challenges

Environmental issues need to be adequately and efficiently tackled to guarantee sustainable development of riverine tourism. These challenges can impact the destination's natural assets, biodiversity, and overall ecological harmony. Below are some major Environmental Challenges of riverine tourism development in Bangladesh.

Among the issues that affected and have continued to ruin neighborhoods and communities are water contamination and rivers condition.

The decomposition of water quality is augmented by industrial wastes, domestic effluent, and tourism litter, both to the ecosystems and tourism experience (Das & Khatun, 2017; Karim & Hossain, 2019).

Decrease in Biodiversity:

Failure to sustainably manage the various tourist activities, as well as the disturbance of their habitat and over-fishing activities, are some of the major challenges facing the aquatic and riparian biodiversity in riverine areas (Haque & Sultana, 2022).

Possible dangers of erosion and floods:

Tourism development leads to erosion of the riverbank and floods, as the risks correlate with the growth of the tourism infrastructure, putting local people and tourist-related assets at risk (Islam & Rahman, 2020).

Depletion of resources:

The rivers can be depleted by excessive exploitation of the sand, fish, and other resources present in the rivers in order to sustain the tourism and other local activities in them (Siddique et al., 2019).

Lack of sufficient waste management:

Without efficient solid waste and wastewater management systems in touristic sites, the environment, and the health of the population face severe risks (Chowdhury & Kabir, 2021).

7.8 Socio-Cultural Challenges

Riverine tourism focuses on establishing economic, social, cultural and environmental benefits through the protection of local heritage, development of social systems and preservation of natural ecosystems. However, along with these positive effects on the socio-cultural progress, a considerable number of problems also emerge, as discussed below.

There is a lack of participation in touristic activities in riverine areas due to weak community involvement in the activities and a sense of ownership (Haque & Sultana, 2022; Chowdhury & Kabir, 2021).

Having the potential to disrupt local traditions and customs, cultural heritage, and traditional practices, tourism activities run the risk of being used with the unintentional destruction of such by exposing them to new situations and processes.

When benefits of tourism are distributed unevenly, there tends to be tensions among the people which cause community conclusions and marginalization of the deprived population.

Some members of the community can resist the development of tourism because they fear culture shocks or ignorance of the benefits associated with it (Karim & Hossain, 2019).

The lack of expertise and sufficient experience in tourism management and hospitality of local residents reduce their capacity to participate in the riverine tourism initiatives.

7.9 Stakeholder Collaboration Challenges

Sustainable development in riverine tourism is very much dependent on cooperation among the tourism stakeholders. However, it is common in communities to face challenges in fostering this cooperation due to difference in stakeholder interests, lack of mutual trust and poor communication between the concerned parties, as discussed below.

Inadequate Co-ordination of Stakeholders:

The lack of effective communication and coordination among government agencies, private operators, and local community, as well as overlaps in responsibilities, inefficiencies, and delays in the delivery of activities cause some problems (Chowdhury & Kabir, 2021; Siddique et al., 2019).

Competing Interests:

Conflicts arise due to differing priorities among various stakeholders, including the profitability of the private operator objectives that are in contrast to the sustainability goals held by the local communities.

Poor Inclusion of the Local Communities:

Residents in local communities often have little involvement in making decisions and thus the tourism projects in the rivers lose its touch with the community and the locals have no ownership about the projects (Karim & Hossain, 2019).

There is a lack of institutional support on collaboration:

Structures, platforms, or policies that facilitate or foster multi-stakeholder cooperation and partnerships have not been established and thus these issues limit the successful provision of partnerships in the planning and management of riverine tourism projects.

7.10 Institutional and Policy Barriers

The institutional and policy barriers to the development of the riverine tourism in Bangladesh are poor governance, poor policy coordination, weak regulatory frameworks, and weak government

and local agency support. These challenges hinder planning, investment and sustainable management of the river tourism postponing the growth of the sector and equitable share of the fruits. Some of these are discussed below.

Poor Policy Framework:

Lack of proper policies and regulations of riverine tourism leads to a chaotic growth and unstable management methodologies.

Scarce Institutional Resources:

The government and the local institutes often do not have sufficient resources, skills, and manpower to successfully plan, implement, and manage riverine tourism initiatives.

Inefficient Grouping of Utilitarianisms:

The inability to act together of government officials along with local society and privately owned businesses results in duplication of responsibilities, mishandling, and delays in the implementation of projects (Siddique et al., 2019).

Slack Regulatory Enforcement:

Even amidst the presence of current policies, the weak enforcement of environmental, tranquility, and tourism provisions deter the process of proper development of sustainable and responsible tourism.

Poor incentives and support:

Having a limited supply of financial, technical and training support from the government or development agencies repels the people locally to contribute and invest in riverine tourism projects.

7.11 Technological and Informational Barriers

In the present era that is technology oriented, lack of adequate technology and informational tools can significantly hinder successful development of sustainable riverine tourism. These obstacles have to be identified and overcome in order to assure sustainable longevity, effective management and growth in river tourism projects. Some of these Technological and Informational obstacles are illustrated below.

Limited Access to the Digital Resources:

Poor internet connectivity, the lack of an online reservation system, inability to communicate using digital platforms, among others are barriers to accessibility and marketing possibilities of riverine tourism (Haque & Sultana, 2022; Islam & Rahman, 2020).

Website Content Does Not Promote Tourism:

The sparseness of information centers, maps, signage, and promotional materials reduces information of destinations in the riverine area and weighs down the attractions (Chowdhury & Kabir, 2021).

Minima Utilization of the Modern Technology in Operations:

Many of the local operators do not possess the experience or means to introduce technology to use reservation systems, send payment options, safety, and customer service, which also hinders reliability and competition (Siddique et al., 2019).

Scarcity of data to guide Planning and Management:

The underdeveloped nature of collecting tourism statistics, visitor perception, and environmental information hinders evidence-based tourism planning and successful management of the riverine tourism projects (Karim & Hossain, 2019).

Poor Training in Tech enabled:

The local communities and small business operators are often not provided with training in the field of technology application to the promotion of tourism, marketing and management of operations which makes it impossible to engage properly (Das & Khatun, 2017).

7.12 Analysis of the challenges to effective riverine tourism development in Bangladesh

7.12.1 Main Challenges of riverine tourism Development in Bangladesh

Even though, riverine tourism in Bangladesh has a great potential related to tourism and economic improvement, a number of challenges are a part of their deployment. As argued above, some of these challenges are indicated in the existing literature. In the field survey, respondents were asked to answer multiple-choice questions concerning the challenges of riverine tourism development in Bangladesh, with the option to select more than one response. The results of this survey have been analyzed and are presented below, accompanied by suitable graphical representations.

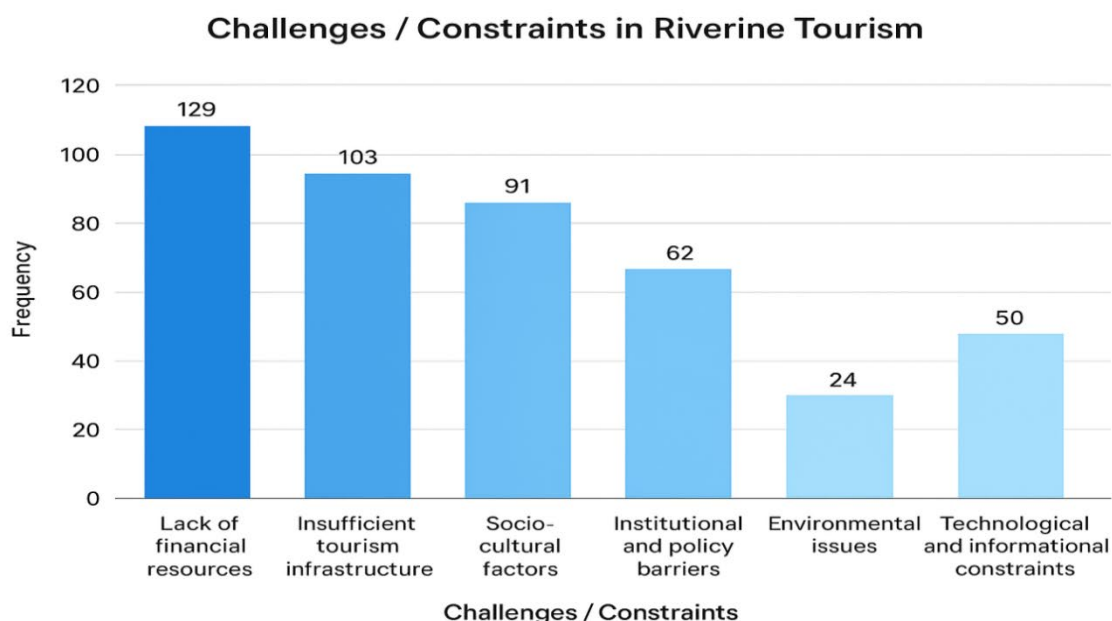


Figure 7.5: Main Challenges of Riverine Tourism Development in Bangladesh

Source: Survey data analysis

A lack of financial resources has been recognized as a primary obstacle to the growth of riverine tourism, with 61.5% (N=210) of participants noting that limited funding is a significant constraint. Furthermore, 49% of participants pointed out that insufficient tourism infrastructure—including transportation, accommodations, and other vital services—is a considerable hindrance. Additional challenges mentioned include socio-cultural factors (43.5%), institutional and policy barriers (29.5%), environmental issues (11.5%), and technological and informational constraints (24%), all of which contribute to the difficulties faced in developing riverine tourism.

7.12.2 Economic Impacts of Riverine Tourism of Riverine Tourism Development in Bangladesh

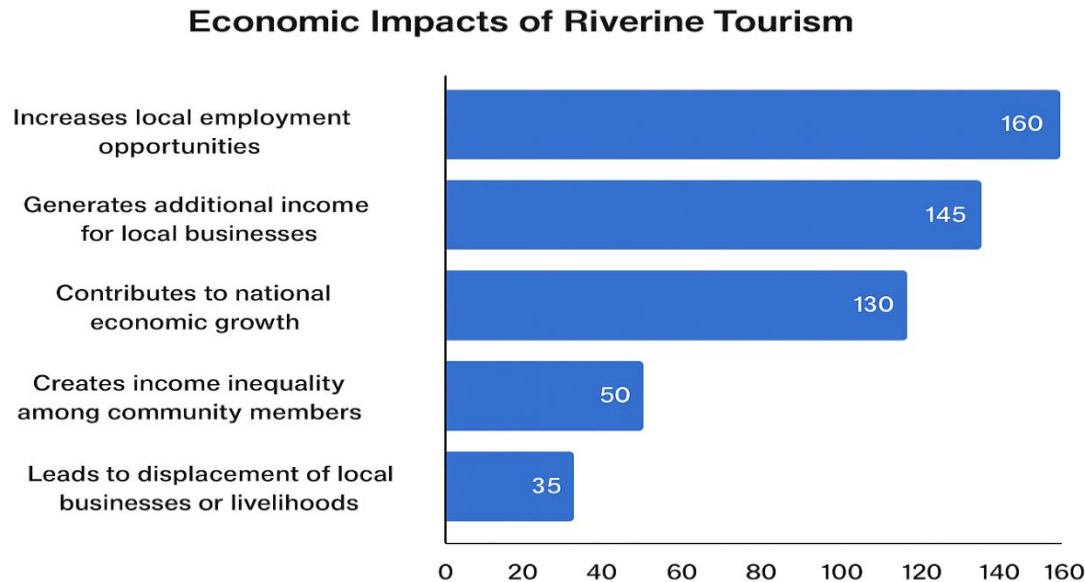


Figure 7.6: Economic Impacts of Riverine Tourism of Riverine Tourism Development in Bangladesh

Source: Survey data analysis

Enhanced employment generation has been cited by 76.2 percent (N=210) of the respondents as the most significant economic gain of riverine tourism in the area because tourism will create a lot of job opportunities to the locals. On the same note, 69 percent of respondents also

noted that riverine tourism brings more income to other businesses in the locality thus portraying its significance in enhancing businesses revenues in the region.

In addition, 61.9 percent of the respondents made contributions that riverine tourism promotes national economic growth, implying that the benefits are appreciated outside the community it represents. There are also some negative effects observed. The lack of even distribution of the financial side of tourism was indicated by 23.8% of the respondents with income inequality among members of the community. Also, 16.7 percent of the participants claimed that tourism-related to rivers can contribute to the social displacement of local businesses or livelihoods, showing an insignificantly smaller, but still material negative impact on some units.

All in all, the results indicate that riverine tourism has more positive economic consequences mainly to the employment and income generation aspect and there are other issues that ought to be addressed when it comes to inequality and displacement associated with this tourism.

7.12.3 The Proposed Resources that will eliminate those difficulties:

Respondents were presented with a couple of questions with regard to how they can overcome the challenges and the resources necessary to tackle these challenges. The highlights are as follows:

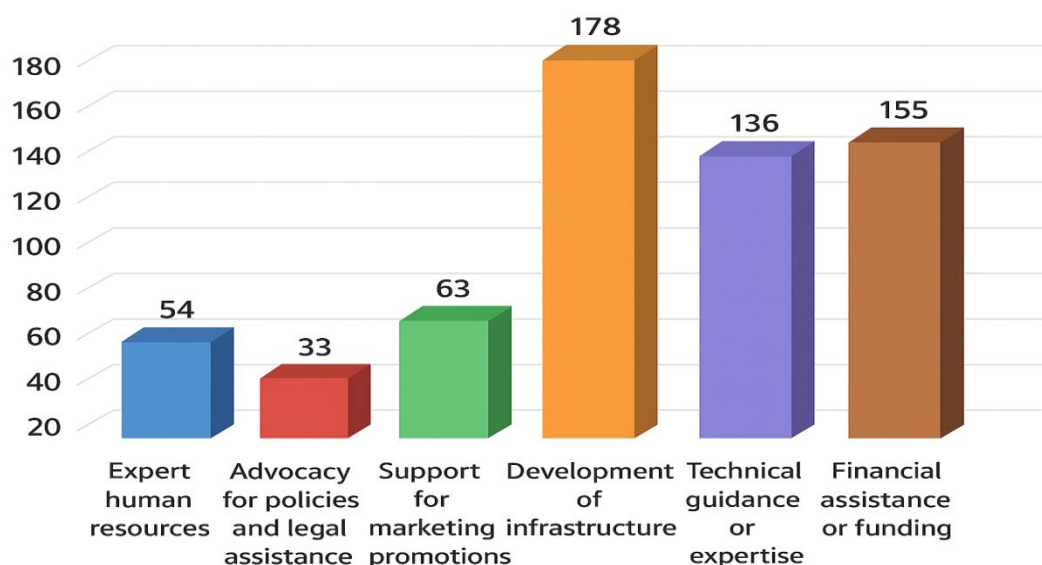


Figure7.7: Resources Needed to Overcome the Challenges of Riverine Tourism Development.

Source: Survey data analysis

The respondents identified several key resources necessary for the development of riverine tourism in Bangladesh. Most of them (84.8%) argued about the importance of development of tourism infrastructure, as it seems that it was necessary to ensure improvements in terms of physical facilities and organizational capacity. Contribution of the financial assistance or the finances also depicts a better priority as 73.9 percent of the respondents emphasized that it is a necessity to the tourism ventures. The professional knowledge/expertise and technical direction were also considered to be essential by 64.7 percent of the respondents which shows that technical expertise and professional dexterity is considered important in planning and execution of tourism activities. Other assets, like marketing and promotional support (30%), skilled human resources (25.7%), and advocacy of policies and legal assistance (15.7%) were not often cited but are still essential to stable and well-planned tourism destinations.

A general observation shows that according to stakeholders, the infrastructure development and financing are the most essential resources towards the development of riverine tourism in Bangladesh, with technical expertise, human resources, marketing and legal support being less important but still of importance.

7.12.4 Proposed Initiatives to Overcome the Challenges of Riverine Tourism Development:

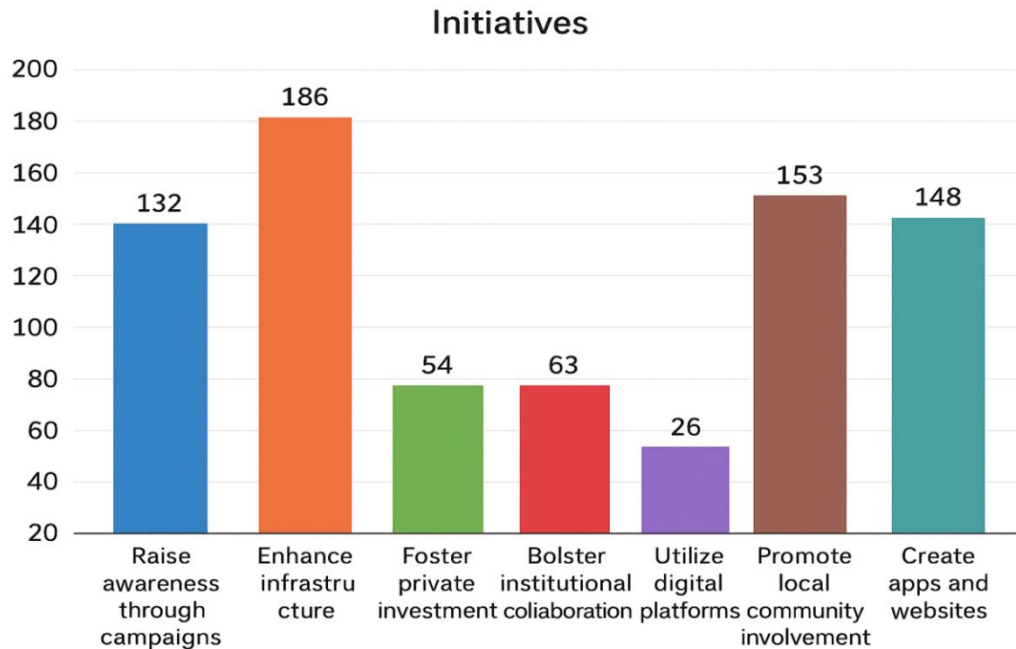


Figure 7.8: Proposed Initiatives to Overcome the Challenges of Riverine Tourism Development

Source: Survey data analysis

The respondents gave some recommendations to assist and improve the development of riverine tourism in Bangladesh. Improving tourism infrastructure was seen as a priority by 88.6 percent of interviewees a point that indicates the sensitivity of physical man-made facilities as well as organization capabilities. Incorporating the local communities was also rated high among the priorities, whereby 72.9 percent of the respondents indicated importance of having local involvement in tourism projects. The creation of apps and websites using the digital technology (70.6%) was also supported by a considerable percentage of respondents who understand the relationship between technology and ease of accessing information as well as stimulating riverine tourism. The participants used in 63% of cases the idea to raise the awareness through campaigns, as that is the way to promote sustainable tourism in a mild manner. Collaboration between governmental organs and the activity of the business community were also considered important, as with 30.0% and 25.5%, respectively, of the respondents showing their agreement with the given statements. Using wider digital platforms was the least noted strategy with 12.4 percent forming the consensus.

7.13 Views and Perspectives of Stakeholders on the Development of Riverine Tourism in Bangladesh

Stakeholder perspectives inform the progress, operation, and the uptake of riverine tourism at the destination level. In Bangladesh, a multiplicity of interests and perspectives held by a variety of actors e.g. local communities, forest and transport agencies, private operators, tourists, NGOs/INGOs are influenced by factors such as livelihoods, conservation objectives, safety considerations and economic opportunities in the market. As depicted in the available literature, there are some commonalities (such as the estimated potential of tourism in generating income) as well as contradictions (such as environmental and safety concerns, the lack of even benefit distribution) among the stakeholder groups (IUCN, 2014; Siddique et al., 2024).

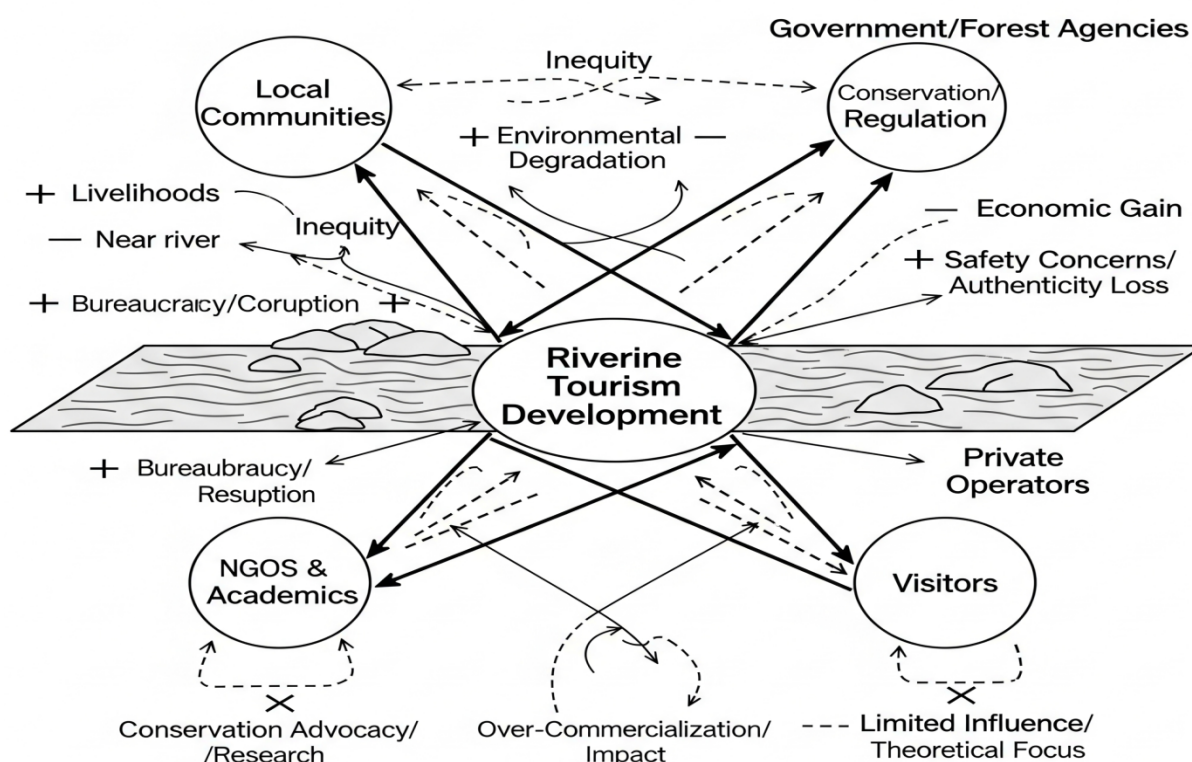


Figure 7.9 Views and Perspectives of Stakeholders on the Development of Riverine Tourism in Bangladesh (Bangladesh Parjatan Corporation)

Local Communities

Riverine tourism is regarded positively when they generate actual income and employment such as boat services, homestays, guiding, as well as handicrafts. However, benefits ought to be shared equally and traditional resource use preserved. Studies of Sundarbans and haor wetlands show that co-management and community-based ecotourism (CBET) increase the receptiveness of visitation and compliance with conservation laws when benefits are apparent (IUCN, 2014).

Governmental Bodies and Administrators of Protected Areas

Forest departments and officials of wildlife reserves realize the economic rewards of tourism but they focus on the preservation of biodiversity, mitigation of risks, and controlled access. Tourism has flourished in line with conservation zoning, safety and waste standards, and funding monitoring initiatives have been made available, yet unregulated visitation remains a problem (Siddique et al., 2024; Mahmood et al., 2021). Inland water transport authorities only give tourism a priority in the cases where it promotes navigability and increases efficiency of freights.

Tourism Business Owners and Individual Operators

Cruise lines, travel agencies and local tour guides regard river tourism as an opportunity to grow, but they note that the river conditions restrict the season, safety regulations, marketing is not sufficient, and demand information is not available. Operators note the greater development of the jetty infrastructure, the transparent safety precautions and marketing support but state that deregulation can work against conservation and safety goals (Uddin et al., 2024).

Visitors (Domestic and Foreign)

Tourists appreciate the authentic natural and cultural experiences that riverine tourism provides (e.g. river cruises and haor stays), however, dissatisfaction and low rates of return are linked with issues of safety, quality of services provided and environment. Domestic passengers are often

seeking cost-effective adventures and focusing on cleanliness, reliable transportation, and educational experience (Uddin et al., 2024).

NGOs, INGOs, and Academics

NGOs and international organizations are in favor of CBET, joint management and skill enhancement to develop sustainable tourism that will help preserve vulnerable ecosystems. The projects like IUCN Tanguar Haor one align the community demands with environmental sustainability, but the researchers emphasize the significance of data-based approaches to planning, including the perspectives of multiple stakeholders (IUCN, 2014).

7.14 Potentials of Riverine Tourism Development in Bangladesh

With more than 800 rivers that are intrinsically woven throughout the country, Bangladesh has a unique chance of tourism with the elements of ecology, culture, and connectivity. This potential has largely remained under utilised but is becoming increasingly popular in recent literature and policy debates (Islam, 2023). Riverine tourism is an option that is being developed as a strategic tool to utilize the natural waterways of Bangladesh in terms of sustainability, equitable creation of livelihoods and tourism services.

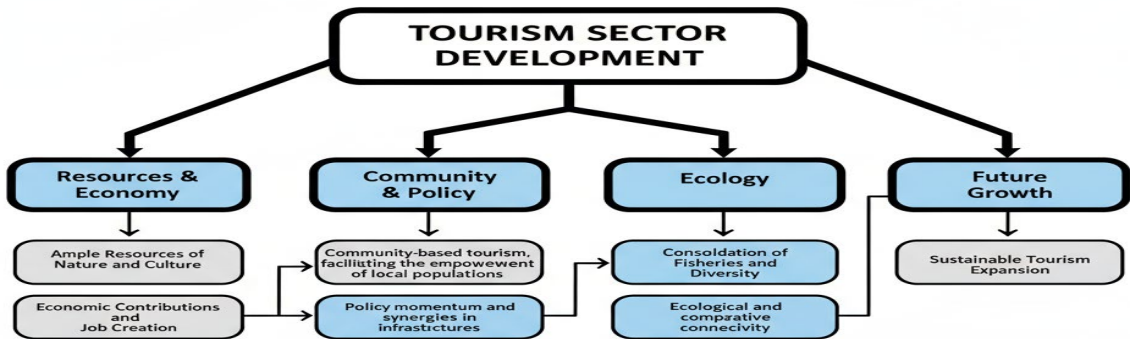


Figure 7.10 Potentials of Riverine Tourism Development in Bangladesh (MOCAT)

Ample Resources of Nature and Culture

The famous river networks in Bangladesh, especially Sundarbans mangroves, the Nikli Haor wetlands, and colorful riverfront societies provide a good foundation of tourism. In one example, Nikli Haor is easier to access, and has added seasonal appeal, which has made people visit it on multiple days to enjoy its scenic locality and culture therein (Wikipedia, 2025). Similarly, in Patuakhali, there is the Water Museum where the country promotes its identity with a heritage of rivers. This adds greater depth to its educational aspect of tourism (Wikipedia, 2025). These aspects demonstrate the potential resources which are not being capitalized on by river tourism.

Economic Contributions and Job Creation

The economic analysis of the Sundarbans shows the possibility of riverine-based tourism; it is estimated that tourism may generate about 53 million US dollars each year, which is a very strong willing-to-pay nature-based and the wildlife and ecotourism experience (Nobi et al., 2021). Based on a thorough analysis, it is seen that river tourism serves to raise local economies through generating income in its accommodation services, transport services, crafts and foods, making it an important and significant contributor to GDP and growing rural areas (Gan et al., 2023).

Community-based tourism, facilitating the empowerment of local populations

Strategies that consider community participation play a key role in the sustainable exploitation of the potential of the riverine tourism. The example of Maheshkhali shows that where community-based tourism (CBT) is accompanied by active engagement by stakeholders, it can have an economic benefit, preserve culture, and make an environmental impact (Suchana & Munne, 2020). Multiple theoretical frameworks on community-oriented rural tourism in Bangladesh also make mention of how CBT serves to create value in rural economies in the form of inclusive tourism decisions and locally-gearred tourism (Islam, 2021).

Consolidation of Fisheries and Diversity

New models are emerging that combine fisheries and tourism-referred to as fisheries-based ecotourism are also becoming popular. Such practices utilize local fishing legacies, angling, and seafood culture to develop unique tourism products, such as fishing tours, in fishermen huts, and seafood tasting (MDPI, 2020). The riverine people are friendly and, as such, the initiatives will be a scalable way to improve livelihoods and diversify tourism.

Policy momentum and synergies in infrastructures

The adoption of the River Tourism Guidelines (2021) by the government will mean increasing recognition of river networks as tourism corridors. In the event that these guidelines are implemented, it has the potential to enhance navigability, enhance riverbank protection, create tourist infrastructure, and integrate river tourism with multi-modal connectivity and agribusiness (Observer, 2025). Such policy support could make private investment and strategic development of riverine tourism sites possible.

Ecological and comparative connectivity

Bangladesh has an opportunity to compete with river tourism on a worldwide programme, just like current famous rivers like the Ganges, the Nile or the Amazon. The waterways of the country can be arranged into themed routings that would link biodiversity, heritage, markets, and festivals- so that there would be unique and culturally enriching experiences (Wikipedia, 2025). Simultaneously, tourism that entails the development of islands, coasts, or wetlands (like that of the Muhuri Project or floating haor villages), reflects and echoes both ecological and cultural dimensions, and are amenable to development into tourism projects(Islam, 2023; Ahmed, Acharjee & Urmila, 2025).

Chapter 8

Data analysis and Discussion of Result

Data analysis and Discussion of Result

Section 1: Frequency statistics

8.1 Demographic profile

The primary data for this study were gathered through a questionnaire survey consisting of 28 questions presented in various formats. Certain questions focus on the demographic characteristics of the respondents, while others evaluate the potential contribution of riverine tourism to sustainable tourism development (STD) and examine its social, cultural, and economic impacts of riverine tourism in Bangladesh. Initially, data was collected from 221 participants; however, some questionnaires were incomplete. Ultimately, the researcher identified 210 usable questionnaires, and the analysis is conducted based on the responses from these 210 questionnaires.

Table 8.1: Socio-demographic profile

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	129	61.4	61.4	61.4
	25-34	62	29.5	29.5	91.0
	35-44	9	4.3	4.3	95.2
	45-54	10	4.8	4.8	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

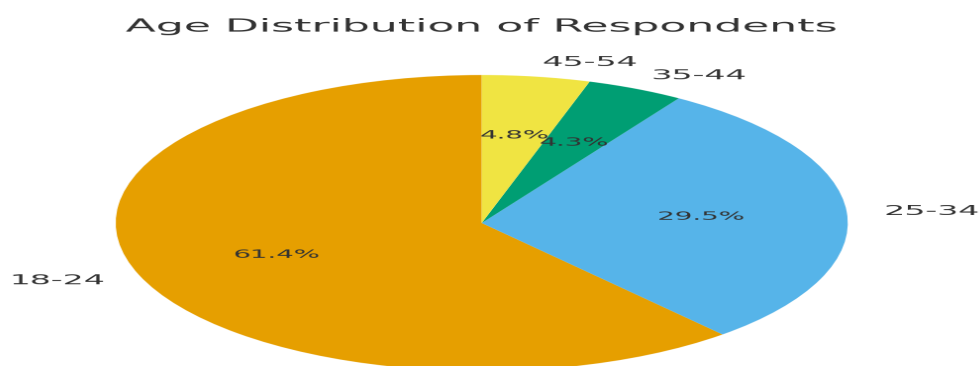


Figure 8.1 Age distribution of Respondents

Out of 210 participants, the greatest focus is 18-24 years of age, comprising 129 people (61.4 percent). The 25-34 brackets is in the second position with 62 respondents (29.5%). Aged 18-34 have a total of 90.9 percent of the sample. 9 respondents (4.3%) are aged 35-44 and 10 people (4.8%) are between 45-54. On aggregate, 61.4 percent of them are below 25 years, 91.0 percent below 35 years, and the youngest being 18 to 54 years.

Table 8.2: Socio-demographic profile (Gender)

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	119	56.7	56.7	56.7
	Female	91	43.3	43.3	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

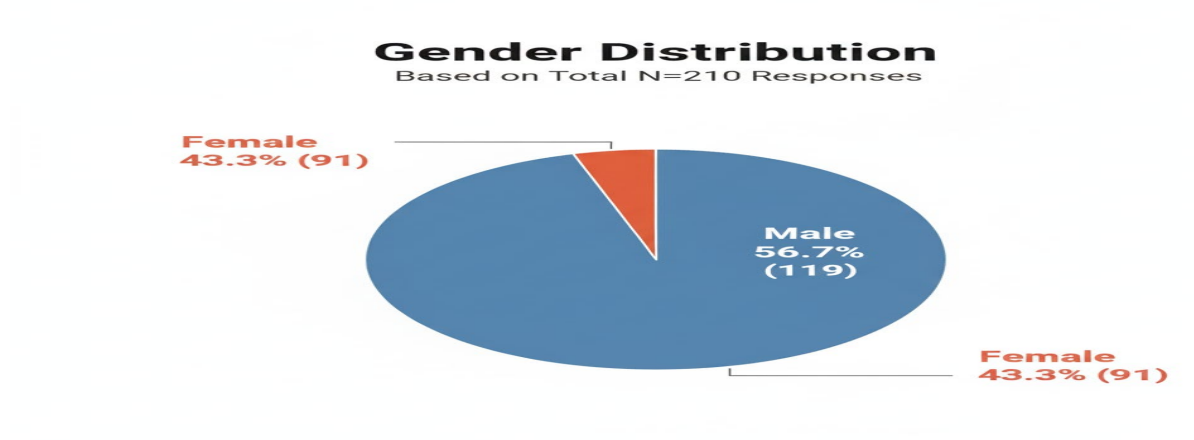


Figure 8.2: Gender distribution

Out of 210 respondents, 119 or 56.7 percent are male and 91 or 43.3 percent are female. Missing responses are zero; therefore Percent and Valid Percent are the same. The totals amount to 56.7 percent after males and 100 percent after females, producing an all-hands-on-deck of about 57 to 43 percent of men male to female.

Table 8.3: Marital Status of Respondents

Marital Status					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	143	68.1	68.1	68.1
	Married	67	31.9	31.9	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

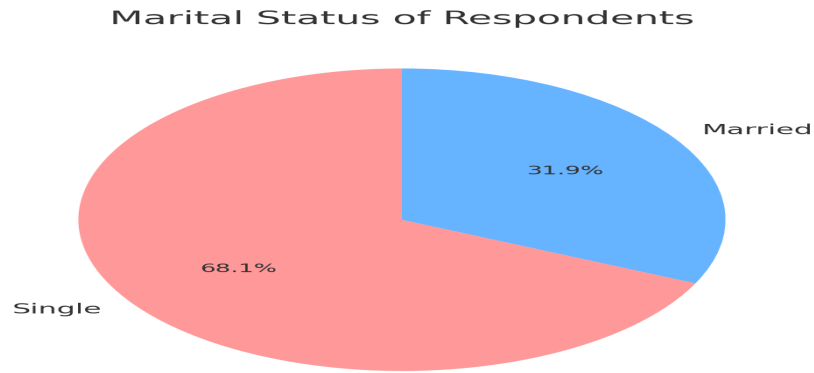


Figure 8.3: Marital Status of respondents

Out of 210 respondents, 143 are single and this constitutes 68.1 per cent, and 67 married representing 31.9 per cent. The cumulative percentage is used to reveal that the percentage of married respondents makes up the total 100 percent of the sample. Generally, most participants are singles a fact that reflects the previous age distribution that had the majority of the respondents fall within the ages of 18-34 years.

Table 8.4: Education level of respondents

Education Level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary	20	9.5	9.5	9.5
	Bachelor's Degree	120	57.1	57.1	66.7
	Master's Degree or higher	70	33.3	33.3	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

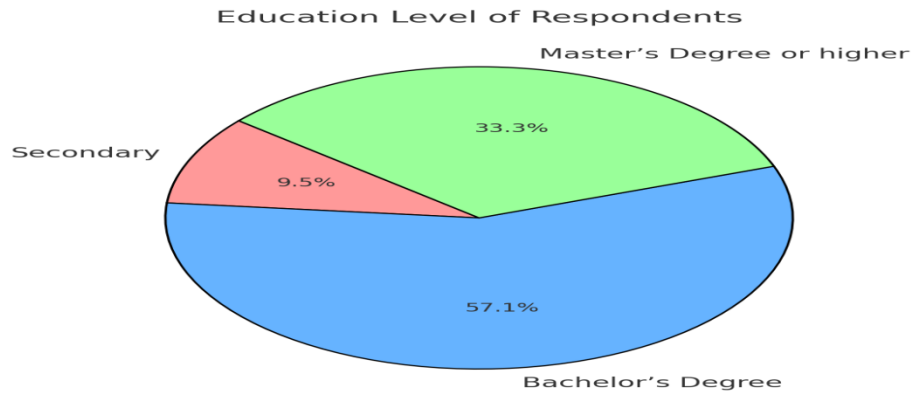


Figure 8.4: Education Level of respondents

Out of the sample of 210 respondents, the highest number of people by far is the group who possess a bachelor degree, with 120 people or 57.1 percent of the sample cases. They are followed by those with a master's degree or above, which constitute 70 respondents (33,3%) in number. The fewest group has 20 (9.5%) who have attained secondary education. Collectively, a greater proportion (66.7%) of the respondents has at least a bachelor degree and thus rather high-degree attainment among the respondents can be said to exist.

Table 8.5: Employment Status of Respondents

Employment Status					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed by government sector	67	31.9	31.9	31.9
	Employed by private sector	15	7.1	7.1	39.0
	Self employed	118	56.2	56.2	95.2
	Unemployed	10	4.8	4.8	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

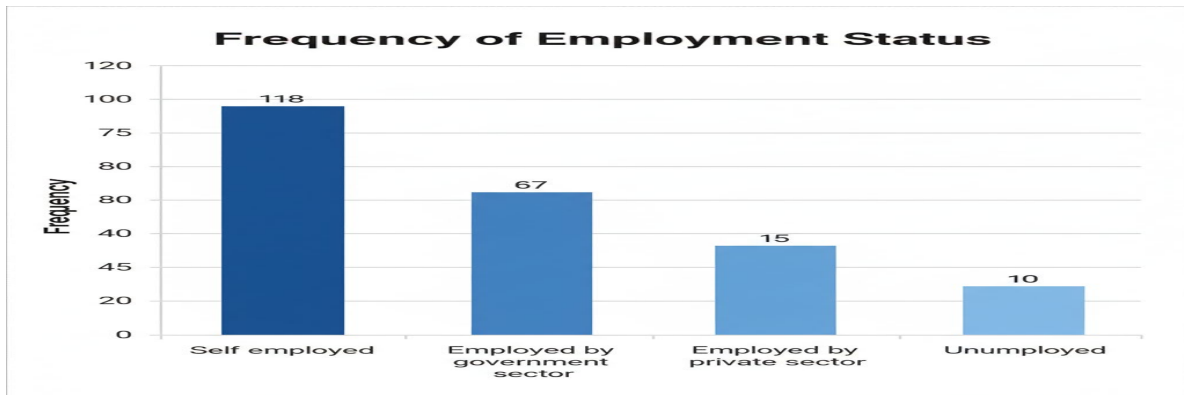


Figure 8.5: Employment Status of Respondents

Out of the 210 respondents, self-employed people take the most significant portion of employment at the rate of 118 people, totaling 56.2 percent. The second largest group consists of individuals that work in the government and it includes 67 participants (31.9%). In the private sector are 15 respondents (7.10%) and the least number is of 10 individuals representing those who are unemployed (4.80 %). Almost all the respondents (95.2 percent) are engaged in some type of employment, which implies a high employment rate in the sample taken.

Table 8.6: Income level of Respondents

Income Level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 10,000 BDT	118	56.2	56.2	56.2
	10,000–30,000 BDT	36	17.1	17.1	73.3
	30,001–50,000 BDT	28	13.3	13.3	86.7
	50,001+ BDT	28	13.3	13.3	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

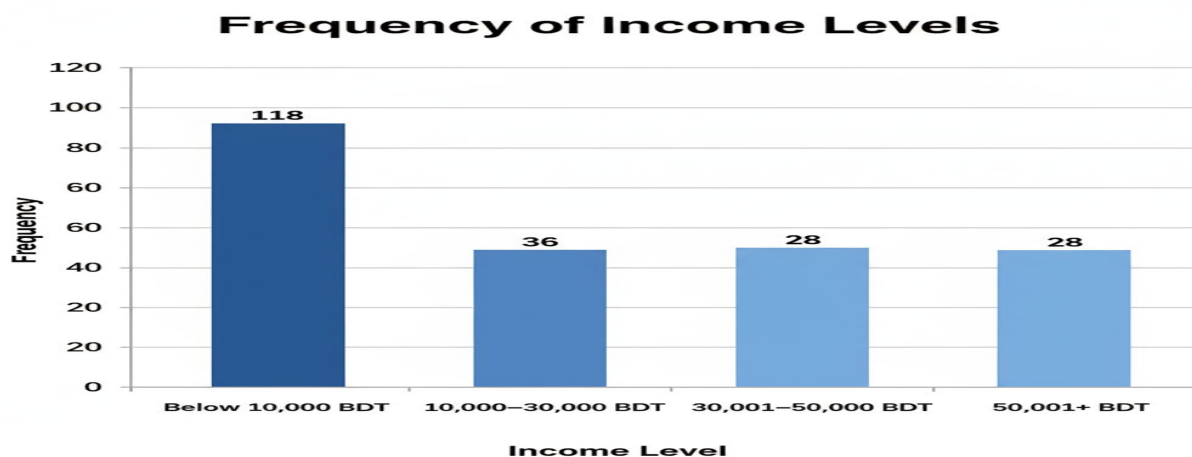


Figure 8.6: Income level of Respondents

Out of the total who responded, 210, the highest income bracket of the individuals was those with less than 10,000 BDT, i.e., 118 members or 56.2 percent of the sample. After this category falls those obtaining between 10,000 BDT and 30,000 BDT, which is equal to 36 people (17.1%). The sample size of the income bracket of 30,001 to 50,000 BDT and 50,001 onward category and are 28 in both the categories, constituting 13.3 percent each. Overall, 73.3 percent of participants make up to 30,000 BDT, indicating that the respondents fall within the lower and middle-income device brackets.

Table 8.7: Resident of Respondents

Residence					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Urban	173	82.4	82.4	82.4
	Rural	37	17.6	17.6	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

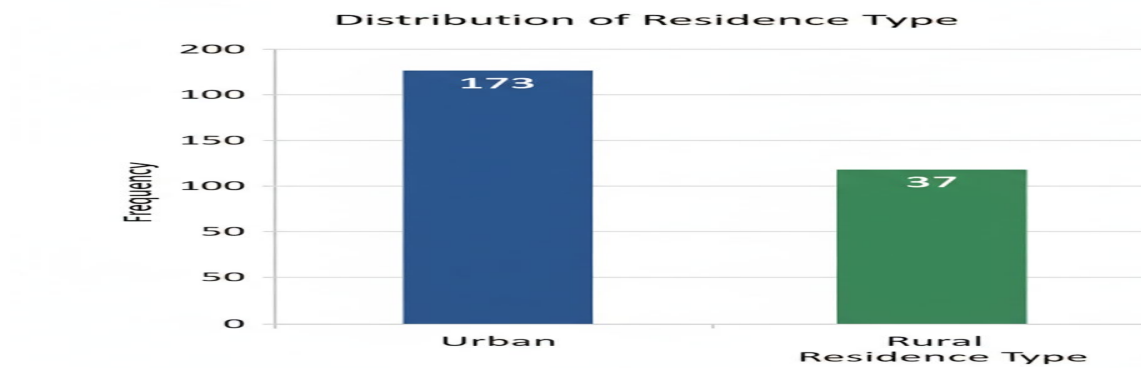


Figure 8.7: Resident of Respondents

Out of 210 respondents interrogated a large number of them are urban dwellers with 173 interviewees, who constitute 82.4 percent of the total interviewees. The remaining 37 patients (17.6%) are rural. Overall, the proportion of urban background participants is 82.4%, which shows that the sample population is mostly urban.

Table 8.8: The Travel purpose of the respondents in tourism

Travel Purpose					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Leisure	116	55.2	55.2	55.2
	Cultural/Heritage Interest	62	29.5	29.5	84.8
	Ecotourism	12	5.7	5.7	90.5
	Research/Work	20	9.5	9.5	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

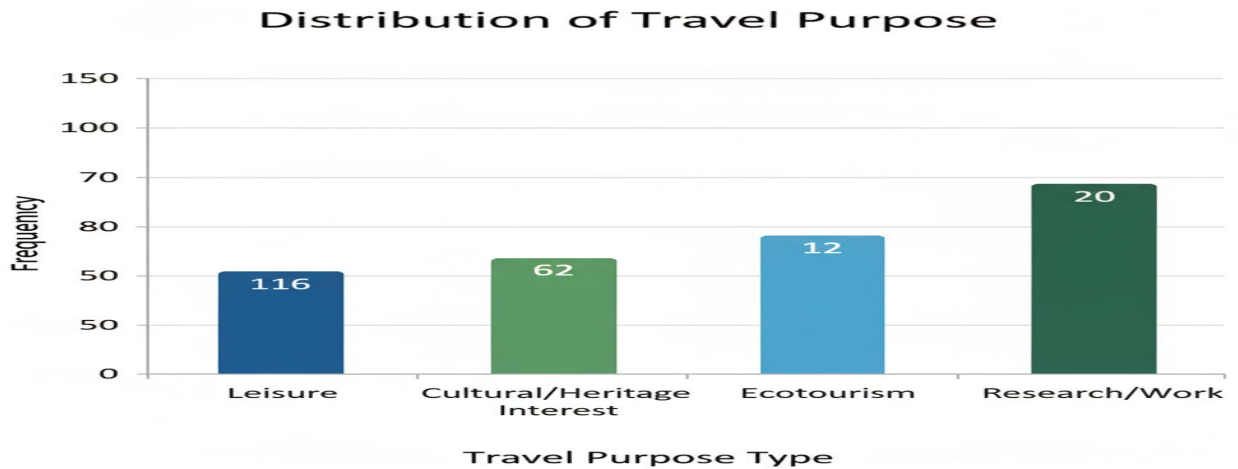


Figure 8.8: The Travel purpose of the respondents in tourism

Out of the 210 participant surveyed, leisure is the most common cause of travel as reported by 116 people (55.2 percent of the total). The second largest group consists of travelers going to their cultural or heritage destination, 62 participants (29.5%). Travelling abroad in search of research or work makes 20 people (9.5 %), whereas the least numerous one is ecotourism that has 12 members (5.7%). Overall, 84.8 percent of respondents make trips to entertain or cultural / heritage purposes, indicating a strong sense of recreation and cultural / heritage in the group that is doing surveys.

Table 8.9: The Travel Group of the respondents

Travel Group					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Alone	31	14.8	14.8	14.8
	With family	94	44.8	44.8	59.5
	with friends	82	39.0	39.0	98.6
	With organized tour group	3	1.4	1.4	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

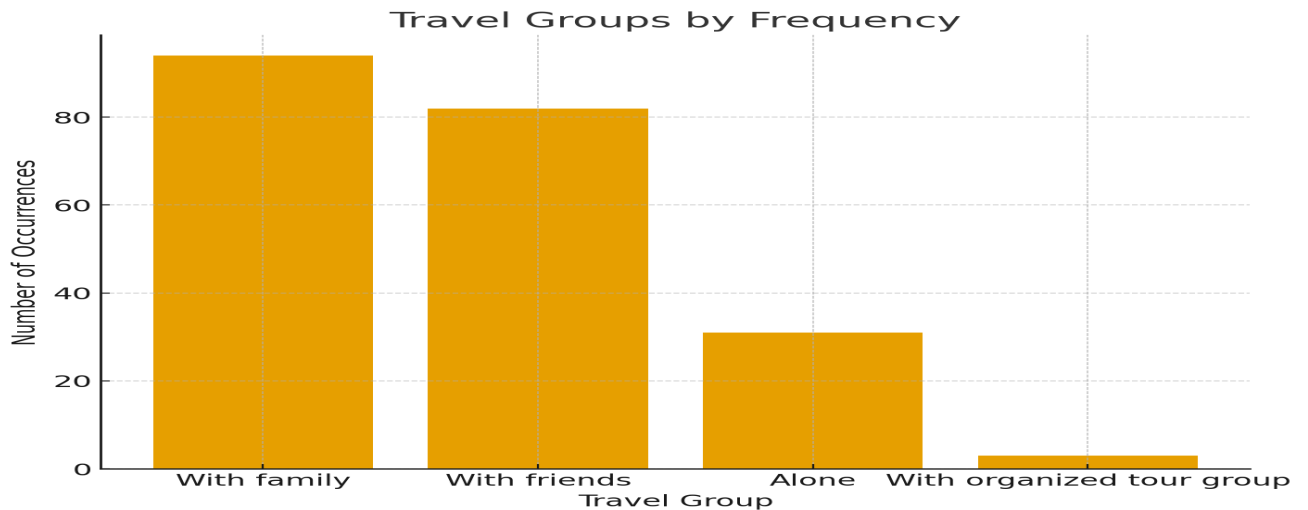


Figure 8.9: The Travel Group of the respondents

Out of the 210 participants, the largest segment consists of those traveling with family, totaling 94 people, which represents 44.8% of the sample. Next, there are respondents who travel with friends, amounting to 82 individuals (39.0%). Meanwhile, 31 respondents (14.8%) prefer to travel alone, and the smallest group, which travels with organized tour groups, comprises just 3 individuals (1.4%). In total, 98.6% of respondents choose to travel with either family or friends, highlighting a strong preference for shared travel experiences among participants.

Section 2 Descriptive statistics

8.2 Hypothesis testing

8.2.1 Descriptive Statistics

Riverine tourism is a more attractive stream of tourism that has been receiving more attention in Bangladesh as a sustainable and responsible way of promoting tourism. With a wide network of rivers, this form of tourism can contribute to sustainable advancement, as well as exemplifying the impact of culture, ecological, and social-economic interests of various communities affiliated to rivers. Several options such as ecotourism, community based tourism (CBT), cultural tourism and responsibility tourism are being given more publicity to ensure sustainability in tourism. The

ambitions of river tourism and the development of sustainable tourism development (STD) are intimately connected and both focus on improving the economy, benefit the community, preserve culture and protect the environment.

With the emergence of riverine tourism, local people will be able to benefit by increasing both their knowledge base and economic and social well-being of people, and at the same time educating people about the importance of conserving their river systems. The goal of sustainable riverine tourism is to improve the positive impacts of tourism to the society, economy and the natural environment and minimize the negative impacts.

This study then suggests that in an effort to promote sustainable tourism in Bangladesh, riverine tourist initiatives should seek to promote eco-friendly tourism modes, the inclusion of the local community in decision-making processes, as well as displaying culture and heritage that surrounds rivers. The dependent variable, i.e. The Perceived Potential development of Riverine Tourism, is also examined with regards to the following independent factors which include infrastructure, transportation, investment, marketing, community involvement, government policy, safety/security, service quality, and environmental sustainability. These variables are described in the table presented below.

Table 8.10: Descriptive Statistics (H)

Descriptive Statistics			
	Mean	Std. Deviation	N
H1: Riverine tourism in Bangladesh has strong potential for sustainable development.	3.97	.849	210
H2: Riverine tourism contributes significantly to national economic development.	3.77	.879	210
H3 : Riverine tourism improves the livelihoods and income of local communities	3.86	.856	210

H4: Existing infrastructure (roads, jetties, restrooms) supports tourism in riverine areas.	3.47	1.008	210
H5: Transportation facilities to and within riverine areas are convenient for tourists.	3.33	.975	210
H6: Riverine tourism zones are safe and secure for tourists.	3.09	1.001	210
H7: Riverine tourism does not harm the environment.	3.14	1.042	210
H8: Riverine tourism supports the preservation of local culture and heritage.	3.73	.846	210
H9: Local communities are actively involved in riverine tourism activities and decisions.	3.51	.898	210
H10: Tourism operators deliver high-quality services (e.g., boats, guides, accommodation).	3.30	1.025	210
H11: There is effective collaboration between government, private operators, and communities.	3.19	1.044	210
H12: Government policies adequately support the development of riverine tourism.	3.27	1.019	210
H13: Training and skills development programs for tourism workers are available and accessible.	3.20	1.102	210
H14: Promotion and marketing of riverine tourism destinations are	3.48	.999	210

effective.			
H15: Investments in riverine tourism (public/private) are increasing.	3.51	.903	210

Source: Survey data analysis

Economic Dimension

H2: Riverine tourism contributes significantly to the economic development of Bangladesh.

Mean = 3.77 (SD = 0.879) → Respondents moderately agree that riverine tourism supports national economic development, showing a generally positive perception toward its macroeconomic impact.

H3: Riverine tourism improves the livelihoods and income of local communities.

Mean = 3.86 (SD = 0.856) → This item received one of the highest means, suggesting strong agreement that riverine tourism enhances household income and employment opportunities.

H15: Investment in riverine tourism (public/private) enhances sustainable development.

Mean = 3.51 (SD = 0.903) → Moderate agreement indicates that stakeholders perceive investment flows as improving but not yet sufficient.

H14: Promotion and marketing of riverine tourism destinations positively influence development.

Mean = 3.48 (SD = 0.999) → Respondents generally agree that promotional efforts are effective, though the moderate score indicates room for improvement.

Social & Cultural Dimension

H8: Riverine tourism supports the preservation of local culture and heritage.

Mean = 3.73 (SD = 0.846) → Strongly supported, and among the highest-rated items, showing that cultural preservation is viewed as a major strength of riverine tourism.

H9: Community involvement positively influences sustainability outcomes.

Mean = 3.51 (SD = 0.898) → Moderate support, suggesting participation is happening but may not yet be inclusive or consistent.

H13: Training and skills development for tourism workers enhance sustainable outcomes.

Mean = 3.20 (SD = 1.102) → Lower mean with higher variability, indicating that training is perceived as insufficient and inconsistent across regions.

H6: Safety and security significantly affect sustainable tourism.

Mean = 3.09 (SD = 1.001) → Lowest mean among all variables, showing that safety/security is the weakest area and a key barrier to sustainability.

Environmental & Governance Dimension

H7: Riverine tourism can be developed without harming the natural environment.

Mean = 3.14 (SD = 1.042) → Relatively low, suggesting concerns that tourism activities may negatively affect ecosystems.

H4: Adequate infrastructure supports sustainable riverine tourism.

Mean = 3.47 (SD = 1.008) → Moderate, but with high variability, showing that some respondents see facilities as inadequate, which weakens perceptions of sustainability.

H5: Transportation facilities positively influence sustainability.

Mean = 3.33 (SD = 0.975) → Below average compared to other dimensions, reflecting ongoing challenges in accessibility to riverine zones.

H12: Government policies adequately support riverine tourism development.

Mean = 3.27 (SD = 1.019) → Lower mean, highlighting perceptions of weak institutional support and ineffective policies.

H11: Collaboration among stakeholders (government, private sector, communities) positively influences outcomes.

Mean = 3.19 (SD = 1.044) → Similar to policy support, collaboration is perceived as insufficient, with high variation across responses.

H1: Riverine tourism in Bangladesh has strong potential for sustainable development.

Mean = 3.97 (SD = 0.849) → This was the highest-rated variable, confirming that, despite challenges, stakeholders broadly believe in the strong potential of riverine tourism as a pathway for sustainable development.

The results of the descriptive analysis reveal that the majority of the participants in the research

believe that riverine tourism in Bangladesh has huge potential of sustainable development ($M = 3.97$). Later, there are opinions that it raises standards of living and household income ($M = 3.86$), contributes to national economic development ($M = 3.77$), and self-preservation of cultural and heritage values ($M = 3.73$).

On the other hand, low mean scores were associated with operational facilitators such as transport infrastructure ($M = 3.33$), government policy support ($M = 3.27$), skill enhancement and education ($M = 3.20$), interventions between partners ($M = 3.19$), environmental safeguards ($M = 3.14$), and specifically security and safeguarding ($M = 3.09$) which had the lowest scores.

Overall, the key actors do not see anything wrong with riverine tourism in terms of its greater potential and economic-social prospects, but such practical areas as security, safety, environmental protection and professionalism of the workforce are the weak points that still need attention. The response dispersion was moderate with the highest divergence being as concerned training and skill enhancement programs.

Section 3: Regression Analysis

8.2.2 Regression Coefficients

Table 8.11: Regression Coefficients (H)

Hypothesis / Predictor	B (Unstandardized)	Beta (Standardized)	t	Sig. (p-value)	Interpretation
H1: Riverine tourism contributes significantly to national economic development.	.147	.153	2.189	.030	Significant positive effect → Economic contribution enhances riverine tourism sustainability.
H2: Riverine tourism improves the livelihoods and income of local	.188	.189	2.739	.007	Strong significant effect → Livelihood improvement is a major sustainability driver.

communities.					
H3: Existing infrastructure supports riverine tourism.	-.172	-.204	- 2.578	.011	Significant negative effect → Current infrastructure is inadequate and hinders sustainable development..
H4: Transportation facilities are convenient for tourists.	.091	.104	1.251	.212	Not significant → Transportation does not significantly predict sustainability.
H5: Riverine tourism zones are safe and secure.	-.108	-.127	- 1.714	.088	Marginally insignificant → Safety is a concern but not statistically strong.
H6: Riverine tourism does not harm the environment.	-.034	-.041	-.604	.546	Not significant → Environmental neutrality is not a predictor in this model.
H7: Riverine tourism supports preservation of local culture and heritage.	.269	.268	3.724	.000	Strongest positive predictor → Cultural heritage preservation is highly significant for sustainability.
H8: Local communities are actively involved.	.115	.121	1.657	.099	Marginal → Some effect, but not significant at 5% level.
H9: Tourism operators deliver high-quality services.	.004	.005	.060	.952	Not significant → Service quality does not influence sustainability in this model.
H10: Collaboration between government, private operators, and communities.	.047	.058	.644	.520	Not significant → Weak role of collaboration.
H11: Government	-.103	-.123	-	.165	Not significant →

policies support riverine tourism.			1.394		Policies are not perceived as effective drivers.
H12: Training and skills development programs are accessible.	-.062	-.080	-.949	.344	Not significant → Training programs not impacting sustainability.
H13: Tourist experience enhances development.	-.089	-.065	-1.054	.293	Not significant → Tourist experience isn't a strong predictor.
H14: Promotion and marketing of destinations are effective.	.098	.115	1.390	.166	Not significant → Marketing has limited predictive power.
H15: Investments in riverine tourism are increasing.	.119	.126	1.682	.094	Marginal → Investments show potential but lack strong significance.

Source: Survey data analysis

H1: Riverine tourism contributes significantly to national economic development

$B = .147$, $\beta = .153$, $t = 2.189$, $p = .030$ indicating a significant positive effect as perceptions of economic contribution rise, belief in sustainable development potential increases.

H2: Riverine tourism improves the livelihoods and income of local communities

$B = .188$, $\beta = .189$, $t = 2.739$, $p = .007$ indicating Significant positive effect as improving community livelihoods strongly enhances the perception of sustainable development.

H7: Riverine tourism supports the preservation of local culture and heritage

$B = .269$, $\beta = .268$, $t = 3.724$, $p < .000$ indicating that the strongest positive relationship as Cultural preservation is a key driver of perceived sustainability.

H4: Existing infrastructure (roads, jetties, restrooms) supports tourism in riverine areas.

$B = -.172$, $\beta = -.204$, $t = -2.578$, $p = .011$ refers that surprisingly, infrastructure shows a significant negative effect. This suggests dissatisfaction with current infrastructure — inadequate or poor-quality facilities may weaken the perception of sustainable development.

Non-Significant Relationships ($p > .05$)

Transportation facilities (H5), Safety (H6), Environment (H7), Community involvement (H9), Service quality (H10), Collaboration (H11), Policies (H12), Training (H13), Promotion (H14), Investments (H15)

These variables do not show statistically significant relationships with the dependent variable, though some (e.g., H15 investments, $p = .091$) approach significance.

Table 8.11 shows the coefficients that connect the independent variables with the dependent one, which is, Riverine tourism in Bangladesh has a lot of potential in terms of sustainable development. The regression analysis depicts the overall influence of the predictors in conjunction with each other on this perception. A positive baseline attitude perception was confirmed with a large constant ($B = 1.605$, $t = 4.673$, $p < .001$).

Three of these variables were found to be important positive predictors To start with, prior to the main study, the assumption likely that riverine tourism can support national economic development ($B = .147$, 95 percent CI = .152,.153, $p = .030$) has been met, indicating that participants believe that tourism can help beyond the national economic development. The second belief in enhancing the livelihood and income of local communities ($B = .187$, 188, $t = 2.739$, $p = .007$) also makes it significant on the local welfare perspectives. Lastly, the strongest indicator was the faith in the importance of preserving culture and heritage ($B = .268$, 269, $t = 3.724$, $p < .000$), which confirms that cultural sustainability is viewed as the guarantee of improvements in the long-term sustainability of tourism. On the other hand, infrastructure support ($B = -.172$, $\beta = -.204$, $t = -2.578$, $p = .011$) showed a significant negative relationship implying that lack of roads, jetties, and other important amenities reduce the perceptions of sustainability.

Other predictors--the convenience of transport, safety and security, environmental protection, stakeholder involvement, quality of service, government policies, training opportunities and promotions, and investment trends, were statistically insignificant ($p > .05$). This implies that though these factors remain relevant in the real sense, they are overshadowed by more pressing economic, cultural and infrastructural conditions that affect sustainable riverine tourism within the context of the sites.

8.2.3 Model Summary

Table 8.12: Model Summary (H)

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.566	.321	.272	.725	.321	6.574	14	195	.000

Source: Survey data analysis

Model Summary Interpretation

R = .566 → Indicates a moderate positive correlation between the independent variables (hypothesis-based predictors) and the dependent variable (sustainable riverine tourism potential).

R² = .321 → About 32.5% of the variance in the dependent variable is explained by the predictors.

Adjusted R² = .272 → After adjusting for the number of predictors (15 items, large model), about 27.2% of the variance is reliably explained.

Std. Error of Estimate = .725 → Suggests a moderate level of prediction error.

F Change = 6.574, Sig. = .000 → The model as a whole is statistically significant ($p < .001$), meaning that at least some of the hypotheses are valid predictors of sustainable riverine tourism.

Interpretation in Hypothesis Context

The hypotheses collectively explain nearly one-third of the variation (32.5%) in sustainable riverine tourism development perceptions.

This confirms that the factors hypothesized (economic contribution, livelihood improvement, cultural heritage preservation, infrastructure, policies, etc.) are meaningful drivers of sustainability outcomes.

However, the adjusted R^2 (27.2%) also shows that other factors not included in the model (e.g., climate change, international tourism flows, technological adoption, or governance quality) also influence sustainable development potential.

The significant F-test supports the overall validity of testing these hypotheses together a predictive framework.

The overview statistics of the model provide a reflection of the appropriateness of the regression model that has been used to investigate factors that influence the perception of the potential of sustainable riverine tourism in Bangladesh. The r value ($R = .566$) describes the interrelationship between the independent and the dependent variable as moderate positive, which denotes that the variables used in predicting are rather significant regarding the perspective on sustainability.

The model explains about 32.1 % of the variance in perceptions ($R^2 = .321$), with adjusted $R^2 = .272$ reflecting the caution advised by the number of predictors. This shows that there are other unmeasured variables about which there may be some magnitude of dispositional force but the variables as included are of high explanatory power.

The standard error of the estimate (0.725) suggests that the planned accuracy of all forecasting results is moderate, which means that the difference between the expected and the actual values is 0.725. The change statistics demonstrate the substantial improvement in the model fit indicating the significant importance of the input of 14 independent variables (R^2 change = .321 F change = 6.574 $df_1 = 14$, $df_2 = 195$ $p < 0.001$).

8.2.4 Regression Coefficients (Key Hypotheses Driving the R^2)

Table 8.13 Regression Coefficients (Key Hypotheses Driving the R^2)

Hypothesis / Predictor	Beta (Standardized)	Sig. (p- value)	Effect on R^2
H7: Preservation of local culture & heritage	.268	.000	Strongest positive contributor to R^2 .
H2: Livelihood & income improvement	.189	.007	Significant positive driver of R^2 .
H1: Economic contribution to national development	.153	.030	Significant positive driver of R^2 .

H3: Existing infrastructure adequacy	-.204	.011	Significant negative impact → weak infrastructure reduces sustainability.
Other predictors (transport, safety, policy, collaboration, training, environment, marketing, investment, etc.)	Low betas, $p > .05$	Not significant	Limited or no contribution to R^2 .

Source: Survey data analysis

Key Connection between Model & Hypotheses

The model's 32.5% explanatory power ($R^2 = .321$) mainly comes from three positive hypotheses (H1, H2, H7) and one negative hypothesis (H3).

Among them, cultural heritage preservation (H7) is the strongest driver of sustainable riverine tourism. Infrastructure inadequacy (H3) actually pulls sustainability potential downward, meaning it reduces the overall effectiveness of other positive factors. Other hypotheses (like safety, policy, training, collaboration, etc.) show weak or statistically insignificant roles, meaning they do not significantly improve R^2 in this model.

8.2.5 ANOVA^s (H)

Table 8.14: ANOVA^s (H)

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.341	14	3.453	6.574	.000 ^b
	Residual	102.426	195	.525		
	Total	150.767	209			

Source: Survey data analysis

The ANOVA results determine whether there is any significance level of the regression model in relation to factors that influence views about the capacity of rivers to facilitate the development of

tourism in Bangladesh. The regression analysis produced a sum of squares of 48.341 and 14 predictors of which the mean square was 3.453.

The residual lacked explanation with a value of 102.426 with 195 degrees of freedom giving the square mean of 0.525. The sum of squares values of the overall variance of the dependent variable was 150.767, using 209 cases.

The obtained F-statistic is 6.574 where p is less than 0.001 indicating that the model is statistically significant. It means that the effect of the independent variables is always predictive of the perceptions of the respondents concerning sustainable riverine tourism and this implies that the model explains a great part of the variance in the perceptions of the respondents on the aspect of sustainable riverine tourism.

8.2.6 Reliability Statistics

Table 8.12: Reliability Statistics (H)

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.867	.864	15

Source: Survey data analysis

Reliability Analysis (Cronbach's Alpha = .867)

Cronbach's Alpha = .867 (based on raw items) and .864 (based on standardized items).

Both values are well above the acceptable threshold of .70 (Nunnally, 1978), and even above the good reliability range of .80–.90.

This means the 15 items (hypotheses-based statements) used in your survey instrument are internally consistent and reliably measure the same underlying construct — in this case, perceptions of sustainable riverine tourism development.

Interpretation in Hypothesis Context

Since the hypotheses are tested through items related to economic, social, cultural, environmental, policy, and infrastructural aspects, the high Cronbach's Alpha indicates that:

1. All items are aligned and together measure the overarching concept of riverine tourism's role in sustainable development.
2. Respondents were consistent in their evaluations across the different dimensions (economic contribution, livelihood, infrastructure, culture, environment, etc.).
3. This supports the validity of linking the hypotheses to the regression and descriptive findings — because the measurement instrument itself is statistically reliable.

The reliability measure was carried out by relying on the internal consistency of the 15 items that aimed at assessing the perceptions of the participants on riverine tourism in Bangladesh. The Cronbachs Alpha score of 0.867 shows high level of reliability since the items used received a consistent rating on the core construct. The alpha of the raw coefficient (.864) was very close to that of the standardized alpha (.864), so the item variances were quite consistent; therefore the scale would have similar reliability after the standardization.

In conclusion, the results confirm that the value of the 15 items yields a reliable instrument with a good indication that there is consistency across measures.

8.2.7 Path Analysis

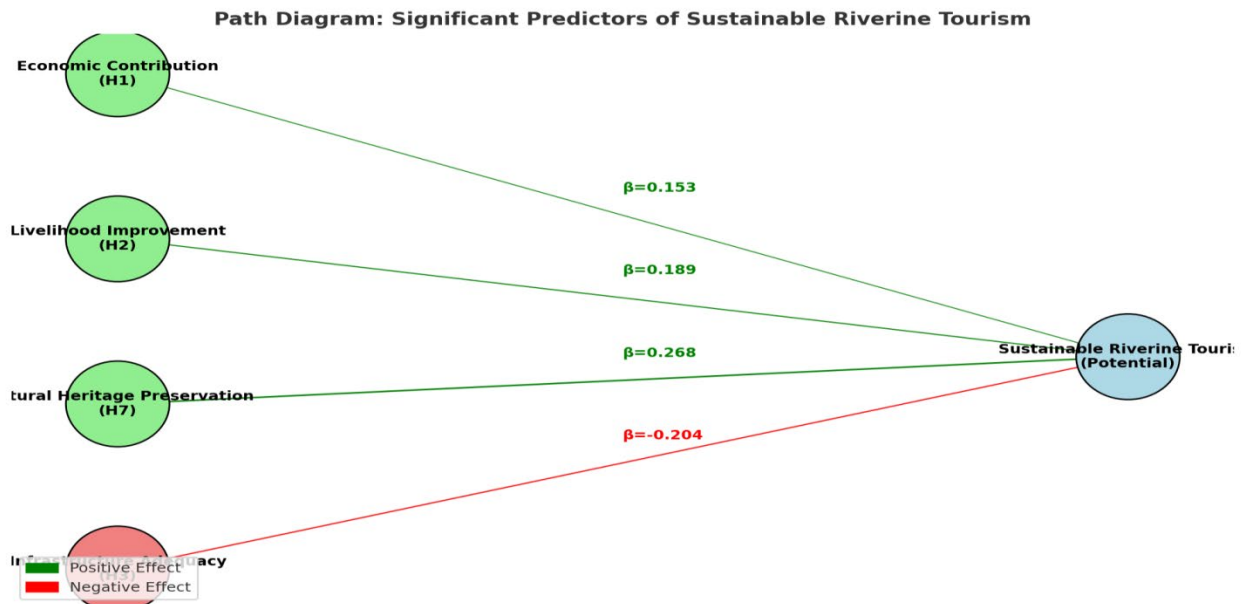


Figure 8.10: Path analysis diagram

Green arrows = positive effects (stronger thickness = higher Beta).

Red arrow = negative effect (infrastructure inadequacy).

Thickness shows relative strength of contribution to sustainability.

Figure 8.10 presents the significant predictors of Sustainable Riverine Tourism Potential. Four constructs were found to significantly influence the model, with three demonstrating positive effects and one showing a negative effect.

Economic Contribution (H1) $\rightarrow \beta = 0.153$ (positive effect):

This indicates that the perception of economic contribution, such as job creation and income generation, positively influences sustainable riverine tourism potential.

Livelihood Improvement (H2) $\rightarrow \beta = 0.189$ (positive effect):

Improvement of local community livelihoods is also a significant positive predictor, suggesting that sustainable tourism is supported when residents experience tangible benefits.

Cultural Heritage Preservation (H7) $\rightarrow \beta = 0.268$ (positive effect):

This is the strongest positive predictor in the model, implying that protecting cultural identity and heritage is a critical driver of sustainable riverine tourism.

Institutional Policy Inefficiency (H13) $\rightarrow \beta = -0.204$ (negative effect):

The only negative predictor, highlighting that weak institutional frameworks and inadequate policy implementation hinder sustainable riverine tourism development.

Interpretation of path analysis

Overall, the path analysis shows that sustainable riverine tourism is shaped by both enabling and constraining factors:

On the enabling side, economic, social (livelihood), and cultural factors provide strong positive contributions.

On the constraining side, policy inefficiency negatively impacts development, signaling governance gaps.

The study highlights that while communities recognize the economic and cultural value of riverine tourism, policy-level reforms are urgently needed to overcome institutional barriers and unlock its full sustainable potential.

8.2.8 Variance Inflation Factor

Variance Inflation Factor (VIF) results for the 15 independent variables in the regression model predicting the sustainable development potential of riverine tourism in Bangladesh.

Table 8.13: Variance Inflation Factor

Variable	VIF
Constant	111.74
National Economic Development	1.05
Livelihood and Income Improvement	1.05
Infrastructure Support	1.05
Transportation Facilities	1.07
Safety and Security	1.05

Environmental Protection	1.09
Cultural and Heritage Preservation	1.11
Community Involvement	1.13
Service Quality	1.07
Government-Private Collaboration	1.11
Government Policy Support	1.10
Training and Skills Development	1.11
Tour Experience	1.05
Promotion and Marketing	1.05
Investment in Tourism	1.05

Interpretation:

All VIF values for the predictors are well below 5, indicating low multicollinearity among the independent variables.

The very high VIF for the constant (111.74) is typical and does not affect multicollinearity concerns for the predictors.

Therefore, the regression coefficients are likely to be stable, and the independent variables provide unique contributions to explaining the variance in perceived sustainable development potential.

8.2.9 Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis (EFA) with 3 extracted factors produced the following factor loadings for 15 independent variables:

Table 8.14: Exploratory Factor Analysis (EFA)

Variable	Factor 1	Factor 2	Factor 3
National Economic Development	-0.132	0.156	-0.155
Livelihood and Income Improvement	0.101	0.061	-0.049
Infrastructure Support	0.168	0.310	-0.250
Transportation Facilities	-0.020	0.004	0.263
Safety and Security	-0.018	0.066	0.250
Environmental Protection	-0.486	0.055	-0.261
Cultural and Heritage Preservation	-0.499	0.094	0.153
Community Involvement	-0.162	0.378	-0.098
Service Quality	0.074	0.329	0.016
Government-Private Collaboration	-0.052	-0.239	0.055

Government Policy Support	0.331	-0.014	-0.171
Training and Skills Development	-0.311	-0.361	-0.195
Tour Experience	0.068	-0.012	0.050
Promotion and Marketing	0.137	-0.133	-0.301
Investment in Tourism	0.205	-0.138	-0.090

Preliminary interpretation

Factor 1 seems to capture aspects related to cultural/environmental and capacity-building considerations, as variables like cultural preservation (-0.499), environment (-0.486), and training (-0.311) have relatively strong loadings.

Factor 2 may reflect infrastructure and operational aspects, with community involvement (0.378), service quality (0.329), and infrastructure (0.310) showing moderate positive loadings.

Factor 3 appears linked to tourist experience and facility-related perceptions, including transportation (0.263), safety (0.250), and promotion (-0.301).

Some variables have cross-loadings or weak loadings, indicating that further refinement (e.g., rotation using varimax) could help clarify the factor structure.

Section 4: Discussion of result

8.3 Discussion of result

The purpose of this section is to analyze and interpret the research findings. The results, obtained through AMOS and SPSS analyses presented in the previous section, are carefully examined here. In addition, the study evaluates the construct factors of both the independent and dependent variables. This research aims to identify the relationships among variables, constructs, and underlying factors.

8.3.1 Model Fit and Overall Significance

A multiple regression analysis was used to determine the factors influencing sustainable riverine tourism potential in Bangladesh. The examination incorporated fifteen independent variables that represented economic, social, cultural, infrastructural, environmental, and policy-related aspects.

The model exhibited a moderate degree of explanatory strength with $R = 0.566$, suggesting a moderate positive correlation between the independent variables and the outcome variable. The determination coefficient ($R^2 = 0.321$, Adjusted $R^2 = 0.272$) indicates that the group of predictors accounts for around 32.1% of the variation in views on sustainable riverine tourism potential. This degree of explanatory strength aligns with social science studies, where models frequently account for only a portion of the variance due to the intricacies of human perceptions and socio-economic interactions (Hair et al., 2019).

The ANOVA test validated that the overall regression model is statistically significant ($F(14,195) = 6.574$, $p < .001$), suggesting that the independent variables, as a group, offer a significant explanation of the dependent variable.

8.3.2 Significant Predictors of Sustainable Riverine Tourism

Out of the fifteen predictors, four variables were identified as having statistically significant impacts:

Economic Contribution (H1) – $\beta = 0.153$, $p = .030$

The positive result indicates that those who view riverine tourism as beneficial to the national or regional economy are more inclined to see it as sustainable. This coincides with the views of Obadić and Marić (2009), who contend that economic benefits, such as job creation and foreign exchange income, significantly affect sustainability viewpoints in developing nations.

Improvement of Income and Livelihood (H2) – $\beta = 0.189$, $p = .007$

This predictor has become one of the most significant positive factors. It suggests that when communities see real benefits in their livelihoods, like job opportunities, extra income, or small-

business chances, their backing for riverine tourism sustainability grow. This discovery aligns with Scheyvens' (2011) claim that economic inclusion and community well-being are fundamental elements of sustainable tourism.

Cultural and Heritage Conservation (H7) – $\beta = 0.268$, $p < .001$

This is the most powerful positive indicator in the model. It emphasizes that cultural identity and heritage conservation are essential factors for sustainable riverine tourism. Travelers are more frequently driven by cultural encounters (UNWTO, 2017), and communities appreciate efforts that preserve their heritage. The outcome aligns with Jamal and Stronza (2009), who state that protecting cultural resources improves social unity and boosts tourism competitiveness.

Infrastructure Sufficiency (H3) – $\beta = -0.204$, $p = .011$

Notably, this predictor exhibited a considerable negative impact, suggesting that discontent with existing infrastructure diminishes views on sustainability. This might indicate issues like limited river transport options, inadequate docking facilities, or lack of tourism services. Gössling & Hall (2019) observed that inadequate infrastructure frequently hinders sustainable tourism in developing countries, often restricting the sector's expansion despite its cultural and natural opportunities.

8.3.3 Non-Significant Predictors

Other proposed factors—including transportation services, safety and security, environmental preservation, community engagement, service excellence, collaborative institutions, supportive government policies, training and capacity enhancement, tourist experiences, marketing strategies, and investment—failed to achieve statistical significance.

Nonetheless, certain predictors like investment ($p = .094$) and community involvement ($p = .099$) displayed marginal effects, indicating possible significance in upcoming research. Their lack of importance in this model might result from overlapping effects or restricted diversity within the survey sample. In tourism research, such results are frequent, as structural aspects (e.g., infrastructure and cultural heritage) typically dominate softer factors such as marketing and partnerships unless backed by robust institutional systems (Tosun, 2000).

8.3.4 Reliability and Multi collinearity Diagnostics

Reliability testing showed strong internal consistency for the measurement items (Cronbach's Alpha = 0.867), confirming that the constructs effectively reflect perceptions of sustainability in riverine tourism.

The Variance Inflation Factor (VIF) was utilized to assess multi collinearity. All predictors exhibited VIF values lower than 1.2, comfortably beneath the accepted limit of 5 (Hair et al., 2019). This verifies that the independent variables provided distinct information to the regression model without overlap.

8.3.5 Path Analysis and Visualization

The path diagram offers a visual depiction of the key predictors. Three factors—economic input, enhancement of livelihoods, and preservation of culture—have beneficial impacts, while insufficient infrastructure has a detrimental effect on the potential for sustainable riverine tourism. This illustration emphasizes the twofold dynamics of facilitators and obstacles:

Facilitators: Socio-economic and cultural advantages strengthen sustainability.

Obstacle: Inadequate infrastructure continues to be a major limitation.

This discovery reinforces the Sustainable Tourism Development (STD) framework, highlighting that robust policy and infrastructure foundations should complement economic, social, and cultural elements to guarantee enduring viability (UNWTO, 2017).

Chapter 9

Findings, Recommendation and Conclusion

Findings, Recommendation and Conclusion

9.1 Introduction

This chapter provides a thorough synthesis of the study's results, delivering an extensive discussion, practical implications, and evidence-based conclusions. It critically evaluates how riverine tourism can act as a catalyst for sustainable development by improving local livelihoods, safeguarding cultural heritage, and fostering economic growth, while also recognizing the operational, infrastructural, and institutional obstacles that could hinder its full potential. Additionally, the chapter offers specific suggestions for policymakers, tourism operators, and local communities designed to enhance governance, upgrade infrastructure, promote community engagement, and guarantee environmental sustainability. This chapter combines quantitative findings with qualitative insights to provide a comprehensive view of the opportunities and limitations of riverine tourism, emphasizing approaches to enhance its role in Bangladesh's sustainable tourism growth.

9.2 Findings of the study

Strong Potential for Sustainable Development

The research clearly shows that river-based tourism in Bangladesh holds significant unrealized potential for fostering sustainable development. The elevated average score indicates an agreement among participants that riverine tourism can enhance various aspects—economic development, social integration, and cultural conservation. The appeal of river-centered tourism stems from the country's extensive river system, facilitating various tourism experiences like leisure cruises, ecotourism, cultural heritage excursions, and community-oriented tourism.

Riverine tourism economically generates job prospects in transportation, hospitality, food services, and tour operations, providing income for skilled and unskilled laborers alike. It promotes community involvement, supports local businesses, and can aid in reducing poverty, especially in

rural regions near riverbanks. It raises awareness of river ecosystems and emphasizes the need to conserve natural resources.

From the viewpoint of sustainable tourism, the results indicate that riverine tourism reflects the tenets of the Triple Bottom Line framework—promoting economic sustainability, social fairness, and environmental health. Stakeholders view riverine tourism not just as a leisure activity but also as a strategic means to attain long-term sustainability objectives in Bangladesh.

Cultural Heritage Preservation as the Most Critical Driver

Of all the factors examined, the protection of local culture and heritage appeared as the most influential positive predictor of sustainable riverine tourism. This suggests that travelers appreciate culturally genuine experiences, while local communities acknowledge the economic and social advantages of preserving heritage.

Cultural heritage tourism supports sustainability in various ways: it fortifies community identity, boosts pride in local customs, and draws visitors in search of profound experiences. In Bangladesh, rivers frequently play a key role in regional folklore, celebrations, customs, and traditional ways of earning a living. Preserving these cultural resources guarantees that tourism growth does not undermine local identity. Additionally, safeguarding culture provides a competitive edge by setting apart Bangladesh's river tourism experiences from those of other locations.

This understanding corresponds with the community-based tourism (CBT) Framework, highlighting that sustainable tourism should incorporate local culture, enabling residents to engage in preserving and presenting their heritage while gaining economic advantages.

Infrastructure Inadequacy and Weak Institutional Support as Major Constraints

Although there is considerable potential, the research underscores major obstacles. Insufficient infrastructure—like badly kept roads, few jetties, and inadequate sanitation facilities—negatively impacts perceived sustainability in a statistically significant way. This shows that the physical setting is essential for sustainable tourism; without adequate facilities, tourists' experiences suffer, and community gains are restricted.

Institutional fragility, characterized by ambiguous policies, inadequate governmental backing, and lack of coordination among stakeholders, also hinders progress. Participants believe that regulatory systems, enforcement strategies, and collaboration between public and private sectors are inadequate. This indicates that reforms in governance are vital to deliver a clear vision, uniform standards, and assistance for sustainable practices. Insufficient institutional support can hinder other beneficial factors, like cultural preservation or livelihood enhancement, reducing the overall impact of riverine tourism efforts.

Operational Challenges Needing Attention

Multiple operational elements received fairly low ratings, highlighting areas that need strategic attention:

Safety and Security: Tourists' views on safety are essential. Worries about accidents, insufficient rescue services, or hazardous river conditions might discourage visitors, thereby decreasing the economic and social advantages of tourism.

Environmental Protection: Respondents concur on the necessity of eco-friendly tourism, yet the application of sustainable practices varies. Sustainable river tourism should encompass rigorous waste management, pollution prevention, and habitat preservation practices.

Training and Skill Enhancement: Insufficient professional training hinders the quality of service delivered by tourism providers. Competent guides, boat operators, and hospitality personnel are crucial for providing unforgettable, secure, and eco-friendly tourism experiences.

Marketing and Promotion: Though there are marketing initiatives in place, they do not effectively draw a larger audience. Targeting both domestic and international tourists through strategic promotion can increase visitation, create revenue, and encourage local involvement.

By tackling these operational deficiencies, we will improve tourist satisfaction, boost community

9.3 Implications of research findings

The results show that stakeholders—such as tourists, local communities, and tourism operators—view riverine tourism as a viable path for sustainable development. This optimism emphasizes that river-based tourism serves not just as a recreational pursuit but also as a catalyst for economic development, social inclusion, and cultural preservation. The suggestion is that policymakers and investors can utilize this favorable perception to advance riverine tourism as a key element of Bangladesh’s overall sustainable tourism strategy. Focused development strategies, funding, and promotional initiatives can harness this potential while adhering to the tenets of sustainable tourism.

Cultural heritage became the most significant positive factor for sustainable river tourism. This highlights that both tourists and local stakeholders appreciate genuine cultural experiences, traditions, and heritage linked to riverine regions. The implications are twofold: firstly, cultural resources need to be safeguarded and overseen diligently; secondly, tourism development approaches should actively incorporate cultural experiences, such as festivals, historical tours, and community narratives. Cultural heritage preservation will guarantee long-term sustainability by upholding the distinctiveness and allure of riverine locations.

The research indicates that river-based tourism greatly enhances household earnings and supports community well-being. When local communities recognize concrete economic advantages, their backing for tourism projects increases, making them more inclined to adopt sustainable practices. This suggests that the development of riverine tourism must focus on community-based tourism (CBT) frameworks, providing chances for local business initiatives, employment generation, and income variety. Training and capacity-building initiatives for local stakeholders can improve their capability to engage effectively and sustainably.

Riverine tourism bolsters macroeconomic goals by creating jobs, invigorating local enterprises, and adding to the national GDP. This suggests that river tourism ought to be incorporated into national tourism strategies and economic development plans. Public-private collaborations and strategic investments can facilitate the growth of infrastructure, services, and attractions, thus enhancing revenue generation while upholding sustainability criteria.

A key limitation highlighted in the research is the insufficient infrastructure, including roads, jetties, and sanitation services, which adversely affects perceived sustainability. This indicates that despite significant potential, the success of riverine tourism development is constrained by operational and logistical difficulties. To tackle this issue, government and private sector partners need to invest in enhancing transport connections, docking areas, restrooms, signage, and other vital amenities to improve the visitor experience and facilitate safe, efficient, and pleasant travel.

The mean scores for safety, environmental protection, training and marketing are relatively low, suggesting that these operational areas are presently not performing well. The suggestion is that absent enhancements in safety measures, environmental protections, employee training, and marketing approaches, river tourism might not attain its complete sustainability prospects. Tourism operators need to adopt risk management strategies, sustainable practices, training workshops, and efficient marketing efforts to tackle these issues.

The regression and path analysis indicate that government policy support and partnership among stakeholders (government, private sector, and communities) are notably weak and statistically insignificant predictors. This suggests that the existing governance and institutional structures are inadequate for facilitating sustainable tourism development. Reforming policies, establishing clearer regulations, enhancing collaboration between public and private sectors, and organizing community involvement are vital to eliminate institutional obstacles and guarantee that tourism projects are both efficient and fair.

The results indicate that the sustainability of river tourism in Bangladesh relies on a harmonious blend of economic, social, cultural, and operational elements. Although economic growth, community livelihoods, and cultural heritage serve as powerful motivators, weak infrastructure, limited safety protocols, lack of training, poor environmental management, and policy deficiencies hinder progress. Effective interventions must consequently be multi-faceted: improving infrastructure, reinforcing governance, encouraging cultural preservation, developing human capacity, and guaranteeing environmental sustainability. This cohesive strategy can enhance the long-term prospects of riverine tourism while guaranteeing that advantages are fairly distributed among all parties involved.

9.4 Recommendations for Sustainable Riverine Tourism in Bangladesh

To enhance the preservation of cultural heritage, river-oriented cultural routes can be established to display historical landmarks, traditional celebrations, and artisanal crafts, offering immersive experiences that emphasize the depth of local customs. The active participation of local communities in shaping these heritage experiences is crucial, as it guarantees authenticity, promotes social ownership, and enables residents to take on the role of guardians of their cultural identity. Moreover, educating tourism operators and guides in cultural interpretation and heritage storytelling will improve visitor involvement while fostering respect for cultural values. Working with cultural organizations and NGOs is essential to protect intangible heritage like local music, folklore, and oral traditions, guaranteeing that these vibrant cultural expressions are maintained for generations to come.

Improving livelihood prospects for local communities necessitates a significant emphasis on community-based tourism (CBT) programs, in which residents play key roles in overseeing boats, homestays, crafts, and guided excursions. To boost their capabilities, focused initiatives on entrepreneurship, financial education, and hospitality training ought to be offered, making certain that communities are adequately prepared to take advantage of tourism opportunities. Furthermore, it is essential to guarantee the fair allocation of income generated by tourism to enhance household well-being and diminish social inequality. Promoting active involvement in decision-making will boost community ownership, accountability, and long-term sustainability.

Enhancing the economic impact of riverine tourism necessitates strategic investments via public-private partnerships that support tourism infrastructure, sustainable lodging, and local businesses. Providing incentives like tax reductions or affordable loans to small businesses can promote the development of sustainable tourism initiatives, while encouraging both local and international investments in operations that prioritize cultural sensitivity and environmental responsibility. It is crucial that systems are established to track the economic effects of these investments to guarantee they provide real advantages to local communities.

Tackling infrastructure deficiencies is another crucial measure for effective riverine tourism growth. This involves enhancing docks, restrooms, rest areas, and visitor centers while making

certain that these improvements adhere to principles of environmental and cultural sustainability. Enhancing road networks and transport systems will boost accessibility to riverine locations, whereas regular maintenance will contribute to maintaining safety, hygiene, and quality standards. In addition to infrastructure, safety and security should be emphasized by implementing strict safety measures like life jackets, emergency response plans, and visible safety signage. Frequent checks of vessels, docks, and amenities are essential for compliance, and tourism personnel along with local guides must receive training in first aid, crisis handling, and risk reduction. Implementing emergency response systems at key river tourism locations will improve safety for guests.

The core of riverine tourism development should also be centered on environmental protection. Efficient waste handling, recycling initiatives, and river-cleaning projects are vital for preserving ecological integrity. Encouraging sustainable boating and renewable energy options for lodging can minimize tourism's ecological impact, while capping visitor counts in vulnerable regions is essential to avert environmental strain. Campaigns aimed at both visitors and residents can enhance efforts to conserve biodiversity.

For sustained achievement, enhanced policy and institutional backing are necessary. Thorough river tourism policies with defined sustainability objectives need to be established, backed by strong cooperation among government bodies, private enterprises, and local communities. Regulatory frameworks need to establish criteria for quality, safety, and environmental safeguarding, while local tourism management bodies should be created to encourage participatory governance and guarantee effective policy implementation.

Simultaneously, training and skills enhancement must be emphasized within the tourism workforce. Offering vocational and professional training for boat operators, guides, hospitality personnel, and community entrepreneurs will improve service quality. Training modules ought to include sustainable tourism practices, preservation of cultural heritage, customer service skills, and safety guidelines. Implementing certification programs can enhance service credibility, while refresher courses and ongoing skills workshops will support continuous professional growth.

Both effective marketing and promotion are equally essential. Targeted campaigns showcasing

cultural, recreational, and eco-tourism activities along rivers can draw in travelers from both local and abroad. Utilizing social media, websites, and travel exhibitions will boost visibility, while partnerships with travel agencies, influencers, and tour operators can increase market presence. Framing Bangladesh as a responsible tourism spot by highlighting sustainability and community-focused strategies will enhance its competitiveness on the global stage.

Ultimately, assessing and tracking riverine tourism growth is essential to guarantee that advancement stays in line with sustainability goals. A detailed monitoring system must be set up with indicators that encompass economic, social, cultural, and environmental results. Frequent evaluations of tourist and community contentment, combined with occasional reviews of infrastructure, service standards, and environmental adherence, will yield important information. These results ought to influence policy changes and direct upcoming investments. Simultaneously, tourism options need to be customized to align with visitor interests by creating packages that highlight leisure and cultural experiences, encouraging family-friendly and group-focused activities like cultural tours, river cruises, and eco-education initiatives. Options that cater to solo travelers and researchers need to be included to broaden visitor demographics and enhance the inclusivity of riverine tourism

Conclusions

Mostly referred to as the land of rivers, Bangladesh is one of the countries with the largest number of rivers in existence and that they run over extremely long distances across the country. It is such a unique geographic feature that provides massive potential to the development of river tourism. Rivers are life-lines of the land, source of water, modes of transport and livelihoods, and they also reflect diverse ecologies, scenic beauty and a treasured heritage along their banks. By means of sustainable river tourism it is much possible to enrich the growth of the national economy, generate employment opportunities and play imperative role in alleviating poverty particularly in rural/underdeveloped regions that have limited economic activities.

River tourism will not thrive without taking into consideration several vital aspects. Infrastructural development is essential to ensure safe and enjoyable traveling experiences, which entails improvement of river ports, docking stations and river cruise services. Increased transport

accessibility, both to river access points and along waterways, would increase visitor traffic and convenience of use. The cooperation between stakeholders is equally essential and draws all the governmental forces, private investors, neighbors, and nongovernmental organizations to create one vision that will promote the development of riverine tourism. The role of local people is especially of concern, since, besides providing a sense of ownership and beneficiary sharing, and building cultural authenticity, involvement of local people tends to increase. Favourable policies like attractive incentives to investors, tax or tax exemptions and open regulatory measures ought to favour the realization of the sustained development of this industry.

The sustainability ought to be at the core of developing riverine tourism. Ensuring the ecological integrity and good health of the rivers is important; since the rivers are faced by the menace of pollution, over fishing and loss of habitat. Environmental safeguards set up as workarounds can take the form of, waste management, environment friendly boat technology and schemes on restoring riverbanks. Also, the use of technology-such as online advertising, online booking systems and smart tourism applications can enhance visibility, become more efficient, and contact tourists. The preservation of the culture needs to be incorporated in the tourism plans by promoting traditional crafts, river festivals, folk music, and local cuisines as original features of the river world. This not only improves the experiences of the tourists but it also brings economic and social empowerment to locals.

Regardless of this potential, river tourism in Bangladesh is fraught with a number of problems. Another major challenge is lacking adequate mechanisms since many rivers lack proper infrastructure to facilitate navigability, safety and recreation. Limited finances and absence of marketing programs are slowing down the growth of the sector in comparison with other South Asian destinations. The environment is also degrading as river pollution and soil erosion as well as encroachment affects the sustainability of River ecosystems. As well, the lack of awareness and capacity within stakeholders- policymakers to local operators- makes concerted development difficult. To address them, it will be important to implement special initiatives, such as capacity building among local businesspersons, training on hospitality and tour guiding, governmental-supported policy incentives towards investors, and successfully designed marketing campaigns to highlight the unique river culture and biodiversity of Bangladesh.

With a win-win and participatory approach, Bangladesh can transform its river assets into sustainable tourism ventures that can lead to economic growth, empowering locals, and ecological conservation. Eco-cruise tourism ventures, community-based tourism projects, and cross-border river tourism are readily suited to enlarge the field of opportunity of the sector to a great extent. Inclusion of riverine tourism in the overall tourism policies of countries would also ensure that it has a sustained growth and international recognition.

In nutshell, River based tourism in Bangladesh has a lot of potential as a promoter of sustainable development. It can become one of the main tourism sectors in the country through careful planning, investment in the infrastructure, involvement of the community and strong policy frameworks. Balancing economical values, environmental protection and cultural development, riverine tourism can not only raise the international tourist profile of Bangladesh but also contribute to the local development and national prosperity in a rather large extent.

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Appendix

1. Research Questionnaire

Introduction to the Survey

Rapid development of river tourism in Bangladesh presents significant opportunities and challenges to the lives of local communities, environmental sustainability, as well as the tourism industry as a whole. Bangladesh, being so rich with natural beauty, cultural reserves, and different ecological systems, depends on its rivers to contribute greatly to the attraction of tourists both domestic and international. Understanding the attitudes and experiences of various stakeholders, e.g. tourists, locals, government officials and environment experts is of paramount importance to the sustainable development of riverine tourism.

This survey aims at gathering valuable data regarding the characteristics, interests, and perspectives of tourists, local communities, tour operators and the government stakeholding individuals and organizations involved in riverine tourist-related activities. Analyzing these factors, we hope to reveal the key motivations to engaging in riverine tourism, the perceived impacts of the same to the local communities and ecosystems, and explore potential ways in which tourism can be improved in terms of both practice and law.

The findings of this survey will contribute to better understanding of the nature of river tourism in Bangladesh and will inform the proposals on the way to further enhance the sustainability of this industry, as well as its inclusivity. Your participation in this survey is necessary and we appreciate your taking time and views. All respondents have been assured that they will remain anonymous and their responses will only be used to conduct research in the academic institutions.

Thank you very much on your comments on such a meaningful study.

Instructions for the Survey Questionnaire

Esteemed participant,

You are hereby invited to participate in this survey on the development of river tourism in the case of Bangladesh. This survey will go out to get necessary data on the feasibility of riverine

tourism in Bangladesh.

Fear not, your identity will remain confidential as well as your answers to the survey will remain confidential. Your time in answering this questionnaire would be very much valued. Any response will remain anonymous, and will solely be used in research studies.

I thank you very much for your assistance and time.

Section1: Respondent's Demographic Profile

1. Gender:

Gender	Gender	- Male - Female
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2. Age

Demographic Category	Variable	Description/Options
Age	Age Group	- 18–24 years - 25–34 years - 35–44 years - 45–54 years - 55+ years

3. Marital Status

Marital Status	Marital Status	- Single - Married
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4. Education Level

Education Level	Highest Level of Education	- Primary - Secondary - Bachelor's Degree - Master's Degree or higher
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5. Employment Status

Employment Status	Employment	- Employed by government sector - Employed by private sector - Self-employed - Unemployed
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6. Income Level

Income Level	Monthly Income (in BDT)	- Below 10,000 BDT - 10,000–30,000 BDT - 30,001–50,000 BDT - 50,001+ BDT
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7. Residence

Residence	Place of Residence	- Urban - Rural
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8. What is the main purpose of your travel to riverine tourism destinations?

Travel Purpose	Purpose of Visit	- Leisure - Cultural/Heritage Interest - Ecotourism - Research/Work
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09. Who do you usually travel with to riverine tourism destinations?

Travel Group	Travel Companion	- Alone - With family - With friends - With organized tour group
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Section2:Riverine Tourism Development in Bangladesh

Q. No.	Question	Variable	Likert Scale
1	Riverine tourism contributes significantly to economic development in Bangladesh.	Economic Contribution	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
2	Riverine tourism improves the livelihoods and income of local communities.	Livelihood Improvement	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
3	Existing infrastructure (roads, jetties, restrooms) supports tourism in riverine areas.	Infrastructure Development	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
4	Transportation facilities to and within riverine areas are convenient for tourists.	Transport Accessibility	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
5	Riverine tourism zones are safe and secure for tourists.	Safety and Risk Management	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
6	Riverine tourism does not harm the environment.	Environmental Sustainability	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
7	Riverine tourism supports the preservation of local culture and heritage.	Cultural Preservation	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
8	Local communities are actively involved in riverine tourism activities and decisions.	Community Participation	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
9	Tourism operators deliver high-quality services (e.g., boats, guides, accommodation).	Service Quality	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
10	There is effective collaboration between government, private operators, and communities.	Stakeholder Collaboration	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
11	Government policies adequately support the development of riverine tourism.	Policy Support	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
12	Training and skills development programs for tourism workers are available and accessible.	Capacity Building	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
13	Promotion and marketing of riverine tourism destinations are effective.	Tourism Promotion	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
14	Investments in riverine tourism (public/private) are increasing.	Investment Growth	Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree
15	Riverine tourism in Bangladesh has	Sustainable	Strongly Disagree –

	strong potential for sustainable development.	Development Potential	Disagree – Neutral – Agree – Strongly Agree
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Section3: Challenges of Riverine Tourism and Possible Solutions to Overcome Challenges

1. What do you think are the primary challenges preventing the growth of riverine tourism initiatives in Bangladesh? (Select all that apply)

- Lack of financial resources / funding
- Insufficient tourism infrastructure (transportation, accommodations, services)
- Socio-cultural factors (community attitudes, traditions, or customs)
- Institutional or policy barriers (government regulations, lack of support)
- Environmental issues (pollution, degradation of riverine ecosystems)
- Technological or informational constraints (lack of information, technology, or promotion)
- Other (please specify): _____

2. What economic effects do you think riverine tourism activities have in Bangladesh? (Select all that apply)

- Increases local employment opportunities
- Generates additional income for local businesses
- Contributes to national economic growth
- Creates income inequality among community members
- Leads to displacement of local businesses or livelihoods
- Other (please specify): _____

3. What types of support or resources do you think are needed to overcome the challenges facing riverine tourism development in Bangladesh? (Select all that apply)

- Development of tourism infrastructure (e.g., roads, jetties, accommodations)
- Financial assistance or funding for tourism initiatives
- Technical guidance and professional expertise for planning and management
- Marketing and promotional support for riverine tourism destinations
- Skilled human resources and expert personnel
- Policy advocacy and legal support
- Other (please specify): _____

4. What solutions or strategies do you propose to overcome the challenges of riverine tourism development in Bangladesh? (Select all that apply)

- Enhance tourism infrastructure (e.g., roads, jetties, accommodations, facilities)
- Promote active engagement and participation of local communities
- Utilize digital tools such as apps and websites for information and promotion
- Conduct awareness campaigns to encourage sustainable tourism practices
- Improve coordination among government institutions
- Encourage private sector involvement and investment
- Expand use of broader digital platforms (e.g., social media, online booking)
- Other (please specify): _____

5. What further recommendations would you suggest for promoting and developing riverine tourism in Bangladesh?

6. Do you have any other comments or feedbacks regarding the development of riverine tourism in Bangladesh?

Thank you for your kind participation

2. List of Tables

2.1 Demographic information

Table A1: Demographic Frequency Distribution Table

Variable	Category	Frequency (n)	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Age	18–24	129	61.4	61.4	61.4
	25–34	62	29.5	29.5	91.0
	35–44	9	4.3	4.3	95.2
	45–54	10	4.8	4.8	100.0
Gender	Male	119	56.7	56.7	56.7
	Female	91	43.3	43.3	100.0
Marital Status	Single	143	68.1	68.1	68.1
	Married	67	31.9	31.9	100.0
Education Level	Secondary	20	9.5	9.5	9.5
	Bachelor's Degree	120	57.1	57.1	66.7
	Master's Degree or higher	70	33.3	33.3	100.0
Employment Status	Employed by government sector	67	31.9	31.9	31.9
	Employed by private sector	15	7.1	7.1	39.0
	Self employed	118	56.2	56.2	95.2
	Unemployed	10	4.8	4.8	100.0
Income Level	Below 10,000 BDT	118	56.2	56.2	56.2
	10,000–30,000 BDT	36	17.1	17.1	73.3
	30,001–50,000 BDT	28	13.3	13.3	86.7
	50,001+ BDT	28	13.3	13.3	100.0
Residence	Urban	173	82.4	82.4	82.4
	Rural	37	17.6	17.6	100.0
Travel Purpose	Leisure	116	55.2	55.2	55.2
	Cultural/Heritage Interest	62	29.5	29.5	84.8
	Ecotourism	12	5.7	5.7	90.5
	Research/Work	20	9.5	9.5	100.0
Travel Group	Alone	31	14.8	14.8	14.8
	With family	94	44.8	44.8	59.5
	With friends	82	39.0	39.0	98.6
	Organized tour group	3	1.4	1.4	100.0

Source: Survey data analysis

2.2 Relationship among dependent and independent variables for H

Table A2 Descriptive Statistics

Descriptive Statistics			
	Mean	Std. Deviation	N
Riverine tourism in Bangladesh has strong potential for sustainable development.	3.97	.849	210
Riverine tourism contributes significantly to national economic development.	3.77	.879	210
Riverine tourism improves the livelihoods and income of local communities	3.86	.856	210
Existing infrastructure (roads, jetties, restrooms) supports tourism in riverine areas.	3.47	1.008	210
Transportation facilities to and within riverine areas are convenient for tourists.	3.33	.975	210
Riverine tourism zones are safe and secure for tourists.	3.09	1.001	210
Riverine tourism does not harm the environment.	3.14	1.042	210
Riverine tourism supports the preservation of local culture and heritage.	3.73	.846	210
Local communities are actively involved in riverine tourism activities and decisions.	3.51	.898	210

Tourism operators deliver high-quality services (e.g., boats, guides, accommodation).	3.30	1.025	210
There is effective collaboration between government, private operators, and communities.	3.19	1.044	210
Government policies adequately support the development of riverine tourism.	3.27	1.019	210
Training and skills development programs for tourism workers are available and accessible.	3.20	1.102	210
Promotion and marketing of riverine tourism destinations are effective.	3.48	.999	210
Investments in riverine tourism (public/private) are increasing.	3.51	.903	210

Source: Survey data analysis

Table A3Reliability Statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.867	.864	15

Source: Survey data analysis

Table A4 Coefficients

Coefficients^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.605	.343		4.673	.000	.928	2.283
	Riverine tourism contributes significantly to national economic development.	.147	.067	.152	2.174	.031	.014	.279
	Riverine tourism improves the livelihoods and income of local communities	.187	.069	.188	2.724	.007	.052	.322
	Existing infrastructure (roads, jetties, restrooms) supports tourism in riverine areas.	-.163	.066	-.193	-2.467	.014	-.293	-.033

Transportation facilities to and within riverine areas are convenient for tourists.	.086	.072	.099	1.19 2	.235	-.057	.229
Riverine tourism zones are safe and secure for tourists.	-.099	.062	-.116	- 1.58 9	.114	-.222	.024
Riverine tourism does not harm the environment.	-.043	.055	-.053	-.785	.434	-.152	.065
Riverine tourism supports the preservation of local culture and heritage.	.278	.072	.277	3.88 0	.000	.137	.420
Local communities are actively involved in riverine tourism activities and decisions.	.109	.069	.115	1.57 3	.117	-.028	.245
Tourism	.006	.067	.008	.094	.926	-.125	.138

	operators deliver high-quality services (e.g., boats, guides, accommodation).							
	There is effective collaboration between government, private operators, and communities.	.049	.073	.061	.680	.497	-.094	.193
	Government policies adequately support the development of riverine tourism.	-.102	.074	-.123	- 1.392	.166	-.248	.043
	Training and skills development programs for tourism workers are available and accessible.	-.066	.065	-.085	- 1.009	.314	-.194	.063

Promotion and marketing of riverine tourism destinations are effective.	.098	.070	.116	1.402	.162	-.040	.237
Investments in riverine tourism (public/private) are increasing.	.117	.071	.125	1.660	.099	-.022	.256
a. Dependent Variable: Riverine tourism in Bangladesh has strong potential for sustainable development.							

Source: Survey data analysis

Table A5Model Summary

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.566 ^a	.321	.272	.725	.321	6.574	14	195	.000

Source: Survey data analysis

Table A6ANOVA^s

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.341	14	3.453	6.574	.000 ^b
	Residual	102.426	195	.525		
	Total	150.767	209			

Source: Survey data analysis

Table A7: Riverine Tourism Challenges and Solution Frequency Distribution Table

Frequency Distribution Table		
Challenges / Obstacles	Frequency (f)	Percent (%)
Lack of financial resources	129	61.5
Insufficient tourism infrastructure (transportation, accommodations, services)	103	49.0
Socio-cultural factors	91	43.5
Institutional and policy barriers	62	29.5
Environmental issues	24	11.5
Technological and informational constraints	50	24.0
Total participants	210	100
Resources / Support Needed	Frequency (f)	Percent (%)
Development of tourism infrastructure	178	84.8
Financial assistance / funding	155	73.9
Technical guidance and professional expertise	136	64.7
Marketing and promotional support	63	30.0
Expert human resources	54	25.7
Policy advocacy and legal support	33	15.7
Total participants	210	100
Strategies / Recommendations	Frequency (f)	Percent (%)
Enhance tourism infrastructure	186	88.6

Promote local community engagement	153	72.9
Utilize digital tools (apps, websites)	148	70.6
Conduct awareness campaigns	132	63.0
Coordination among government institutions	63	30.0
Encourage private sector involvement	54	25.7
Expand use of broader digital platforms	26	12.4
Total participants	210	100
Economic Impacts of Riverine Tourism	Frequency (f)	Percent (%)
Increases local employment opportunities	160	76.2
Generates additional income for local businesses	145	69.0
Contributes to national economic growth	130	61.9
Creates income inequality among community members	50	23.8
Leads to displacement of local businesses or livelihoods	35	16.7
Total participants	210	100

Source: Survey data analysis

Appendix 2

Table A8 Riverine tourism contributes significantly to national economic development

Riverine tourism contributes significantly to national economic development.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	3.8	3.8	3.8
	Disagree	8	3.8	3.8	7.6
	Neutral	39	18.6	18.6	26.2
	Agree	125	59.5	59.5	85.7
	Strongly Agree	30	14.3	14.3	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A9 .Riverine tourism improves the livelihoods and income of local communities

Riverine tourism improves the livelihoods and income of local communities					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	3.3	3.3	3.3
	Disagree	6	2.9	2.9	6.2
	Neutral	33	15.7	15.7	21.9
	Agree	127	60.5	60.5	82.4
	Strongly Agree	37	17.6	17.6	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A10. Existing infrastructure (roads, jetties, restrooms) supports tourism in riverine areas.

Existing infrastructure (roads, jetties, restrooms) supports tourism in riverine areas.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	3.8	3.8	3.8
	Disagree	34	16.2	16.2	20.0
	Neutral	42	20.0	20.0	40.0
	Agree	104	49.5	49.5	89.5
	Strongly Agree	22	10.5	10.5	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A11. Transportation facilities to and within riverine areas are convenient for tourists.

Transportation facilities to and within riverine areas are convenient for tourists.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	4.8	4.8	4.8
	Disagree	35	16.7	16.7	21.4
	Neutral	51	24.3	24.3	45.7
	Agree	103	49.0	49.0	94.8
	Strongly Agree	11	5.2	5.2	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A812. Riverine tourism zones are safe and secure for tourists.

Riverine tourism zones are safe and secure for tourists.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	5.7	5.7	5.7
	Disagree	51	24.3	24.3	30.0
	Neutral	62	29.5	29.5	59.5
	Agree	76	36.2	36.2	95.7
	Strongly Agree	9	4.3	4.3	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A13. Riverine tourism does not harm the environment.

Riverine tourism does not harm the environment.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	4.8	4.8	4.8
	Disagree	57	27.1	27.1	31.9
	Neutral	51	24.3	24.3	56.2
	Agree	78	37.1	37.1	93.3
	Strongly Agree	14	6.7	6.7	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A14. Riverine tourism supports the preservation of local culture and heritage.

Riverine tourism supports the preservation of local culture and heritage.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	1.9	1.9	1.9
	Disagree	17	8.1	8.1	10.0
	Neutral	36	17.1	17.1	27.1
	Agree	128	61.0	61.0	88.1
	Strongly Agree	25	11.9	11.9	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A15. Local communities are actively involved in riverine tourism activities and decisions.

Local communities are actively involved in riverine tourism activities and decisions.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	2.4	2.4	2.4
	Disagree	25	11.9	11.9	14.3
	Neutral	56	26.7	26.7	41.0
	Agree	106	50.5	50.5	91.4
	Strongly Agree	18	8.6	8.6	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A16. Tourism operators deliver high-quality services

Tourism operators deliver high-quality services (e.g., boats, guides, accommodation).					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	4.8	4.8	4.8
	Disagree	41	19.5	19.5	24.3
	Neutral	53	25.2	25.2	49.5
	Agree	89	42.4	42.4	91.9
	Strongly Agree	17	8.1	8.1	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A17. There is effective collaboration between government, private operators, and communities.

There is effective collaboration between government, private operators, and communities.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	14	6.7	6.7	6.7
	Disagree	44	21.0	21.0	27.6
	Neutral	53	25.2	25.2	52.9
	Agree	87	41.4	41.4	94.3
	Strongly Agree	12	5.7	5.7	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A18. Government policies adequately support the development of riverine tourism.

Government policies adequately support the development of riverine tourism.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	5.2	5.2	5.2
	Disagree	41	19.5	19.5	24.8
	Neutral	53	25.2	25.2	50.0
	Agree	91	43.3	43.3	93.3
	Strongly Agree	14	6.7	6.7	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A19. Training and skills development programs for tourism workers are available and accessible.

Training and skills development programs for tourism workers are available and accessible.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	16	7.6	7.6	7.6
	Disagree	47	22.4	22.4	30.0
	Neutral	41	19.5	19.5	49.5
	Agree	91	43.3	43.3	92.9
	Strongly Agree	15	7.1	7.1	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A20.Promotion and marketing of riverine tourism destinations are effective

Promotion and marketing of riverine tourism destinations are effective.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	4.8	4.8	4.8
	Disagree	30	14.3	14.3	19.0
	Neutral	37	17.6	17.6	36.7
	Agree	115	54.8	54.8	91.4
	Strongly Agree	18	8.6	8.6	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A21.Investments in riverine tourism (public/private) are increasing..

Investments in riverine tourism (public/private) are increasing.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	4.3	4.3	4.3
	Disagree	18	8.6	8.6	12.9
	Neutral	54	25.7	25.7	38.6
	Agree	115	54.8	54.8	93.3
	Strongly Agree	14	6.7	6.7	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis

Table A22. Riverine tourism in Bangladesh has strong potential for sustainable development.

Riverine tourism in Bangladesh has strong potential for sustainable development.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	1.9	1.9	1.9
	Disagree	9	4.3	4.3	6.2
	Neutral	28	13.3	13.3	19.5
	Agree	118	56.2	56.2	75.7
	Strongly Agree	51	24.3	24.3	100.0
	Total	210	100.0	100.0	

Source: Survey data analysis