School of Marketing

Does Ecotourism Produce Sustainable Outcomes? Testing the Direct and Mediated Effects

Feroz Ahmed

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Doctor of Philosophy
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DECLARATION

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) – updated March 2014. The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee (EC00262), Approval Number is GSB 25-12

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DEDICATION

This thesis is dedicated to my parents and my family members

ABSTRACT

Previous literature suggests that ecotourism to occur several antecedents are required. Many others argued that ecotourism has the potential to contribute in providing multiple outcomes for the destination. Some studies have explored both the antecedents and outcomes of ecotourism. This study suggests a model that includes both antecedents and outcomes of ecotourism with one new dimension concerning potential outcomes.

Bangladesh is gifted with abundant natural resources. It also has a long historical and cultural background. However, as it is a small developing country with a massive population, this country needs a variety of income earning activities that can offer multiple benefits including employment opportunities.

Tourism can be a viable solution for such, but mass tourism may not be suitable for such a country as the natural resources are not abundant and also it lacks sufficient capital for mass tourism. Ecotourism has the potential to be a suitable option through careful management of natural resources and minimal funding models. Therefore, the primary objective of this study was to offer a comprehensive model of ecotourism comprised of both antecedents and outcomes.

This study initially proposed a model comprised of a set of six antecedents namely natural attractions, socio-cultural attractions, physical infrastructure and facilities, local community and involvement, government action and local management. Further this model also proposed a set of possible four outcomes of ecotourism for a destination like Bangladesh, being economic, socio-cultural and environmental benefits, and one new type of outcome named 'emotional benefits'. This study further also sought to identify the mediating and moderating effects of the outcomes of ecotourism. The study model of ecotourism here utilised stakeholder theory, a sustainable

framework format, and findings reported from other studies in contemporary literature.

The study adopted a mixed methodology that embraces both qualitative and quantitative approaches. A semi-structured interview schedule was used to conduct a field study among twelve local community and ten tourism entrepreneurs. The qualitative field study was conducted through face to face interview in Baniasanta and Mongla of Khulna region of Bangladesh. The data collected through interview were analysed through content analysis with the aid of NVivo 10 software. Based on the findings, the initial model was refined and given a different shape. The analysis confirmed that the antecedents of ecotourism should be split into two broadly category named as 'Resource dimension' and 'Support dimension'. Thus based on the field study findings, the initial study model was converted into three stage model.

Two sets of questionnaire were developed for survey that comprised of 60 Likert scale questions based on same 60 indicators; one for tourists and the other for local community and tourism entrepreneurs. The indicators of the questionnaires were initially identified by the literature and verified through the field study. The developed questionnaires were pretested, refined and finalised for the survey.

The survey covered three stakeholders of ecotourism namely tourists, local community and tourism entrepreneur. The survey was conducted in the Khulna region of Bangladesh, the gateway to the largest mangrove forest in the world – the Sundarbans. Convenient sampling technique was used for recruiting tourists and snowball sampling technique was used to recruit the local community and tourism entrepreneur. The survey was conducted among 120 respondents from each of the category; the number of valid respondents however was 102, 104 and 103 respectively from the stated three

stakeholders. The collected data was verified and analysed by using partial least squares (PLS)-based structural equation modelling (SEM) technique.

The analysis confirmed that ecotourism in Bangladesh is likely to produce outcomes aligned to economic, environmental, socio-cultural and emotional benefits. This finding is unique in nature that incorporated two categories of antecedents and four outcomes including emotional benefits as a new addition. This model thus adds a new dimension to the sustainability framework.

This study further identified that economic benefits partially mediate for socio-cultural benefits while socio-cultural benefits partially mediate for environmental benefits. A moderating effect among tourists and local community in respect of socio-cultural benefits was also identified in the study. This study further identified that tourists and tourism entrepreneur have moderating effects on economic and socio-cultural benefits over the outcomes of ecotourism. Application of the model developed here in a different culture, with a different group of stakeholders and different types of destinations may confirm findings from this study and further develop the model presented.

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CHAPTER 1: INTRODUCTION

1.1 OVERVIEW

According to World Tourism Organization (UNWTO) report, global tourist arrivals increased by 4.7% on average per year between 1995 and 2014 (UNWTO 2015). Similarly, the World Heritage Centre of the United Nations Educational, Scientific and Cultural Organization (UNESCO) predicted annual growth for the same period as 6% on average (UNESCO 2014).

Globally, tourist arrivals grew by 5% in 2013 to 1.087 billion in 2014 (UNWTO 2014). UNWTO has predicted that between 2010 and 2030, the number of international tourist arrivals will increase by an average of 3.3% per year, reaching around 1.8 billion by 2030 (UNWTO 2012).

According to the UNWTO and the United Nations Environment Programme (UNEP), tourism will be the primary source of foreign earnings for one-third of developing countries and half of the least developed countries (LDCs) (UNWTO and UNEP 2011). This predicted growth in international tourism is likely to benefit destination countries in many ways (e.g. Su and Lin 2014).

Tourism is already a major source of revenue for many low-income countries and small islands, and is a principal export for 83% of developing countries (Scheyvens 2012; Figini and Vici 2010). In terms of international trade, it is the world's largest service sector industry (Lew 2011).

Tourism also has the potential to significantly contribute to sustainable development in destination countries (Powell and Ham 2008). The ecotourism sector is now a prominent part of the tourism industry and continues to thrive (Rishi and Upadhyay 2013). According to Weaver (1998) ecotourism is the fastest growing sector of the tourism industry, particularly in developing countries. Environmental concerns among knowledgeable and

concerned tourists have led to increasing global demand for environmentally and socially-responsible travel experiences (Sweeting and Wayne 2006).

This study was therefore designed to identify whether ecotourism can produce sustainable outcomes, such as economic, social and environmental benefits. It has subsequently defined a new ecotourism outcome – emotional benefits – to contribute to the comprehensive set of outcomes already identified. There have been numerous studies of ecotourism outcomes, but this study is the first to develop a comprehensive set of ecotourism outcomes that include emotional benefits as a new dimension. This study also aimed to identify the antecedents of ecotourism, and the factors moderating the effects of ecotourism and the interdependencies between ecotourism outcomes.

This study was conducted in Bangladesh, which has diverse and unique resources, and the potential to thrive as a lucrative tourism industry. For example, the south-east part of the country is home to the world's longest beach: 120 km of soft, silvery sand. In addition, the world's largest mangrove ecosystem, the Sundarbans, lies in the south (see Appendix A, page 248). Bangladesh abounds in numerous natural attractions, including but not limited to mountains, forests, beach and lakes, and is also rich in flora and fauna (Akter and Zuberi 2009). Bangladesh has 110 inland mammals and 3 marine mammals, 109 inland reptiles and 17 marine reptiles, 22 amphibians, 388 resident birds and 240 migratory birds, 266 freshwater fish and 442 marine fish, 4 freshwater crab and 11 marine crabs, 2493 insects, and 66 species of coral (Bangladesh 2000; Gopal and Chauhan 2006; Rahman and Asaduzzaman 2013). Furthermore, according to Khanom and Buckley (2015), the Sundarbans has a large population of tigers, along with many other natural and cultural attractions that can be used for suitable ecotourism.

The existing high demand for ecotourism and predicted global expansion of this market, along with Bangladesh's rich natural and socio-cultural

resources, suggest strong potential for successful ecotourism businesses in Bangladesh (Tuhin and Majumder 2011). It would appear that ecotourism could prove to be a resilient economic resource for the country of Bangladesh (Zahra 2012).

1.2 RESEARCH PROBLEM

Ecotourism has the potential to make positive contributions to an economy and deliver social and environmental benefits (McGranahan 2011; Liu et al. 2014). However, there is much debate about the use of the term 'ecotourism' – there is no universally agreed definition (Ikonen 2012; Boo 1990). Numerous studies have also identified various antecedents of ecotourism, but there are few comprehensive descriptions in the existing literature. The corresponding term 'sustainability' is also defined in many ways, and as a concept it is hard to measure objectively – judgment on whether something is sustainable is often a matter of opinion (Weaver 2002). Despite such ambiguities, sustainability is commonly deemed as integral to ecotourism, with many researchers arguing that ecotourism leads to sustainable outcomes (e.g. Buckley 2003; Cater 1995; Tuohino and Hynonen 2001).

Ecotourism often produces numerous outcomes for the destination (Weaver 2005; Stronza and Gordillo 2008), although there is debate about what these outcomes are. For example, many researchers have suggested that ecotourism can deliver economic benefits for destination countries (e.g. He et al. 2008; Pırnar and Günlü 2012; Cisneros-Montemayor et al. 2013), while others have argued that it produces environmental (e.g. Priskin 2001; Mohammadi, Ahmadi and Godarzi 2012; Hunt et al. 2015) and socio-cultural benefits (e.g. Kiper, Özdemir and Sağlam 2011). Furthermore, a few researchers have argued that tourism may produce emotional benefits for the destination community (e.g. Waitt 2003). Such divergent perspectives and opinions about ecotourism outcomes suggest a need for more research.

Moreover, this study has aimed to verify whether there are both mediating and moderating effects on ecotourism outcomes. Mediation, or an indirect effect, is said to occur when the causal effect of an independent variable (X) on a dependent variable (Y) is transmitted by a mediator (M) (Preacher, Rucker and Hayes 2007). Corresponding mediational analyses attempt to identify the intermediary process that leads from the manipulated independent variable to the outcome or dependent variable (Muller, Judd and Yzerbyt 2005).

In contrast, moderation analyses attempt to identify individual differences or contextual variables that strengthen and/or change the direction of the relationship between the treatment variable and the dependent variable (Muller, Judd and Yzerbyt 2005). Baron and Kenny (1986) define a moderator as a "qualitative (e.g. sex, race, class) or quantitative (e.g. level of reward) variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable" (p. 1174).

Numerous studies have indicated that economic benefits mediate benefits to the natural environment (e.g. Torquebiau and Taylor 2009; Lapeyre 2010). Researchers (e.g. Chiu, Tang and Luk 2001; Mbaiwa and Stronza 2010) have suggested that economic benefits mediate the socio-cultural benefits to the host community, or that socio-cultural benefits mediate environmental benefits (e.g. Pretty and Smith 2004; Jones 2005; Jones 2010; Stronza and Gordillo 2008).

One major purpose of this study was to examine the relationships between ecotourism and its various outcomes. It has also commonly argued that the various stakeholders in ecotourism have divergent views about the ecotourism outcomes (Wang et al. 2014; Giordano et al. 2007), and examined

whether there are any moderating effects among the three stakeholders' views in terms of ecotourism outcomes.

1.3 RESEARCH QUESTIONS

The primary research questions addressed by this study are as follows:

RQ1: What antecedents does a country like Bangladesh require for ecotourism?

RQ2: What kind of outcomes is ecotourism likely to produce for Bangladesh?

The secondary research questions addressed by this study are as follows:

RQ3: Do the outcomes occur independently or are they dependent on one another?

RQ3a: Do values, experiences and judgements of ecotourism stakeholders moderate the ecotourism outcomes?

1.4 RESEARCH OBJECTIVES

The primary objectives of this study were to:

1) identify a comprehensive set of antecedents of ecotourism applicable for Bangladesh
2) investigate whether ecotourism in Bangladesh is likely to produce economic, environmental, socio-cultural and emotional benefits based on a comprehensive set of potential outcomes.

The secondary objectives of the study were to:

3) identify how economic benefits mediate the relationship between ecotourism and its environmental, socio-cultural and emotional benefits
4) examine whether the socio-cultural benefits of ecotourism can mediate the relationship between ecotourism and its environmental benefits
5) examine how the values, experiences and judgements of ecotourism stakeholders moderate the ecotourism outcomes.

1.5 SIGNIFICANCE OF RESEARCH

1.5.1 Theoretical Contributions

Existing literature suggests that ecotourism requires both antecedents and outcomes (e.g. Buckley 2003; Oviedo-Garcia, Castellanos-Verdugo and Martin-Ruiz 2008). However, there are diversified views in relation to the antecedents of ecotourism. For example, Ross and Wall (1999b) argue that nature is the main attraction for ecotourism, while according to Ceballos-Lascurain, Lindberg, and Hawkins (1993), ecotourism requires the integration of many factors including tourists, local community and managers. In line with this, Young et al. (1992) believe that ecotourism involves natural, economic and social dimensions, while Lai and Nepal (2006) argue that nature, culture and local community participation are core elements of ecotourism. Spiegler and Gonda (2012) add that infrastructural support is also an important antecedent of ecotourism, while Tsaur, Lin, and Lin (2006) believe that ecotourism resources, community and tourists are the main antecedents of ecotourism.

In view of these, this study has developed a requisite set of six ecotourism antecedents from the perspective of a developing country like Bangladesh: nature, socio-cultural atmosphere, physical infrastructure and facilities, participation and involvement of local community, government action and local management.

Furthermore, numerous researchers have argued about the possible outcomes of ecotourism, with many suggesting that ecotourism can produce both economic and natural outcomes (e.g. Buckley 2003; Butcher 2006). Adding to this, many have contended that ecotourism can generate economic, natural and social benefits (e.g. Zambrano, Broadbent and Durham 2010; Jones 2005). Yet only a handful have suggested that tourism can generate emotional benefits (Waitt 2003). To date, none talked about such

benefits in terms of ecotourism. This study has therefore examined whether emotional benefits is also a primary ecotourism outcome.

This study has produced an antecedent-outcome model based on existing literature, including theories of sustainability and stakeholder relationships. This model indicates several antecedents for successful ecotourism, as mentioned above, while the potential outcomes include economic, social, environmental and emotional benefits. The inclusion of emotional benefits as an ecotourism outcome, and the proposed comprehensive model that includes both antecedents and outcomes of ecotourism are the major theoretical contributions of this study.

This study's model constitutes a comprehensive representation of the network of factors relevant to ecotourism, and extends knowledge by linking the antecedents for ecotourism to a set of four outcomes. It was tested with data on ecotourism in Bangladesh, and this empirical investigation also contributes to understanding of ecotourism. This proposed antecedent-outcome model of ecotourism is unique in nature, and therefore makes a valuable contribution to the theory.

1.5.2 Practical Contributions

This study has proposed a comprehensive set of antecedents for ecotourism in a developing country context based on six key antecedents. It has also proposed a comprehensive set of outcomes encompassing the four types of benefits derived from ecotourism. Furthermore, this study has identified factors which mediate and moderate the extent to which ecotourism delivers these outcomes.

These results should be of particular interest for ecotourism stakeholders in Bangladesh and similar ecotourism destinations. Ecotourism should foster sustainable benefits for the host community, including social, economic and

environmental benefits. It is therefore anticipated that providers of ecotourism will take measures to enhance the development of the industry, which will benefit other stakeholders including ecotourists, as it will improve their experience.

Furthermore, the ecotourism management and other authorities will benefit from evidence-based guidelines about how to maximise development of ecotourism and its potential benefits. For example, host countries will benefit from improvements to their ecotourism sector in the form of more foreign currency revenue. The findings of this study will also be of use to governments, entrepreneurs and other bodies trying to negotiate the development of ecotourism in Bangladesh. This study's model could also be applied in other developing countries.

1.6 DEFINITION OF TERMS

1.6.1 Ecotourism

Ecotourism can be defined as responsible travel to natural areas that conserves the environment, sustains the wellbeing of the local community, and involves interpretation and education. Only ecotourism can take care of the environment and local culture (Islam 2015); hence be beneficial to the destination.

1.6.2 Infrastructure

Tourism infrastructure can be defined as manmade structures that support visitors while travelling, and at destinations including parks, trails, overnight accommodation, suppliers of food, and other retailers (Silva and McDill 2004). While ecotourism has far less infrastructure requirements than traditional tourism, it still requires a minimum level of infrastructural development. Infrastructure for ecotourism should align with the natural surroundings (Nianyong and Zhuge 2001).

1.6.3 Ecotourists

Ecotourists are participants in ecotourism, which is a subset of nature-based tourism involving experiences in remote or natural areas that foster an understanding and appreciation of the need to conserve the natural environment in a way that sustains the resources, culture and economy of the local community (David 1999). Ecotourists are characterised not only by their behaviour but also by their preference for specific kinds of destinations (Krider et al. 2010). Most ecotourists intending to visit natural and/or cultural destinations have the attitude that it is possible to learn, observe and enjoy without disturbing or contaminating the natural environment.

1.6.4 Ecotourism Management

Ecotourism is more dependent on the quality of the natural environment than other forms of tourism, because it is the prime attraction. Additional care needs to be taken by managers and developers of ecotourism destinations to ensure that the impacts of their ecotourism activities are minimised (Boyd and Butler 1996), so that the destination remains attractive to ecotourists (Wight 2002; Boyd and Butler 1996).

1.6.5 Economic Benefits

Ecotourism provides economic benefits in the form of direct employment and commercial benefits like renting accommodation to visitors and/or selling handicrafts and food. However, the extent to which local community can realise these benefits is largely dependent on their possession of capital or personal attributes (Clifton and Benson 2006).

1.6.6 Environmental Benefits

Ecotourism is dependent on the preservation of natural attractions to ensure that the destination remains attractive to ecotourists that in turn provide environmental benefits. Ecotourism enterprises will inevitably have some

impact on the very environment they depend on, but this must be reduced at every opportunity (Parker and Khare 2005).

1.6.7 Socio-cultural Benefits

Ecotourism generates various paid jobs in the host community, which in turn increases the income of the people involved. In relation to gender, such earning opportunities empower women and help to increase their social status. Moreover, through interaction with tourists, local residents can acquire knowledge and perhaps enrich the social and cultural life of their community.

1.6.8 Emotional Benefits

An emotional benefit is defined as a psychological state produced by the activity in question which is satisfying or pleasurable for the individual who experiences it. Feelings or psychological states result from experiences and are conveyed symbolically through the objects exchanged, the functions performed by the exchange, or the meanings attributed to the exchange (Bagozzi 1975).

1.7 ORGANISATION OF THIS THESIS

This thesis is organised into eight chapters, followed by references and appendices.

Chapter one provides the background to this study and an overview of the research. It sets out the research questions and specific objectives of the research, as well as explaining the significance of the research.

Chapter two presents reviews of the relevant extant literature, focusing on theories and variables relevant to this study. This chapter also presents a preliminary model of ecotourism, based on the literature review, which was modified further and tested empirically in the course of this research.

Chapter three sets out the research methodology used in this study – the interpretive (qualitative) and positivist (quantitative) techniques are discussed. The choice of this mixed-methods approach (qualitative and quantitative) around which this study is structured is also discussed in this chapter.

Chapter four presents the qualitative field study and the refinement of the model. It includes a detailed analytical presentation of the field results, and there is also a description of the indicators used and their relationship to the constructs used in the model, which draws on extant supporting literature.

Chapter five provides an account of the development of the research hypotheses and questionnaires used in the field study. Eleven hypotheses based on the literature are set out in this chapter. This chapter also presents pilot work designed to assess the suitability of the questionnaire.

Chapter six provides details of the analysis of the quantitative data and presents the results. The rationale for the choice of sample size is presented and non-response bias is discussed. The composite reliability, content validity, construct validity and discriminant validity of the constructs and measurement are also discussed. A summary of the results and the implications for the hypotheses are also included in this chapter.

Chapter seven discusses the results of Partial Least Square (PLS) analysis and their implications for the hypotheses. The theoretical and practical implications of these results are also discussed in this chapter.

Chapter eight presents the conclusion to the study, as well as its limitations and weaknesses, along with suggestions for future research.

1.8 SUMMARY

This chapter has outlined the research topic, background information, approach and scope of this study. It has also set the study in the context of

the extant literature on ecotourism, with particular emphasis on areas not well researched in the context of ecotourism in developing countries. The research questions and objectives presented in this chapter are based on ideas derived from the literature review, which is presented in the next chapter.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

Ecotourism has attracted growing attention in recent years, both as an alternative to mass tourism and as a tool for economic development and environmental conservation (Schaller, Jónasson and Aikoh 2013a). Even though mass tourism can produce more financial and social benefits than ecotourism (Ivanov and Ivanova 2013), it may be harmful for the environment. Ivanov and Ivanova (2013) also state that although mass tourism can produce greater economic benefits, it may generate more pollution. In line with this, Marzouki, Froger, and Ballet (2012) argue that mass tourism has a negative impact on the natural environment.

As an alternative, ecotourism offers a way of addressing some of the problems associated with mass tourism (Collins-Kreiner and Israeli 2010; Walpole and Goodwin 2000). Yet ecotourism may also create negative consequences on the natural areas owing to its unsuitable utilisation. For example, as an ecotourism destination grows in popularity, the lack of managerial actions may violate the site's carrying capacity and subsequently cause damage to the natural environment (Das and Chatterjee 2015). In particular, such excessive tourist activities may have detrimental effects on wildlife attractions - that serve as prime motivational drive for tourists to make the visit and these excessive activities can be deleterious to nature reserve (Kirkby et al. 2011). Zhou et al. (2013) believe that despite offering economic benefits, particularly in developing countries, ecotourism can have unintended negative consequences for wildlife conservation. Furthermore, Zhang, Li, and Ma (2014) argue that monetary earning from ecotourism may create socio-cultural problems such as changing family structures and values.

Yet despite such potentially adverse effects, ecotourism suggests economic, natural and social benefits, and in many cases is able to follow through on such promises. In the study conducted in Costa Rica's Osa Peninsula, Hunt et al. (2015) found that ecotourism could deliver on its promises.

Ecotourism no doubt accounts for environmental benefits, but it often has fewer economic benefits than mass tourism (Ivanov and Ivanova 2013). Thus, mass tourism is often more popular with destination countries than ecotourism; although it may not be as appropriate for a developing country like Bangladesh. Because, ecotourism though less than mass tourism, can generate socio-economic benefits while preserving a country's environmental assets (Liu et al. 2014; Hunt et al. 2015). Ecotourism also requires less development and investment than mass tourism (Ok, Okan and Yilmaz 2011), making it appropriate for developing countries.

Bangladesh is a small country, and its environmentally-attractive destinations are already threatened by human encroachment. The people living in these areas are not affluent, and thus are highly dependent on the natural resources. Thus, maintaining the environmental resources are challenging in these areas. However, ecotourism can be a solution for such challenge as it provides alternative income opportunities for the community people. Besides, mass tourism requires a significant investment in infrastructure in comparison with ecotourism (Bao et al. 2013), and may therefore not be suitable for a developing country like Bangladesh that lacks sufficient financial resources. This study has investigated whether ecotourism can produce positive outcomes in developing countries, using Bangladesh as the case study.

2.2 ECOTOURISM

For the past few decades there has been continuous growth in ecotourism – at 10–12% per year, it is three times faster than the tourism industry as a

whole (IES, 2008 - cited in Coria and Calfucura 2012; Das 2011), and is expected to represent 5% of the global holiday market (Das and Chatterjee 2015).

The historical origins of the ecotourism concept can be traced back to the 1960s when ecologists and environmentalists became concerned over the inappropriate use of natural resources when the preservation of biodiversity was threatened in favour of economic interest and the exploitation of natural resources (Björk 2007). The Mexican ecologist Hetzer was the first to introduce the term 'ecotourism' based on four normative principles (pillars) in 1965. According to Hetzer (1965), ecotourism should have: (1) minimum environmental impact; (2) minimum impact on and maximum respect for host cultures; (3) maximum economic benefits to the host country's grassroots; and (4) maximum recreational satisfaction for participating tourists (cited in Blamey 2001). According to Ceballos-Lascurain (1991), this definition of Hetzer's has been widely supported as a more acceptable form of tourism that offers great potential for interests in economic development as well as conservation.

One of the first more formal definitions of ecotourism is generally credited to Ceballos-Lascuráin (1987), who defined it as: "travelling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas" (p. 14) (cited in Higham 2007).

There are two main categories of ecotourism definitions in the literature (Björk 2007). The first consists of multidimensional, comprehensive definitions, such as the one offered by Ziffer (1989) that defines ecotourism as "a form of tourism inspired primarily by the natural attractions of a

destination that consumes both its natural beauty and indigenous cultures" (p. 6).

The second category is more concise, although extended by appending lists of principles or criteria (Björk 2007). For example, the Quebec Declaration (UNEP/WTO, 2002), defines ecotourism as follows: (1) contributes actively to the conservation of natural and cultural heritage; (2) includes local and indigenous communities in its planning development and operation, contributing to their wellbeing; (3) interprets the natural and cultural heritage of the destination to visitors; and (4) lends itself better to independent travellers, as well as to organised tours for small size groups.

In line with stakeholder theory, Honey (2008) suggests that local ecotourism stakeholders will protect what they gain monetary value from. According to Lu and Stepchenkova (2012), ecotourism promotes nature-based tourist activities, environmental conservation, and intends to deliver tourism-related benefits to local communities within ecotourism destinations.

The International Ecotourism Society (IES) defines ecotourism as responsible travel to natural areas that conserves the environment and improves the wellbeing of local people. This definition involves three main pillars of ecotourism: (1) environmental conservation; (2) local participation and local benefits; and (3) a tourism industry, visitors, destination community and group of wider stakeholders who are socially- and environmentally-responsible (García, Orellana and Araujo 2011).

Ecotourism often involves activities that require a high level of environmental awareness among the tourists and tour operators (Moinuddin and Begum 2004). Ecotourism inevitably incentivises the tourists and local community to be more aware of the environment. For example, Cheng, Jin, and Wong (2014) report that domestic Chinese tourists became more environmentally-conscious after visiting ecotourism sites. Furthermore,

Reimer and Walter (2013) argue that ecotourism can be used to educate both the ecotourists and the local community about the environment, as both of these groups are participants in ecotourism. Ecotourism activities have three main characteristics: (1) they encourage environmental consciousness; (2) they are low-impact; and (3) they promote environmental protection (Zhang and Lei (2012). Wang et al. (2014) note that as a result of ecotourism efforts, ecological awareness is higher among residents of most protected areas in China.

Hence, with the evolution of the definition of ecotourism, ecotourism definition starts with recognising natural attractions along with considering the socio-cultural issues, and gradually focusing on the involvement and empowerment of the local community. Thus, ecotourism, along with tourist satisfaction, gradually accommodates aspects of conserving nature and socio-cultural atmosphere, educates the concerned stakeholders, and provides economic and administrative benefits to the local community.

2.3 THEORETICAL BACKGROUND

This study was based on stakeholder theory and the sustainability framework. Ecotourism is highly dependent on the various stakeholders, so stakeholder theory was considered relevant. In addition, as the study's main focus was to identify sustainable ecotourism outcomes, its design was also informed by the sustainability framework.

2.3.1 Stakeholder Theory

Stakeholder theory intends to explain and guide the structure and consistent operation pattern to ensure numerous and diverse participation to accomplish multiple purposes (Donaldson and Preston 1995). Stakeholder theory can be – and has been – presented and used in diverse ways (Donaldson and Preston 1995). In the context of this study, its most suitable

application is as an instrumental theory that can be used to identify the connections – or lack of connections – between stakeholders, and the achievement of traditional corporate objectives (Donaldson and Preston 1995). A stakeholder is generally defined as any party with an interest or stake in the problem or issue under consideration – all individuals, groups or organisations directly influenced by the actions others take in relation to an matter are stakeholders (Gray 1989). Donaldson and Preston (1995) argue that stakeholders are persons or groups with legitimate interests in procedural and/or substantive aspects of a corporate activity.

Gray (1989) also argues that stakeholders have the right and capacity to participate in the work process; thus, anyone who is affected by the actions of others has a right to be involved. Furthermore, Freeman (2004) suggests that a stakeholder can be defined as any naturally occurring entity that affects or is affected by a given action. In line with this, Gibson (2012) argues that the environment should also be considered as a stakeholder like any other with respect to ecotourism. Kolk and Pinkse (2007) also believe that the natural environment clearly constitutes a stakeholder if it is affected by the corporate activity in question. If the term 'environment' is used to encompass all human and non-human life forms, then by definition it is a stakeholder in all corporate activity, since all activity on earth will affect the environment – in this wide sense – In one way or another (Gibson 2012).

A stakeholder in the ecotourism industry is deemed to be anyone who is affected positively or negatively by this industry, and anyone who is involved in shaping the way in which tourism develops (Bramwell and Lane 2000). Ecotourism usually involves a wide variety of stakeholders, including tourists, communities, governments, managers (Su, Wall and Ma 2014; Tsaur, Lin and Lin 2006). All these stakeholders are important for a given ecotourism destination; yet this does not imply that all stakeholders should

be equally involved in all processes and decisions (Donaldson and Preston 1995). Stakeholder theory should therefore encompass public and private organisations, the natural destination, the environment and those who inhabit it and others who have a 'stake' in it, and the relationships between them (Jamal and Stronza 2009).

2.3.2 Applying Stakeholder Theory to Ecotourism

Tourism is complex and dynamic with linkages and interdependencies among multiple stakeholders who often hold diverse and divergent views and values (Jamal and Stronza 2009). The ecotourism destination is often highly sensitive to human encroachment; thus all the stakeholders should act proactively and collaboratively to achieve agreed goals. Collaboration and coordination among these stakeholders are necessary to ensure that the development of tourism does not adversely affect the environment. Sustainability often depends on the relationships of its stakeholders (Perrini and Tencati 2006), ensuring that natural and cultural resources are managed properly (Jamal and Stronza 2009). Jamal and Jamrozy (2006) posit that in general, a useful approach to the study and management of tourism destinations is to view them as complex planning domains.

Ecotourism in a particular area often involves multiple stakeholders with potentially diverse views on development and varying influences over decisions – no single stakeholder will have complete control over the planning process (Jamal and Stronza 2009). Stakeholder theory provides a diverse range of criteria that justify the involvement of other individuals and groups (Reed et al. 2009). Jamal and Stronza (2009) believe that multiple stakeholders affect and are affected by ecotourism, which has several effects on local communities – not only economic or environmental effects, but also social and cultural effects which may in turn affect other stakeholders in that ecotourism destination.

In the context of ecotourism, stakeholder theory is most relevant (Fletcher 2009) because sustainability includes the degree to which ecotourism helps to enhance the environmental milieu within which it occurs (Fennell and Weaver 2005). Although most ecotourism researchers recognise the importance of involving a wide range of stakeholders in ecotourism, there is still debate about whether country characteristics affect the extent to which stakeholders are willing or able to get involved in ecotourism projects. This study was therefore designed to address this issue, so the results will be useful for destinations with similar attributes.

2.3.3 Sustainability Framework

The word 'sustainability' is derived from the word 'sustainable', which is usually applied to the world, a country, an environment or a community. Sustainability is a property of a socio-ecological system that results from the dynamic processes which preserve the system's identity over the long term (Espinosa 2011).

Sustainability refers to systems and processes that can operate autonomously and persist over extended periods of time (Robertson 2014). It implies an opposite state of unsustainability and involves imposing limitations on undesirable actions that may cause harm (Upham 2001). In practice, sustainability is a matter of balancing social and economic benefits against social and environmental costs (Upham 2001). A sustainable world would be one with sufficient resources for multiple billions of people to meet the environmental and socio-economic needs, and coexist and thrive alongside many millions of other species (Cortese 2010 - cited in Starik and Kanashiro 2013).

The most commonly used definition of sustainable development is provided by the Brundtland Commission. According to Brundtland (1987), sustainable development is the kind of development "which meets the needs of the

present without compromising the ability of future generations to meet their own needs" (p. 43). This definition is based on the notion that present and future generations have equal claims on resources. The Brundtland report coins 'sustainable outcomes' as an integrative concept aiming to balance environmental and economic issues in a mutually-beneficial way.

Over the past two decades it has been suggested that there are two different perspectives on sustainability: anthropocentric and ecocentric perspectives (Espinosa 2011). The anthropocentric approach to sustainability (also called the 'weak approach') treats nature as something external to humankind, a resource to be used and exploited in moderation (Baker et al. 1997). In contrast, the ecocentric approach (also called the 'strong approach') considers nature and social systems as coextensive and inextricably linked via a transactional relationship, and therefore attempts to balance social needs, ecological limits and quality of life (Espinosa 2011). The ecocentric approach to sustainability is clearly based on the idea that sustainable development involves reducing any discrepancies in access to resources between those living today and their descendants (Espinosa 2011).

Sustainable development needs to relate the life harmony to its nature. The Rio Declaration for Environment and Development at the United Nations Conference on Environment and Development (UNCED) states that human beings are at the centre of concerns for sustainable benefits, as they deserve a healthy and productive life in harmony with nature (Weiss 1992). The sustainable outcome is a well-known societal guiding model that recommends for the integration of economic, social and environmental issues in all societal spheres (Steurer et al. 2005). According to Bossel (1999, 10) "the sustainable benefit of human society has environmental, material, ecological, social, economic, legal, cultural, political and psychological dimensions that require attention". However, the most commonly described sustainable

outcome takes into account three factors: economic; socio-cultural; and environmental issues (Parris and Kates 2003; Harris 2000). The essence of the sustainability framework is that to be considered sustainable, ecotourism in a particular destination should produce economic, social and environmental benefits for that destination (Mitchell, Curtis and Davidson 2008).

Espinosa (2011) argues that sustainable development is a process of change by which the system co-evolves, and as an outcome both the system interact with its niche. In contrast, Farrell et al. (2005) believe that sustainable development is a political concept on the grounds that sustainable progress in any area depends on the government working closely with independent organisations such as non-governmental organisations (NGOs), businesses and local people (Espinosa 2011). The sustainability framework specifies that sustainable development in a certain destination must include economic, social and environmental aspects, and that there must be a political commitment in order for that development to be achieved.

2.3.4 Applying the Sustainability Framework to Ecotourism

Numerous tourism researchers have argued that tourism and the term 'sustainability' are closely linked (e.g. Cohen and Cohen 2012; Holden 2009). Sustainable development is the type of development that meets the needs of the present without compromising the future. Ecotourism is nature-based tourism, and environmental attraction is highly engaged in such kind of tourism (Zhang and Lei 2012; Reimer and Walter 2013). Many authors categorise ecotourism as sustainable tourism (e.g. Björk 2000), because it factors in the destination's natural environment (Tsaur, Lin and Lin 2006).

However, Ivanov and Ivanova (2013) have contended that ecotourism can be sustainable or unsustainable; depending on its operation. These researchers add that the sustainability of ecotourism can be measured through environmental, social and economic dimensions (Ivanov and Ivanova 2013).

UNWTO (2007) further states that sustainability principles incorporate the environmental, socio-economic and socio-cultural aspects of tourism development, creating a suitable balance between these three dimensions. In line with this, the World Trade Organization (WTO) Inter-Parliamentary Conference on Tourism in 1989 resulted in the Hague Declaration on Tourism, which states that sustainable tourism is closely related to sustainable development of tourism (WTO 1989).

Sustainable tourism has been defined as the development of tourism in a particular destination through conserving the nature and socio-cultural resources while involving the community in tourism so as to yield sustainable economic, environmental and socio-cultural benefits for the people of the destination (Schaller, Jónasson and Aikoh 2013a; Tosun 2001). Ecotourism often implies sustainable development of tourism. Lu and Stepchenkova (2012) observe that ecotourists care about sustainable development of the destination and respect the local culture. Furthermore, the local community in an ecotourism destination often benefits, and is thus motivated to conserve the local environment.

Stronza (2007) has assumed that market integration and economic incentives are the most effective means of inducing local people to embrace ecotourism as a strategy for conservation. In addition to economic development for the locality, ecotourism is also likely to generate socio-cultural benefits. However, some of the effects of ecotourism on the local community may also be negative (Zamani-Farahani and Musa 2012). For example, unregulated ecotourism may harm the destination environment as well as its socio-cultural atmosphere (Okech and Bob 2009).

In most cases, however, ecotourism brings cultural progress and socio-cultural development, improves the image of the host community, and leads to improvements in local public health, social amenities, education and

conservation system (Zamani-Farahani and Musa 2012). Through their study in the Southern Highlands of New South Wales, Australia, Small, Edwards, and Sheridan (2005) have surmised that owing to the special nature of the interaction between tourists, the destination and the population, ecotourism creates a positive socio-cultural impact.

In summary, it has often been argued that ecotourism is likely to yield social, economic and environmental benefits for the local community (Ross and Wall 1999a; Lindberg and Enriquez 1994). There are, however, definite concerns as to whether ecotourism can produce sustainable outcomes in all circumstances.

The outcomes of ecotourism may vary according to the nature of the destination (Mbaiwa and Stronza 2009; Moscardo 2005; Hunter and Shaw 2007). For example, in the context of this study conducted in Bangladesh, which is a densely populated but small, developing country, even though there are sufficient natural and cultural attractions to support ecotourism, in comparison with most international ecotourism destinations these are not plentiful. Due to such differences in Bangladesh compared with other ecotourism destinations, there are concerns as to whether, in such a country, ecotourism can produce sustainable outcomes.

2.4 ANTECEDENT-OUTCOME FRAMEWORK OF ECOTOURISM

Ceballos-Lascurain, Lindberg, and Hawkins (1993) have argued that ecotourism involves the integration of many parties including tourists, residents and managers. Furthermore, Tsaur, Lin, and Lin (2006) recommend that ecotourism resources in terms of attractiveness, communities and tourists are crucial for ecotourism.

Walker and Moscardo (2014) believe that ecotourism typically includes three key features: (1) it is conducted in natural environments; (2) it operates in such a way that tourism-related businesses make positive contributions to

the destination; and (3) it explicitly educates the tourists. Ross and Wall (1999b) have provided a framework of ecotourism, which provides wide applicability in one province of Indonesia. This framework is designed for the development and evaluation of ecotourism that includes local communities, biological diversity and management.

Most of the attempts to define the inputs of ecotourism are by aggregating the subsectors like nature with culture, and nature with adventure (Buckley 2003). In line with this, Tsaur, Lin, and Lin (2006) believe that tourism resources can relate to nature as well as culture and infrastructure. It can therefore be argued that ecotourism requires some of these antecedents.

It is commonly expected that ecotourism will generate some positive outcomes. Buckley (2003) argues that ecotourism has both input and output constructs. For example, ecotourism is likely to ensure protection of natural areas, generate revenue, provide education, and encourage local participation and capacity building (Ross and Wall 1999a). By participating in ecotourism, communities can receive tangible economic, infrastructural and social benefits (Ross and Wall 1999a). Residents living in or adjacent to a protected area are often receiving economic and social benefits or compensations which will support or complement their livelihoods (Lindberg and Enriquez 1994).

Ross and Wall (1999a) showed that ecotourism can produce economic, infrastructural and social welfare benefits for the community. Tsaur, Lin, and Lin (2006) also showed that ecotourism can produce economic, social and environmental benefits for the local residents. Buckley (2003) further contends that ecotourism is likely to produce a positive natural as well as social environment. Hence, it can be surmised that ecotourism has both antecedent and outcome constructs.

All the studies invoke a concern for a wide group of stakeholders, and for the environment and socio-cultural atmosphere of the destination, as well as the pleasure of nature-loving tourists (Coghlan 2012). However, despite this broad agreement on what ecotourism involves, the extant literature does not provide a comprehensive model that incorporates the broader aspects of ecotourism antecedents and outcomes. This study has therefore attempted to address this gap in the literature by providing a comprehensive model in the context of ecotourism in developing countries like Bangladesh.

2.4.1 Antecedents of Ecotourism

Ecotourism requires some antecedents. The antecedents of ecotourism generally include 'pull' factors – that is, factors that motivate the tourists to visit a destination (Buhalis 2003; Fluker Martin and Turner Lindsay 2000). Pull factors can also include the features of a tourism destination (Kozak 2002; Klenosky 2002). In most cases, natural and socio-cultural attractions are perceived as the main pull factors for an ecotourism destination. In line with the arguments, Ceballos-Lascurain (1996) supports that both natural and socio-cultural elements are required for ecotourism.

Ecotourism also requires other facilities and features within a destination. For example, Eraqi (2006) has suggested that ecotourism depends on natural resources, cultural resources and other tourism-related infrastructure including communications, accommodation and restaurants. Community and government support have also been deemed as important for ecotourism (Kiss 2004). Further, local management bodies clearly have a significant role in maintaining the attractiveness of a destination. These antecedents of ecotourism are discussed in the following subsections.

2.4.1.1 Natural Environment

As a nature-based tourism, nature is treated as one of the prime resources for ecotourism. Nature-based tourism is defined as tourism to places within a

relatively natural setting, strictly outside of large settlements (Priskin 2001). Such natural attractions are often the primary incentives for tourists to visit an ecotourism destination (Reimer and Walter 2013). Horng et al. (2012) have pointed out that natural attractions including climate phenomena, mountain scenes and plants are often the most important ecotourism resources. Lu and Stepchenkova (2012) have also observed that ecotourists are increasingly attracted by the quality of the environment and the integrity of natural and cultural resources in various destinations. Adding to this, the diversity in nature-based tourism destinations such as national parks and conservation reserves often constitute the attractiveness of ecotourism destination (Eagles 1992).

Weaver (2008) believes that in ecotourism, the main interest of visitors is observing and appreciating the natural beauty of a destination (cited in Weaver 2011). Furthermore, the variety of natural attractions contributes to the attractiveness of a destination. In their ecotourism study in South America, Nahuelhual et al. (2013) could see that most visitors travel to Chiloé Island, Southern Chile for wildlife observation, hiking, trekking, kayaking, climbing, bird-watching, horse riding, mountain biking and cultural activities.

In North America, Eagles (1992) reports that Canadian ecotourists are mostly interested in the destinations that contain lakes and streams, rural areas, parks, mountains or coastal habitats. Furthermore, in a study of tourism in the Barva Volcano Area of Costa Rica, Hearne and Salinas (2002) have found that both foreign and domestic tourists enjoy the natural elements; although while foreign tourists wish to appreciate nature in relative isolation, local visitors are most often seeking a natural setting for family recreation and picnics.

This findings ensures that the quality of the natural environment is a crucial element within ecotourism (Ross and Wall 1999a). In line with this, Coghlan (2012) argues that a well-conserved and well-managed natural attraction is likely to attract more ecotourists to the destination. As part of this quality management, and to ensure the ongoing attractiveness of a destination, it is important to reduce visitor-caused disturbance and other negative impacts; thus, it is often necessary to impose limitations on visitor entries (Tershy et al. 1999). However, the logical difficulty with limiting visitations is that carrying capacity is not necessarily fixed (Weaver 2001). Moreover, it is often difficult to calculate the maximum number of visitors, as tourist numbers can vary during peak season, as well as daily, weekly and yearly; furthermore, concerns about the capacity issue may discourage tourist visits (Chougule 2011). To continue with this carrying capacity debate, this study has explored whether the Sundarbans should be used as a resource in terms of ecotourism.

2.4.1.2 Socio-cultural Attraction

Ziffer (1989) defines ecotourism as a form of tourism primarily inspired by the natural attractions of a destination that consumes both its natural beauty and indigenous cultures (cited in Weaver 2008). In line with this, Weaver (2005) argues that the inclusion of a cultural component in ecotourism is a logical extension of the focus on 'nature'. Ecotourism thus involves the enjoyment of natural and cultural attractions as part of an otherwise conventional holiday (Carrier and Macleod 2005).

Ziolkowski (1990) indicates that ecotourism focuses on enabling visitors to experience local culture. Similarly, Carrier and Macleod (2005) believe that ecotourism involves travelling to enjoy and engage with attractive and interesting surroundings, with tourists participating in various activities at the destination. These activities are often identified as 'indigenous' or 'exotic' in a way that respects and supports the community, such as

consuming locally-owned accommodation and services (Carrier and Macleod 2005). Reimer and Walter (2013) contend that ecotourists visit a specific destination to enjoy both the natural and socio-cultural attractions.

The socio-cultural atmosphere of the destination not only attracts the ecotourists but also potentially improves through interaction of the local community with the tourists. For example, the growth of tourism in the Dominican Republic and Jamaica has led to an increase in the infrastructural facilities used by ecotourists, which positively affects both the natural environment and local people's relationships with the surroundings (Carrier and Macleod 2005). Although it has also been argued that ecotourism can increase the reliance of indigenous communities on tourism business and weaken cultural bonds through commodification (McLaren 1999).

It has been recognised that much of the online advertisement language in relation to ecotourism, the environment and sustainability reflects a form of commodification (Dorsey, Steeves and Porras 2004). Thus, concern has risen as to whether a conservative socio-cultural atmosphere can be treated as an ecotourism resource. The study destination is more conservative in nature in comparison with many other ecotourism destinations. This study has therefore aimed to assess whether the prevailing socio-cultural atmosphere available in the study destination can be treated as another antecedent resource of ecotourism.

2.4.1.3 Physical Infrastructure and Facilities

Physical tourist infrastructure and facilities mostly consist of manmade structures that support visitors while traveling to a destination. These infrastructure and facilities may include: facilities for travel by air, rail, road and water; hospitality services such as accommodation, food and beverages; tours; souvenirs; and other facilitating services (Schianetz and Kavanagh 2008, Silva and McDill 2004; Ahmed, Azam and Bose 2010). Although

ecotourism requires far less infrastructure than traditional tourism (Ok, Okan and Yilmaz 2011), it still depends on a more basic level of facilities, such as water supply and basic sanitation (Singh and Mishra 2004; Shihabudheen 2012).

In line with this, Priskin (2001) has pointed out that tourists expect at least basic infrastructure and facilities in a destination. For example, important ecotourism infrastructure might include canal, road or rail transport, airports, or a combination that enables tourists to reach their destination (Shihabudheen 2012; Parker and Khare 2005). Ramp, Wilson, and Croft (2006) note that infrastructure such as access roads and hiking trails facilitate development of ecotourism. However, the infrastructure requirements for ecotourism are no doubt different from mass tourism, particularly as they are more about blending into the natural environment (Nianyong and Zhuge 2001; Worboys and Pickering 2002).

There is increasing awareness that infrastructure for tourism and recreation, including transportation and buildings such as exhibition halls, tourist centres and experience halls (Khadaroo and Seetanah 2008; Gospodini 2002), can have both direct and indirect adverse effects on the environment (Pickering and Buckley 2003; Hill and Pickering 2006). For example, the burning of fossil fuels for transportation and to manage buildings is responsible for a substantial proportion of greenhouse gases along with indirect emissions linked to water use and waste production (Horng et al. 2012).

Ecotourism infrastructure needs to be planned carefully so that it allows tourists access to the destination, but not at the expense of habitats or wildlife (Zhou et al. 2013). Ecotourism projects should therefore consider whether building excessive infrastructure is going to jeopardise the outcomes. This study's ecotourism destination is a mangrove forest which is unique from

many others. Thus, concern immediately arises about how much infrastructural development is allowable for such a rare ecotourism destination. This study has aimed to address this issue.

2.4.1.4 Participation and Involvement of Local Community

In the context of tourism, a community can be defined in terms of a geographical area or a group of people with shared interests (Aas, Ladkin and Fletcher 2005). If a geographical area definition is used, a community can be defined as all the citizens in a given area. Furthermore, if the common interest approach is taken, the tendency to emphasise the importance of economic factors means that the business sector often represents the local community (Aas, Ladkin and Fletcher 2005).

According to Gray (1989), stakeholders are parties with an interest or stake in a common problem or issue. Farrell and Twining-Ward (2005) and many others note there are many stakeholders in ecotourism, with the local community one of the most important. Ensuring the sustainability of natural and cultural resources is no longer viewed as the responsibility of a single party – it is the shared responsibility of all relevant stakeholders. Thus, as an important stakeholder, the views of local communities towards tourism are important, because they are closely associated with conservation of biodiversity, and management of protected areas in the locality (Spiteri and Nepalz 2006). Numerous researchers have recognised that local community involvement in ecotourism has a positive effect on the social and cultural structure at a destination (e.g. Boo 1990; Liu et al. 2014). In line with this, Honey (2008) recommends the inclusion of the local community in the planning and decision-making process if the project is to deliver sustainable benefits at the local level.

Western and Wright (1994) have observed that since the late 1960s there has been a gradual increase in local community involvement in decision-making

and profit-sharing in ecotourism destinations. This is because, local participation in ecotourism can increase the community's appreciation of the value and significance of its culture and resources, and raise awareness of the importance of resource conservation (Foucat 2002). In addition, greater local involvement in ecotourism projects may contribute to the long-term success of both conservation and community development (Su, Wall and Ma 2014), which are major positive results of ecotourism. For example, local involvement in ecotourism projects often replaces traditional, resource-consuming jobs or subsistence lifestyles (Su, Wall and Ma 2014). This change can in turn be converted into positive direction by strengthening the relationship between the ecotourism industry and conservation initiatives (Su, Wall and Ma 2014; Simmons 1994).

The ecotourism resources are often interrelated, and action by multiple stakeholders may be required for the development of ecotourism (Jamal and Stronza 2009). Reimer and Walter (2013) have stated that community support for conservation efforts helps to ensure the viability of the natural attractions upon which ecotourism depends.

Thus, support of local community is essential for the development of ecotourism. Moreover, in Third World Countries, community participation in ecotourism is often considered a crucial way of promoting development in economically-marginalised regions, encouraging sustainable use of natural resources and enhancing local people's control (Scheyvens 2000).

Local communities can participate in ecotourism via various tourism-related enterprises that serve the tourists (Walpole and Goodwin 2000). Local communities are often dependent on the conservation of ecological resources, and successful ecotourism enterprises generally have a powerful influence over the social and natural environment (Parker and Khare 2005). Small, locally-owned tourist enterprises are viewed as a key tool for diffusing

the economic and socio-cultural benefits and ensuring the goals of such tourism projects are met (Roberts and Tribe 2008).

There is a strong assumption that local ownership of ecotourism enterprises will encourage community stability, increase local economic participation, and reduce local antagonism towards the tourists and the industry surrounding the local community (Morrison 2002). However, Tosun (2000) argues that in the context of developing countries there are often operational, structural and cultural limitations to community participation, which may not always be evident in a given destination at a given time. Moreover, it can be difficult to take a collaborative approach in terms of ecotourism (Ladkin and Bertramini 2002).

Based on the above arguments, this study has explored the extent to which community participation and involvement is required in ecotourism, in the context of the chosen destination within Bangladesh.

2.4.1.5 Government Actions

Most ecotourism requires active involvement of multiple stakeholders, including the government which often has the major responsibility of ensuring that all relevant stakeholders are involved in the tourism process (Ruhanen 2013). As ecotourism largely depends on the attractiveness of the destination's natural environment, government-led conservation is crucial (Jaafar and Maideen 2012). It is commonly believed that governments should support ecotourism via policy, incentives and regulations (Nicholas, Thapa and Pennington-Gray 2009). In line with this, Pearcy and Story (2013) contend that it is necessary for government agencies at various levels to intervene in ecotourism initiatives to ensure that destinations are developed and managed in a manner that is economically, environmentally and socio-culturally sustainable.

Government regulations are also critical to ecotourism management strategies, action plans and codes of conduct (Techera and Klein 2013). Aguila and Ragot (2014) have further suggested that local governments support ecotourism by financing the promotion and maintenance of ecotourism destinations. In line with this, Ruhanen (2013) believes that governments need to play a central role in the ecotourism process.

Governments also have a role in ensuring that tourism strategies address social issues, regulatory changes, technological and product innovations, and even the impact of transportation modes on energy consumption (Gössling et al. 2006). Doremus (2003) contends that for ecological conservation, all stakeholders including tourists actions need to be controlled through prohibitions or restrictions on various activities; and government support is require for that (Pearcy and Story 2013). Furthermore, it has been suggested that governmental ineffectiveness may lead to discouraging environmental activism (Lubell 2002).

As part of ecotourism management, governments can provide guidelines for natural conservation to both visitors and residents (Moinuddin and Begum 2004). The government also has a significant role in managing tourism initiatives, including planning, promoting and regulating, especially in developing countries (Bhuiyan et al. 2011).

It has been contended that the government's role in promoting ecotourism should be to provide proper leadership to the society (Moinuddin and Begum 2004). In addition, it should provide leadership by implementing appropriate policies that support the ecotourism process. It also needs to provide security to the destination and ensure adequate funding for basic transport and communication infrastructure (Bhuiyan et al. 2011). Furthermore, Hall (2007) has argued that governments can help the tourism industry by providing infrastructure, educational opportunities, establishing

a supportive regulatory environment, and promoting and marketing the country as a tourist destination. For example, Bhuiyan et al. (2011) note that the Malaysian Government formulated a specific plan for ecotourism that provided for the conservation of Malaysia's natural and cultural heritage. The Malaysian Government sought to improve the tourist experience by preserving natural attractions, improving accessibility, training people to improve the service quality, promoting ecotourism, ensuring safety and security for all stakeholders, and providing funds for research and development (Bhuiyan et al. 2011).

Furthermore, the local community participation that is also integral to ecotourism development suggests that appropriate institutional and regulatory arrangements are required (Liu, Li and Pechacek 2013), to ensure that local communities are involved in decision-making and share the benefits of ecotourism projects (Su, Wall and Ma 2014). Baum and Szivas (2008) believe that local community involvement is essential to many parts of ecotourism including planning, monitoring and establishing tourism-related enterprises, and that the central government and its various agencies have a major role in ensuring this happens.

In many developing countries, ecotourism destinations are in remote, underdeveloped areas with few employment opportunities for the local community (Snyman 2012). Thus, these governments have an important role in creating job opportunities that ensure adequate employment in these ecotourism areas (Stiglitz 2002).

The government also plays a critical role in regulating tourism activities to ensure that disturbance to the environment is minimised. This type of monitoring already occurs in many international ecotourist destinations, such as Ningaloo Marine Park in Western Australia, which is governed by protected area management legislation (Techera and Klein 2013).

In addition, governments can encourage tourist enterprises to use energy and water conservation equipment and employ practices that will preserve the environment (Horng et al. 2012). Thus, the government having expansive responsibilities in relation to ecotourism area that varies based on the destination and community perspective.

This study has therefore sought to address the scope of the government's role in the chosen destination within Bangladesh, as an antecedent of ecotourism.

2.4.1.6 Local Management

The visitor experience within natural and socio-cultural attractions is the key element of ecotourism. Many researchers (e.g. Diamantis 2004; Weaver and Lawton 2007) consider ecotourism management as crucial in terms of ensuring visitor experience, development of tourism product and program, supporting government policy and local institutions. Local governments often need to take a managerial role in ecotourism projects involving remote destinations.

Robust maintenance of facilities at most ecotourism destinations is essential, and local governments have considerable responsibility for this – they are closest to many of the problems associated with planning and development of tourism projects (Dredge and Jenkins 2007). For example, in Queensland, Australia local governments are increasingly engaged in supporting and promoting tourism (Ruhanen 2013).

Local governments also often facilitate and support the development of tourism via specific goals and policies designed to ensure sustainable development (Reid 1984). Local governments must therefore ensure the required infrastructure at the outset. The standard of public infrastructure and community facilities (e.g. parks, gardens) can have a significant

influence on the image and attractiveness of a destination, and the visitor experience (Dredge 2001). Local governments are also responsible for ensuring sustainable land use, suitable development of the land for tourism and promoting the destination (Hall 2000).

It is crucial for the local management to ensure that ecotourism activities and developments do not cause damage to the environment because this is a key component of ecotourism (Ceballos-Lascurain 1996). Effective ecotourism management minimises the impact of tourist activities, ensuring that the destination remains attractive to the future tourists (Wight 2002; Boyd and Butler 1996). Damage to the environment can be minimised via coordinated planning and regulation, incentives to encourage or discourage certain activities, and on- and off-site awareness-raising programs (UNEP 1998).

Conservation of biodiversity is another key aspect of developing and maintaining the attractiveness of an ecotourism destination. Paloniemi and Tikka (2008) have emphasised the growing need to conserve biodiversity as part of ecotourism activities. The need for biodiversity conservation has also been recognised by international organisations, which have recommended that this aspect of ecotourism should be regulated by the public sector and managed by other pertinent stakeholders like local management.

Well-managed ecotourism can promote the ecologically- and economically-sustainable use of the natural resources, and can provide proper incentives for conservation (Vianna et al. 2012). For example, local management can facilitate the protection of migratory species, shared water tables and scenic landscapes (Cook et al. 2013). Ecotourism clearly has the potential to deliver multiple benefits to its stakeholders, yet it may also have adverse effects if poorly managed (Dobson, Jones and Botterill 2005). For example, ecotourism may impose a threat to endangered animals and plants in the destination area. In this context, effective management is essential to ensure that

ecotourism is compatible with the protection of plants and animals (Quiros 2007).

Furthermore, Bhuiyan et al. (2011) believe that ecotourism should benefit nature conservation by ensuring appropriate environmental management activities. To ensure that ecotourism delivers environmental and socio-cultural benefits, it is important to watch for unintended consequences and to manage the destination to minimise damage (Salvador, Clavero and Pitman 2011).

Visitor management is also a key part of ecotourism management. Visitor management strategies generally consist of protecting natural resources via physical barriers, regulating visitor number and behaviour, using economic incentives to encourage or discourage specific tourist behaviours, and providing information about the environment protection (Horng et al. 2012).

Ecotourism often involves a range of stakeholders including tourists and residents as well as governments and other local management bodies (Tsaur, Lin and Lin 2006). It is also widely perceived as being capable of improving the living standards and life choices of local people, as well as conserving natural habitat (Xu et al. 2009). Thus, Stronza and Pêgas (2008) have suggested that greater local involvement in ecotourism management contributes to the long-term success of both conservation activities and community development.

Ecotourism-related facilities can also be used to enrich the cultural life of residents, including providing support for environment-related public campaigns and educational activities that can enhance the socio-cultural standards of the local community (Su, Wall and Ma 2014). However, for this to occur all of the stakeholders including local governments and local management need to play an active role (Su, Wall and Ma 2014). With the support of appropriate management, ecotourism can contribute to the

sustainability of the protected areas by improving the wellbeing of local communities, enhancing public awareness of the value of the environment and natural resources, and providing money for conservation activities (Su, Wall and Ma 2014).

This study has therefore examined how pivotal local management activities are as an antecedent of ecotourism in the chosen study destination. Table 2.1 below shows all of the above stated antecedents of ecotourism.

Table 2.1: Proposed antecedents of ecotourism

Antecedents of Ecotourism	**Source**
Natural Attraction	Horng et al. (2012); Lu and Stepchenkova (2012); Nahuelhual et al. (2013)
Socio-cultural attraction	Weaver (2005); Carrier and Macleod (2005); Reimer and Walter (2013)
Physical Infrastructure and Facilities	Silva and McDill (2004); Schianetz and Kavanagh (2008); Ahmed, Azam, and Bose (2010); Shihabudheen (2012)
Participation and Involvement of Local Community	Aas, Ladkin, and Fletcher (2005); Farrell and Twining-Ward (2005); Reimer and Walter (2013)
Government Action	Jaafar and Maideen (2012); Pearcy and Story (2013); Aguila and Ragot (2014)
Local Management	Tsaur, Lin, and Lin (2006); Dredge and Jenkins (2007); (Su, Wall and Ma 2014)

2.4.1.7 Research Gaps among Ecotourism Antecedents

In sections 2.4.1.1 to 2.4.1.7, the proposed antecedents of ecotourism were discussed. The corresponding research gaps are summarised in Table 2.2.

Table 2.2: Research gaps among proposed antecedents of ecotourism

Antecedents	**Research gap**
Natural attraction	Whether the Sundarbans can be used as a resource in terms of attraction for ecotourism?
Socio-cultural attraction	Whether the prevailing conservative socio-cultural atmosphere available in the study destination can be used as another antecedent resource of ecotourism?
Physical infrastructure and facilities	How much infrastructural development is required for the study destination?
Participation and involvement of local communities	What level of local participation and involvement is required in ecotourism in the study destination?
Government actions	What the scope of the government's role is in the study destination, as an antecedent of ecotourism?
Local management	How much local management inputs are required as an antecedent of ecotourism in the study destination?

2.4.2 Outcomes of Ecotourism

Ecotourism is expected to generate a wide variety of benefits in any given destination (Stone and Wall 2004). For example, many researchers (e.g. Priskin 2001; Walker and Dickson 1988; Tobias and Mendelsohn 1991) have argued that it delivers environmental benefits. Others have suggested that ecotourism delivers economic (e.g. He et al. 2008; Ross and Wall 1999a; Wunder 2000) or socio-cultural benefits (e.g. Ashley and Roe 1997; Kiper, Özdemir and Sağlam 2011; Pipinos and Fokiali 2009).

The international development community is convinced that ecotourism is a means of improving the economic welfare of indigenous people through the creation of a symbiotic relationship between tourism, indigenous communities and natural areas (Zeppel 2006; Gordillo Jordan et al. 2008). As an example of this, Reimer and Walter (2013) have shown how an ecotourism project in the rainforest of south-western Cambodia produced mutually-beneficial relationships between environmental conservation, local economic

livelihood and cultural preservation, as well as a symbiotic relationship that benefited all three parties.

However, there are concerns that ecotourism may also have negative consequences (e.g. Kirkby et al. 2011; Zhou et al. 2013; Zhang, Li and Ma 2014; Das and Chatterjee 2015). Although this study has only considered the positive outcomes of ecotourism, and has subsequently assumed that ecotourism is likely to produce the four following positive outcomes: (1) economic benefits; (2) environmental benefits; (3) socio-cultural benefits; and (4) emotional benefits.

2.4.2.1 Economic Benefits

Economic benefit is often measured in terms of annual household income from ecotourism activities. In line with this, it is most often measured in terms of new employment and cash earnings (Wunder 2000). Ecotourism is also often perceived as a way to improve the economic condition of indigenous people (Stronza and Gordillo 2008), as it provides access to various employment opportunities (Mbaiwa and Stronza 2010).

In line with this, Andereck et al. (2005) believe that ecotourism has various economic benefits for community people, including employment opportunities, tourism-related business opportunities, and sharing the benefits of supply industries. Boudreaux (2008) concludes that in Namibia, the development of community-based ecotourism (CBET) enhanced local job opportunities and improved the community's economic situation. Zhou et al. (2013) also note that ecotourism can be a sustainable source of income for local communities.

Ecotourism often generates various types of employment and business opportunities that in turn provide economic benefits for the local community (Kiss 2004). For example, ecotourism destinations require various facilities

and services including cottages, small restaurants and tour guides (Wight 1997; Vianna et al. 2012) which can employ local people. Ecotourism also often opens up opportunities for business development at the destination (Farrelly 2011). As examples of further business opportunities, Lindberg, Enriquez, and Sproule (1996) observed that communities can earn a significant profit from tourism via the selling of handicrafts, and providing accommodation and other services.

Local people can also benefit from their involvement in the ecotourism supply chain. Ashley, Roe, and Goodwin (2001) point out that in developing countries in particular, the local community and local businesses can benefit by supplying food to the tourists. Adding to this, Reimer and Walter (2013) report that ecotourism in the Cardamom Mountains rainforest of south-western Cambodia has generated financial benefits for local people. In the context of a developed country, Dyer et al. (2007) have shown the Australians perceived economic benefits out of ecotourism development in the Sunshine Coast.

The economic benefits of ecotourism may be direct (i.e. amount visitors spend on main product), indirect (amount visitors spend on additional services and products) and/or induced (amount tour operators spent on inputs such as wages and fuel), and also often include tax receipts (Vianna et al. 2012). If the local community is able to leverage all these economic activities, the local people can gain greater economic benefits. For example, He et al. (2008) report that around 60% of the local working population at Wolong Nature Reserve in China are employed in ecotourism.

Furthermore, Wunder (2000) believes that ecotourism increases local residents' purchasing power. Jaafar and Maideen (2012) note that visitors can provide monetary benefits to the local community while enjoying the variations of the biodiversity of the destination that in turn increases their

purchasing power. However, critics of international tourism argue that due to leakage problem, the industry does not leave significant revenue in many of the destination economies (e.g. Mbaiwa 2005; Mitchell and Ashley 2007). Sandbrook (2010) adds that leakage of tourism revenue often results in minimal economic benefits for host communities, particularly in rural areas of developing countries. For example, Walpole and Goodwin (2000) have revealed that only 1% of tourist spending at the destination reaches local people living within Komodo National Park in Indonesia.

This study has therefore aimed to verify whether the economic benefits derived from ecotourism reach the local community in the chosen study destination.

2.4.2.2 Environmental Benefits

Ecotourism is predominantly founded on nature-based attractions, and the importance of nature in ecotourism eventually produces nature conservation (Priskin 2001; Fennell 2007). Balmford et al. (2009) agree that one of the essential features of ecotourism is that it promotes nature conservation. In addition, ecotourism has the potential to act as an incentive for local communities to manage the environment sustainably via revenue generation (Kirkby et al. 2011). Coria and Calfucura (2012) support that ecotourism can provide enough economic incentives to the local communities for biodiversity conservation.

Ecotourism represents a nexus of mutually-beneficial relationships linking environmental preservation, the livelihood of local residents and cultural preservation (Reimer and Walter 2013). Ecotourism benefits the natural environment by promoting conservation activities (Priskin 2001), and often generates employment opportunities which lead to more positive attitudes towards nature conservation (Snyman 2012).

The prefix 'eco' in ecotourism denotes an emphasis on preserving the natural attractions that draw in tourists (Reimer and Walter 2013). Furthermore, the revenue generated from ecotourism may justify conserving areas that would otherwise be under pressure from competing industries such as farming, mining or urban development (Walker and Dickson 1988). In line with this, Tobias and Mendelsohn (1991) have argued that given the growing demand for ecotourism, the decline in the number of natural sites will only increase the benefits of preserving the remaining sites.

In a study conducted in the Osa Peninsula, Costa Rica Hunt et al. (2015) identified that the owners of lodges used for ecotourism have directly contributed to reforestation, as well as promoting the conservation of tropical forest adjacent to the national park on several occasions. Reimer and Walter (2013) add that there is an urgent need for conservation and environmental protection measures to be implemented in the rainforest of the Cardamom Mountains of south-western Cambodia, in order to safeguard the ecotourism business. They concluded that ecotourism was contributing more to conserving the region's rainforest than other businesses (Hunt et al. 2015). Vincent and Thompson (2002) add that the local community perception regarding natural conservation was developed through conservation education of ecotourism.

Liu et al. (2014) have shown that ecotourism can promote pro-environmental behaviour in a community. Shrestha et al. (2014) have also discovered that ecotourism in the protected forests of Nepal contributes to protecting endangered wildlife species and enhancing the flora. Reimer and Walter (2013) further report that in the Cardamom Mountains rainforest of south-western Cambodia, the ecotourism process has increased environmental awareness and provided indirect financial support for conservation.

However, it has also been identified that tourism can cause significant environmental damage (Gössling 1999), particularly if it is not managed properly (Dobson, Jones and Botterill 2005). Some researchers have argued that overuse of natural resources can cause vegetation damage, and thus makes tourism development unsustainable (Li 2004).

Despite the probability of the adverse effects of ecotourism as stated above, this study has therefore aimed to verify whether ecotourism can produce environmental benefits, based on the chosen study destination.

2.4.2.3 Socio-cultural Benefits

Ecotourism is embraced by many rural communities as a potential economic saviour – they are motivated by the promise of jobs, new business opportunities and skills development (Ashley and Roe 1997). Ecotourism produces even greater economic benefits in developing countries (Schellhorn 2010). Because, most researchers believe that ecotourism activities increase the income of the local community (Kausar, Mirza and Akhtar 2015); higher local income levels in turn lead to improvements in the local provision of goods as part of the ecotourism supply chain (Barrett and Arcese 1995).

Additionally, economic benefits of ecotourism often enables the local communities to enjoy various socio-cultural benefits, including better health care, transport and communication infrastructure and amenities, such as portable water and plumbing (Stronza and Gordillo 2008). Income from ecotourism can also make education more affordable, and enable better housing, provides more sports activities, higher quality products and services, better infrastructure, more support for elderly and disabled, and better health care services (Mbaiwa and Stronza 2010; Reimer and Walter 2013). Moreover, increased earnings are also shared within each households, which eventually facilitates livelihood improvements for the local community (Scheyvens 1999).

To develop a location as a prime ecotourism destination, certain infrastructural facilities (e.g. road, water and sanitation system) often need to be improved. The local people then benefit from improved infrastructure, and hence enjoy a better quality of life. For example, Ogutu (2002) reports that the local community in Eselenkei, Kenya is benefiting from improved infrastructure built to support ecotourism.

Furthermore, Karwacki and Boyd (1995) have suggested that ecotourism gives the local community more control over their own area's development, which is likely to empower indigenous people (Coria and Calfucura 2012), leading to greater economic achievements, improved self-confidence, greater social cohesion and enhanced political influence over acquisition and management of their land (Weaver 2010).

Local communities can also benefit from cultural exchanges with the tourists. Pipinos and Fokiali (2009) have contended that local people believe ecotourists communicate more with local people, share their experience, and render better support the living folklore tradition and culture. Dyer et al. (2007) shows that the people of Australia perceived positive socio-cultural impacts of tourism, along with some negative social impacts. The communication opportunity with the ecotourists often provides psychological support to the local community in their efforts to preserve their customs and traditions (Karwacki and Boyd 1995; Greathouse-Amador 2005; Pipinos and Fokiali 2009). Ecotourism also often enables local communities to prosper in a greener, more sustainable way than traditional activities such as stockbreeding, forestry or fishing (Kiper, Özdemir and Sağlam 2011).

However, local traditions and values can be commodified as part of ecotourism (Stronza 2001). 'Commodification of culture' has been defined as a process by which cultural elements are evaluated primarily in terms of

business elements (Cohen 1988). Many tourism scholars have voiced concern about whether a cultural item or ritual loses meaning for locals once it has been commodified and the item becomes 'material' property rather than a spiritual element of the host culture (e.g. Stronza 2001).

This study has therefore strived to identify whether ecotourism in the true sense provides socio-cultural benefits rather than exploiting the local communities, based on this study's chosen destination.

2.4.2.4 Emotional Benefits

Ecotourism enables tourists to enjoy and appreciate the natural beauty of the destination (Ding and Alias 2014). Nature-loving tourists often search for a destination that possesses varied natural attractions – whenever a place becomes famous for its natural beauty it attracts both domestic and international tourists (Akama and Kieti 2003). Most tourists appreciate the natural beauty or culture of the destination (Komppula and Suni 2013). The tourists' appreciation obviously provides some joy for the local community.

Waitt (2003) has argued that whenever a destination becomes renowned for its natural beauty or cultural heritage, the local residents become proud of the area. In such instances, visitors' positive comments function as a psychological reward for the residents (Waitt 2003). Many places in the world are rich in natural or cultural resources, but often it is only when people from outside appreciate them that the local community realises that what it has is precious.

Scheyvens (1999) states that the pride of many community members is enhanced by outside recognition of the uniqueness and value of their culture, their natural resources and their traditional knowledge. López-Mosquera and Sánchez (2013) further indicate that the local community derives functional, cognitive and emotional benefits from visitors' enjoyment of the

attractiveness of their area. This kind of emotional feeling can be justified through emotional theory.

An emotion theory should encompass a number of interdependent cause-and-effect variables and processes, which follow the principle of reciprocal determinism (Bandura 1983); that may offer specific propositions about each of the individual emotions such as pride (Lazarus 1991). For example, the people of Australia and more specifically Sydney received a significant psychological boost from hosting the Olympics in 2000 – the games were perceived to have raised the international profile and enhanced the status of both Sydney and Australia (Waitt 2003).

Furthermore, access to employment and income as a result of ecotourism often increases the standing of traditionally low-status sectors of society, such as women and young people (Scheyvens 1999).

Despite its prevalence as an outcome of ecotourism, there has been very little theoretical work to date on emotional benefits. This study has therefore explored whether ecotourism can produce emotional benefits for the local community.

Table 2.3 below summarises this study's proposed outcomes of ecotourism, as discussed above, based on the support of existing literature.

Table 2.3: Proposed outcomes of ecotourism

Outcomes of Ecotourism	Source
Economic benefits	Boudreaux (2008); Stronza and Gordillo (2008); Zhou et al. (2013)
Environmental Benefits	Balmford et al. (2009); Kirkby et al. (2011); Coria and Calfucura (2012)
Socio-cultural benefits	Stronza and Gordillo (2008); (Reimer and Walter 2013); Kausar, Mirza, and Akhtar (2015)
Emotional Benefits	Scheyvens (1999); (Waitt 2003)

2.4.2.5 Research Gaps among Ecotourism Outcomes

It has been discussed above that ecotourism is likely to generate economic, environmental, socio-cultural and emotional benefits. However, there are debates about the outcomes. The gaps identified through the literature are summarised in Table 2.4 below.

Table 2.4: Research gaps among proposed outcomes of ecotourism

Benefits	Research gap
Economic benefits	Whether the economic benefits generated by ecotourism really reach the local community in the chosen study destination?
Environmental benefits	Whether ecotourism can produce environmental benefits in the study destination?
Socio-cultural benefits	Whether ecotourism in the true sense can provide socio-cultural benefits rather than exploiting those in the study destination?
Emotional benefits	Whether ecotourism can generate emotional benefits for those in the study destination?

2.5 MEDIATION AMONG THE ECOTOURISM BENEFITS

Ecotourism generates multiple, interdependent benefits for the local community (Melo, Turnhout and Arts 2014; Liu et al. 2014; Zinda et al. 2014). Many conservationists have argued that the economic benefits of ecotourism would persuade local people to protect forests (Stronza 2007). Groom, Podolsky, and Munn (1991) believe that tourism can produce economic benefits for the local population via employment, business opportunities. Furthermore, Crapper (1998) has predicted that as local communities start to see the direct economic benefits of ecotourism, they have more incentives to protect the environment the tourists have come to see.

Many scholars have argued that to local community, the economic benefits of ecotourism are a crucial incentive to conserve the environment (Bookbinder et al. 1998; Liu 2003). However, this concern is not out of the debate. Taylor,

Stewart, and Hardner (2006) have raised the question of whether generating income from tourism is compatible with conservation goals, such in the Galapagos where their study was focused. The various consequences of ecotourism in a given destination are often interrelated.

Thus, as part of this study's suggestion that ecotourism generates emotional benefits for the local community, it has assumed that the relationship between ecotourism and its emotional benefits might be mediated by the economic benefits. Existing literature has not addressed such anticipated mediation effects of ecotourism outcomes as in this study, which are further discussed below.

2.5.1 Mediation between Economic and Environmental Benefits

It has been identified that ecotourism can generate economic benefits, as discussed in section 2.4.2.1. Furthermore, ecotourism also can generate environmental benefits (as discussed in section 2.4.2.2). In addition to generating these above-stated benefits independently, it has been argued that the economic benefits of ecotourism can mediate the environmental benefits of the destination concerned. That is, if a local community believes they economically benefit from nature conservation, they tend to take a more active role in conservation work.

Both Liu et al. (2014) and Brooks, Waylen, and Mulder (2013) have argued that communities' pro-environmental behaviours are influenced by the economic benefits the community derive from ecotourism. Whenever local communities benefit directly from the biodiversity of their area, they have an incentive to safeguard it (Torquebiau and Taylor 2009; Lapeyre 2010; Nilsson et al. 2016). West (2006) and Imran, Alam, and Beaumont (2014) have also contended that local communities benefit from ecotourism through employment and other income-generating activities, and that these benefits act as an important incentive to support nature conservation.

This relationship has been reported in many developing countries (Su, Wall and Ma 2014; Wunder 1999; Spiteri and Nepalz 2006). For example, Lindberg, Enriquez, and Sproule (1996) show that economic benefits for local communities can increase local support for conservation. In a study of ecotourism in Infierno in the Peruvian Amazon, Stronza (2007) also shows that the economic benefits are an effective incentive for the local community to participate actively in natural conservation. In line with this, Liu et al. (2014) demonstrate that economic benefits via ecotourism have a positive impact on local communities' pro-environmental behaviours – most realise that to attract more customers and thus financial benefit more from ecotourism, they have to be vigilant about environmental conservation.

Langholz (1999) has also suggested that a rise in the local community's economic benefits reduces or eliminates traditional activities such as farming, logging and ranching. Additionally, Wunder (2000) claims that the earnings of the local community have both 'push' and 'pull' effects. Such pull effects include resource protection behaviours that benefit the residents while also protecting the diversity of biological resources and traditional culture. In contrast, the push effect enhances awareness regarding the importance of environmental protection, prompting local residents to adopt pro-environmental behaviours (Liu et al. 2014).

Based on the above discussion, this study has therefore examined whether the economic benefits of ecotourism mediate delivery of environmental benefits.

2.5.2 Mediation between Economic and Socio-cultural Benefits

As discussed in section 2.4.2.3, ecotourism can generate socio-cultural benefits for its inhabitants. The socio-cultural benefits of tourism have been defined as development in collective and individual value systems, behaviour patterns, community structures, lifestyles and quality of life (Hall

and Lew 2009). It was also highlighted in section 2.4.2.1 that ecotourism can generate economic benefits for its local community.

Some researchers believe that the economic benefits generated via ecotourism can mediate socio-cultural benefits for the local communities. For example, Telfer and Sharpley (2007) have recognised that tourism can generate both formal and informal employment. However, incomes from tourism tend to be higher than incomes for traditional activities such as agriculture and fishing (Noia, Avila and Cartibani Midlej 2009; Villela Lima da Costa 2009). Importantly, there is strong evidence that income and social conditions are closely related. For example, in their study of a CBET project in the rainforest of south-western Cambodia, Reimer and Walter (2013) have found that ecotourism provides financial benefits to the local community which both empowers and implicitly supports local human rights and democratisation. Furthermore, in Brooks' (2010) survey of eight villages in two communities in Bhutan, findings indicate that economic and social motivations for conservation need not be mutually-exclusive.

For most local people, the economic benefits of community-based activities are an important incentive to participate (Liu et al. 2014). Chiu, Tang, and Luk (2001) have shown that the financial incentive is a crucial factor in motivating local people in Hong Kong and China, so that the residents' social activities or behaviours are encouraged by economic benefits derived through ecotourism. Furthermore, in a study of three villages in Botswana – Khwai, Mababe and Sankoyo – Mbaiwa and Stronza (2010) have identified that income from ecotourism is often used to fund social services and community development projects. They also point out that incomes in these villages were lower and poverty was higher before tourism was developed (Mbaiwa and Stronza 2010).

Eraydin, Armatli - Köroğlu, and Uzun (2012) have agreed that ecotourism often results in economic transformations, which can have a significant positive impact on the social structure of a community such as on the standard of local housing. It is also claimed that revenue from tourism benefits the local community through improvements in education, infrastructure, etc. (Charnley 2005). Eraydin, Armatli - Köroğlu, and Uzun (2012) have demonstrated that the economic benefits of ecotourism can produce socio-cultural development in a community.

Furthermore, Stem, Lassoie, Lee, and Deshler (2003) show that the villagers in Costa Rica spend their earnings from ecotourism on family wellbeing – that is, improvements in basic subsistence, health, education, as well as the home. Tourism may also have direct positive effects on intangible social variables such as community identity, environmental values, social cohesion and local culture (Cordero, Muñoz and Ontiveros 2013; Zamani-Farahani and Musa 2012).

Based on the above, this study has examined whether the economic benefits of ecotourism mediate delivery of socio-cultural benefits.

2.5.3 Mediation between Economic and Emotional Benefits

Ecotourism is expected to generate emotional benefits for its inhabitants, as discussed in section 2.4.2.4, in addition to economic benefits as discussed in section 2.4.2.1. This study has therefore assumed that in addition to provide direct emotional benefits, economic benefits also mediate the delivery of emotional benefits. Ecotourism provides various employment opportunities for local communities, which leads to an increase in household incomes (Snyman 2014). Local people employed in ecotourism often purchase goods and services from other community members, and thus the benefits extend

beyond only direct employment (Mitchell and Ashley 2010; Telfer and Sharpley 2007).

Ecotourism is also often more than a source of employment. In remote ecotourism destinations where there are few opportunities for residents, it can also provide opportunities for skills development and empowerment (Mitchell and Ashley 2010). Through creating consistent employment and business opportunities, ecotourism increases the pride of the local community.

Furthermore, the economic benefits from ecotourism enhance the socio-cultural atmosphere of the local community and also enable pride. Additionally, through ecotourism, the socio-cultural standing of the community can reach such a level that they enjoy the presence of the tourists. Such benefits contribute to the attainment of pride as an inhabitant of an ecotourism destination.

However, as there is no support in the literature for this anticipation, this study has explored whether potential mediation effects of economic benefits on emotional benefits.

2.5.4 Mediation between Socio-cultural and Environment Benefits

As discussed in section 2.4.2.3, ecotourism often generates socio-cultural benefits for its local inhabitants. Furthermore, as discussed in section 2.4.2.2, ecotourism also often generates environmental benefits. It has subsequently been argued that the socio-cultural benefits of ecotourism can mediate the delivery of environmental benefits.

Many researchers (e.g. Pretty and Smith 2004; Jones 2005; Jones 2010; Stronza and Gordillo 2008) have argued that socio-cultural development in communities due to ecotourism increases with their pro-environmental activities. This increased social status of the community encourages local

residents to act in a pro-environmental manner (Jones 2005). Stronza (2007) reports that the promise of new jobs and income from ecotourism-related activities at Posada Amazonas has persuaded the local community of Infierno to minimise their hunting and protect wildlife. Brooks, Waylen, and Mulder (2013) agree that benefits derived via ecotourism such as increased livelihood generally help the environment through reduced land use.

In line with this, Aguila and Ragot (2014) believe that ecotourism enriches both the economic and social conditions of a community. The social gains then increase the capacity of the local community to contribute to conservation and development in the area (Stronza and Gordillo 2008). Furthermore, Jones' (2010) study in Mytilene, Greece, has been recognised that the social capital of communities is positively associated with their environmental activism. Jones (2005) also indicates that social benefits for the community foster a commitment to forest protection.

In addition, Imran, Alam, and Beaumont (2014) argue that ecotourism provides the opportunity of continuous education, information dissemination, and the inclusion of stakeholders in planning and management that could facilitate a balance between environmental protection and satisfying human needs. Jones (2010) observed in the study of Mytilene, Greece that social capital influences how local communities tackle environmental problems in many ways, and is often associated with the level of knowledge of the relevant stakeholders.

It should also be pointed out here that the socio-economic developmental benefits of ecotourism are likely to be different in this study's chosen destination compared with many other destinations, as the socio-cultural atmosphere of the community is different. It therefore follows that the likely effects of socio-cultural benefits on the realisation of environmental benefits might also be different. Thus, this study has sought to verify whether the

socio-cultural benefits of ecotourism would mediate delivery of environmental benefits in the chosen study destination.

Table 2.5 below summarises the anticipated mediating effects of this study regarding each of the main outcomes of ecotourism, and highlights the existing literature that has suggested the mediating effects of ecotourism outcomes. This study anticipates one additional mediation (economic to emotional) effect that is not found in the existing literature.

Table 2.5: Mediating effects of the ecotourism outcomes

Origin	Mediating variable	Outcomes	Source
Ecotourism	Economic benefits	Environmental benefits	Torquebiau and Taylor (2009); Lapeyre (2010)
		Socio-cultural benefits	Chiu, Tang, and Luk (2001); Mbaiwa and Stronza (2010)
		Emotional benefits	
	Socio-cultural benefits	Environmental benefits	Liu et al. (2014)

2.5.5 Research Gaps in Terms of Mediation of Ecotourism Outcomes

In the extent literature, it has been suggested that ecotourism generates economic, environmental, socio-cultural and emotional benefits, as discussed in section 2.4.2. However, extant literature suggests that economic benefits derived via ecotourism can have mediation effects over other ecotourism outcomes.

The corresponding gaps identified in this study are summarised in Table 2.6 below, based on those discussed in sections 2.5.1, 2.5.2, 2.5.3 and 2.5.4.

Table 2.6: Research gaps in terms of mediation effects of ecotourism

Mediation	Research gaps
Economic to environmental benefits	Do the economic benefits mediate the environmental benefits in the study destination?
Economic to socio-cultural benefits	Do the economic benefits mediate socio-cultural benefits in the study destination?
Economic to emotional benefits	Do the economic benefits mediate emotional benefits in the study destination?
Socio-cultural to environmental benefits	Do socio-cultural benefits mediate environmental benefits in the study destination?

2.6 STAKEHOLDERS AS MODERATORS

A moderator variable is one that affects the direction of the relationship between an independent or predictor variable and a dependent or criterion variable (Baron and Kenny 1986). Cortina (1993) describes moderation as the effect of one variable, X, on another variable, Y, which depends on the level of some third variable, and various types of the moderator may have an influence on any particular causal path. However, there exists unsettlingly high levels of variation on the moderating effect (Carte and Russell 2003).

Most ecotourism involves several stakeholders. Stakeholders are the members of a particular entity or activity on which they have an interest (Freeman 1984). The main stakeholders in tourism are most often the regulators (government and local management), tourists, concerned organisations like tourism related NGOs (if any), investors or employees of the tourism-related business, and the local communities (Velasquez 2014). In the study of Dunga beach and wetland in Kisumu County, Kenya, Wanga et al. (2014) have referred to the local community, tour guides, county government, fishermen, tourism department and craft makers as key stakeholders.

As there are often many stakeholders involved in ecotourism, it is generally more complex in nature; thus the relationship among the stakeholders likely to be non-linear (Baggio 2008; Haugland et al. 2011). Wanga et al. (2014) note that ecotourism destinations are often complex and dynamic, involving diverse stakeholders with differing perception of the same tourism system. This may be why researchers have argued that wider stakeholder involvement in ecotourism is difficult to achieve (Byrd 2007).

The range of stakeholders in ecotourism may have different views about what the outcomes of such activities should be. Kersten and Concilio (2002) note that views and understanding of problems and their implications for the

individuals and groups involved often vary among stakeholders (Kersten and Concilio (2002 - cited in Giordano et al. 2007). In the study in the Apulia region of southern Italy, Giordano et al. (2007) dealt differently with the various ecotourism stakeholders because the stakeholders have different opinions and interests.

This study was designed to identify the outcomes of ecotourism in relation to a destination within a developing country. There are several common stakeholders of ecotourism in the context of Bangladesh including the tourism department (Bangladesh Parjatan Corporation), the central government, tourists, local communities, tourism entrepreneurs and tourism relevant NGOs. However, this study could not cover all of these stakeholders due to time constraints, the unavailability of the stakeholders in any confined area (relevant NGOs) and the difficulty of finding suitable individuals to consult with (government).

This study therefore focused on three main stakeholders in relation to ecotourism in Bangladesh: tourists; local community members; and tourism entrepreneurs. It was anticipated that these three groups would have different interest and different socio-cultural and economic backgrounds. For example, both the local community and tourism entrepreneurs benefit directly from ecotourism; however, the tourists are unlikely to benefit economically or socio-culturally from ecotourism in the study destination.

This study therefore assumed that the views of the different stakeholder groups may be different in relation to the potential outcomes suggested in this study. Thus, this study anticipated that stakeholder variables would moderate some of the relationships between ecotourism and its outcomes.

2.7 ECOTOURISM IN BANGLADESH

Bangladesh is a small south Asian country located between the latitude of 20.034 to 26.038°N, and the longitude of 88.001 to 92.042°E. It covers an area of 147,570 square km and has a population of 160 million. To date, Bangladesh has been unable to capitalise on its considerable potential as an ecotourism destination. An embryonic ecotourism industry has emerged in the Sundarbans, situated in the southern part of Bangladesh, but it attracts no more than a few thousand inbound visitors per year (Tisdell 1997). According to the Forest Department (FD) of Bangladesh, around 100,000 tourists (2% of them are foreign) visit the Sundarbans every year (USDA–IRG, 2009).

It is unclear why there has been little growth in ecotourism in Bangladesh. Firoz (2003) has reported that Bangladesh attracts about 4.5% of tourists to south Asia; while the World Travel and Tourism Council (2011) previously anticipated that the direct contribution of travel and tourism to Bangladesh's GDP would be 2.3% of its GDP in 2011 and still only 2.1% in 2021.

It should be pointed out, that the high population density and sharply skewed distribution of natural resources means that the country's natural resources – including its forest resources – are overexploited (BBS 2004; World Bank 2004) and thus are in gradual decline. Moreover, as in most other countries, tourism in Bangladesh is not generally focused on ecotourism; hence the fragile natural setting continues to be degraded, with no clear incentive to preserve it.

The fate of St. Martins Island of Bangladesh is a good example of the adverse impact of tourism. The island has been a tourist destination for many years and has all the virtue to be an excellent ecotourism destination; yet unregulated tourism has been detrimental to the health of its unique ecosystem, and the existing peak season pattern of tourism has been deemed

as unsustainable (Coastal and Wetlands Biodiversity Management Project 2010).

Furthermore, Muhammed, Koike and Haque (2008) report that forests in Bangladesh are deteriorating at an alarming rate due to a variety of socio-economic threats, such as biotic pressures and competing uses for the land. In most cases of human encroachment, population growth has been identified as the leading cause of natural degradation. Iftekhar and Hoque (2005) have reported that the average landholding per encroacher household in Bangladesh is 1.38 ha, and that their average monthly income is far lower than the national average, indicating that encroachment involves the poorest segment of the population.

There are a number of barriers to ecotourism development in Bangladesh, including natural disasters, population pressures, inadequate physical infrastructural support, lack of motivation and awareness among the general population, and the absence of appropriate information and lack of proper guidelines for tourists (Ahsan 2008). However, some have suggested that ecotourism can help to eliminate many of these problems. For example, some researchers argue that ecotourism may be a means of alleviating environmental and socio-economic problems, and in particular a tool for sustainable development in ecologically-sensitive areas (Kiper, Özdemir and Sağlam 2011).

Tourism creates jobs, provides opportunities to earn foreign currency, and subsequently contributes considerably to the economy of a country (Incera and Fernández 2015). Ecotourism, as a form of nature and culture-based tourism, enhances earnings among the local communities and provides an incentive to conserve nature and culture. Ecotourism can thus be a suitable way of reducing the rate of deforestation, conserving natural and cultural resources whilst generating revenue to support these activities, earning

foreign currency and creating jobs for local people; it could therefore contribute to both economic and socio-cultural development in Bangladesh (Yogi 2010).

2.8 INITIAL RESEARCH MODEL

Based on the existing literature, this study posits that there are six antecedents of ecotourism. These prerequisites – natural attractions (NTA), socio-cultural attractions (SCA), physical infrastructure and facilities (PIF), government actions (GTA), local management (LMT), and community support and involvement (PCA) – are the first-order constructs in this study's initial research model. These first-order constructs produce a second-order construct referred to as 'ecotourism' that is likely to generate four outcomes: economic benefits (EOB); environmental benefits (NTB); socio-cultural benefits (SOB); and emotional benefits (EMB).

The initial research model is shown in Figure 2.1 below. It was summarised that the initial research model adequately addressed the research questions presented in section 1.3.

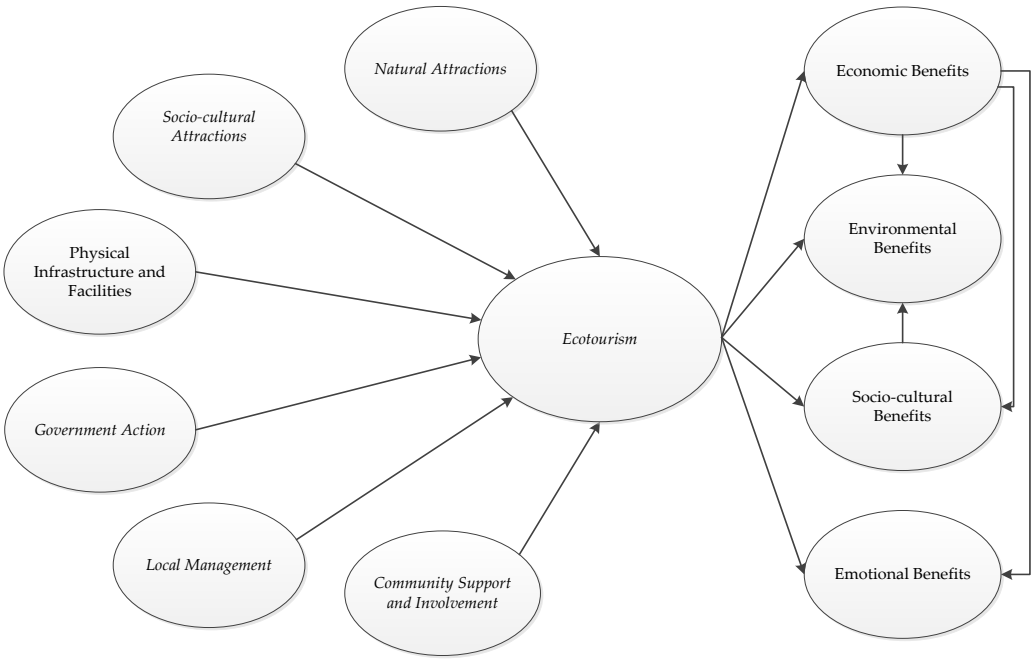

Figure 2.1: Initial research model

2.9 SUMMARY

This chapter has examined contemporary literature with a view to identifying the various related antecedents for ecotourism and possible ecotourism outcomes. Of the various theories explored here, stakeholder theory and sustainability framework emerged as the most appropriate for developing the theoretical framework for this study.

This study was designed to determine the validity of a model for examining antecedents and outcomes of ecotourism. It has been concluded here that there are six antecedents for ecotourism: natural environment; socio-cultural environment; physical infrastructure and facilities; community support and involvement; local management; and government support. In addition, there are four potential outcomes for ecotourism: economic benefits; environmental benefits; socio-cultural benefits; and emotional benefits.

Although there are potential negative outcomes of ecotourism, this study has only considered the positive outcomes. Furthermore, it has assumed that delivery of four potential outcomes would be mediated by other outcomes, and that stakeholder variables would moderate all of the above stated ecotourism outcomes. The following chapter presents the research methodologies used in this study.

CHAPTER 3: RESEARCH METHODOLOGY AND DESIGN

3.1 INTRODUCTION

The previous chapter presented the literature on which this study's model was based. This chapter now discusses the research design, methods and analytical tools and techniques used in this study.

The aims of this study was to identify the antecedents and outcomes of ecotourism, and the nature of any mediation or moderation relationships. To achieve these objectives, this study adopted a mixed-methods approach that included both field study and a comprehensive survey (Harrison and Reilly 2011). According to Johnson, Onwuegbuzie, and Turner (2007), mixed-methods research involves elements of both qualitative and quantitative research approaches (e.g. use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the purpose of obtaining breadth and depth of understanding and corroboration (p. 123). The use of the mixed-methods approach has increased substantially in recent times (Biddle and Schafft 2015), with a substantial portion of tourism research now using it (Lu and Nepal 2009).

This chapter starts by describing the research paradigm and the rationale for mixed-methods approach used in this study. Then the research methods – data collection, data screening, data validation and data analysis – are discussed.

3.2 RESEARCH PARADIGM

A research paradigm is a set of beliefs, values and assumptions about the nature and conduct of research, held by researchers (Johnson and Onwuegbuzie 2004). It provides a conceptual framework for organising

perceptions of the world in the context of research (Burrell and Morgan 1979).

There are two main types of research paradigm: positivist and interpretivist (Onwuegbuzie and Leech 2005). Positivism often leads to different meanings to different people, where researchers assume the reality from their independent perspective (Schrag 1992). A positivist researcher usually remains detached from the participants and research issue, and tries to observe rather than become part of it. The positivist paradigm is associated with quantitative research, and hypothesis formulation is essential to this type of research (Johnson and Onwuegbuzie 2004).

In contrast, the interpretivist paradigm relies on qualitative research, and most researchers with an interpretivist philosophy reject the notion of a separation between researcher and participant because they believe the researcher should interact with and affect the issues being researched (Creswell et al. 2003).

There is a long-standing debate about the various merits of qualitative and quantitative research. Quantitative research purists articulate assumptions that are consistent with a positivist philosophy (Maxwell and Delaney 2004), whereas qualitative research purists argue for the superiority of constructivism, idealism, relativism, humanism and hermeneutics (Lincoln, Lynham and Guba 2011). Both paradigms are often used in social sciences and behavioural and business studies (Marsden and Littler 1996). The polarisation of opinion about quantitative and qualitative research led to the emergence of another intellectual movement focusing on synthesis and what has been termed 'mixed-methods research' (Johnson, Onwuegbuzie and Turner 2007).

Mixed-methods research approach is often regarded as the third research paradigm in educational research (Johnson and Onwuegbuzie 2004; Teddlie

and Tashakkori 2009), involving a combination of qualitative and quantitative methods. The mixed-methods approach has become increasingly common in recent years (Bryman 2006), and often perceived as superior to a single-method design (Venkatesh, Brown and Bala 2013). For example, using a mixed-methods approach can help to increase the quality, accuracy, validity and reliability of the data collected (Babbie 2004). The mixed-methods approach can also assist the researcher to find theoretically reasonable answers to a research question (Venkatesh, Brown and Bala 2013).

Mixed-methods research appeals strongly to practicing researchers who would like to see methodologists describe and develop techniques that are closer to those used in practice (Johnson and Onwuegbuzie 2004). Mixed-methods research can also help bridge the ideological schism between quantitative and qualitative research (Onwuegbuzie and Leech 2005). These are some of the key reasons why this study decided to use a mixed-methods approach.

3.3 RESEARCH METHOD

Mixed-methods research is an approach that considers multiple viewpoints, perspectives, positions and standpoints (Johnson, Onwuegbuzie and Turner 2007). It can also help a researcher to find theoretically-credible answers to their research questions (Johnson and Onwuegbuzie 2004). Johnson, Onwuegbuzie, and Turner (2007) add that mixed-methods research is a relatively new approach that has emerged in response to the flaws of both quantitative and qualitative research. Greene, Caracelli, and Graham (1989) also believe that both qualitative and quantitative methods have limitations, and therefore recommend a mixed-methods approach to overcome these.

Greene, Caracelli, and Graham (1989) have identified five broad rationales for using in mixed-methods research: (1) triangulation (i.e. attempting to obtain convergent results using different methods to provide corroborative

evidence); (2) complementarity (i.e. seeking amplification, enhancement, illustration, clarification of the effects obtained using one method by using another method); (3) development (i.e. using the results of one method to facilitate use of another method); (4) initiation (i.e. identifying inconsistencies and contradictions that lead to a reframing of the research question); and (5) expansion (i.e. seeking to expand the breadth and range of inquiry by using diverse methods for different aspects of the investigation). This study has used the third development approach, meaning that the outcome of the qualitative research was used in the quantitative research.

In determining the appropriate mix of methods for research, it is essential to reflect on the aims of the research. This study intended to identify the antecedents and outcomes of ecotourism, along with the mediation or moderation relationships of the outcomes. Thus, this study developed a comprehensive model with six antecedents and four outcomes – the first of its kind.

In addition, the study destination is different from most of the study destination. It is, however, required to verify whether the model fits with the chosen study destination. As the measurement indicators of the study model were adopted through the literature review, it was essential to validate the model to check whether it was comprehensive to the constructs and indicators.

A field study based on semi-structured interviews was used to contextualise the indicators and test the study model. Following this field study, a survey was carried out to test the model empirically. The research process followed in this study is discussed in the following sections.

3.4 RESEARCH PROCESS

The primary aim of this study was to clarify the main antecedents of ecotourism, as well as the main outcomes, in the context of the developing country of Bangladesh as an ecotourism destination. The study has also examined mediation and moderation relationships identified in the ecotourism outcomes.

The phases of the study are described in the following sections.

Step 1: Development of a preliminary research model

A preliminary model of ecotourism was developed based on existing literature, stakeholder theory and the sustainability framework that included both antecedents and outcomes of ecotourism. The model incorporated six antecedent constructs, one second-order construct and four outcome constructs. The antecedents were natural attractions (NTA), socio-cultural attractions (SCA), physical infrastructure and facilities (PIF), government actions (GA), local management (LMT), and community support and involvement (PCA). The four outcome constructs were economic benefits (EOB), environmental benefits (NTB), socio-cultural benefits (SOB), and emotional benefits (EMB). The only second-order construct of the model was ecotourism.

Appropriate measurement indicators for these constructs were adopted via extant literature and contextualised via the field study process.

Step 2: Qualitative field study

A qualitative study based on field interviews was carried out in the Khulna region of Bangladesh. Twelve local community members and ten tourism entrepreneurs were interviewed, to determine whether the constructs and indicators drawn from largely Western literature were applicable to a developing country like Bangladesh.

Step 3: Model refinement

The preliminary research model was refined on the basis of the qualitative field study findings. The antecedent constructs were subsequently divided into two categories: resource and support dimensions. Furthermore, two new second-order constructs were identified and incorporated into these categories, meaning that the previously stated second-level construct (ecotourism) became a third-level construct. Through the field study, some new indicators pertinent to the respective constructs were identified. Further information on the model refinement process is provided in Chapter 4.

Step 4: Hypotheses construction

Eleven hypotheses were developed from the refined model and relevant literature. Further details on the hypotheses development process are provided in Chapter 5.

Step 5: Questionnaire development

Sixty questions to which responses would be given on a Likert scale were developed for the quantitative survey. These questions were based on relevant literature and modified on the basis of data obtained from the qualitative field study. Two sets of questions were consequently prepared for the survey.

Both of the two questionnaires used the same 60 indicators; the tone of the questions as well as the demographics was modified for tourists, to factor in their differing perceptions and backgrounds compared with the two other stakeholders: local community and tourism entrepreneurs.

The questionnaire was pre-tested to verify its content validity. Further details about the development of the questionnaire are provided in Chapter 5.

Step 6: Translation of the questionnaire

It was assumed that the local community members and tourism entrepreneurs were likely to have a fairly low educational level. As it was crucial that they understand the questions properly, the survey was translated into their local language (Bangla).

Step 7: Pre-testing the questionnaire

This study surveyed three ecotourism stakeholders: tourists; local community members; and tourism entrepreneurs. To ensure that the questions were understood by respondents, they were pre-tested and verified to ensure its content validity. Only a few problems were identified in relation to understanding the terms and language during the pre-testing of the questionnaire.

Step 8: Refinement of the questionnaire

The questionnaire was refined based on the pre-testing feedback. This included making modifications to the language and terminologies, to improve the standard of the questionnaire.

Step 9: Determining sample size

Partial least squares (PLS) based structural equation modelling (SEM) was used for data analysis in accordance with Chin (2010) recommendations. A questionnaire consisting of 60 questions (assessing 10 first-order constructs) was used to survey three groups of stakeholders in ecotourism.

This study calculated the sample size needed to obtain the desired level of explanatory power for the model based on rule that the minimum sample size for PLS study is seven times the number of constructs (Gefen, Straub and Boudreau 2000a). The study model contained 13 constructs (10 first-order constructs, 2 second-order constructs and 1 third-order construct), meaning that a sample with $n \geq 100$ per group would be acceptable.

This study therefore incorporated three groups of stakeholders to achieve a sample of at least 300. The aim was to collect data from 360 respondents (120 from each group), which resulted in a total of 309 usable survey responses – deemed as sufficient to run the PLS SEM.

Step 10: Data collection

A survey was conducted based on the questionnaires, and data were collected from the three groups of ecotourism stakeholders: tourists; local community members; and tourism entrepreneurs. A total of 360 survey responses were obtained, with 309 (tourists n=102; local community members n=104; tourism entrepreneurs n=103) valid completed surveys collected.

Tourists were surveyed in the various hotels in the city of Khulna – the gateway to get into the Sundarbans. The local community and tourism entrepreneurs were surveyed in Mongla, Baniashanta, Bonlaudob, Joymuni Bazar, Chadpai, Chila Bazar and Baiddabari Bazar, areas which are also used as gateways to the nearby Sundarbans. Many of the residents in these areas are highly involved with various tourism-related activities.

Due to the unavailability of any database of the respondents stated above, convenience and snowball sampling techniques were used to recruit respondents in the various survey locations.

Step 11: Data analysis

PLS-based SEM was used to assess convergent and discriminant validity, and to test the hypotheses (Ringle, Sarstedt and Straub 2012). SPSS version 20 was used for descriptive analysis. Smart PLS 2 (website: https://www.smartpls.com/ smartpls2/download?key=e1f61074-bd06-4231-82b6-00a42337fa37) was used to perform all other data analysis.

The data were analysed and the results were considered in relation to the previously developed research questions and objectives. The data are reported in chapter six of this thesis.

Figure 3.1 below charts the progression of this study, based on the above steps.

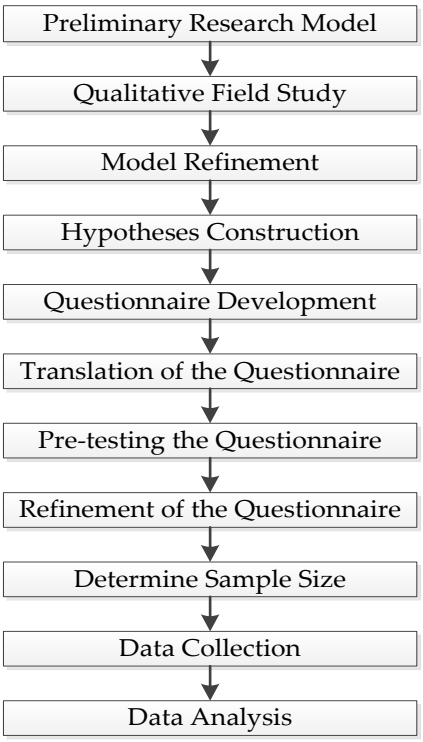

Figure 3.1: Flow chart of the study's progression

3.5 QUALITATIVE FIELD STUDY METHOD

A qualitative field study phase was designed to verify the suitability of the preliminary research model constructs and the corresponding indicators, as derived from the literature. This stage of the study is further discussed in the following subsections.

3.5.1 Sample Selection for Field Study

Ecotourism research often involves various respondent groups based on the nature of the study. For example, while investigating the sustainability of a Taiwanese indigenous ecotourism site in Saviki, Tsaur, Lin, and Lin (2006) surveyed the tourists, local community and management as their main

respondents. In contrast, while assessing indicators of sustainable ecotourism in Tanzania, Pasape, Anderson, and Lindi (2015) chose local community members, NGOs, and local and central government as the study sample. Furthermore, while assessing ecotourism from a multi-stakeholder perspective in Xingkai Lake National Nature Reserve in China, Su, Wall, and Ma (2014) considered local management and local community members as their respondents.

In this study, which was conducted in the periphery of the Sundarbans in Bangladesh, the prominent ecotourism stakeholders are local community members, tourism entrepreneurs, the tourists, government, NGOs and local management. Despite this range of relevant stakeholders, this study only used two stakeholder groups for the field study e.g. local community and tourism entrepreneurs, based on their availability and convenience. The logic behind prioritising these respondent groups is discussed in the following subsections.

3.5.1.1 Local community members

According to Ceballos-Lascurain (1996), the essential requirements for true ecotourism include the participation and involvement of the local communities in close proximity to the destination. Tourism sustainably ethically facilitates quality-of-life dimensions that include community empowerment, employment opportunities, improved material and psychological wellbeing, stronger socioeconomic and cultural structures, and a healthy natural environment (Weaver 2013).

Lee (2013) used local residents in his study of the Cigu wetlands in south-west Taiwan. Many other researchers (e.g. Reimer and Walter 2013; Sher, Bagul and Din 2015; Saufi, O'Brien and Wilkins 2014) have also used community members in their respective studies in relation to ecotourism. Based on the common use of local communities in prior research, this study

has chosen the destination's local community as one of the primary stakeholder groups in relation to ecotourism.

3.5.1.2 Tourism entrepreneurs

In the early 2000s, some new tourism businesses emerged which were not necessarily intended to be involved in ecotourism, however, gradually became part of tourism (Song and Kuwahara 2016). Moreover, it appears that a lot of local communities are turning into tourism business entrepreneurs (Song and Kuwahara 2016), as this industry becomes profitable (Thurau et al. 2015). Based on the nature of the study, many researchers have included tourism entrepreneurs in their studies (e.g. Mottiar 2016; Hopeniene, Railiene and Kazlauskiene 2015; Fotiadis, Vassiliadis and Piper 2014). Tourism entrepreneurs often play an important role in providing various tourism facilities asked by the tourists.

Based on their common inclusion in ecotourism research, this study has considered tourism entrepreneurs as one of its main respondent groups.

3.5.2 Sampling Technique for Field Study

Convenient and snowball sampling techniques were used to select the field study sample. Convenience sampling is commonly used by tourism researchers (e.g. Tapachai and Waryszak 2000; Getz and Brown 2006) – it ensures that the researcher has easy access to the respondents (Berg 2004). Snowball sampling is often used to find right respondents - most suited to answering specific research questions (Biernacki and Waldorf 1981).

In this study, convenience sampling was used to recruit the tourism entrepreneurs, and snowball sampling was used to recruit the local community members across two areas of the Khulna region of Bangladesh: Mongla and Baniasanta.

3.5.2 Data Collection Method of the Field Study

In-depth interviews were used to collect qualitative research; this is the most commonly used and possibly the most suitable method of collecting rich qualitative data (Seidman 2013). The interview technique is accepted as one of the main methods for collecting qualitative data (Maykut and Morehouse 1994).

In this study, a semi-structured interview protocol was used to guide interviews with member of the local community as well as tourism entrepreneurs. The interviews were based on six open-ended questions covering both the antecedent and outcome components of the study model.

Questions one, two and four were designed to assess the validity of the proposed antecedents of ecotourism, whilst questions three and five assessed the validity of the outcome components of the model. The final question was designed to capture respondents' general opinion of the future of ecotourism in their locality. Selected interviewees were approached via proper local way of greetings before being asked if they were willing to be interviewed. Only after receiving their consent was an interview scheduled. On average, these in-depth, one-on-one interviews ran for an hour.

3.5.3 Data Analysis Method of the Field Study

Inductive and deductive methods were used to compare the data with the proposed model, and to identify the pattern of relationships among the model constructs. In inductive methodology, researchers start with a set of observations and then move from those particular experiences to a more general set of propositions about those experiences (Blackstone 2016). In contrast, a deductive approach is one that is typically associated with scientific investigation (Blackstone 2016). In addition, content analysis was

used to identify links in between constructs as suggested by the researchers (e.g. Xu and Quaddus 2005; Siltaoja 2006).

The interview data were first transcribed, and NVivo 10 software was then used to analyse the interviews – it has been deemed as most suitable for organising, analysing and sharing data (Bazeley and Jackson 2013). The results of the analysis were then used to refine the preliminary research model. As a result, two additional second-order constructs and several additional indicators were incorporated into the model based on the findings of the field study.

3.6 SURVEY METHOD

The findings of the qualitative field study were used to refine the model and respecify the indicators. Hypotheses were then derived from the refined model. A set of questions assessing the various constructs was also developed for the study.

3.6.1 Development of the Questionnaire

The questionnaires were developed based on the indicators of the corresponding constructs identified by the literature and qualitative survey. The primary objective of the questionnaire survey was to assess the validity of the study model of ecotourism, including a comprehensive set of antecedents and a set of outcomes. A secondary objective was to identify the mediator and moderator variables of the relationship between ecotourism and its outcomes. Procedures suggested by Cronbach (1971) were used to assess the content validity of the proposed model.

The questionnaires were designed to provide subjective rather than objective data. Even though it has been suggested that selection bias can influence subjective responses, and that conclusions derived from analysis of qualitative subjective data may be erroneous, this study's research questions

meant that it was not possible to collect objective data. That is, there were no specific, objective data on the outcomes of ecotourism in the chosen study destination, so it was also necessary to use subjective measures of outcomes. Care was subsequently taken to avoid selection bias when using the subjective data.

Based on the literature survey and qualitative field study, 60 indicators were identified that represent both antecedents and outcomes of ecotourism. Through using the same 60 indicators, two sets of questionnaire were prepared for three main groups of respondents. One set of questions was prepared for the local community and tourism entrepreneurs. By changing the tone of the questions and the demographics part, another set of questionnaire was prepared for the tourists.

Responses to the 60 questions were based on a six-point Likert scale, which has been deemed as easy to prepare and interpret, and also easy for respondents to use (Zebal 2005; Zikmund 1997). Malhotra et al. (2004) believe that Likert scales have several advantages, including ease of construction and administration. Likert scales are commonly used in business research, as they can be easily adapted to a given set of variables.

In this study, the respondents were asked to indicate their agreement with each questionnaire item using a six-point Likert scale ranging from 1=strongly disagree to 6=strongly agree. Likert scales are often based on five- to nine-point forms (Cox III 1980; Reynolds, Simintiras and Diamantopoulos 2003); however, this study avoided using an odd number scale as pre-testing indicated that a substantial proportion of the respondents would opt for the midpoint.

3.6.2 Translation of the Questionnaire

The local community members and tourism entrepreneurs of the study destination were assumed to be less educated than the tourists and it was therefore not appropriate to use an English-language questionnaire with them, so it was translated into Bangla. The back translation method suggested by Brislin (1970) and Marin and Marin (1991) was used while converting the questionnaire into Bangla, to ensure that both of the questionnaires retained the same meaning.

A couple of skilled interpreters were used in the back-translation process. Initially the English questionnaire was translated into Bangla, and then the translated Bangla questionnaire was re-translated into English. It first appeared that the re-translated English questionnaire slightly varied from the original one. Thus, several adjustments were made in the original questionnaire and the back-translation process was redone until there were no significant differences between the meaning of the English and Bangla versions. The Bangla version of the questionnaire was then ready to be used.

3.6.3 Pre-testing of the Questionnaire and the Pilot Test

The questionnaires were pre-tested and piloted to ensure its reliability and validity in the study context. Some problems were identified during pre-testing, mostly relating to: (1) the ambiguity and/or technical nature of some terms; (2) respondents' lack of familiarity with some points; and (3) multiple meanings of some words which could cause confusion for respondents.

The questionnaire was subsequently modified to address these problems, and then used in a pilot survey among 20 stakeholders from each of the groups of interest. The questionnaire was then further refined based on the results of the pilot survey.

3.6.4 Sampling Technique for the Questionnaire Survey

Probability sampling is highly regarded as it avoids bias. In probability sampling, all the persons in a given population have an approximately equal probability of being sampled (Visser et al. 2000).

Convenience sampling is, however, a much more widely used technique (Hughes et al. 2010), and is one type of non-probability sampling. Convenience sampling typically involves sampling people known to the investigators or that are easily available to them (Özdemir, Louis and Topbaş 2011). As a database of tourists are generally not available to construct probability samples, many researchers in this field use convenience sampling (e.g. Lee et al. 2014; Getz and Brown 2006).

Snowball sampling on the other hand, is useful for exploratory, qualitative and descriptive research (Baltar and Brunet 2012). Furthermore, snowball sampling is an effective method of sampling for ethnically-diverse populations (Perez et al. 2013). Snowball sampling is also often a recruitment technique, in that participants are encouraged to refer members of their social network to the study (Browne 2005).

In this study, convenience sampling was used to recruit tourists from the hotels in Khulna city, and snowball sampling was used to recruit local community members and tourism entrepreneurs for the survey. This study ensured that the survey was based on a representative sample of the populations of interest, so the results can be generalised (Özdemir, Louis and Topbaş 2011).

3.6.5 Sample Selection for the Questionnaire Survey

This study surveyed three groups of ecotourism stakeholders – tourists, local community members and tourism entrepreneurs – in the Khulna region, which is adjacent to the Sundarbans, the chosen ecotourism destination. The

population for the study were tourists heading for the Sundarbans, the local community living around the Sundarbans who witness and are involved in ecotourism activities, and tourism entrepreneurs operating in the area. The reasons for selecting tourists in the sample are provided below.

According to Ceballos-Lascurain, Lindberg, and Hawkins (1993), ecotourism is an integration of many actors including tourists, residents, suppliers and managers. In line with this, Tsaur, Lin, and Lin (2006) have included tourists, management and the local community as respondents while evaluating the sustainability of ecotourism development in a Taiwanese indigenous ecotourism site. In their study, Tsaur, Lin, and Lin (2006) argue that ecotourism provides adequate opportunities for the tourists to interact with the residents in some specific regions. Similarly, while measuring tourism perceptions of a protected area involving the study of Central Karakoram National Park in Pakistan, Imran, Alam, and Beaumont (2014) chose to use four stakeholders: tourists; local community members; local management; and tourism entrepreneurs.

Ryan and Stewart (2009) believe that it is highly probable that in the case of ecotourism, tourists' attitudes are different from other forms of tourism. For example, tourists generally like to earn experience through interacting with nature in ecotourism (Chiu, Lee and Chen 2014). Tourist experiences has been described as a distinctive set of events and/or activities comprised of several phases within a bounded time period in a particular tourism destination, that provide meaning and significance to the tourist (Moscardo, Kozak and Decrop 2009). Therefore, the features of the whole tourism experience influence the way tourists engage with and understand the perspective, including the changes in tourist cognitions, emotions and behaviours (Biran, Poria and Oren 2011).

Furthermore, Mair and Laing (2013) contend that people who select ecotourism often already have high levels of awareness about the destination. Palacio (1997) reconfirms that ecotourists are often different from other types of tourists and are more couscous about nature. Thus, tourists involved in ecotourism are more likely to show different attitudes than other forms of tourism – they are more aware about the destination, including the pros and cons of ecotourism.

In the case of the Sundarbans – the chosen study destination – most of the tourists surveyed were from Bangladesh, and most were repeat visitors. Thus, they often had in-depth knowledge about the Sundarbans and were able to form various opinions. The Sundarbans is a well-known location on the Indian subcontinent – locals are sufficiently aware of this destination including the consequences of ecotourism. Thus, this study has sought the ecotourists' opinions about the economic, social, natural and emotional benefits that the local community derives via ecotourism.

This study therefore selected local community members, tourism entrepreneurs and tourists as the respondent groups to be surveyed, based on their availability, close proximity and convenience.

3.6.6 Data Collection through Questionnaire Survey

The survey questionnaires were modified based on the pre-testing results as well as suggestions made by the researcher who carried out the pre-testing. The questionnaires were then piloted among a small portion of the three main stakeholder groups and refined further. The refined questionnaires were subsequently used for the survey.

As in the pilot study, each of the questionnaires were introduced by a cover letter explaining the researcher's aims and providing instructions on how to complete the survey. The survey was conducted in two areas. Tourists were

surveyed in hotels in the city of Khulna, which is the nearest large city to the Sundarbans (approximately 60 km distance), meaning that the tourists generally stay here. The local community members and tourism entrepreneurs were surveyed in the regional periphery of the Sundarbans, including Mongla, Baniashanta, Bonlaudob, Joymuni Bazar, Chadpai, Chila Bazar and Baiddabari Bazar (see Appendix B, page 249). These areas serve as the gateways to the Sundarbans.

Tourists were recruited based on convenience. On the other hand, the members of the local community and tourism entrepreneurs were recruited using the snowball sampling technique, and were approached using the native custom of greeting. The researcher then explained the study and asked if each respondent would be prepared to spend some time completing the survey. In total, 360 respondents were surveyed (120 from each group), out of which 102 tourists, 104 local community members and 103 tourism entrepreneurs were deemed as valid for the analysis. On average, the questionnaire took 30 minutes to complete.

3.6.7 Data Analysis

First and second-generation statistical techniques (i.e. descriptive statistics for demographic data and SEM) were used in this study. SEM was carried out by using smart PLS software version 2 (Ullman and Bentler 2012; Barclay, Higgins and Thompson 1995). Several other software applications were used to prepare the data for analysis, including Microsoft Excel (for data management, mediation and moderation analysis) and SPSS (for variance inflation factor (VIF) analysis, used for verification, checking for reliability and validity of the data).

3.6.8 PLS Method

Tourism research often needs to deal with multiple interrelated issues. The use of SEM has therefore been deemed as highly suitable for tourism research, to ensure the quality of the study (Turner and Reisinger 2001). SEM has become widely used in tourism research (e.g. Martín-Ruiz, Castellanos-Verdugo and de los Ángeles Oviedo-García 2010; Žabkar, Brenčič and Dmitrović 2010).

This study's model has several components, including six antecedent constructs and four outcome constructs, with specific mediation and moderation relationships. The theoretical framework for this study is complex and based on both formative and reflective indicators. It has been suggested that PLS-based SEM is an ideal choice to assess both measurement models and structural models (Hair, Ringle and Sarstedt 2011; Ringle, Sarstedt and Straub 2012). However, it is essential to specify the causal relationships between manifest variables and the latent variables for SEM analysis of measurement models (Jarvis, MacKenzie and Podsakoff 2003).

As this study's model consists of both measurement and structural components (Wetzels, Odekerken-Schröder and Van Oppen 2009), and contains both formative and reflective indicators (Diamantopoulos, Riefler and Roth 2008), PLS-based SEM was used to test the corresponding hypotheses (Vinzi, Trinchera and Amato 2010). As the measurement part of the model contains formative and reflective indicators, the assessment included examining indicator reliability, internal consistency, average variance extracted (AVE), indicator weight, multi-collinearity and discriminant validity (Hair, Ringle and Sarstedt 2011).

The structural model was evaluated in terms of the explanatory power of endogenous constructs and *t*-values of path coefficients corresponding to the hypotheses.

Table 3.1 below summarises the procedures used in the SEM analysis, while the PLS-based analyses are discussed further in Chapter 6.

Table 3.1: Systematic process of SEM analysis

Stage	Item	Measurement	Parameter
Measurement Model	Reflective	Convergent validity	
		Indicator reliability	≥ 0.5
		Internal consistency	≥ 0.6
		Average variance extracted (AVE)	≥ 0.5
		Discriminant validity	
		AVE analysis	Square root of the AVE of the construct must be larger than its correlation with other constructs
		Cross-loading matrix	Loading of an item within a construct must be greater than its loading in any other construct
	Formative	Indicator weight	Review construct conceptualisation and *t*-value = 1.96 (*p=0.1*)
		Multi-collinearity	VIF ≤ 5
Structural Model	Reflective	Coefficient of determination	$R^2 \geq 0.25$
		Test of hypothesis	Significant *t*-value = 1.96

3.6.8.1 Specification of reflective and formative indicators

There is often a casual association between the indicators and the corresponding latent variable (Hoe 2008), indicating that any change in the construct will probably change these indicators (Razilan and Diljit 2012). The expressions of the constructs are the outcomes of the reflective model, and hence the measures of a given construct share a common theme (Jarvis, MacKenzie and Podsakoff 2003; Polites, Roberts and Thatcher 2012). There is therefore a high probability that reflective indicators of a given construct will be correlated (Jarvis, MacKenzie and Podsakoff 2003; Fornell and Bookstein 1982).

Unlike reflective indicators, formative indicators show the opposite direction in the causal path (Diamantopoulos and Winklhofer 2001). The formative indicators are assumed to not be correlated and are likely to measure different dimensions of the underlying latent variable (Chin 1998). Elimination of indicators may change the meaning of the construct (Jarvis, MacKenzie and Podsakoff 2003).

In this study, the varying nature of the constructs in the conceptual model generated the need to use both formative and reflective indicators. However, as identification of whether an indicator should be formative or reflective may not always be secure, the criteria provided by Jarvis, MacKenzie, and Podsakoff (2003) was used.

3.6.8.2 Assessment of reflective measurement model

It is commonly believed that both the convergent and discriminant validity of a reflective measurement model need to be evaluated (Barclay, Higgins and Thompson 1995; Santosa, Wei and Chan 2005; Henseler, Ringle and Sinkovics 2009). Convergent validity is evaluated on the basis of indicator reliability, internal consistency and AVE, as well as indicator cross-loadings of the constructs and comparison of inter-construct correlations with the square root of AVE (Fornell and Larcker 1981; Hair, Ringle and Sarstedt 2011).

3.6.8.3 Assessment of formative measurement model

While assessing a formative model of the indicator level, it is deemed as important to measure the validity (Diamantopoulos, Riefler and Roth 2008). The significance of indicator weights and loadings are useful for such an assessment (Hair, Ringle and Sarstedt 2011; Henseler, Ringle and Sinkovics 2009). An indicator should only be dropped if both the weight and loading are insignificant (Hair, Ringle, and Sarstedt (2011).

Many researchers (e.g. Fornell, Lorange and Roos 1990; Santosa, Wei and Chan 2005) argue that all formative indicators should be included for analysis, even if the weight is very low or negative, as omitting an indicator could mean than an important component of the corresponding construct is left out (Bollen and Lennox 1991). However, it is also important to assess the

redundancy among a set of formative indicators as they may overlap (Hair, Ringle and Sarstedt 2011).

Numerous researchers (e.g. Henseler, Ringle and Sinkovics 2009; Hair, Ringle and Sarstedt 2011) recommend examining the VIF as a measure of multi-collinearity among the indicators. A VIF of ≤ 5 or less is deemed acceptable, as values of 5 or more mean that 80% of the variance in an indicator is due to other formative indicators of the same construct (Hair, Ringle and Sarstedt 2011; Henseler, Ringle and Sinkovics 2009).

3.6.8.4 Assessment of hierarchical/multidimensional constructs

A hierarchical construct has been defined as a construct with multiple dimensions, and may also be referred to as a 'multidimensional construct' (Wetzels, Odekerken-Schröder and Van Oppen 2009; Jarvis, MacKenzie and Podsakoff 2003). This study's model incorporated a multidimensional construct, with such constructs often characterised by: (1) representation of multiple levels in the model; and (2) associations between the constructs (formative vs. reflective) in the model (Ringle, Sarstedt and Straub 2012; Wetzels, Odekerken-Schröder and Van Oppen 2009; Becker, Klein and Wetzels 2012).

This study used three-dimensional constructs (Caro and García 2008) and a repetitive indicator approach to second- and third-order constructs. This involves constructing a higher-order latent variable by specifying a latent variable as replacement for all the manifest variables corresponding to the underlying lower-order latent variables (Lohmöller 2013; Becker, Klein and Wetzels 2012).

3.6.8.5 Assessment of structural model

Evaluation of a structural model is based on an inspection of the statistical significance of the hypothesised relationships among the constructs by

evaluating the path loadings and path coefficients among the latent constructs (Hair, Ringle and Sarstedt 2011; Santosa, Wei and Chan 2005; Barclay, Higgins and Thompson 1995). PLS-based SEM is an effective technique for predicting and estimating the coefficient of determination (R^2) values that are usually used to illustrate the ability of a model to describe or predict the endogenous latent variables (Ringle, Sarstedt and Straub 2012; Hair, Ringle and Sarstedt 2011).

The structural model for this study was assessed by examining the explanatory power of the proposed model (Hair, Ringle, and Sarstedt (2011). The R^2 values were obtained from the bootstrapping PLS run. Many researchers disagree about the acceptable values of R^2. Hair, Ringle, and Sarstedt (2011) suggest that R^2 values of 0.75, 0.50 and 0.25 can be considered as substantial, moderate or weak respectively, in the case of latent endogenous variables; however, other researchers (e.g. Santosa, Wei and Chan 2005) argue that lower thresholds are acceptable. This study therefore considered $R^2. \geq .25$ as the threshold for acceptable fit. Furthermore, A *p*-value of 5% was used as the significance criterion for assessing the values and weights of the indicators.

3.7 SUMMARY

This chapter has described the methods used in this study. The difference between positivist and interpretivist paradigms were explained, and a rationale was given for adopting a mixed-methods approach in this study. The methods used for qualitative interviews and a quantitative survey have also been discussed, along with the nature of the data and the data analysis procedures.

The next chapter presents the analysis of the field interviews and resulting modifications of the research model in this study.

CHAPTER 4: FIELD STUDY AND REFINED RESEARCH MODEL

4.1 INTRODUCTION

This chapter cover the analysis of the field study data collected via semi-structured interviews with local community members and tourism entrepreneurs. Twenty-two interviews were conducted among these groups in Mongla and Baniasanta, in the Khulna region of Bangladesh.

This study designed a preliminary research model (please see Figure 2.1, page 61) that contained six antecedents and four outcomes of ecotourism, with mediating and moderating effects. These constructs and the corresponding indicators were developed based on an extant literature review. Although most of the literature is based on a Western perspective, it was still deemed as applicable in the context of Bangladesh, with some modification and adaptation. A field study was considered necessary for clarification of the factors and variables.

The field study was used to explore the universality of the model and to test the validity of its constructs. This enabled verification and clarification of the constructs and indicators; and a couple of constructs and some new indicators were subsequently included in the updated model to make it more suitable and applicable for the study destination.

4.2 FIELD STUDY METHODS

4.2.1 Interview Questionnaire Development

A semi-structured interview protocol was developed for the qualitative field study. The protocol incorporated six open-ended questions designed to capture information about the antecedents and outcomes of ecotourism. Questions one, two and four were related to the antecedents of ecotourism.

Questions three and five were designed to identify the outcomes of ecotourism in the study area. The sixth question was designed to capture respondents' general opinion of the future of ecotourism in the locality, and the perceptions of general community feelings about ecotourism.

The questionnaire was translated into the local language by the back-translation method suggested by both Brislin (1970) and Marin and Marin (1991). Pre-testing was also used to determine whether the questionnaire was appropriate to the prospective interviewees; in particular, whether the questions would be interpreted as intended by the researcher. To ensure the flow of the interviews, the questions were not organised according to the components. During the interviewing, the sequence of the questions also varied in accordance with the flow of responses.

4.2.2 Sample

This field study was conducted among local community members and tourism entrepreneurs in two peripheral areas of the Sundarbans: Mongla and Baniasanta. Convenience sampling was used to recruit the tourism entrepreneurs, and snowball sampling was used to recruit the local community members

Opinions often vary on the appropriate sample size for a field study. For example, Malhotra et al. (2004) suggest that small samples are sufficient in most field studies, whilst Sandelowski (1995) argues that it is hard to determine the appropriate sample size in advance of fieldwork. Strauss and Corbin (1998) believe that saturation of the theory marks indicates that sufficient data has been collected; while Denzin and Lincoln (2005) add that sample size appears to be optimum once redundancy is apparent in the data.

Qualitative methodologists often use the criteria of redundancy of data to determine sufficiency of data (Morrow 2007). Redundancy generally occurs

while importing new data into the analysis, no new findings of note are generated (Lincoln and Guba 1999). Bertaux (1981) argue that 15 is the smallest acceptable sample size in qualitative research, which is also supported by Guest, Bunce, and Johnson (2006).

Based on the above-stated arguments, this study continued interviewing until the data started to become redundant. This resulted in a final sample of 12 local community members and 10 tourism entrepreneurs. The demographic profile of these interviewees is presented in Table 4.1.

4.2.3 Data Collection

This field study was conducted via face-to-face interviews with the two groups of ecotourism stakeholders. Two university students at 3rd year honours level, with experience in facilitating field studies, were employed to conduct these interviews. These interviews were recorded with the interviewees' permission, and the researcher was present at all interviews.

The respondents were first approached and greeted according to local custom, and then asked if they were willing to be interviewed. Those who agreed were interviewed according to the following protocol. The purpose of the study and relevant ethical issues were explained [ethical approval number GSB 33-13, Curtin University, Australia for the period 28/11/2013 to 28/11/2017] and formal written consent to participate was obtained. The interview was then conducted using the semi-structured interview protocol.

Interviews were conducted over a three-day period, and each interview typically lasted for an hour. Interviews were then transcribed for further analysis as suggested by the researchers (Harrold et al. 2010; Turner, Salisbury and Shield 2012). The data collection procedure has been described in detail in Chapter 3. An English version of the full interview schedule is also attached as Appendix C (page 250).

4.2.4 Interview Transcribing

Interviews were transcribed using the following procedure:

a) The two interviewers transcribed the interviews from the audio recordings.
b) They checked the transcriptions against the audio recordings.
c) Instances where the words were in doubt were discussed by both interviewers, who tried to recall the context of that part of the interview and the interviewee's body language at that point, to derive a conclusion.
d) The researcher also checked the transcripts against the audio recordings and made adjustments where necessary.
e) The Bangla transcripts were translated into English by an expert linguist from Khulna University, Bangladesh.
f) The researcher checked the translations against the Bangla transcripts.

4.2.5 Data Analysis

There are several approaches to conducting qualitative data analysis (Jennings 2001). This study used content analysis to identify relationships between the data and proposed constructs, as it is often considered most suitable for exploratory research (Siltaoja 2006; Xu and Quaddus 2005). Content analysis involves examining the dataset in a systematic and replicable way (Wilkinson 2000).

The content analysis was carried out in two stages. Stage one dealt with single interview transcripts, while stage two dealt with cross-interview transcripts (Berg 2004; Miles and Huberman 1994). All content analysis was done manually using colour coding.

Both inductive and deductive methods were used to compare the qualitative data with the theoretical framework (Berg (2001). Inductive analysis was

used to explore the concepts, themes and sub-themes related to variables of interest. The process was also used to identify suitable methods of assessing the variables. Next the variables and factors that were identified during the inductive analysis were fitted to a common framework. Berg (2001) guidelines for manual content analysis were followed during this process, to check the variables and factors. The transcripts were also checked manually, line by line, with the statements segregated into various categories.

Nvivo 10 software was used to analyse the interviews, as it is very user-friendly and is capable of identifying themes and sub-themes. It also has the ability to categorise themes, sub-themes and concepts using free nodes and tree nodes.

Each segment of a transcript was assigned to a free node, then related free nodes were organised into tree nodes; these in turn were then converted into constructs. Afterwards, via deductive analysis, the preliminary research model was reviewed to assess the importance of the constructs and indicators in comparison with existing literature.

The data analysis steps followed in this field study are visually summarised in Figure 4.1 below.

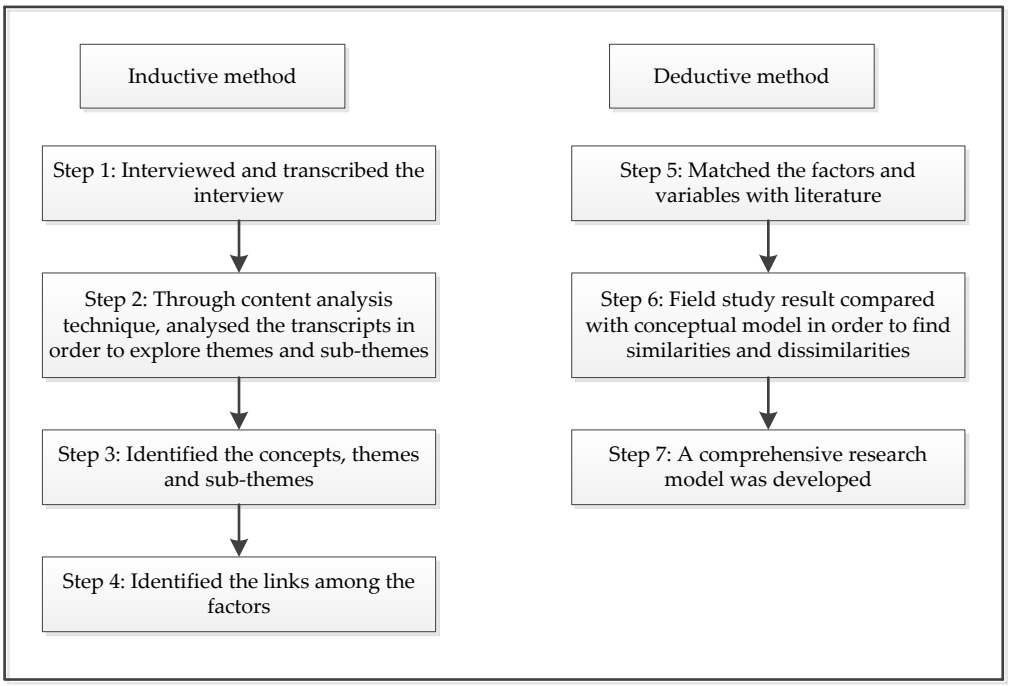

Figure 4.1: Data analysis process of the field study

4.2.6 Respondent Profiles

The profile of the respondents is presented in Table 4.1 below. Two groups of ecotourism stakeholders – local community members (*n*=12) and tourism entrepreneurs (*n*=10) – were interviewed. Eighteen of the twenty-two respondents were male, and four were female; seven were aged 30 years or younger, ten were between 31 and 45 years, and the remaining five were more than 45 years old. Five respondents had lived in the study area for less than 10 years, four had lived there for between 10 and 20 years, eight had lived there for 20 to 30 years, and the remaining five had lived in the area for more than 30 years.

Table 4.1: Profile of the respondents

Description	Number	%
Type of Respondents		
Local community	12	54.55
Tourism entrepreneurs	10	45.45
Gender		
Male	18	81.82
Female	04	18.18
Age		
30 years or younger	7	31.82
31 to 45 years	10	45.45
Above 45 years	5	22.73
Living in this area		
Below 10 years	5	22.73
10 to below 20 years	4	18.18
20 to below 30 years	8	36.36
30 years or more	5	22.73

4.3 INDUCTIVE ANALYSIS FINDINGS

Findings from the first phase of content analysis based on qualitative field study are presented in this section. First the exploration of factors and variables is presented; then potential relationships between the constructs and the indicators are discussed. The factors and corresponding variables are shown in Table 4.3.

4.3.1 Factors and Variables

The preliminary model incorporated 10 first-order constructs derived from the ecotourism literature. These first-order constructs were initially divided into two categories: antecedents and outcomes of ecotourism. The first-order constructs are natural attractions (NTA), socio-cultural attractions (SCA), physical infrastructure and facilities (PIF), community support and involvement (PCA), local management (LMT), and government actions (GTA). The outcome constructs are economic benefits (EOB), environmental benefits (EOB), socio-cultural benefits (SOB) and emotional benefits (EMB).

The field study revealed that the antecedent constructs are valid constructs for ecotourism, as discussed in the following sections. The field study results also indicate that while all of the six antecedents make positive contributions to ecotourism in a destination, they may have divergent input. In this study, three of the six proposed antecedents were perceived by the interviewee as the main resources for ecotourism. For example, interviewee 9 mentioned that *"… tourists mainly come to this place for the Sundarbans; many also want to take in the culture. Communication is another key element, people need to be able to visit a place and move around; they also need some facilities like hotels, restaurants, toilets"*. Interviewee 16 added: *"The main resource for ecotourism in this destination is the Sundarbans' attraction. Multiple socio-cultural activities also have some contribution in the attractiveness of this destination; the communication also has a major role for the growth of tourism in this destination; though many other issues are relevant, but those are not as prominent as the said"*.

Numerous researchers have termed nature and socio-culture as 'tourism resources'. For example, in Puhakka (2008) study of Finnish national parks, natural and cultural attractions are treated as resources, while acknowledging that a ecotourism destination must have some infrastructural facilities. Honey and Rome (2001) also treat natural and cultural attraction as ecotourism resources. Furthermore, in examining the feasibility of a single European eco-label for accommodation, it has been argued that ecotourism requires harmonic infrastructure for the environment (Crem 2000). Tsaur, Lin, and Lin (2006) also add that nature, culture and infrastructure may be treated as tourism resource.

Based on this study's field study results and existing literature, it has been identified that among the six main antecedents of ecotourism, natural attractions (NTA), socio-cultural attractions (SCA) and physical infrastructure and facilities (PIF) are different from the remaining three. This

study therefore suggests that these three antecedents should form a second-order construct named 'resource dimension' of ecotourism. This new second-order construct and its corresponding first-order constructs are shown in Table 4.2 below.

This field study also identified that while the above stated three antecedents contribute towards ecotourism, the remaining three antecedents' role is more supportive. That is, unlike the other three antecedents: NTA, SCA and PIF, these (GTA, LMT, PCA) do not directly contribute to attracting tourists, but instead support tourism activities. Eight interviewees expressed similar sentiments in relation to three of the antecedents being more supportive. While supporting this argument, interviewee 14 commented: *"The Sundarbans is the main attraction for the tourists; facilities like hotel and restaurants are also a major concern for the tourists. But there are other things which are also important for ensuring that the ecotourists always have a good experience; these include management and government support for tourism. People like us also have some role in ecotourism here; we work for less as it is our home, and that also helps the growth of ecotourism in this area"*. Interviewee 10 added: *"The tourism is very important for all of us, but for the growth and sustainability of tourism it is urgent that all the relevant parties perform their duties and responsibilities. Government is the most important party here and they should provide continuous support through ensuring development work and ensuring security in this place. The managerial body should maintain the proper tourism systems in terms of providing rules and regulations and guidance; besides local community also need to understand how to support this industry for their own sake"*.

Researchers in extant literature have also argued about the relevance of support roles in the ecotourism process. For example, in their study of Tsaur, Lin, and Lin (2006) indicate that the Danayigu Park authority render support to the local community via employment opportunities in ecotourism

activities. Rogerson (2007) further indicates that government support plays a strong role in the practise of entrepreneurship and innovation in tourism. Carlisle et al. (2013) add that institutional support can enhance niche tourism in LDCs in particular, through professionally-managed, small-scale indigenous businesses.

Based on this study's field study results and the existing literature, it has been determined that the remaining three antecedents – government actions (GTA), local management (LMT), and community support and involvement (PCA) – together constitute another second-order antecedent construct named 'support dimension' of ecotourism. The new second-order construct and its corresponding first-order constructs are shown in Table 4.2 below.

Table 4.2: New second-order constructs and the corresponding first-order constructs

New second-order constructs	Relevant first-order constructs
Resource-dimension (Resources - required for ecotourism)	Environmental Attraction (NTA) Socio-cultural Attraction (SCA) Physical Infrastructure and Facilities (PIF)
Support-dimension (Support activities - required for ecotourism)	Government action (GTA) Local Management (LMT) Community Support and Involvement (PCA)

4.3.1.1 Resource dimension of ecotourism

In light of these field study findings, it can be argued that the three antecedents – natural attraction (NTA), socio-cultural attraction (SCA) and physical infrastructure and facilities (PIF) – should be treated as resources of ecotourism, as they each perform crucial roles for ecotourism attraction; which has been supported by existing literature (e.g. Horng et al. 2012; Reimer and Walter 2013; Shihabudheen 2012).

In this study, most of the interviewees talked about these three antecedents as the main elements for ecotourism. Thus, these three antecedents should be treated differently from the other three. This study therefore suggests that NTA, SCA and PIF are the main or essential resources for ecotourism; they

are therefore deemed to contribute to a single second-order construct termed 'resource dimension' of ecotourism (as shown in Figure 4.2 below).

There are four indicators for NTA, six indicators for SCA, and 10 for PIF. The field study concluded that these resource dimension indicators are essential, while most of these indicators also supported by the existing literature.

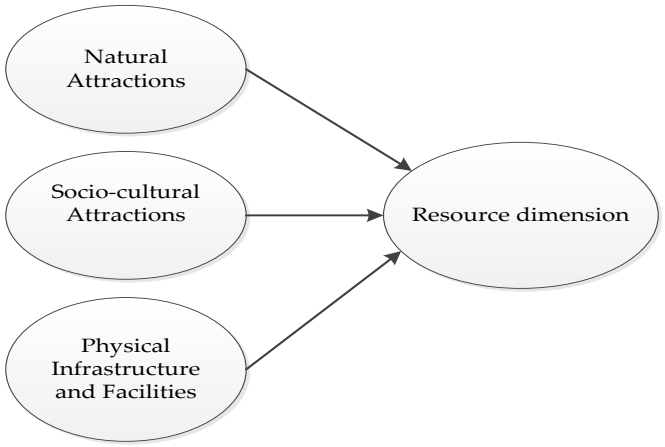

Figure 4.2: Resource dimension of ecotourism

4.3.1.1.1 Natural attractions (NTA)

This field study has indicated that natural attractions (NTA) have a significant impact on the attractiveness of an area as an ecotourism destination. Four indicators were identified as pertinent to NTA, as further discussed below.

All of the interviewees mentioned that natural beauty is the principal component of a natural attraction. For instance, interviewee 2 said that "… *this place is a gateway for people visiting the Sundarbans – the mangrove forest is a great attraction to tourists; people like to see the beauty of the Sundarbans"*.

Furthermore, eight interviewees mentioned river activities (e.g. river cruise or spending time in the river) as important tourist activities, implying that these should be treated as resource components of natural attraction. For example, interviewee 10 pointed out that "… *sometimes, there is a boat race in this area; many people come to see the race – it is a huge attraction for the tourists"*.

Interviewee 6 added that *"… as well as coming to visit the Sundarbans, people come here for river cruises through Pasur River; that gives tourists a lot of pleasure*". Interviewee 2 further noted that "… *the tourists want to know whether there is anywhere to stay by the river, they want to spend time there*".

Seven interviewees argued in favour of a developed and controlled nature-based tourism spot as a component of NTA. For example, interviewee 8 stated that "…*Koromjol* [a destination within the Sundarbans controlled by the government] *is another local destination that attracts a good number of tourists; the government has developed it, and that has increased the number of tourists*".

Eight interviewees believed that escaping from city life to enjoy the fresh air and a noise-free location is a very important attraction for the tourists. Such attributes are identified by the interviewee as the components of the resource dimension construct. For example, interviewee 4 mentioned that "… *many of the tourists look for an escape from city life; they want to enjoy the pristine nature that is free from noise and dirt, and they like to travel to a place like the Sundarbans and wish to spend time here"*.

4.3.1.1.2 Socio-cultural attractions (SCA)

This field study has indicated that socio-cultural attractions (SCA) are important resource in attracting tourists to a particular destination. Based on the extant literature, this study identified six indicators corresponding to SCA. The field study results show that these six indicators can be utilised in the study destination, as further discussed below.

Two respondents suggested that a place that is known for religious and/or cultural activities might enhance the attractiveness of a destination. For example, interviewee 11 explained that *"… the Khan Jahan Ali Shrine is famous in this region; many people visit this place because of the shrine, and so it has a*

positive impact on the attractiveness of the destination". Interviewee 21 added that *"… this* [Bagherhat – close to Mongla] *is a ritual place; it is a place known for famous ritual person Khan Jahan Ali* [a famous religious personality]*; this place has attraction among the tourists along with the attractions of the Sundarbans"*.

Three respondents further pointed out that some religious activities attracted tourists to the area, particularly those with an interest in such cultural activities. For example, interviewee 10 said that *"… the majority of the population of this area are Hindu, and so various types of Puja* [a Hindu religious ritual or celebration] *occur every year; many people visit this place in order to observe the Puja"*.

In addition to religion and culture, four respondents suggested that activities like boat race attracts a good number of tourists to the area. For instance, interviewee 10 explained that "… *sometimes, the local people organise boat races in this area; many people come to see the race – it is a huge attraction for the tourists"*.

Furthermore, six respondents commented that special cultural festivals can attract tourists to a specific destination. For example, interviewee 12 mentioned that "… *Rash Mela is a yearly event that brings huge numbers of tourists to that area*". Rash Mela is an annual fair on Dubla Island and was started in 1923 by Hari Bhajan, a disciple of Thakur Hari Chand; it lasts 5-7 days during the period of the full moon. Dubla Island is in the Bay of Bengal and regarded as part of the Sundarbans.

Special or famous food may also act as an additional attraction to tourists. Five respondents believed that delicious local foods can enhance the attraction of a location to tourists. For instance, interviewee 7 recalled that "… *the tourists like pitha* [local cakes] *and the local specialities; some people living nearby also come here for them, so these are another attraction to the tourists"*.

In summary, half of the respondents argued that having a range of cultural activities and special events is a major attraction for the tourists. For example, interviewee 8 pointed out that "… *the tourists are very interested in the local culture; they like to talk to the local community, try to understand their culture, and they love to watch the cultural activities"*.

4.3.1.1.3 Physical infrastructure and facilities (PIF)

This field study also indicated that physical infrastructure and facilities (PIF) should also be treated as an important resource for ecotourism, as it adds significant value to the attractiveness of a destination. Eleven indicators for the PIF construct were identified through the field study, which are discussed below.

Thirteen respondents mentioned that good communication and accessibility to the destination are important for ecotourism. For example, they believed that without proper transport infrastructure, tourists cannot get to a destination easily; and that having problems getting somewhere can be a disincentive to visit. Interviewee 7 commented that "… *many tourists visit this place. If there was no transport system, people would not come here; there would be more tourism if the transport system was better"*.

Another 15 believed that suitable accommodation is also essential if a destination is to be successful in attracting tourists over the long term. For example, interviewee 3 pointed out that *"… the tourists want good-quality hotels, but there is only one hotel here; if there were some more good hotels, the number of tourists would increase"*. Two others agreed that the lack of hotel accommodation is a problem, with interviewee 4 stating that "… *there is no good hotel here; some of the visitors are forced to move because they can't find somewhere suitable to stay; this discourages tourists from visiting this place"*. Interviewee 7 added that *"… there are some hotels on the other side of the river, but there is nothing on this side of the river* [Baniasanta bazar]*"*.

Eleven of the respondents also mentioned that ease of travel within a ecotourism destination area is another element of infrastructure that influences the attractiveness of a destination, because tourists like to move around within a destination area. For instance, interviewee 2 commented that *"… local transport connections are not good; it is not easy to get to places or move around the area. There are some wooden bridges that are not physically safe, and there are no other ways of getting around. If the area were more accessible, tourism would have been more successful"*.

Seven respondents also believed there are many tourists that would like to be able to stay overnight at the ecotourist destination. For example, interviewee 9 pointed out that *"… many tourists want to stay in the Sundarbans. They ask us whether there is anywhere they can stay in the forest, we say there is only one place to stay in Hiron point, but it is hard to arrange that because it is managed by the forest department and we don't have access. We recommend them to spend a night in a boat, but many of them don't feel comfortable with that kind of arrangement, so they leave"*.

Furthermore, eight respondents suggested that better quality and availability of boats would stimulate ecotourism. They believed that as it is a riverine area, tourists better enjoy the beauty of the area when travelling by boat. For example, interviewee 10 noted that "… *the number of tourists is increasing, but there aren't enough decent boats. This is impeding the growth of tourism, as the tourists become dissatisfied due to the shortage of decent boats*".

In addition to the more natural attractions, six respondents believed that most tourists are also interested in shopping while they are visiting a place. That being able to shop adds value to a tourist destination. Yet interviewee 16 noted that "… *there are few shops here* [in the Sundarbans area]. *Along with travelling into this area, the tourists want to do some shopping, and that is additional entertainment for them"*.

Fourteen respondents also suggested that decent shower and toilet facilities are essential for any tourist destination, and that the destination area was deficient in this respect. Interviewee 22, for instance, voiced concern that *"… the toilet and shower facilities in this place are not adequate; this is a requirement for any tourism destination. Many people visit this destination and they need shower and toilet facilities so that they can move around comfortably".* Interviewee 5 added that *"… there are very few public toilets here, and nowhere for the tourists to take a shower; has that created dissatisfaction and discomfort for many of the tourists"*.

Fourteen respondents contended that security is mandatory for tourism to succeed. They believed that if visitors feel insecure, they will not visit a destination. As evidence, interviewee 7 explained that *"… government ensures good security here; there is a police camp nearby, and so we feel secure here. The tourists are secure too, and so they feel comfortable travelling around the area. That is the main reason that lots of tourists come to visit this place; without proper security no-one would come here to visit"*.

In addition to security, 15 respondents mentioned that adequate drinkable water is essential for a tourist destination. People cannot live without water, and many tourists do not want the bother of carrying drinkable water when they are travelling. Some respondents referred to the problems that this has caused, such as interviewee 13 who stated that *"… this area is surrounded with salt water; we don't have any choice but to drink water from the pond that is not always healthy. We don't have a system for converting salt water into drinkable water, so tourists need to bring bottled water from Mongla which is a nuisance and a problem for the tourists".* Interviewee 9 added that *"… we don't have a good source of drinkable water in this place, and so the tourists need to bring it with them. If we don't develop a good source of water for the tourists, they won't stay here for longer periods"*.

Lastly, nine respondents indicated that the availability of electricity is another factor in tourism. Most tourists were perceived as dependent on various electrical devices that need charging. In line with this, interviewee 13 believed that *"… the infrastructure and facilities of this place are not yet up to the mark for tourism. There is no electricity available here* [Baniasanta] *and for tourism to prosper, there has to be electricity so that the tourists can access all the services they want"*.

Table 4.3 below shows the constructs of the resource dimension of ecotourism and their corresponding indicators, as identified through this field study.

Table 4.3: Constructs and corresponding indicators related to resource dimension of ecotourism

Factors and Variables	**Respondents**																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Natural Attraction																						
Natural beauty	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y
River activities e.g. river cruise	y	y	-	-	-	y	-	-	-	y	-	-	y	y	-	-	-	y	-	-	-	y
Nature-based ecotourism destination	y	-	-	-	-	-	-	y	y	y	-	-	y		y	-	-	-	y	-	-	-
Fresh air and pristine natural surrounding	y	-	-	y	-	-	-	-	y	y	-	y	-	-	y	-	y	-	-	y	-	-
Socio-cultural Attractions																						
Famous cultural site	-	-	-	-	-	-	-	-	-	-	y	-	-	-	-	-	-	-	-	-	y	-
Puja or similar religious activities	-	-	-	-	y	-	-	-	-	y	-	-	-	-	-	-	-	-	-	-	y	-
Activities e.g. boat race	-	-	-	y	-	-	-	-	-	y	-	-	-	-	-	y	-	-	y	-	-	-
Various special cultural festivals	y	-	-	-	y	-	-	-	-	y	-	y	-	-	-	-	y	y	-	-	-	-
Speciality local foods	-	-	y	-	-	-	y	-	-	y	-	-	-	-	-	y	-	-	-	y	-	-
Diverse local cultural features	-	y	y	-	y	-	-	y	y	y	-	-	y	y	-	y	-	y	-	-	-	y
Physical Infrastructure and Facilities																						
good communication and transport links	y	-	-	-	-	-	y	y	y	y	y	-	y	y	y	-	y	y	-	-	y	y
good hotels and other accommodations options	-	y	y	y	-	y	y	-	y	-	y	y	-	y	y		y	y	-	y	y	y
good transport infrastructure within the area	-	y	-	-	-	y	y	-	-	-	y	-	y	y	-	y	y		-	y	y	y
overnight accommodation in the forest	-	y	-	-	y	-	-	-	y	-	-	y	-	-	-	y		-	y	-	-	y
good boats and motor boats	y	y	-	-	-	-	-	-	y	y	y	-	-	-	-	y	-	-	-	y	-	y
good restaurants	-	-	y	y	-	y	y	-	y	-	-	y	y	y	-		y	y	y		y	y
shopping facilities	-	y	-	y	-		-	y		-	-		-	y	-	y		-		-		y
decent toilet and bathing facilities	y	-	y	y	y	y	-	y	y	-	y	y		y	y	-	y	-	y	-	-	y
adequate security	-	y	y	-	y	y	y	y	y	-	-	y	y	y	-	y	y	-	y	y	-	-
adequate supply of potable water	-	y	y	y	-	-	y	y	y	-	y	-	y	-	y	y	y	-	y	y	y	y
electricity	-	-	y	y	-	-	y	-	y	-	y	-	y	-	-	y	-	-	y	-	-	y

4.3.1.2 Support dimension of ecotourism

In the light of the field study findings, it can be argued that the first-order antecedents – government actions (GTA), local management (LMT), and community support and involvement (PCA) – should be treated differently to the other three antecedents. Unlike natural attractions (NTA), socio-cultural attractions (SCA), and physical infrastructure and facilities (PIF), GTA, LMT and PCA do not play a crucial role in attracting tourists to the destination. Yet these antecedents are major contributors to developing, maintaining and ensuring sustainability of ecotourism. The extant literature also suggests that ecotourism requires support from these three stakeholders.

The results in this field study suggest that even though these three antecedents are important for ecotourism, they are not the main drivers of ecotourism. Instead, they are required to ensure basic facilities at a destination (GTA), proper maintenance of the ecotourism resources (LMT) and the upholding of logical benefits for the local community (PCA).

In summary, government actions (GTA), local management (LMT), and community support and involvement (PCA) together constitute a second-order antecedent construct named the 'support dimension' of ecotourism, as shown in Figure 4.3 below. These antecedents of the support dimension of ecotourism are further discussed in the following subsections.

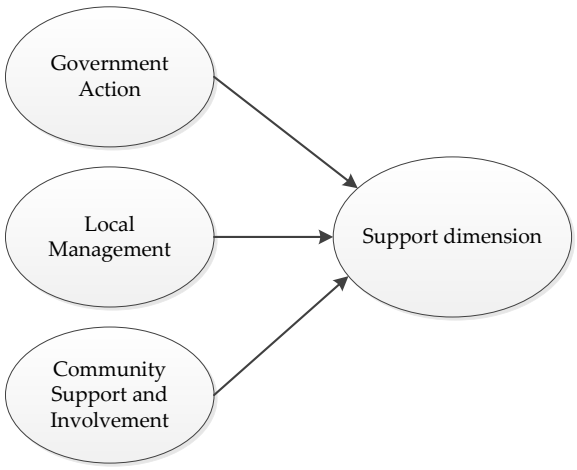

Figure 4.3: Support dimension of ecotourism

4.3.1.2.1 Local community participation and involvement (PCA)

This field study indicated that the active involvement of the local community is an important support for ecotourism. Ten indicators were identified for PCA as discussed below.

Eight interviewees nominated themselves as supporting tourism in their area, and believed that such support significantly contributes to the success of ecotourism. For example, interviewee 7 commented that *"… ecotourism in the area is a matter of joy for local people. We believe that ecotourism has brought wealth to our area; the view of the local community is important for the sake of prosperity of ecotourism in this area".*

Ten interviewees pointed out that they loved seeing the tourists visiting their area. For instance, interviewee 1 said that "… w*e love to see people coming from long distances to visit this area; it really is something to cheer about. I like their attitude"*. Interviewee 9 added that *"… we feel good that foreigners and people from long distance visit our area and enjoy its beauty. We try to make them happy because they are our guests; we don't want any of them to be unhappy because of our attitude. They should not think that the people of this area are not good"*.

In line with this positive perspective, 12 interviewees explained that they are not in any way disturbed or upset by tourists coming to their area. Interviewee 4 stated that *"… we don't feel disturbed by the tourists' arrival; they are our guests, they bring wealth to our community. The tourists like the local people and we also like to see them; they are always welcome on our soil"*. While interviewee 7 clarified that *"… we enjoy having the foreigners here and we like their attitude. They are our guests, so we treat them in such a manner. The foreigners have a good impression of our dress and culture, and we appreciate their interest"*.

Ten respondents also suggested that the arrival of the tourists is good for them personally and for their area, as explained by interviewee 9: "V*arious developments have occurred in this area, and there are several developments happening here at the moment. This is because of the tourists"*.

As part of these benefits, 15 interviewees pointed out that the tourists are a source of income for the local community, especially those who are involved in tourism-related businesses. For example, interviewee 2 noted that *"… it is good to have more visitors, in particular for the hotels, restaurants and trawler business. Sometimes there isn't enough accommodation for the tourists, and when this happens the management and owners charge higher rates than usual. People who're involved in tourist businesses can earn more from tourism"*. Interviewee 19 added that *"… there are a lot of shops now; the small shops have turned into larger shops. Business has flourished and so the earnings of the local community have also increased significantly"*.

Eight interviewees believed that their business is actually dependent on the presence of tourists in the area. For instance, interviewee 19 stated that *"… the business sector is expanding, thanks to the arrival of the tourists. I've been running this restaurant for about five years and my business depends entirely on tourism. Due to the increase of tourism, the number of shops has doubled in just a few years; the water transport business has also expanded substantially. All my customers are tourists; the arrival of the tourists means we can earn money and thanks to the increase of tourism"*.

In line with this, four respondents explained that ecotourism has generated numerous job opportunities in their area, with local people employed in hotels, restaurants and other tourist-enhanced businesses. Interviewee 11 pointed out that *"… ecotourism has created various employment opportunities for the local community; hotels, restaurants and trawler businesses have flourished. Many people work in these sectors and earn enough to support their family. It is*

good for the local community that people don't need to go to distant places to find work; they love this kind of employment".

In the extant literature, two indicators – 'active participation of the local community in various tourism-related activities' and 'involvement of the local community in decision-making process of tourism' – were commonly identified as pertinent to PCA. However, it did not emerge through the field study that either of these forms of local community engagement is present in the chosen study area. Yet these two indicators were included in the survey despite the lack of evidence of their applicability in this specific study context.

4.3.1.2.2 Local management (LMT)

This field study also indicated that local management (LMT) of a destination has a significant impact on ecotourism. Four indicators of LMT were identified through this field study, as discussed below.

Ten respondents mentioned that local management has an important role in ecotourism through setting the regulatory framework governing the activities of tourists and all other stakeholders. They noted that effective local management is needed to keep the environment in good shape, with interviewee 2 specifying that *"… during tourism season, many people visit this area, and so several parties have become involved in hosting and providing services to the tourists. There should be specific rules, regulations and guidelines for the tourists and all other parties, so that no-one can exploit anyone else or cause problems for the tourism industry as a whole. Due to a lack of local management monitoring, it was observed that some businessmen try to take an unfair advantage over the tourists; this is not good for the industry as a whole"*.

In line with this, six interviewees believed that it is important for local management to set and enforce appropriate regulations and guidelines to

maintain the discipline of the tourism destination. For instance, interviewee 10 stated that *"… local government has an important role in ensuring the successful growth of ecotourism. There should be proper regulations and a system for everyone; for example, the rate for trawler hire should be fixed so that the operators cannot rip off their passengers. There should be proper management of litter and a transparent fare system; there should be proper regulations in every area that has anything to do with tourism. This would ensure that the tourists are satisfied and that would mean an increase in the number of tourists"*.

Furthermore, three interviewees suggested that local management should have a plan for maintaining the natural environment through nature conservation activities including maintaining the cleanliness of the environment (e.g. rivers and canals). Interviewee 2 explained as follows: *"Natural attractions are the main attraction in ecotourism, so there should be some plan of action to keep the environment clean and attractive. There should be some training for people so that they learn what to do and what not to do for the sake of the environment. We hope that in the near future the local authority will come up with a good plan so that the tourists and other people will be motivated to maintain the attractiveness of the natural environment. Both tourists and the local community need to be careful about littering and other activities that are harmful to the environment"*.

One indicator – 'carrying capacity' – was not supported in this field study. However, as it has been identified in the extant literature as a very important element of ecotourism, it was nevertheless incorporated into the survey study.

4.3.1.2.3 Government actions (GTA)

The field study indicated that central government has an important role in the ecotourism process in any destination. The interviewees identified four

indicators related to the government action (GTA) construct, which are further discussed below.

Nine interviewees commented that the government needs to be highly proactive in promoting and supporting ecotourism, as it is the sole agency in a position to carry out many important actions. Interviewee 8 argued that *"… for ecotourism to develop, the government needs to be more active in ensuring that facilities meet the standard expected by the tourists. The government needs to be aware of the likely requirements of the tourists and tourism, and act accordingly"*.

Furthermore, 10 interviewees contended that the government should fund the infrastructure and amenities needed to allow tourists to travel to and within the area, and to feel comfortable while staying in the Sundarbans – this was perceived as vital for any ecotourism destination. For instance, interviewee 11 explained that *"… the government provides funding for various construction projects in this area, but in most cases it is not adequate. The poltun* [jetty] *was constructed only three years back, but it is gradually breaking. Crores of Taka* [millions of dollars] *were spent, but the blocks are sliding into the river. No-one supervises the work or monitors the quality; it needs to be properly planned and monitored"*.

Eight interviewees further stated that the government is already carrying out development work that supports ecotourism in the locality. Interviewee 16, for instance, explained that *"… the government undertook various types of development work helpful to the community and the tourism industry; Sidr* [a Category 5 tropical cyclone that occurred in 2007, resulting in one of the worst natural disasters in Bangladesh's history] *washed out the roads and a lot of other infrastructure, but the government has built a new road here. The government has also secured the river bank with stone block*s, *and installed a poltun* [jetty] *so that people can get in and out of boats easily"*.

Only one interviewee (21) thought that the government needed a master plan for ecotourism if the area needs to be successfully developed and maintained as an ecotourism destination. As he explained: *"This area is very popular among tourists. The attractions of the Sundarbans include the forest, river and animals that attract many tourists every year. The government ought to have a master plan for developing this area as a prime ecotourism destination; that might ensure that the natural environment is preserved, increase tourism to the area, and improve the wellbeing of all the people involved with the Sundarbans"*.

Table 4.4 below shows the constructs of the support dimension of ecotourism and their corresponding indicators, as identified through this field study.

Table 4.4 Constructs and corresponding indicators related to support dimension of ecotourism

Factors and Variables	Respondents																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Community Support and Involvement																						
Fully support the development of tourism	y	-	-	-	y	-	y	-	-	y	-	-	-	y	-	y	-	-	-	y	-	y
Love to see tourists in their locality	y	y	-	y	-	-	y		y	y	-	y	-	-		-	y	-	y	-	-	y
Do not feel that the tourists disrupt their life	y	y	-	y	-	-	y	y	y	-	-	y	-	-	y	y	-	y	-	y	-	y
Believe tourism in the area is good for local society and culture	-	y	-	-	y	y	y	-	y	y	-	-	y	y	-	-	y	-	-	-	y	-
Believe that tourists arrival is the mode of their income	-	y	-	y	y	y	y	-	y	y	-	y	y	y	-	y	-	y	y	y	y	-
Consider that tourism is beneficial to the area are actively involved in various tourism activities	y	-	y	-	y	-	-	y	y	-	-	-	y	-	y	-	-	y	-	y	-	y
Are involved in making decisions																						
Operate a business which is dependent on tourism in the area	-	-	y	-	y	-	-	y	-	y	-	-	y	-	y	-	-	-	y	-	y	-
Like working in the hotels, restaurants, trawlers	-	-	-	y	-	-	-	y	-	-	-	y	-	-	-	-	-	y	-	-	-	-
Local Management																						
Provides an appropriate regulatory framework	-	y	-		-	y	-	y	y	y	-	-	-	y	-		-	y	-	y	y	y
Provides guidance	-	-	-	y	-	-	-	y	-	y	y	-	-	y	-	-	-	-	-	-	y	-
Has an appropriate action plan	-	y	-	-	-	-	y	-	-	-	-	-	-	y	-	-	-	-	-	-	-	-
Ensures maintaining the carrying capacity																						
Government																						
Working steadily	-	y	-	-	y	-	-	y	y	-	y	-	y	-	y	-	-	y	-	-	y	-
Provides necessary funding	y	-	-	y	-	-	y		y	-	y	y	y	-	y	-	-	-	-	-	y	y
Carries out development work	-	y	-	-	y	-	-	y	-	y	-	y	-	y	y	y	-	-	-	-	-	-
Has a master plan for further development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	y	-

4.3.1.3 Outcomes of ecotourism

This field study indicated that ecotourism in the study area can produce several positive outcomes. These constructs are discussed in the following subsections.

4.3.1.3.1 Economic benefits (EOB)

In relation to monetary outcomes, 13 interviewees mentioned that ecotourism has created jobs in the destination area. For example, interviewee 4 relayed that *"… thanks to ecotourism in this area, I got an opportunity to earn some money. I would not have got my current job if there were no tourism in this area; it* [ecotourism] *has made a big contribution to the local community by generating employment"*.

The field study also indicated that ecotourism has not only generated employment, but has also increased local incomes. Sixteen interviewees mentioned this. One of the female interviewees (3) further explained how ecotourism had directly affected her financial capacity: *"Ecotourism has given many people an opportunity to earn some money; it has increased incomes, so now people can live better than before. I am a widow and so I am the sole earner in my family, but my wages support my family of six children. It is a big opportunity for me and I feel proud to work here and earn money by serving the tourists"*.

Furthermore, 15 interviewees believed that ecotourism has improved business opportunities in this area. Interviewee 7 clarified that *"… tourists from this country and abroad visit the area. They need road and water transport, and they spend money on essentials when they are staying in the area. That also increases business opportunities for the local community; the local community can be involved in a grocery business, operate road or water transport, or even work as tour guides"*.

The field study also indicated that along with generating revenue for the local community and local entrepreneurs, ecotourism has increased revenue

for the government. Six interviewees expressed this sentiment, including interviewee 1 who claimed that *"… the government is also earning substantial revenue through tourism activities; there is a picnic spot here and government earns a good deal of money through rent*". Interviewee 18 added that *"… for crossing the river there is a system of paying toll. Everyone has to pay and the charge was increased from TK2 to TK5 per person; this provides income for the government"*.

4.3.1.3.2 Environmental benefits (NTB)

This field study indicated that ecotourism can generate environmental benefits (NTB) for the locality. Four indicators of environmental benefits were identified, as discussed below.

Twelve interviewees had perceived an increase of consciousness in relation to the environment within the local community due to ecotourism activities in the locality. Interviewee 3, as a tourism entrepreneur explained further: *"Tourism has had multiple effects on the local community; with the growth of tourism in this area they* [local community] *are gradually becoming more involved in civic activities. They are also becoming educated, and so environmental consciousness is also increasing among the local community"*.

The field study results also suggested that tourists become more environmentally-conscious as a result of visiting an ecotourism destination, as suggested by two of the interviewees. For example, interviewee 2 stated that *"… various types of tourists visit this place; they're not all the same; many of them are not well-educated about the environment. Ecotourism gives them a chance to learn about environmental issues affecting the area, and they try to understand the plants and animals of the Sundarbans"*.

One interviewee (5) confirmed that the local community is active in protecting the environment, explaining that *"… tourism in this area has benefits for everyone; it generates revenue for everyone including the government. We feel*

good because people are visiting this area. We understand that the existence of natural beauty is important for the tourists, and so we become more environmentally-conscious and actively try to protect the natural environment so that it will yields benefits for a long time".

Furthermore, five interviewees voiced that the central government has to be proactive to maintain the environmental attractions of the area. For example, interviewee 11 explained that *"… tourists are visiting this area, which gives us opportunities to earn a living. The Sundarbans is the main attraction for the tourists, but due to lack of environmental awareness among local people there is a risk that the natural attraction will not remain as it is for long. The government needs to protect the environment and take proper action to conserve it"*.

4.3.1.3.3 Socio-cultural benefits (SOB)

This field study indicated that ecotourism produces socio-cultural benefits (SOB) for the local community. Eight indicators of SOB were identified, as discussed below.

Five interviewees mentioned that ecotourism can enhance the lifestyles of local community. A key benefit is that a substantial proportion of local community can now meet the basic food requirements of their family; something which was comparatively difficult pre-ecotourism. Interviewee 11 expressed these positive sentiments: *"Thanks to ecotourism in this area, many people are employed in various tourism-related jobs and so they can afford all necessities; something which wasn't true in earlier days"*.

In line with this, five interviewees explained that ecotourism has enhanced the lifestyle of the local community, meaning they can now afford better medical care. For example, interviewee 3 stated that *"… ecotourism has increased our incomes; we are now capable of purchasing various basic requirements.*

In earlier days, we used to visit the polli [quack] *doctor; now if there is a serious problem, we try to go to Khulna to see a doctor"*.

Three interviewees also mentioned that ecotourism has brought improvements in local people's ability to purchase suitable clothing. Interviewee 3 clarified that *"… our economic status is better now, and so we can afford to purchase better clothing for children and other family members"*.

Furthermore, three interviewees believed that the increased incomes as a consequence of ecotourism have enhanced the local people's ability to support their wider family. As an example, interviewee 3 noted that *"… my income has increased substantially; I have sufficient income to support my parents financially"*.

Five interviewees mentioned that they could now afford to live in better housing due to ecotourism in their area. For example, interviewee 7 commented that *"… our houses are much better now. Most of the houses are tin shaded, and almost every house has a sanitary toilet. This development has occurred because we can earn more now"*.

In relation to slightly less tangible benefits, two interviewees mentioned that ecotourism had led to facilities for lifelong education being introduced to the area. Interviewee 15 explained that *"… thanks to tourism that helps enhance the consciousness among the local community about various issues and new facilities, many illiterate, elderly people are now interested in getting educated, and there are some educational programs designed for elderly people. Once people can earn a living and have a reasonable standard of life, they can start to think about other things they would like"*.

Furthermore, eight interviewees maintained that additional income opportunities in their locality as a result of ecotourism had enabled them to be involved in more activities than previously. For instance, interviewee 15

pointed out that *"… [as] we have a lot of economic freedom now, we can send the children to school. That was not possible before"*.

Ten interviewees also mentioned that the improvements in infrastructure had increased their standard of living. That is, ecotourism has prompted the government to pay more attention to these areas than before, which has led to investment in various infrastructural projects such as roads, bridges and jetties. This has had knock-on benefits for local people, as explained by interviewee 15: *"Although the government is less active than our expectation, they are involved in several development projects. The roads are good so tourists can get here easily; this also means that we can travel to the city easily. The government also constructed a jetty here so that the motor boats can anchor here, and people can get on and off easily"*. Interviewee 9 added that *"… some structural developments like road and communication work have been completed,* [and] *more development work is in progress. There is a road under construction; after completion of the road people will be able to come directly from Khulna by road. There is also a Parjaton motel in Mongla now. Although all these facilities were built for the tourists, the local community can also take advantage of many of them"*.

4.3.1.3.4 Emotional benefits (EMB)

This field study has also suggested that ecotourism can produce emotional benefits (EMB) for the local community. Four indicators of EMB were identified, as discussed below.

Two interviewees expressed their happiness about tourists from various parts of the world, as well their own country, visiting their area. For example, interviewee 8 said that *"… people from this country and abroad come here and we are delighted to see them. There is variety in their attitudes, language and dress; we love to see them out and about in our area"*.

Three interviewees further stated that they enjoy interacting with the tourists, particularly those tourists that want to know about the local culture and food. Interviewee 14 clarified that *"…many of the tourists are interested in the local culture; they ask many questions, they like our dress, food and activities. They also advise on a lot of issues. We enjoy talking to them and sharing our feelings with them"*.

Adding to this, seven interviewees believed that having tourists visit their area is a source of pride for the local community. For example, interviewee 2 commented that *"… many people come to our area; they like the scenic beauty of our area. Many of them come from a long distance and it is a source of pride that these people come from such a distance to visit our area and admire its beauty"*.

Six interviewees also suggested that local people are happy to know that the tourists love their area and appreciate its natural beauty, including interviewee 9 who explained that *"… both foreigners and Bangladeshi people from various distant places come to this region and visit our area, the Sundarbans, and enjoy its beauty. They talk to us when they're hiring a boat or purchasing goods or staying in the hotels or eating out in the restaurants, and sometimes they tell us that they like the area. They like the beautiful scenery; it makes us happy to hear that; it is something we can be proud of"*. This finding is in line with Matarrita-Cascante (2010), who suggests that the local community's quality of life is significantly influenced by their current living conditions, community satisfaction and other factors that derived through ecotourism.

Table 4.5 represents the outcome constructs of ecotourism and their corresponding indicators as identified through this field study.

Table 4.5: Factors and corresponding variables related to outcomes of ecotourism

Factors and Variables	Respondents																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Economic Benefits																						
Created jobs for local people	y	y	y	y	-	-	y	-	-	y	y	y	y	-	y	y	-	y	-	-	y	y
Increased local wages	-	y	y	-	y	y	y	-	y	y	y	-	y	y	-	y	y	y	-	y	y	y
Enhanced the business opportunities	-	y	y	y	-	y	y	-	y	y	y	-	y	y	y	-	y	y	-	y	y	-
Generates substantial earnings for the government	y	-	-	-	y	y	-	-	-	y	-	-	-	-	y	-	-	y	-	-	-	-
Environmental Benefits																						
The local community is conscious	y	-	y	-	-	y	y		y	y	-	y	-	-	y	-	y	y	-	y	y	-
The tourists are more concerned about nature	-	y	-	-	-	-	-	-	-	y	-	-	-	-	-	-	-	-	-	-	-	-
Local people actively try to prevent degradation	-	-	-	-	y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
The government plays an active role in conservation	-	y	-	-	y	-	-	-	-	-	y	-	-	-	-	-	y	-	-	-	y	-
Socio-cultural Benefits																						
Most local people are able to feed their family requirement of their family	-	-	-	y	-	-	y	-	-	-	y	-	-	y	-	-	-	-	-	y	-	-
Local people can afford basic medical care	-	-	y	-	-	-	y	-	-	-	y	-	-	y	-	-	y	-	-	-	-	-
Local people have enough money to buy decent clothing	-	-	y	-	-	-	-	-	-	-	-	-	-	-	-	y	-	-	-	-	y	-
Local people are now able to support their wider family	-	-	y	-	-	-	-	-	y	-	-	-	-	-	-	-	-	y	-	-	-	-
Local housing and sanitation facilities are greatly improved	-	y	-	-	-	-	y	-	-	-	-	y	-	-	-	-	-	y	-	-	y	-
There are facilities for lifelong learning	-	-	y	-	-	-	-	-	-	-	-	-	-	-	y	-	-	-	-	-	-	-
Local community can afford to send their children to school	-	y	-	-	-	y	-	y	-	y	-	-	y	-	y	-	-	y	-	y	-	-
Local community benefit from better infrastructure	-	-	y	-	-	y	y	-	y	-	-	y	y	y	-	y	-	y	-	-	y	-
Emotional Benefits																						
Local community are happy to see tourists	-	-	-	-	-	-	-	y	-	-	-	-	-	-	-	y	-	-	-	-	-	-
Local community enjoy interacting with tourists from other regions and other countries.	y	-	-	-	-	-	y	-	-	-	-	-	-	y	-	-	-	-	-	-	-	-
Local community are proud that because of tourism and ecotourism people from other regions and countries can learn about their area	-	y	y	-	y	-	-	y	-	-	y	-	-	-	-	y	-	-	-	y	-	-
Local community are pleased that the tourists appreciate the scenic beauty of their area	-	y	-	y	-	-	-	-	y	-	-	-	y	-	-	y	-	-	-	-	y	-

4.4 REFINED MODEL

This study's model was initially developed by identifying the variables from extant literature. For example, Buckley (2003) provides a model of ecotourism that has both antecedents and outcomes, where environmental and socio-cultural attractions are treated as antecedents, and environmental, socio-cultural and economic outcomes are the result of ecotourism. Many authors have identified nature, socio-culture and infrastructure as main ecotourism resources (e.g. Eraqi 2006; Tsaur, Lin and Lin 2006); while many others have also referred to local community (e.g. Kiss 2004; Honey 2008), government actions (e.g. Kiss 2004; Jaafar and Maideen 2012) and local management (e.g. Weaver and Lawton 2007; Ruhanen 2013) as fundamentals of ecotourism.

Based on the literature, this study anticipated the sustainable outcomes of ecotourism: economic, environmental, and socio-cultural benefits. Besides, this study also suggested one new type of outcome of ecotourism named 'emotional benefits'. Further, based on the support of the literature, this study also anticipated some mediation and moderating effects of those four outcomes.

Thus, the initial study model had 10 first-order constructs that included six antecedent constructs and four outcome constructs with mediating and moderating effects; the only second-order construct was ecotourism, as previously shown in Figure 2.1 (page 61).

The field study was conducted to verify whether the constructs used in this model are applicable in the study destination. It was subsequently concluded that all of the 10 first-order constructs are applicable in the context of Bangladesh. However, the field study results suggested that the six antecedent constructs should be split into two categories – resource dimension and support dimension – to reflect their different roles. The model

was therefore modified from a two- to a three-level model, with the resource dimension and support dimension constructs defined as second-order antecedent constructs that form a third-order construct called 'ecotourism'.

The refined model also confirms the inclusion of four previously suggested outcomes of ecotourism: economic benefits (EOB); environmental benefits (NTB); socio-cultural benefits (SOB); and emotional benefits (EMB). The outcomes of ecotourism were also reassumed to have mediation and moderation effects.

The refined version of this model is shown in Figure 4.4 below.

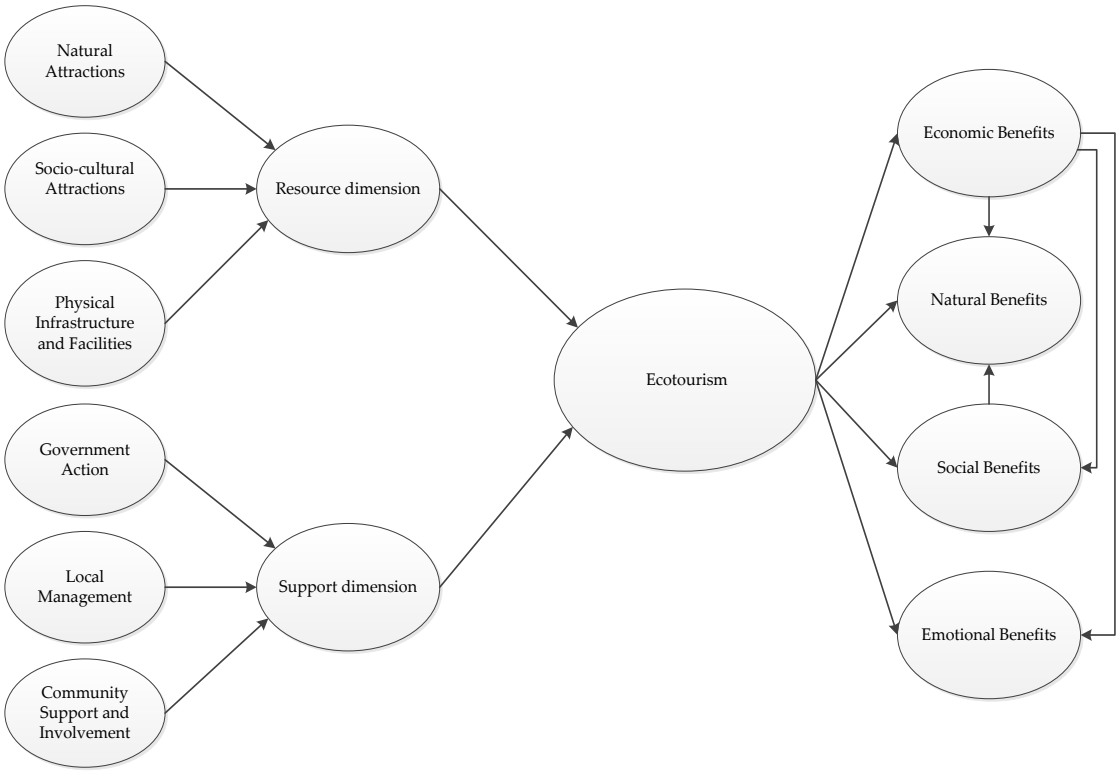

Figure 4.4: Refined model of the study

4.5 SUMMARY

This chapter has discussed the proposed model in light of the findings of the field study. This field study was conducted in two areas of the Khulna region of Bangladesh: Mongla and Baniasanta. A semi-structured questionnaire was used to guide interviews with 12 members of the local community and 10

tourism entrepreneurs. Inductive and deductive content analysis was used to interpret the qualitative data from the field study, and the model was refined based on these results.

This field study confirmed that constructs included in the original model are applicable in the context of Bangladesh. The variables and measures of the model were also analysed in light of existing literature.

This study has added several indicators to respective constructs. However, this study did not get support for three indicators. Since, these three indicators have been regarded as significant by most ecotourism researchers, and were therefore maintained in the model despite the lack of evidence for their applicability. The relationships between those factors and variables were also finalised.

The revised model incorporates all the factors and variables, and accounts for all the outcomes of ecotourism observed in the context of Bangladesh. Several hypotheses were subsequently derived from this model, which are discussed in Chapter 5.

CHAPTER 5: RESEARCH HYPOTHESES AND QUESTIONNAIRE DEVELOPMENT

5.1 INTRODUCTION

This study used a mixed-methods approach as suggested by many researchers (e.g. Creswell and Clark 2007). This study also designed a model with components identified through extant literature that were then contextualised via the field study. Based on the results of the field study, the model was refined (see Figure 4.4, page 120).

As discussed in Chapter 4, the field study confirmed that ecotourism is likely to have several outcomes. It was also identified that some of these outcomes would mediate delivery of others, and that the different stakeholders in ecotourism would have different views on what constitutes desirable outcomes of ecotourism. This chapter presents the research hypotheses and the process by which the survey questionnaire was developed.

5.2 HYPOTHESIS DEVELOPMENT

5.2.1 Hypotheses for Outcomes of Ecotourism

Ecotourism is seen as a potential source of delivering multiple outcomes including environmental, socio-cultural and economic benefits (Aguila and Ragot 2014). Many researchers have identified various benefits derived from ecotourism, including economic benefits (e.g. Charnley 2005), environmental benefits (e.g. Brooks et al. 2006) and socio-cultural benefits (e.g. Aguila and Ragot 2014). However, very few studies have suggested that tourism can also produce emotional benefits. As a new addition to ecotourism outcomes, this study suggests that ecotourism can deliver emotional benefits.

The pertinent matters of various hypotheses development are discussed in the following subsections.

5.2.1.1 Hypothesis on economic benefits

Economic benefits are often considered in terms of the income generated by ecotourism activities. Ecotourism is a way of improving the economic welfare of indigenous people within the international community (Coria and Calfucura 2012; Stronza and Gordillo 2008). Gallagher and Hammerschlag (2011) add that ecotourism can improve the economic status of a community. Several researchers (e.g. Zeppel 2006; Brooks et al. 2006; Charnley 2005) have suggested that the economic benefits of ecotourism should be significant for the indigenous communities.

Ecotourism often provides economic benefits in the form of employment and business opportunities. Gallagher and Hammerschlag (2011) confirm that ecotourism creates various jobs for the local community. While Liu et al. (2014) believe that ecotourism can generate multiple economic benefits in addition to employment, including business and investment opportunities. Argwenge, Patrick, and Ochieng (2013) have also expressed that along with employment, ecotourism also generates innumerable business opportunities for the local community.

Most ecotourism entails a range of activities that require labour and thus create employment (Ivanov and Ivanova 2013), subsequently increasing income among the local community. For example, Walpole and Goodwin (2000) point out that ecotourism generates numerous jobs in local hotels, restaurants and transport modes such as charter boats. Wood et al. (2013) also believe that ecotourism creates many business and employment opportunities and thus increases earnings among the local community. This study has therefore proposed the following hypothesis:

H_1: Ecotourism will produce positive impacts on economic benefits.

5.2.1.2 Hypothesis on environmental benefits

While mass tourism provides significant economic benefits for the destination (Ivanov and Ivanova 2013), it is also often associated with adverse effects on the destination and its region, mainly related to the high volume of tourists (Tirados 2011). This can include disregard for the interests of the local population, acculturation, creation of a cultural cocoon around the resorts, and increases in crime (Ivanov and Ivanova 2013).

Ecotourism appears to offer a solution to many of these problems (Schaller, Jónasson and Aikoh 2013b), as it better emphasises nature conservation at destinations with the aim of enhancing the tourist's environmental consciousness (Chiu, Lee and Chen 2014). Ecotourism depends on natural attractions (Mahanta 2014) and is based on the notion that the ecology of an area constitutes a resource that can be used to create economic value by attracting tourists (Chiu, Lee and Chen 2014).

Björk (2000) describes ecotourism as a form of tourism that focuses on environmental conservation. Sirakaya, Sasidharan, and Sönmez (1999) define it as a form of tourism in which the tourists do not contaminate the natural environment and enjoy undeveloped and under-visited natural, cultural and historical areas. In line with this, Brooks et al. (2006) argue that ecotourism should deliver environmental benefits to the local community.

However, Okech and Bob (2009) claim that ecotourism can have a negative environmental impact if it is carried out the wrong way. Another potential issue is that it intentionally limits the number of tourists visiting a given destination, which is less economically-beneficial to the local community than mass tourism (Ivanov and Ivanova 2013).

Despite such problems, ecotourism promotes an understanding of nature (Fletcher 2015). Furthermore, in addition to the various educational activities

that are part of ecotourism, the existence of taxes that finance the conservation of less iconic animal species may also raise general environmental awareness (Di Minin et al. 2013).

Ecotourism also encourages the locals in that area to conserve their wildlife and environment (Liu et al. 2014). In addition, Thapa (2010) believes that ecotourism promotes recycling, education, green consumption and local community involvement in nature conservation. Ecotourism can also generate revenue for nature conservation activities (Hein, Miller and de Groot 2013).

In summary, ecotourism can help to educate the tourists and the local community, provide money for nature conservation, and motivate the local community to take an active role in nature conservation. The second hypothesis has therefore been based on these opinions:

H_2: Ecotourism will produce positive impacts on environmental benefits.

5.2.1.3 Hypothesis on socio-cultural benefits

Aguila and Ragot (2014) believe that ecotourism is a means of delivering environmental, socio-economic and cultural benefits at both the local and national level; although Okech and Bob (2009) have debated whether the impact is positive or negative, mostly dependent on how it is carried out.

The socio-cultural impact of ecotourism can be defined as the changes which tourism and travel produce in collective and individual value systems, behaviour patterns, community structures, lifestyles and quality of life (Hall and Lew 2009). Ecotourism is capable of attracting tourists and generating revenue that eventually benefits the entire community in a certain destination.

Ecotourism also represents a practical and effective means of achieving both social and economic improvements (Aguila and Ragot 2014). Su, Wall, and

Ma (2014) have shown that ecotourism can yield socio-cultural benefits for the local community. Fletcher (2010) also notes that ecotourism provides significant environmental and socio-cultural benefits for surrounding communities.

The increase in income through ecotourism can be used to finance local community facilities and may eventually reduce social inequalities among the local community. For example, in a study of Osa Peninsula, Costa Rica, it was shown that ecotourism can reduce inequality by increasing local, often poor people's access to strategic resources by increasing their access to information, better paid jobs, and education and training opportunities (Hunt et al. (2015).

Ecotourism can also lead to the building of infrastructure which often improves local lifestyles (Asquith, Rios and Smith 2002). As an example, Ogutu (2002) established that ecotourism had leveraged improvements in infrastructure and employment within the community of Eselenkei Amboseli Biosphere Reserve ecosystem, Kenya, and raised the profile of the area. In line with this, Satyanarayana et al. (2012) report that the stakeholders of the Mangroves of Tanbi Wetland National Park in the Gambia have directly benefited from ecotourism in terms of economic growth and better infrastructure. This study has therefore proposed the following hypothesis:

H_3: Ecotourism will produce positive impacts on socio-cultural benefits for the local community.

5.2.1.4 Hypothesis on emotional benefits

Emotion is recognised as providing a non-rational motive for engaging in an activity (Buijs and Lawrence 2013). In the context of the focus of this study, emotion is an intangible factor that can play a significant role in the success of efforts to develop ecotourism in a destination. That is, without the active support and involvement of the local community, ecotourism is not likely to

be successful in the long term (Ceballos-Lascurain 1996; Honey 2008; Liu et al. 2014). This study therefore suggests that emotions is a key outcome of ecotourism.

There have been few studies in relation to the emotional benefit of ecotourism or tourism, although Waitt (2003) has shown that communities can benefit emotionally from hosting tourists. Nature and culture are the two main attractions of an ecotourism destination (Mahanta 2014; Reimer and Walter 2013; Ziolkowski 1990), and the local community may take pride in these aspects. Buijs and Lawrence (2013) add that the local community's feelings about the flora and fauna of their area are primarily based on love for nature and aesthetic appreciation of it; that is, they are highly emotionally involved with their natural environment.

Ecotourism no doubt delivers multiple benefits to the local community (Ross and Wall 1999a; Stem, Lassoie, Lee, Deshler, et al. 2003), including economic and socio-cultural (Zhou et al. 2013; Mbaiwa and Stronza 2010). Ecotourism also improves the natural environment of the destination (Stem, Lassoie, Lee, Deshler, et al. 2003). Local communities can also benefit from ecotourism as a result of exchanging ideas with tourists (Stem, Lassoie, Lee, Deshler, et al. 2003). Such benefits may then spread from the individual to their family and the local community.

Ecotourism may therefore promote social and familial cohesion, and spread positive attitudes within community (Ross and Wall 1999a). All of these benefits in turn can enhance positive attitudes towards ecotourism. Stem, Lassoie, Lee, Deshler, et al. (2003) confirm that ecotourism is more likely to generate positive attitudes to ecotourism if local people are involved and the benefits are distributed equitably. Furthermore, Hales (2013) notes that the experience and involvement of local people at a destination, including how

they value the natural landscapes, has a significant emotional impact on the local community.

The local community may also feel that their social status is enhanced because of ecotourism. Furthermore, ecotourism raises the profile of the destination within the region, which makes the local community feel proud of its area. Therefore, this study has proposed the following hypothesis:

H_4: Ecotourism will produce positive impacts on emotional benefits for the local community.

5.2.2 Hypothesis about Mediation

This study proposes that ecotourism has four positive outcomes, which then raises the question of whether they are independent or interdependent. Numerous studies have shown that the economic and socio-cultural benefits to the local community are associated (e.g. Brooks 2010), while others have reported associations between the economic and environmental benefits (e.g. Lapeyre 2010) or between the socio-cultural and environmental benefits (e.g. Liu et al. 2014). Hence, this study commenced with an insight into potential mediations between the proposed outcomes of ecotourism.

5.2.2.1 Economic benefits mediate delivery of other benefits

5.2.2.1.1 Mediation of delivery of environmental benefits via economic benefits

Economic benefits can serve as a powerful incentive for pro-environmental behaviours among the local community (Liu et al. 2014). The association between economic benefits and pro-environmental behaviour can be both direct and indirect. A study of Belize shows that the local community are often motivated to support conservation due to the economic benefits derived from ecotourism (Lindberg, Enriquez and Sproule 1996). Similarly, a study conducted at the Osa Peninsula in Costa Rica has revealed that when local community members are employed in ecotourism-related jobs, they are

less likely to disturb the local wildlife (Hunt et al. (2015). In line with this, Liu et al. (2014) contend that whenever a local community understands the benefits, it will engage in the conservation of biodiversity and related ecotourism attractions to sustain their economic value.

Businesses involved in ecotourism may also fund conservation activities such as environmental education in local schools and promoting recycling in the local community (Hunt et al. 2015). Brooks (2010) has also found that the socio-economic benefits of ecotourism can motivate the local community to participate in nature conservation activities. This study has therefore hypothesised the following:

H_5: Economic benefits mediate the relationship between ecotourism and environmental benefits.

5.2.2.1.2 Mediation of delivery of socio-cultural benefits via economic benefits

The economic benefits of ecotourism often lead to direct or indirect socio-cultural benefits for the local community. For example, Eraydin, Armatli-Köroğlu, and Uzun (2012) have shown that ecotourism increases local incomes and hence improves socio-cultural conditions. In their study Mbaiwa and Stronza (2010) reported that ecotourism-generated employment for the local community resulted in better lifestyles as a result of improvements in basic facilities and infrastructure, such as shelter, water supply and transportation system. Arntzen et al. (2007) have also found that an increase in local incomes as a result of ecotourism leads to improved socio-cultural facilities in the local community. Mbaiwa and Stronza (2010) add that financial benefits through meat sales, rent of lodge and campsites, camping fees, and vehicle hires often accrue to the local community via socio-cultural benefits.

Subsequent revenue from tourism can be used to enhance education facilities and infrastructure, and thus benefit the broader local community (Charnley

2005). Government and tourism entrepreneurs also often support ecotourism in ways that improve the lifestyle of the local community (Fuller, Buultjens and Cummings 2005; Hunt et al. 2015). This study has therefore hypothesised that:

H$_6$: Economic benefits mediate the relationship between ecotourism and socio-cultural benefits.

5.2.2.1.3 Mediation of delivery of emotional benefits via economic benefits

Ecotourism delivers many positive outcomes for the local community. For example, it offers income opportunities for the local community (Eraydin, Armatli-Köroğlu and Uzun 2012). Furthermore, earnings from ecotourism along with government support in the form of upgrades to infrastructure and amenities often result in improvements in the lifestyle of the local community (Fuller, Buultjens and Cummings 2005).

Together the benefits of ecotourism often improve the standard of living in the local community, meaning that they no longer struggle to achieve a basic standard of housing and nutrition (Mbaiwa and Stronza 2010). Thus, due to ongoing ecotourism activities, local communities can enjoy many other benefits surrounding them. Ecotourism activities generally make the local community happy because the tourists are a source of income; yet it also provides some emotional pleasures.

Although there has been little research on the emotional benefits of ecotourism, this field study has shown that the economic benefits of ecotourism enable locals to meet their basic requirements, which means they are able to consume many other benefits. This study has therefore proposed the following hypothesis:

H$_7$: Economic benefits mediate the relationship between ecotourism and emotional benefits.

5.2.2.2 Socio-cultural benefits mediate delivery of environmental benefits

Realising the socio-cultural benefits of ecotourism is likely to have a positive influence on the environmental behaviour and attitudes of the local community (Jones 2010). Whenever a local community becomes socio-economically stable, it is then more open to considering other aspects of its adjacent. Jones (2005), Stronza and Gordillo (2008) and many other researchers have argued that the social advantages of community based ecotourism (CBET) should encourage residents to act in a pro-environmental manner.

In line with this common belief, a study conducted in the three regions of the Amazon (Peru, Ecuador and Bolivia) has shown that social capital is a critical determinant of pro-environmental behaviour (Stronza and Gordillo 2008). Similar results have been obtained elsewhere. For example, Jones (2005) has suggested that increasing a community's social standing can improve residents' ability to manage natural resources sustainably. Furthermore, Liu et al. (2014) have found that social status often influences local residents' pro-environmental behaviours, founded on community norms, rules and values. This study has therefore hypothesised the following:

H_8: Socio-cultural benefits mediate the relationship between ecotourism and environmental benefits

Figure 5.1 below provides a schematic representation of the eight hypotheses that have been introduced above.

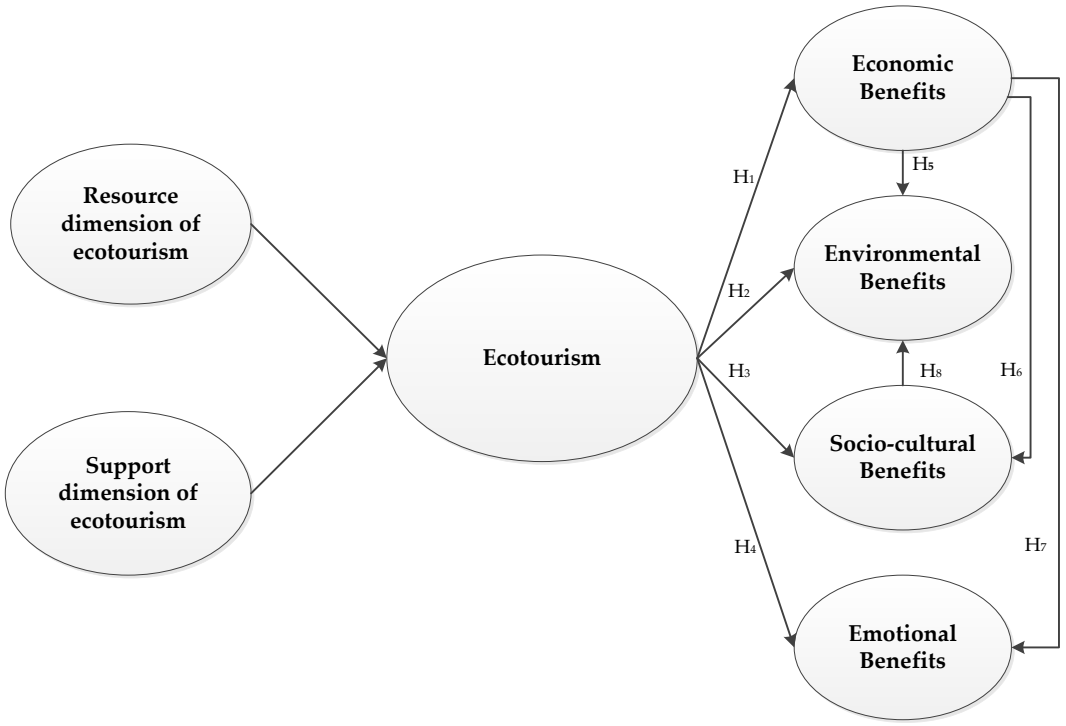

Figure 5.1: Schematic representation of ecotourism hypotheses H1-H8

5.2.3 Hypothesis about Moderation

Chin, Marcolin, and Newsted (2003) suggest that the primary function of moderating variables is to explain the discrepancies in relationships between constructs by identifying situational variance. In the context of this study, the stakeholders' views can be treated as a moderator of the outcomes of ecotourism. Such views can be defined as residents' outlooks towards tourism (Ap 1992), which generally relates to human consciousness and tolerance, and is therefore more closely related to the psychological issue (Hardy and Beeton 2001). However, there is considerable variation in terms of stakeholders views in which tourism has been defined by scholars and practised by the tourism industry (Hardy and Beeton 2001).

This is because every destination has multiple interdependent stakeholders, and a shared vision of development is crucial to the success of a program (Choi and Murray 2010). Poudel, Nyaupane, and Budruk (2014) argue that it

is imperative to identify the various stakeholders' values, perceptions and interests regarding ecotourism in a destination.

Past research has shown that stakeholder views regarding outcomes of ecotourism often vary (Ruschkowski et al. 2013; Thapa 2013). For example, Gee and Fayos-Sola (1997) argue that different stakeholders may have different perspectives of the same outcome. A study in the Daintree region of Far North Queensland in Australia identified that different stakeholders possess divergent views about the effects of ecotourism (Hardy and Beeton (2001).

Furthermore, ecotourism stakeholders generally vary with respect to occupation, activities, education and cultural background, so it is unsurprising that they have differing perspectives on ecotourism. For example, tourists' attitudes to the impact of tourism may vary according to their cultural background (Poudel, Nyaupane and Budruk 2014). In addition, Kuvan and Akan (2012) have shown that local residents and tourism entrepreneurs can have divergent opinions on the outcomes of ecotourism including economic, socio-cultural and environmental. Furthermore, Poudel, Nyaupane, and Budruk (2014) have revealed that management organisations and marketers of destinations often focus on satisfying tourists, whereas residents focus on improvements in the lifestyle and quality of life.

This study has therefore assumed that views about the outcomes of ecotourism are moderated by the identity of the stakeholder, based on differences in background, socio-cultural status, education, etc. Thus, the various stakeholders in the study were expected to have difference in views regarding the outcomes of ecotourism. The hypotheses derived from this assumption are discussed in the following subsections.

5.2.3.1 Hypothesis about moderation effect of tourists and local community members (H_9)

This study has assumed that tourists and the local community have different perspectives on the outcomes of ecotourism. This study has therefore put forward the following hypotheses:

H_{9a}: The views of tourists and those of members of the local community will differ in regard to the economic benefits derived from ecotourism.

H_{9b}: The views of tourists and those of members of the local community will differ in regard to the environmental benefits derived from ecotourism.

H_{9c}: The views of tourists and those of members of the local community will differ in regard to the socio-cultural benefits derived from ecotourism.

H_{9d}: The views of tourists and those of members of the local community will differ in regard to the emotional benefits derived from ecotourism.

5.2.3.2 Hypothesis about moderation effect of tourists and tourism entrepreneurs (H_{10})

This study has further assumed that tourists and tourism entrepreneurs have different perspectives on the outcomes of ecotourism, and thus derived the following hypotheses:

H_{10a}: The views of tourists and tourism entrepreneur will differ in regard to the economic benefits derived from ecotourism.

H_{10b}: The views of tourists and tourism entrepreneur will differ in regard to the environmental benefits derived from ecotourism.

H_{10c}: The views of tourists and tourism entrepreneur will differ in regard to the socio-cultural benefits derived from ecotourism.

H_{10d}: The views of tourists and tourism entrepreneur will differ in regard to the emotional benefits derived from ecotourism.

5.2.3.3 Hypothesis about moderation effect of local community members and tourism entrepreneurs (H_{11})

This study has also assumed that the local community members and tourism entrepreneurs have different perspectives on the outcomes of ecotourism. The hypotheses based on this assumption are as follows:

H_{11a}: The views of local community and tourism entrepreneurs will differ in regard to the economic benefits derived from ecotourism.

H_{11b}: The views of local community and tourism entrepreneurs will differ in regard to the environmental benefits derived from ecotourism.

H_{11c}: The views of local community and tourism entrepreneurs will differ in regard to the socio-cultural benefits derived from ecotourism.

H_{11d}: The views of local community and tourism entrepreneurs will differ in regard to the emotional benefits derived from ecotourism.

Figure 5.2 presents a schematic representation of hypotheses 9, 10 and 11.

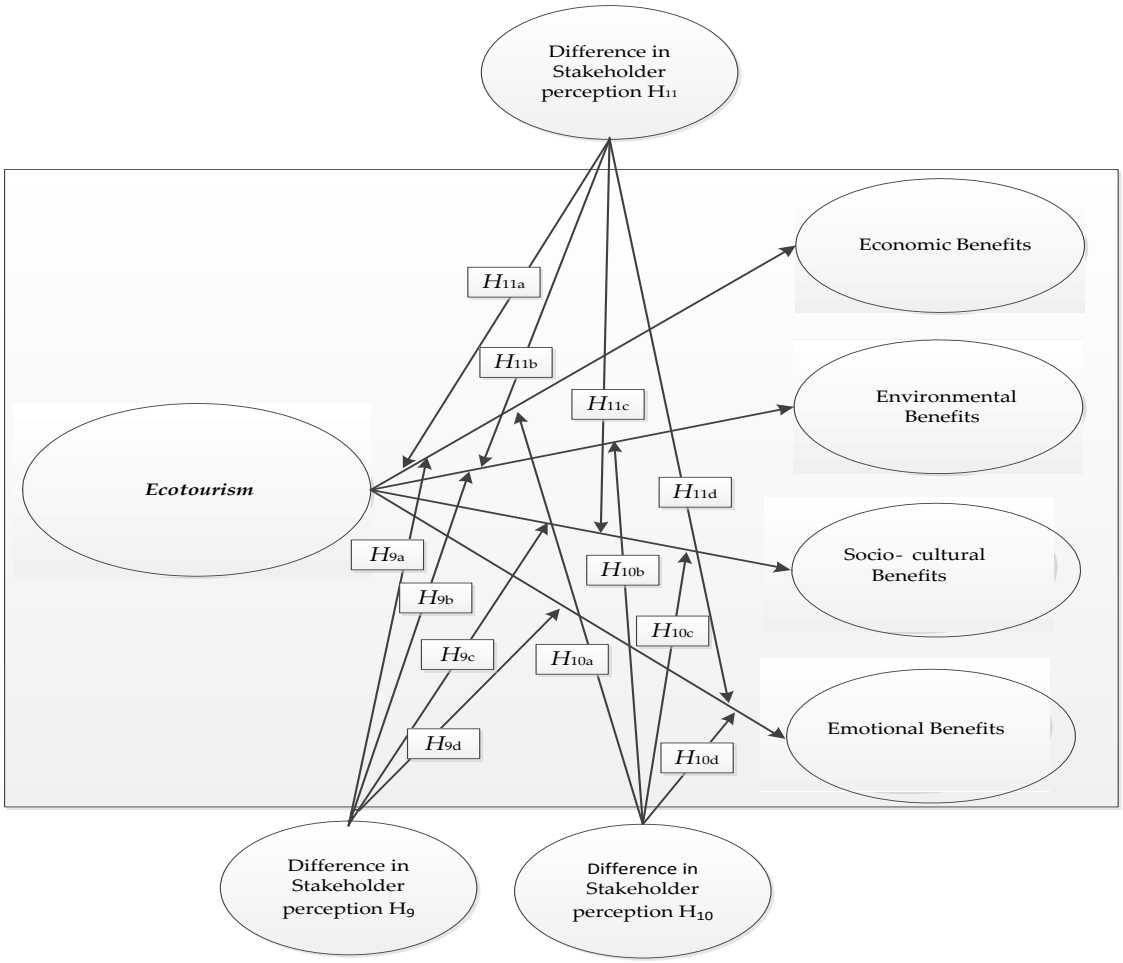

Figure 5.2: Schematic representation of hypotheses 9-11

5.3 QUESTIONNAIRE DEVELOPMENT

The proposed model on which this study is based, includes various constructs and specifies various relationships between these constructs. The final revised model (Figure 4.4, page 120) contains 11 hypotheses. In order to show the hypotheses more clearly, the model is presented in two figures in this chapter. Eight hypotheses are shown in Figure 5.1 above, while the

remaining three hypotheses are shown in Figure 5.2 above. These hypotheses were tested via a questionnaire survey. The questionnaire development process is described in the following subsections.

5.3.1 Overview of the Questionnaire

As stated earlier, this study used a mixed-methods approach. In the first phase, semi-structured interviews were used to collect qualitative data. In the second stage, data were collected through a survey to test the model and hypotheses.

Two sets of questionnaires were prepared for the survey based on the same 60 indicators. However, the tone of the questions and the demographic section of the questionnaire was modified for tourists, to factor in their differing perceptions and demographic backgrounds from the two other stakeholders included in the study.

Both the questionnaires were split into two sections. Section A consisted of 60 Likert scale questions based on the 60 indicators, and was divided into ten parts relating to the six antecedent constructs and four outcome constructs. Section B was designed to collect demographic information about respondents, and was the same for local community members and tourism entrepreneurs as the socio-cultural backgrounds of these stakeholders were assumed to be similar, while designed differently for the tourists as it was assumed to be different than the other two stakeholders. Section B in both questionnaires included both open-ended and closed questions.

5.3.2 Measurement Instruments

In this section, the measurement instruments used in this study including tools and their corresponding sources are discussed. Development of the measurement instruments was guided by the existing literature and the results of the field survey.

5.3.2.1 Environmental attractions

The natural environment is often perceived as the main attraction in ecotourism (Weaver and Lawton 2007). For example, ecotourists may be attracted to a destination based on its mountains, rivers and forests. Dhami et al. (2014) have pointed out that unique wildlife or vegetation, remoteness, and the presence of bodies of water features can add value to the attractiveness of an ecotourism destination. Many tourists also like to enjoy outdoor activities such as mountain hiking and river cruises (Lian Chan and Baum 2007; Hall and Day 2014).

This field survey used five indicators to measure the natural attractiveness of a destination. These indicators are the first-order constructs and are based on the literature, with their relevance confirmed via the qualitative field study. Indicators for the manifest first-order variables are shown in Table 5.1 below.

Table 5.1: Indicators of natural attractions

Indicators	Statement Tourists are attracted to your area because…	Source
NTA1	natural beauty of the forest is diversified	Hutchins (2007); Field study
NTA2	the tourists can enjoy river cruise	Lian Chan and Baum (2007); Field study
NTA3	the presence of nature based tourist spots like 'Koromjol'	Field study
NTA4	there are opportunities for watching wildlife e.g. Royal Bengal tigers, deer, crocodiles etc.	Dhami et al. (2014); Field study
NTA5	tourists can enjoy the fresh air and pristine natural surrounding	Lu and Stepchenkova (2012); Field study

5.3.2.2 Socio-cultural attractions

While natural attractiveness is generally regarded as the most important feature of an ecotourism destination, its popularity also depends on its cultural heritage (Ioppolo, Saija and Salomone 2013). It is often perceived that the availability of many cultural activities and festivals can further enhance the attractiveness of a destination (Uysal and Jurowski 1994).

The field survey used six indicators to measure the socio-cultural attractiveness of a destination. These indicators are the first-order constructs,

and are based on the literature, with their relevance confirmed by the qualitative field study. Indicators for the manifest first-order variables are shown in Table 5.2 below.

Table 5.2: Indicators of socio-cultural attractions

Indicators	Tourists are attracted to your area because it has…	Source
SCA1	a famous cultural site like the shrine of 'Khan Jahan'	Dasgupta, Mondal, and Basu (2006); Field study
SCA2	tourists can observe *puja* and similar religious activities	Dasgupta, Mondal, and Basu (2006); Field study
SCA3	tourists can watch boat races or similar sporting activities	Wunder (2000); Field study
SCA4	there are cultural festivals	Wunder (2000); Field study
SCA5	speciality local foods are available	Curtin (2005); Field study
SCA6	diversified local cultural features are available	Wunder (2000); Field study

5.3.2.3 Physical infrastructure and facilities

Ecotourism is nature-based tourism and therefore often requires less infrastructure than conventional tourism (Ok, Okan and Yilmaz 2011). However, while ecotourists may not demand high-quality facilities at such a destination, they do need to be able to get there; thus roads, railways and airports or a combination of these may be required to make a destination accessible (Parker and Khare 2005). Besides, the tourists need some basic sanitation facilities.

The field survey used 11 indicators to measure the physical infrastructure and facilities required at an ecotourism destination. These indicators are the first-order constructs, and are based on the literature with their relevance confirmed by the qualitative field study. Indicators for the manifest first-order variables are shown in Table 5.3 below.

Table 5.3: Indicators of physical infrastructure and facilities

Indicators	Does your area have the following …	Source
PIF1	good communication and transport links so that tourists can get to it	Wunder (2000); Field study
PIF 2	good hotels and other accommodations options	Hutchins (2007); Field study
PIF 3	good transport infrastructure within the area (bridges etc.)	Abdullah, Weng, and Mohamed (2013); Field study
PIF 4	overnight accommodation in the forest	Wurzinger and Johansson (2006); Field study
PIF 5	good boats and motor boats	Fuller, Buultjens, and Cummings (2005); Field study
PIF 6	good restaurants	Abdullah, Weng, and Mohamed (2013); Field study
PIF 7	shopping facilities for more than the essentials of everyday life	Dasgupta, Mondal, and Basu (2006); Field study
PIF 8	decent toilet and bathing facilities for tourists	Dasgupta, Mondal, and Basu (2006); Field study
PIF 9	adequate security so that tourists feel safe in the area	(Bhuiyan et al. 2011); Field study
PIF 10	adequate supply of potable water	Ogutu (2002); Field study
PIF 11	electricity	Field study

5.3.2.4 Community support and involvement

Community participation in ecotourism often relates to when the local residents collaborate with tourism professionals and local authorities in a partnership manner to ensure that the communities' needs are met and their quality of life improves (Shani and Pizam 2012). Community participation has also been defined as taking account of the opinions and needs of the community in making decisions about tourism, including the planning, management and supervision of tourism activities (Jiuxia and Jigang 2006).

Community participation is often perceived as an important element of ecotourism (Tosun 2000). As an example of their significance, Shani and Pizam (2012) argue that because of the distinctive nature of the tourism 'product' and its dependence on community-based assets and resources over which residents have significant influence, most tourism developers eventually try to involve the local community in the planning and management of tourism activities.

This field survey used 10 indicators to measure community support for and involvement in ecotourism. These indicators are the first-order constructs, and are based on the literature with their relevance confirmed by the qualitative field study. Indicators for the manifest first-order variables are shown in Table 5.4 below.

Table 5.4: Indicators of community support and involvement

Indicators	People in this area…	Source
PCA1	fully support the development of tourism in their area	Lee (2013); Field study
PCA 2	love to see tourists in their locality	Pérez and Nadal (2005); Field study
PCA 3	do not feel that the tourists disrupt their life	Field study
PCA 4	believe tourism in the area is good for local society and culture	Field study
PCA 5	believe that tourists arrival is the mode of their income opportunity	Pérez and Nadal (2005); Field study
PCA 6	consider that tourism is beneficial to the area	Pérez and Nadal (2005); Field study
PCA 7	are actively involved in various tourism activities	Jiuxia and Jigang (2006); Field study
PCA 8	are involved in making decisions about development of tourism	Jiuxia and Jigang (2006); Field study
PCA 9	operate a business which is dependent on tourism in the area	Pérez and Nadal (2005); Field study
PCA 10	like working in the hotels, restaurants, trawlers etc. that serve the tourists	Pérez and Nadal (2005); Field study

5.3.2.5 Government actions

Governments at all levels often assume greater responsibility than other stakeholders for, and become more involved in, tourism destination planning and development (Ruhanen 2013). Significant Government participation and direction in the ecotourism of a destination has been widely supported by researchers (e.g. Liu 2003; Hardy and Beeton 2001). This aligns with some suggestions that the government should be solely responsible for tourism planning (Dredge and Jenkins 2007).

It is commonly believed that governments should act in the national interest rather than in the commercial interest in relation to ecotourism (Bramwell and Lane 2011; Sinclair and Jayawardena 2003); government intervention should be a way of ensuring that ecotourism is developed to deliver benefits for all stakeholders.

Four measurement indicators were identified via the existing literature which are often identified as essential from the government perspective for proper development of a place as an ecotourism destination. The relevance of these indicators was confirmed by this qualitative field study. Indicators for the manifest first-order variables are shown in Table 5.5 below.

Table 5.5: Indicators of government actions

Indicators	The government or local authority supports ecotourism in this area by…	Source
GTA1	working steadily	Wunder (2000); Field study
GTA 2	financing infrastructure projects	Bhuiyan et al. (2011); Field study
GTA 3	carrying out various development projects	Dasgupta, Mondal, and Basu (2006); Field study
GTA 4	providing a master plan to guide development of tourism in the area	Bhuiyan et al. (2011); Field study

5.3.2.6 Local management

Managers in the destination have a responsibility to protect and maintain the economic, natural and cultural resources of the destination for future generations (Dwyer 2005). Tourism now places more emphasis on sustainability. As the focus of sustainable outcomes from tourism is increasing, the emphasis on managerial activities are also expanding, founded on the promise of delivering quality of life to the community. As a result of the increasing trend toward managerial importance, tourism planning and community planning are becoming more integrated (Boley and Perdue 2012). Ritchie and Crouch (2003) believe that the ultimate goal of local management should be to achieve sustainable outcome for the destination.

This field survey used four indicators to measure local management of ecotourism activities. These indicators are the first-order constructs, and are based on the literature with their relevance confirmed by the qualitative field study. Indicators for the manifest first-order variables are shown in Table 5.6 below.

Table 5.6: Indicators for local management

Indicators	For proper tourism/ecotourism, the local management…	Source
LMT1	provides an appropriate regulatory framework for tourism activities	Tsai, Song, and Wong (2009); Field study
LMT 2	provides guidance to others about the tourists activities	Stokowski and Park (2012); Field study
LMT 3	has an appropriate action plan to ensure that the natural environment is preserved and the area is clean	Pırnar and Günlü (2012); Field study
LMT 4	ensures maintaining the carrying capacity e.g. natural beauty of the area	Boley and Perdue (2012)

5.3.2.7 Economic benefits

It is widely believed that ecotourism produces economic benefits for local communities. Pırnar and Günlü (2012) agree that ecotourism has obvious benefits for the destination in the form of jobs, better wages and higher local tax revenue, etc. Hunt et al. (2015) adds that the local community can find employment in the ecotourism sector, and that many therefore consider that ecotourism has potential economic benefits for them. Ecotourism in a destination often opens up numerous possibilities which may benefit the local community economically.

This field survey used four indicators to measure the economic benefits of ecotourism. These indicators are the first-order constructs, and they are based on the literature with their relevance confirmed by the qualitative field study. Indicators for the manifest first-order variables are shown in Table 5.7 below.

Table 5.7: Indicators of economic benefits

Indicators	Ecotourism/tourism in this area has…	Source
EOB1	created jobs for local people	Pırnar and Günlü (2012); Field study
EOB 2	increased local wages	Pırnar and Günlü (2012); Field study
EOB 3	enhanced the business opportunities available in the area	Hunt et al. (2015); Field study
EOB 4	generated substantial revenue for the government	Pırnar and Günlü (2012); Field study

5.3.2.8 Environmental benefits

Numerous studies have indicated that ecotourism can have environmental benefits for the destination. Hunt et al. (2015) suggest that ecotourism can

make the local community more positive about national parks and conservation. Stronza and Gordillo (2008) further argue that as ecotourism is often promoted to residents on the basis of the potential economic benefits, such benefits might act as a powerful incentive to behave in a more environmentally-friendly way. Tourism can no doubt motivate local communities to conserve the natural environment.

This field survey used four indicators to measure the environmental benefits of ecotourism. These indicators are the first-order constructs, and are based on the literature with their relevance confirmed by the qualitative field study. Indicators for the manifest first-order variables are shown in Table 5.8 below.

Table 5.8: Indicators of environmental benefits

Indicators	As a result of ecotourism…	Source
NTB1	the local community is conscious of the adverse effects of littering, water contamination and deforestation	Liddle (1997); Mohammadi, Ahmadi, and Godarzi (2012); Field study
NTB 2	the tourists are more concerned about nature and the natural environment	Healy (1994); Field study
NTB 3	local people actively try to prevent degradation of the natural environment	Hunt et al. (2015); Field study
NTB 4	the government plays an active role in conservation projects in this area	De Los Monteros (2002); Field study

5.3.2.9 Socio-cultural benefits

Ecotourism in a destination often provides various socio-cultural benefits for the local community. For example, Reimer and Walter (2013) have confirmed that ecotourism in the rainforest of south-western Cambodia that they studied has generated various socio-cultural benefits. Ecotourism can involve several income-generating activities that produce socio-cultural benefits for the local community.

This field survey used eight indicators to measure the socio-cultural benefits of ecotourism. These indicators are the first-order constructs, and they are based on the literature with their relevance confirmed by the qualitative field

study. Indicators for the manifest first-order variables are shown in Table 5.9 below.

Table 5.9: Indicators of socio-cultural benefits

Indicators	As a result of ecotourism and tourism in this area…	Source
SOB1	most local people are able to feed their family properly	Field study
SOB 2	local people can afford basic medical care for family members	Healy (1994); Reimer and Walter (2013); Field study
SOB 3	local people have enough money to buy decent clothing for their family	Field study
SOB 4	local people are now able to support their wider family financially and provide food, clothing and medicine form them	Reimer and Walter (2013); Field study
SOB 5	local housing and sanitation facilities are greatly improved	Gezon (2014); Field study
SOB 6	there are facilities for lifelong learning	Field study
SOB 7	local people can afford to send their children to school	Reimer and Walter (2013); Field study
SOB 8	local people benefit from better infrastructure	Reimer and Walter (2013); Field study

5.3.2.10 Emotional benefits

Emotional benefits of ecotourism are positive mental states that arise as a result of ecotourism. The emotional status of the local community is a new variable in ecotourism research; thus, the indicators used in this study are mostly based on its qualitative field study.

There has been some prior research on the emotional benefit of tourism, such as by Scheyvens (1999) who argues that many local communities are mentally satisfied with the tourists' appreciation of the beauty of their area.

This field survey resulted in the development of four indicators of emotional benefits, only one of which was mentioned in the ecotourism literature. The first-order indicators are shown in Table 5.10 below.

Table 5.10: Indicators of emotional benefits

Indicators	As a result of ecotourism and tourism in this area…	Source
EMB1	local people are happy to see tourists from other parts of the country visiting their area	Field study
EMB 2	local people enjoy interacting with tourists from other regions and other countries.	Field study
EMB 3	local people are proud that because of tourism and ecotourism people from other regions and countries can learn about their area	Waitt (2003); Field study
EMB 4	local people are pleased that the tourists appreciate the scenic beauty of their area	Field study

5.4 QUESTIONNAIRE TRANSLATION

As stated above, this study was conducted in two areas of Khulna, Bangladesh: Khulna city and the periphery of the Sundarbans. Tourists were surveyed in Khulna city, and the two other stakeholder groups (local community members and tourism entrepreneurs) were surveyed in the periphery of the Sundarbans including Mongla, Baniashanta, Bonlaudob, Joymuni Bazar, Chadpai, Chila Bazar and Baiddabari Bazar.

Section A of the two sets of questionnaires consisted of 60 Likert scale questions. The indicators used in those 60 questions were the same for all three stakeholder groups. However, the tone of the questions in section A and the content of section B was different for the tourists, because it was assumed they would have a different demographic profile from the other stakeholder groups. As most of the local community members and tourism entrepreneurs in the study areas are not well-educated, the questionnaire was translated into their local language of Bangla. The English versions of the questionnaires are presented in Appendices E (tourists) and F (local community members and tourism entrepreneurs).

A lengthy back-translation process (Marin and Marin 1991; Brislin 1970) was followed to ensure the accuracy of the Bangla translation of the questionnaire. First, the researcher translated the questionnaire, which translation was checked and amended by a linguist from a Bangladeshi university. The questionnaire then was re-translated into English to check whether the translation was accurate. The inherent meaning of the two questionnaires (original and re-translated version) appeared to be very similar, and so the Bangla version of the questionnaire was deemed acceptable. The Bangla version of the questionnaire is attached as Appendix G.

5.4.1 Pre-testing, Piloting and Refinement of the Questionnaire

A pre-test was administered, followed by pilot testing of the questionnaire to verify that the questions were interpreted as intended by respondents. The pre-testing revealed a number of problems with the questionnaire. For example, the second question in the socio-cultural attractions section (SCA2) designed for the local community and tourism entrepreneurs was about religious activities of the local community, and pre-testing revealed that in the study area the main religious activities that attract tourists are Hindu rituals, and thus the question was modified.

The person who administered the pre-testing also suggested modifications to a number of questions that were phrased in ways the respondents would not understand, such as question 36 in relation to carrying capacity. Most of these potential problems related to: (1) the ambiguity and/or technical nature of some terms; (2) respondents' lack of familiarity with some content; and (3) multiple meanings of a word that could be confusing for the respondents.

The questionnaire was further refined based on the results of the pilot survey. Twenty respondents from the three stakeholder groups were selected at random to complete the questionnaire; local community members and tourism entrepreneurs completed the translated version. The questionnaire was further modified to address the various problems and weaknesses identified at the pilot stage, with the revised version used in the main survey.

5.5 SUMMARY

This chapter has discussed the development of this study's 11 hypotheses relating to outcomes of ecotourism and mediation and moderation effects. It has also described the development of the relevant indicators.

Furthermore, the procedure followed to develop and translate the measurement instrument (i.e. the questionnaire) has also been detailed in this

chapter. These questionnaires were used for the survey, and the results of this final survey stage are discussed in the following chapter.

CHAPTER 6: DATA ANALYSIS AND RESULT

6.1 INTRODUCTION

The previous chapter described the development of the hypotheses and questionnaire. The questionnaire was pretested and piloted on a sample of 20 from each stakeholder and modified according to the feedback received. The main survey involved three groups of stakeholders in ecotourism namely tourists, the local community and tourism entrepreneurs.

PLS-SEM approach of Smart PLS version 2 was used for quantitative data analysis. Convenience and snowball sampling were used to recruit respondents from the three groups.

6.2 OVERVIEW OF THE SURVEY

This study obtained 309 valid survey responses from tourists (n = 102), local community (n = 104) and tourism entrepreneurs (n = 103). Data were collected in two broad areas of the greater Khulna region, Khulna city and the periphery of the Sundarbans (the study area is shown in Appendix A, page 248). Tourists were recruited from the hotels in Khulna City. Six hotels were selected at random and lists of the borders were procured from the reception. Based on those lists twenty borders were approached based on their consent and availability.

Members of the local community and tourism entrepreneurs were recruited and interviewed in the periphery of the Sundarbans, namely Mongla, Baniashanta, Bonlaudob, Joymuni Bazar, Chadpai, Chila Bazar and Baiddabari Bazar. These areas are used as the gateway to the Sundarbans and people living there are heavily involved in various tourism-related activities.

PLS-based SEM was used to analyse the data, the sample was large enough for this form of analysis (Gefen, Straub and Boudreau 2000b; Hair et al. 1998). The proposed model incorporated three levels of constructs; it had ten first-order constructs that include six antecedents and four outcomes. The model also had two second-order and one third-order constructs. The study used a repeated indicator approach (Wetzels, Odekerken-Schröder and Van Oppen 2009) to estimate the higher-order latent variables.

6.2.1 Sample Profile

The sample profile is shown in Table 6.1. The survey included tourists (n = 102), members of the local community (n = 104) and tourism entrepreneurs (n = 103).

Table 6.1: Description of the sample

Description	N	%
Stakeholder group		
Tourists	102	33.01
Local community	104	33.66
Tourism entrepreneurs	103	33.33
Gender		
Male	278	0.90
Female	31	0.10
Age		
20 years or younger	16	0.05
21 to 30 years	100	0.32
31 to 40 years	75	0.24
41 years to 50 years	67	0.22
51 years or older	51	0.17
Education		
Primary	80	0.26
High school	86	0.28
College/University (Graduate)	106	0.34
Other	37	0.12
Marital status		
Married	235	0.76
Unmarried	74	0.24

The overwhelming majority of respondents were men (90%). As the local community is conservative it is not usual to survey local women and there

are very few female tourism entrepreneurs. This result is similar to the finding of Kuvan and Akan (2005), Tosun (2006) and Zamani-Farahani and Musa (2012) and is perhaps explained by the reluctance of women to talk to strangers in the areas where traditional norms and customs prevail (Zamani-Farahani and Musa 2012).

Thirty-two percent of the respondents were aged between 21 and 30 years, 24% between 31 and 40 years, 22% between 41 and 50 years and only 0.05% were less than 21 years old.

Roughly a third (34%) of respondents were educated to college or university level, 28% had completed high school level and 26% had completed primary education and the remaining 12% had not completed primary education. The majority of respondents were married (76%); 24% were unmarried.

6.2.2 Non-Response Bias

The three groups of stakeholders surveyed in this study differed from each other in certain respects. This study checked whether the data were affected by non-response bias, i.e. whether it was likely that the results would have been substantially different if the non-respondents had responded. The degree of non-response bias depends on: a) the percentage of non-respondents and b) the extent to which they differ from respondents (Barclay et al. 2002). It is important to assess non-response bias as it is a measure of the validity of the data. This study used Armstrong and Overton (1977) extrapolation method to assess non-response bias, this involves analysing early rapid (n = 270 in this sample) and late non-rapid respondents (n = 39 in this sample) separately. Non-rapid respondents were identified who delayed through delay in responding to the questions answering and facial expression that provides the idea that the respondents are either not ready or not eager to answer the question.

Table 6.2: Mann–Whitney test results

Constructs	z-value	Significance (1-tailed)
NTA	-0.695	.554
SCA	-0.983	.996
PIF	-1.437	.453
GTA	-1.219	.067
LMT	-0.913	.063
PCA	-1.039	.631
EOB	-1.117	.938
NTB	-0.889	.057
SOB	-1.191	.078
EMB	-0.993	.059

The Mann–Whitney test was used to assess potential differences between rapid and non-rapid respondents. Because this kind of non-parametric test is generally used to determine the difference between two independent samples (Malhotra et al. 2004). Table 6.2 shows the non-response bias analysis by using the Mann–Whitney test. In order to conduct the test, this study examined the differences between rapid (n = 270) and non-rapid respondents (n = 39) in terms of the corresponding to the measurement scale indicators. The difference between the samples was evaluated based on some selected indicators of the constructs. Table 6.2 shows that *z*-values of the 10 constructs are not significant at ($p = .05$). The results of the Mann–Whitney test **(**Table 6.2) indicated that there was no significant difference between the two groups of responders with respect to these 10 first-order constructs, so all 309 responses were included in the analysis.

6.2.3 Common Method Bias

Common method bias is a potential threat to the validity of the results in survey research (Bagozzi and Yi 1990; Podsakoff et al. 2003; Podsakoff, MacKenzie and Podsakoff 2012). The probability that the study results would be affected by common method bias was minimised by 1) careful selection of respondents to ensure a genuinely representative sample of each population of interest (tourists, local community, tourism entrepreneurs); 2) the questionnaire for the local community and tourism entrepreneurs was

translated into simple local language to ensure that the questions were comprehensible to the respondents; 3) the study avoided using double-barrelled questions as minimum as possible and 4) examples were used to clarify the questions for respondents. Harman one-factor test (Nie et al. 2014) was also applied in this research to avoid the biasness. This test involved entering all 60 indicators used in the research model into an unrotated factor analysis; this produced four factors with Eigen values greater than 1. The percentage of variance accounted for by all the factors combined was 62.623% and no single factor accounted for over 50% of the variance in the criterion variable (greatest percentage of variance accounted for by a single factor was 16.938%) (Podsakoff and Organ 1986; Chang, Van Witteloostuijn and Eden 2010). These results suggest that common method variance was not a major problem in this study.

6.3 OVERVIEW OF THE MODEL

The study proposed an initial research model which was refined based on the result of the qualitative field study. Thus, the refined model gets a bit different shape that consisted of ten first-order constructs, two second-order constructs and one third-order construct. There were three formative-formative first-order constructs: natural attractions (NTA), socio-cultural attractions (SCA) and physical infrastructure and facilities (PIF); these three first-order constructs constitute one second-order construct 'Resource dimension'. Besides, there were three reflective-formative first-order constructs, government action (GTA), local management (LMT) and community participation and involvement (PCA); these constituted another second-order construct named 'Support dimension'. The remaining four first-order constructs were reflective: economic benefits (EOB), environmental benefits (NTB), socio-cultural benefits (SOB) and emotional

benefits (EMB); these are the likely outcomes of ecotourism. Figure 6.1 shows the proposed model of ecotourism which was investigated in this study.

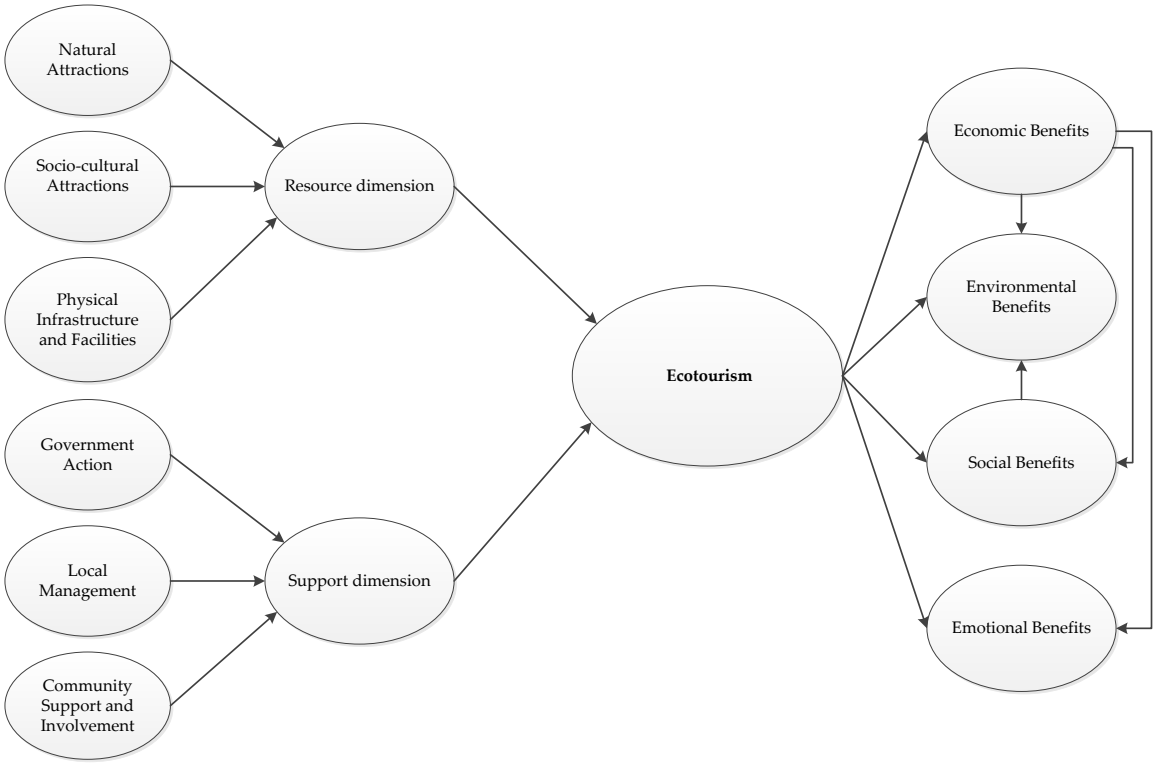

Figure 6.1: Refined model of ecotourism

6.4 DATA ANALYSIS TECHNIQUE

As stated earlier, the preliminary aim of this study was to identify a comprehensive set of ecotourism model that includes both the antecedents and the outcomes of ecotourism in Bangladesh. Besides, there are many variables that are linked to each other pertinent to the hypothesised outcomes of ecotourism. PLS-SEM, a second-generation data analysis technique, appeared to be the most suitable method of data analysis for this study.

There are two different approaches to SEM, covariance-based and component-based SEM. The covariance-based method can be implemented in LISREL, EQS or AMOS. The component-based method is implemented

using tools such as PLS-Graph, PLS-PC and Smart PLS. In this study component based Smart PLS was used for valid reasons.

6.4.1 Rationale for use of *PLS-SEM*

The study tried to identify the antecedents and outcomes of ecotourism in a developing country perspective. This study also tried to determine whether delivery of environmental, socio-cultural and emotional benefits of ecotourism is mediated by its economic benefits, and similarly whether delivery of environmental benefits is mediated by the socio-cultural benefits. This study also investigated whether stakeholder variables moderated the outcomes of ecotourism. PLS-SEM was used to analyse the relationships among the constructs of the study model. Because Structural equation models with good measurement properties can help achieving comparable results (Reinartz, Haenlein and Henseler 2009). PLS-SEM can also be applied to a wider range of situations, researchers must always be aware of the differences in interpretation of the results, particularly as they relate to the constructs' measurement properties (Hair, Ringle and Sarstedt 2011). PLS path modelling can also be used with hierarchical models with formative constructs or a mix of formative and reflective constructs (Petter, Straub and Rai 2007; Wetzels, Odekerken-Schröder and Van Oppen 2009).

6.4.2 Rationale for use of Reflective and Formative Constructs

PLS-based SEM can be used for modelling both reflective and formative constructs. Hierarchical construct models can be specified using a mix of formative and reflective measures (Jarvis, MacKenzie and Podsakoff 2003; MacKenzie, Podsakoff and Jarvis 2005; Petter, Straub and Rai 2007). About one third of models using PLS-SEM include both reflective and formative measures (Hair, Ringle and Sarstedt 2011). The specific attributes of a construct determine whether it should be specified as formative or reflective. Jarvis, MacKenzie, and Podsakoff (2003) state that if the indicators for a

construct are not interchangeable, overlapping or similar in content or if dropping an indicator might alter the conceptual domain of the construct then it should be considered formative.

In the study model, three first-order constructs i.e. natural attraction (NTA), socio-cultural attraction (SCA) and physical infrastructure and facilities (PIF) meet these criteria: the indicators of these constructs are different from each other and are not interchangeable. Moreover, each of the indicators represents a different attribute, and so removal of any of them might change the nature of the construct. In contrast government action (GTA), community support and involvement (PCA), local management (LMT), economic benefits (EOB), environmental benefits (NTB), socio-cultural benefits (SOB) and emotional benefits (EMB) are reflective in nature as their indicators are interchangeable, have similar content, share a common theme and dropping one indicator would not alter the conceptual domain of the construct in question (Jarvis, MacKenzie and Podsakoff 2003).

6.5 MODEL ASSESSMENT

6.5.1 Assessment of Measurement Model

The measurement model consisted of ten first-order, two second-order and one third-order constructs. The first-order constructs contained both formative and reflective indicators and so several methods were used to assess the reliability and validity of the first-order and higher-order constructs.

6.5.1.1 Measurement model for reflective, first-order, antecedent constructs

The three first-order reflective, antecedent constructs were GTA, LMT and PCA. These three constructs combine to produce a formative second-order construct, 'Support dimension'; thus, the arrows are toward second-order

construct. Hence, these constructs are reflective-formative in nature. Figure 6.2 shows the relationship.

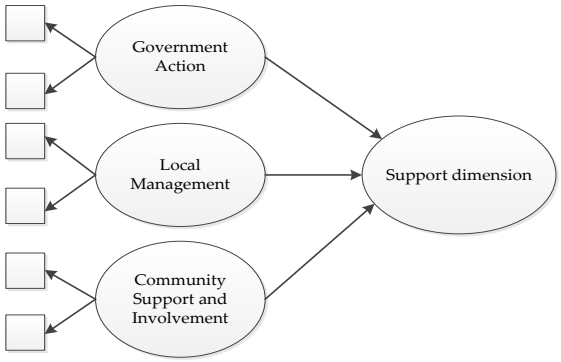

Figure 6.2: Reflective-formative first-order antecedent constructs

Table 6.3 shows the first-order reflective constructs of the measurement model, their indicators and the study objectives to which they are relevant. It also shows that the second-order construct 'Support dimension' is derived from these three reflective, first-order constructs. Indicators GTA1 to GTA4 relate to government action (GTA) which was included to assess whether GTA is essential for ecotourism.

Table 6.3: First-order reflective antecedent constructs, indicators and corresponding objectives

Objectives of Analysis	First-order construct	Second level construct	Indicators
To identify whether government support is essential for ecotourism	Government action to support ecotourism (GTA)	**Support dimension of ecotourism**	GTA1 GTA2 GTA3 GTA4
To identify whether the support of local management is required for ecotourism	Local management support (LMT)		LMT1 LMT2 LMT3 LMT4
To identify whether the support and involvement of the local community is required for ecotourism	Community participation and involvement (PCA)		PCA1 PCA2 PCA3 PCA4 PCA5 PCA6 PCA7 PCA8 PCA9 PCA10

Indicators LMT1 to LMT4 relate to local management (LMT), which was included to determine whether LMT contributes to ecotourism. The 10 indicators of PCA are PCA1 to PCA10; this construct was included in the model to determine whether PCA has any contribution to ecotourism.

6.5.1.1.1 Indicator loading for reflective antecedent constructs

The three reflective indicators in the measurement model were assessed through indicator reliability. The loadings indicate the correlation between the indicator and the construct. Low-loading indicators decrease the correlation between the indicators and the construct (Nunnally 1994). Many researchers consider that outer loadings of 0.7 or higher are highly satisfactory (e.g. Carmines and Zeller 1979; Henseler, Ringle and Sinkovics 2009). Hair et al. (1998) note that thresholds for loading as follows loadings > 0.3 are significant, > 0.4 are more significant and loadings > 0.5 are very significant. Hulland (1999) argues that outer loading of 0.4 is acceptable whereas Henseler, Ringle, and Sinkovics (2009) suggest that manifest variables with loading values between 0.4 and 0.7 should be reviewed before elimination. Chin (1998) states that loadings of ≥ 0.5 are acceptable and that manifest variables with loadings < 0.5 should be dropped.

After considering these various recommendations this study set a threshold of 0.5 for loading, this resulted in removal of five indicators from the PCA construct (PCA3, PCA7, PCA8, and PCA9). Some of the constructs had a small number of indicators, but after deleting the low loading indicators each of the constructs was represented by least four indicators; thus satisfying the criterion of a minimum of two indicators in a construct (Kline 2010). Table 6.4 shows the results of the indicator reliability screening.

Table 6.4: Assessment of reliability, composite reliability (CR) and average variance extracted (AVE) for the reflective first-order constructs

Construct	Indicator	Loading	t Statistics	Composite Reliability**	AVE***
Government Action	GTA1	0.8574	38.4826	0.9101	0.7183
	GTA2	0.8706	42.2584		
	GTA3	0.9251	92.5808		
	GTA4	0.7243	17.7444		
Local Management	LMT1	0.6189	10.6652	0.8148	0.5271
	LMT2	0.6737	12.8241		
	LMT3	0.8407	39.6671		
	LMT4	0.7515	19.8858		
Participation and Involvement of Local Community	PCA1	0.8032	21.9432	0.9088	0.6251
	PCA2	0.8656	40.8173		
	PCA4	0.8386	34.1894		
	PCA5	0.7583	17.0701		
	PCA6	0.7579	18.2374		
	PCA10	0.7096	14.9637		

Table 6.4 indicates that after deleting the four indicators from PCA construct, the rest of the indicators show the significant result as they exceeded the cut-off values of 0.5 at 5% level of significance (Memon et al. 2014).

6.5.1.1.2 Internal consistency

Internal consistency was measured by calculating the composite reliability (CR) and constructs with a CR coefficient of 0.70 were deemed acceptable (Hair, Ringle, and Sarstedt 2011). As shown in Table 6.4, all the constructs has CR values above 0.70. The values for GTA, LMT and PCA were 0.8891, 0.8205 and 0.9022 respectively.

6.5.1.1.3 Average Variance Extracted (AVE)

AVE is the amount of variance captured by the construct about the quantity of variance attributable to measurement error (Santosa, Wei and Chan 2005). AVE values of at least 0.5 are needed for convergent validity (Fornell and Larcker 1981). Table 6.4 shows that the AVE scores for GTA, LMT and PCA were 0.7289, 0.6113 and 0.6499 respectively. Both the CR and AVE values

exceed the cut-off values indicating that the constructs have adequate reliability and convergent validity (Bagozzi and Yi 1988).

6.5.1.1.4 Discriminant Validity

Discriminant validity is the degree to which the constructs differ from each other. Discriminant validity, is one aspect of construct validity and is defined as the extent to which a given construct differs from another relevant construct (Barclay, Higgins and Thompson 1995). The square root of the AVE and the cross-loading matrix are widely used for measuring discriminant validity (Barclay, Higgins and Thompson 1995). Barclay, Higgins, and Thompson (1995) recommend two methods of assessing discriminant validity: average variance extracted (AVE) analysis at the construct level and evaluation of the cross-loading matrix at the indicator level.

6.5.1.1.4.1 Discriminant Validity at construct level

Table 6.5 shows the square root of the AVEs in the diagonal of the correlation matrix. The correlations between the constructs were less than these values confirming the discriminant validity of the constructs (Chin 2010).

Table 6.5: Correlation matrix for first-order reflective constructs

Construct	AVE	SQRT of AVE	GTA	LMT	PCA
GTA	0.7185	**0.84764379**	**0.84764379**		
LMT	0.5277	**0.72642962**	0.6198	**0.72642962**	
PCA	0.625	**0.79056942**	0.1092	0.257	**0.79056942**

This measure of discriminant validity indicated that the constructs are conceptually different from each other and do not share similar indicators (Chin 2010). Inspection of the cross-loading matrix provided further evidence for the discriminant validity of the constructs as each indicator are strongly related to their own constructs, and thus all constructs shared a substantial amount of variance with their own indicators.

6.5.1.1.4.2 Discriminant Validity at indicator level

Table 6.6 shows the cross-loadings of the reflective antecedent indicators used in this model. Analysis of cross-loading involves the examination of loadings of the respective indicators to the correlations of all constructs. A block indicator should load higher on its respective construct than it does on other constructs. As shown in Table 6.6 all the relevant indicators' loadings were higher in comparison to their cross-loadings on other constructs.

Table 6.6: Cross-loadings matrix

	GTA	LMT	PCA
GTA1	0.8574	0.5314	0.1098
GTA2	0.8706	0.4842	0.0633
GTA3	0.9251	0.5875	0.1442
GTA4	0.7243	0.4912	0.0363
LMT1	0.3205	0.6189	0.0823
LMT2	0.3513	0.6737	0.2641
LMT3	0.5656	0.8407	0.1787
LMT4	0.5204	0.7515	0.2072
PCA1	0.0341	0.2293	0.8032
PCA2	0.0775	0.2364	0.8656
PCA4	0.1238	0.2112	0.8386
PCA5	0.0841	0.1655	0.7583
PCA6	0.0949	0.149	0.7579
PCA10	0.1044	0.2422	0.7096

6.5.1.2 First-order measurement model of antecedent formative constructs

The three formative first-order antecedent constructs of the model were natural attractions (NTA), socio-cultural attractions (SCA) and physical infrastructure and facilities (PIF). The indicators of these constructs were considered formative in nature as they were not interchangeable (Jarvis, MacKenzie and Podsakoff 2003). These indicators contributed to a single, formative second-order construct, 'Resource dimension' and can thus be regarded as formative-formative in nature. Figure 6.3 shows the relationship.

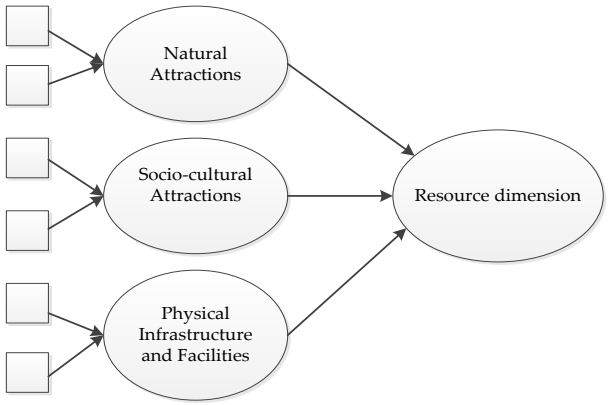

Figure 6.3: Formative-formative first-order antecedent constructs

Table 6.7 shows the first-order formative constructs, the second-order construct and the indicators for the first-order constructs. It also displays the study objective related to each of the first-order constructs. The NTA construct had five indicators (NTA1 to NTA5) and was included to assess whether NTA is required for ecotourism. Indicators SCA1 to SCA6 related to the SCA construct which was included to determine whether SCA is required for ecotourism. The PIF construct had 11 indicators (PIF1 to PIF11) and was included to determine whether PIF is a primary requirement for ecotourism in a destination.

Table 6.7: First-order formative constructs, indicators and related objectives

Objectives of Analysis	First-order construct	Second level construct	Indicators
To identify whether natural attractions can be treated as an antecedent of ecotourism	Natural attractions (NTA)	**Resource dimension**	NTA1 NTA2 NTA3 NTA4 NTA5
To identify whether socio-cultural attractions can be treated as an antecedent of ecotourism	Socio-cultural attractions (SCA)		SCA1 SCA2 SCA3 SCA4 SCA5 SCA6
To identify whether a minimum level of physical infrastructure and facilities can be treated as an antecedent of ecotourism	Physical infrastructure and facilities (PIF)		PIF1 PIF2 PIF3 PIF4 PIF5 PIF6 PIF7 PIF8 PIF9 PIF10 PIF11

6.5.1.2.1 Indicator weight for formative constructs

The weights of indicators provide information about their relative importance to a given construct. The weights of the 18 indicators are presented in Table 6.8.

Table 6.8: Psychometric properties of the first-order formative constructs

Construct	Indicators	Weight	t statistics	Loading	t statistics
Natural Attractions	NTA2	0.2931	3.6211	0.7516	13.3061
	NTA3	0.5568	6.1588	0.8341	16.7775
	NTA4	0.317	2.9277	0.4796	4.2446
	NTA5	0.2627	2.1762	0.6218	6.6216
Physical Infrastructure and Facilities	PIF1	0.1732	3.8754	0.5639	10.1728
	PIF3	0.1563	3.5551	0.5543	8.696
	PIF4	0.0841	2.1054	0.1612	2.0575
	PIF5	0.2397	6.2276	0.6365	13.3748
	PIF6	0.0251	0.5996	0.5139	8.8844
	PIF7	0.3122	6.5186	0.8047	27.7899
	PIF8	0.0149	0.3921	0.1948	1.98177
	PIF9	0.2043	4.7749	0.6307	13.3034
	PIF10	0.34	7.81	0.7464	18.956
Socio-cultural Attractions	SCA1	0.1944	3.1226	0.5503	7.5337
	SCA2	0.2954	4.3823	0.8547	32.488
	SCA3	0.2056	3.3218	0.8354	25.8295
	SCA4	0.1131	1.1407	0.8513	23.1712
	SCA5	0.1115	1.9343	0.6134	10.8333
	SCA6	0.3537	3.921	0.86	26.8193

Originally there were 23 indicators, but four indicators had non-significant weights and thus after checking the significance of both the weight and loading (5% criterion for significance) one NTA indicator and three PIF indicators were dropped, following the procedure described by Diamantopoulos and Winklhofer (2001) in which non-significant indicators were removed one by one until all paths in a model are significant. The removed indicators were NTA1, PIF2, PIF8 and PIF11. Before removing any formative indicator, both the loadings and weights were checked with 5% level of significance. Because Hair, Ringle, and Sarstedt (2011) suggest that if both the weight and loading of an indicator are insignificant there is no empirical evidence to support its retention and its theoretical relevance should be questioned. Therefore the formative indicators with significant weight or loading value retained in this model for further analysis.

Table 6.9: Validation of first-order formative constructs

constructs	Indicators	*t*-statistics	Tolerance	VIF
Natural Attractions	NTA2	2.402	.631	1.584
	NTA3	1.179	.520	1.924
	NTA4	-.269	.711	1.407
	NTA5	2.710	.718	1.393
Socio-cultural Attractions	SCA1	3.090	.578	1.729
	SCA2	-.430	.357	2.805
	SCA3	.325	.384	2.607
	SCA4	-.143	.249	4.016
	SCA5	-1.036	.580	1.725
	SCA6	.764	.294	3.403
Physical Infrastructure and Facilities	PIF1	2.182	.564	1.772
	PIF3	1.494	.640	1.563
	PIF4	-1.488	.703	1.423
	PIF5	.359	.651	1.535
	PIF6	1.401	.548	1.825
	PIF7	-.982	.446	2.240
	PIF8	-.338	.839	1.192
	PIF9	.178	.591	1.691
	PIF10	.471	.522	1.916

Table 6.9 shows the internal consistency of the first-order constructs in terms of the variance inflation factor (VIF). The VIF provides a measure of multicollinearity. Hair, Ringle, and Sarstedt (2011) suggest that VIF value 5 is the maximum threshold for detecting multicollinearity among indicators, whereas Diamantopoulos and Siguaw (2006) state that for formative measures a VIF greater than 3.3 is problematic. Table 6.9 shows that the VIF values of all indicators were lower than 5, and their tolerance values were above 0.2. Only two indicators, SCA 4 and SCA6, had a VIF above 3.3. This study therefore concluded that the constructs were not affected by a collinearity problem.

6.5.1.2.2 Convergent Validity

Convergent validity is assessed by considering individual item reliabilities and internal consistency. The Smart PLS version 2 bootstrapping method was used to obtain the indicator loadings, composite reliability and AVE values.

The results are shown in Table 6.4. The resulting measures of indicator reliability, internal consistency and discriminant validity indicated that the measurement model met the criteria for convergent validity (loadings > 0.50, AVE > 0.50, CR > 0.80) and discriminant validity (AVE > correlations). The measurement model for the first-order of the antecedent level was therefore deemed satisfactory and was used in the assessment of the higher-order measurement model and the structural model, which is described in the next sections.

6.5.1.3 Assessment of first-order measurement model of the outcome constructs

There were four first-order constructs at the output level of the model namely economic benefits (EOB), environmental benefits (NTB), socio-cultural benefits (SOB) and emotional benefits (EMB). This study was designed to investigate whether these are the likely outcomes of ecotourism in Bangladesh. All of these constructs were reflective. Figure 6.4 shows the four first-order measurement model constructs that present the likely outcomes of ecotourism in Bangladesh.

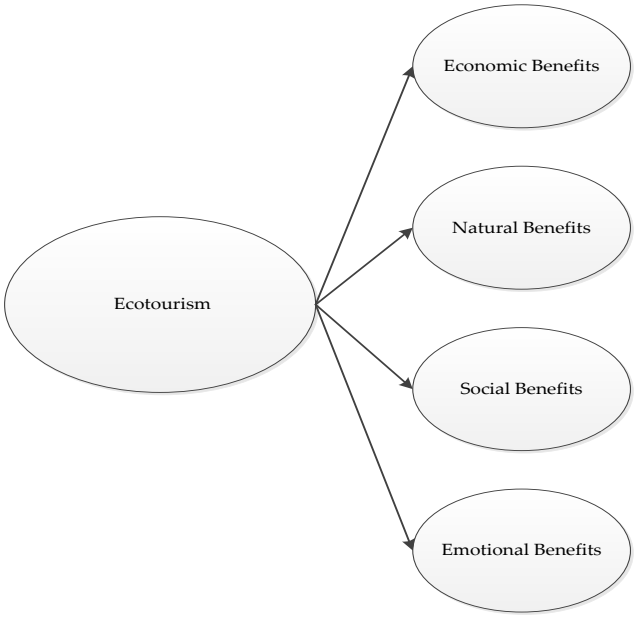

Figure 6.4: First-order measurement model of the outcome constructs

Table 6.10 shows the four first-order outcome constructs and the relevant study objective and indicators. The EOB construct is related to indicators EOB1 to EOB4; this construct was included to identify whether ecotourism produces economic benefits for the community in the destination.

Table 6.10: First-order outcome constructs, indicators and relevant objectives

Relevant study objective	Construct	Indicators
To identify whether ecotourism produces economic benefits for the community	Economic Benefits	EOB1
		EOB2
		EOB3
		EOB4
To identify whether ecotourism produces environmental benefits for the destination community	Environmental Benefits	NTB1
		NTB2
		NTB3
		NTB4
To identify whether ecotourism produces socio-cultural benefits for the community	Sociocultural Benefits	SOB1
		SOB2
		SOB3
		SOB4
		SOB6
		SOB7
		SOB8
To identify whether ecotourism produces emotional benefits for the community	Emotional Benefits	EMB1
		EMB2
		EMB3
		EMB4

Indicators NTB1 to NTB4 are under environmental benefits (NTB) construct which was included to determine whether ecotourism produces environmental benefits for the destination community.

Indicators SOB1 to SOB8 related to the socio-cultural benefits (SOB) construct, which was included to determine whether ecotourism produces socio-cultural benefits for the destination community. Indicators EMB1 to EMB4 relate to the emotional benefits (EMB) construct, which was included to assess whether ecotourism produces emotional benefits for the destination community.

6.5.1.3.1 Reflective outcome constructs and indicators

This study suggests that there are four outcomes of ecotourism in Bangladesh namely economic benefits (EOB), environmental benefits (NTB), socio-cultural benefits (SOB) and emotional benefits (EMB).

Table 6.11 shows that indicator loadings for the reflective first-order outcome constructs (EOB, NTB, SOB and EMB) were above the cut-off point (0.5). Table 6.11 also shows that the loadings were significant. One indicator of EOB (EOB4) and one indicator of SOB (SOB8) were deleted because their reliability was below the threshold (0.5).

Table 6.11: Results summary for the outcome constructs

Construct	Indicators	Loading	t Statistics	Composite Reliability**	AVE***
Economic Benefits	EOB1	0.8884	45.3548	0.9371	0.8325
	EOB2	0.9304	80.5863		
	EOB3	0.9179	63.7291		
Environmental Benefits	NTB1	0.836	32.822	0.857	0.602
	NTB2	0.8027	29.0768		
	NTB3	0.8055	26.3513		
	NTB4	0.6449	13.4029		
Socio-cultural Benefits	SOB1	0.8318	29.2601	0.8962	0.5917
	SOB2	0.8288	29.9229		
	SOB3	0.8347	28.5577		
	SOB4	0.6986	17.8445		
	SOB5	0.6823	19.824		
	SOB7	0.722	28.5569		
Emotional Benefits	EMB1	0.8706	42.6237	0.897	0.6854
	EMB2	0.8357	26.3875		
	EMB3	0.8002	21.7163		
	EMB4	0.8031	19.0656		

*__0.7 or higher__ is preferred, for exploratory research, 0.4 or greater is acceptable (Hulland 1999)
** __0.7 or higher,__ for exploratory research, 0.6 or higher is acceptable (Bagozzi and Yi 1988)
***It should be __0.5 or higher__ (Bagozzi and Yi 1988)

As shown in the Table 6.11, composite reliability was 0.9371, 0.857, 0.8962 and 0.897 for EOB, NTB, SOB and EMB respectively. These values were far above the cut-off values of 0.6 and 0.5 respectively. The average variance extracted (AVE) for these constructs was 0.8325, 0.602, 0.5917 and 0.6854. Further, the higher average of indicator loadings (above 0.80) and a narrower

range of difference provided solid evidence that respective indicators have greater convergence in measuring the underlying construct (Chin 2010). These results indicated that the data were valid and that further analysis was justified. In other words the relationships represented in the model were found in the data, indicating that, as hypothesised ecotourism does in fact produce the four outcomes specified.

6.5.2 Validation of the Higher-Order Model

6.5.2.1 Higher-order measurement model

A higher-order construct may be defined as a construct involving more than one dimension which is created through the indicators and latent variables in a multiple hierarchy (Jarvis, MacKenzie and Podsakoff 2003; MacKenzie, Podsakoff and Jarvis 2005; Petter, Straub and Rai 2007). Many researchers (e.g. Petter, Straub and Rai 2007; MacKenzie, Podsakoff and Jarvis 2005) define hierarchical constructs as constructs involving more than one construct, and most of them focused on the second-order constructs. Recently many researchers have worked with models including third-order and fourth-order hierarchical latent variable with both formative and reflective relationships among the constructs (Wetzels, Odekerken-Schröder and Van Oppen 2009; Akter, D'Ambra and Ray 2011). The second-order constructs in this study were termed as 'Resource dimension' and 'Support dimension'.

The 'Resource dimension' construct was developed from the three basic antecedent constructs for ecotourism namyly NTA, SCA and PIF and was composed of 19 indicators (4 NTA, 6 SCA and 9 PIF). The indicators of all of these three constructs are formative in nature (shown in Figure 6.3). The 'Support dimension' construct was developed from the three support constructs for ecotourism namely GTA, LMT and PCA and had 14 indicators (4 GTA, 4 LMT and 6 PCA). The indicators of all of these three constructs are

reflective in nature (shown in Figure 6.2). Figure 6.5 shows the measurement part of the study model.

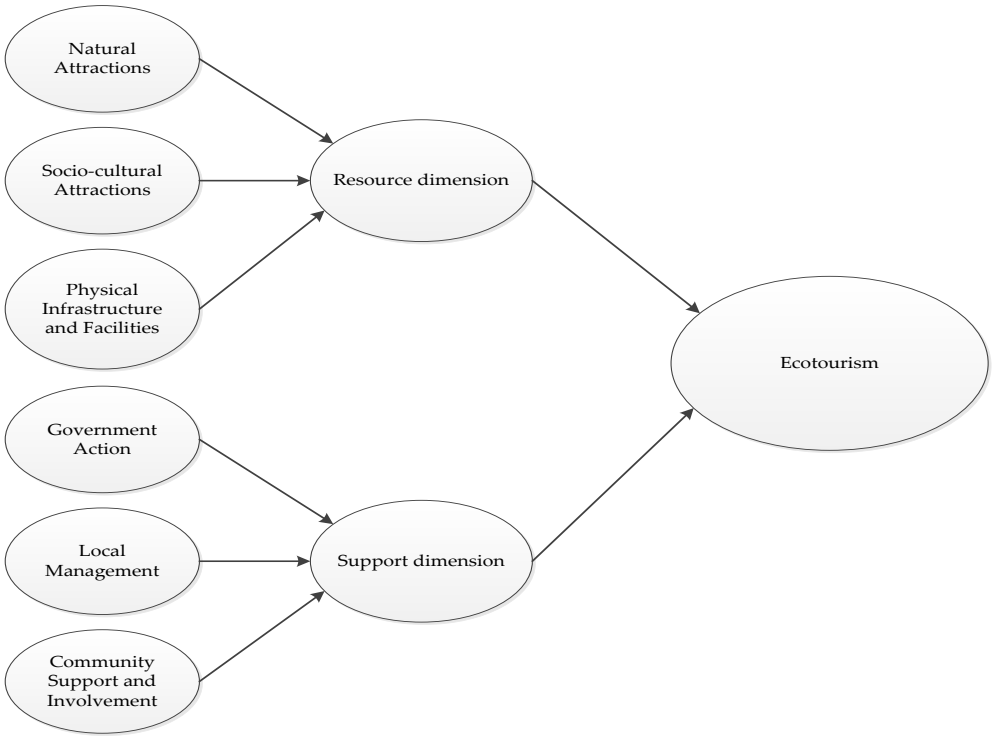

Figure 6.5: Hierarchical-formative model of ecotourism

The third-order construct ecotourism (EcoT) is also a repetitive construct comprised of 33 indicators (4 NTA, 6 SCA, 9 PIF, 4 GTA, 4 LMT and 6 PCA). The model formation of this study is the molar approach, which means that the first-order constructs are causes of the second-order constructs and the second-order constructs are causes of the third-order construct (Chin and Gopal 1995).

6.5.3 Path Coefficients in the Measurement Model

The path coefficients for the relationships in the first-order and second-order constructs are shown in Table 6.12. The table shows that natural attractions (NTA), socio-cultural attractions (SCA) and physical infrastructure and facitilitis (PIF) all contribute to the 'Resource dimension' construct. Similarly GTA, LMT and PCA are all related to the second-order construct 'Support

dimension'. Further, both of the second-order constructs are connected to the third-order construct 'Ecotourism'.

Table 6.12: loadings and t-Statistics of path coefficients of the model (antecedent)

Path	Loadings	t-Statistics
NTA→ Resource dimension	0.224	9.3205
SCA → Resource dimension	0.489	18.1719
PIF → Resource dimension	0.505	21.9327
PCA→ Support dimension	0.750	15.2539
LMT → Support dimension	0.325	10.774
GTA → Support dimension	0.247	6.9086
Resource dimension → Ecotourism	0.504	13.2027
Support dimension → Ecotourism	0.616	16.3946

6.5.3.1 Validation of second-order constructs: cognitive evaluation

The study model of ecotourism included two types of antecedents, namely 'Resource dimension' and 'Support dimension'. These two second-order constructs were formative in nature. Similar to the first-order formative construct validation, the indicator weights and the test of multicollinearity were assessed to provide an indication of the validity of second-order formative constructs.

6.5.3.2 Assessment of higher-order measurement model

The indicators of the reflective and formative first-order, antecedent constructs were shown to be significant in previous sections (sections 6.5.1.1.1 to 6.5.1.2.1), thus ensuring the validity of both the 'Resource dimension' and 'Support dimension' second-order constructs. These two-second-order constructs form a third-order construct, ecotourism, and thus the relationship is formative in nature (see Figure 6.5). The third-order construct, ecotourism yields the four outcomes posited in the model (see Figure 6.4). A two-stage approach (Ringle, Sarstedt, and Straub (2012) was used in this study. Table 6.13 shows the loadings and weights of the paths from first-order to second-order constructs and from second-order to third-order constructs; all the relationships were significant.

Table 6.13: Loadings and weights for second and third-order constructs

Path	loading	t-Statistics	weight	t-Statistics
GTA → Support dimension	0.6093	11.6436	0.3074	6.6813
LMT → Support dimension	0.7351	16.7453	0.3684	8.0483
PCA → Support dimension	0.8039	24.4039	0.6741	14.7383
NTA → Resource dimension	0.7485	20.1923	0.437	7.9968
PIF → Resource dimension	0.9095	39.5963	0.627	12.5075
SCA → Requirement	0.6471	14.3387	0.1586	3.4568
Resource dimension → EcoT	0.7852	19.129	0.2826	3.7923
Support dimension → EcoT	0.9756	68.3238	0.7975	13.0183

Table 6.14 shows the loadings, weights and VIF for the two second-order constructs, 'Resource dimension' and 'Support dimension'. All VIF values were less than 5 indicating that the second-order constructs were not affected by multicollinearity.

Table 6.14: Validation of second-order and third-order constructs

3rd Order Construct	2nd Order Construct	Loading	t-Statistic	Weight	t-Statistic	Tolerance	VIF
Ecotourism	Resource dimension	0.7852	19.129	0.2826	3.7923	0.603	1.659
	Support dimension	0.9756	68.3238	0.7975	13.0183	.603	1.659

Analysis of the higher-order constructs of the measurement model showed that the six first-order constructs have the required valid relationship to the second and third-order constructs (Fassnacht and Koese 2006). It can therefore be concluded that the measurement model was valid for use in further analysis.

6.5.4 Structural Model

Figure 6.5 shows that the constructs were modelled using a Molar approach i.e. the earlier constructs form the later constructs and thus they were formative-formative in nature.

A structural model describes the relationship between dependent and independent variables. A structural model can be analysed after confirming the reliability and validity of the measurement constructs. The assessment of

the measurement model in this study has been reported in previous sections. The results of hypothesis testings are presented in Figure 6.6.

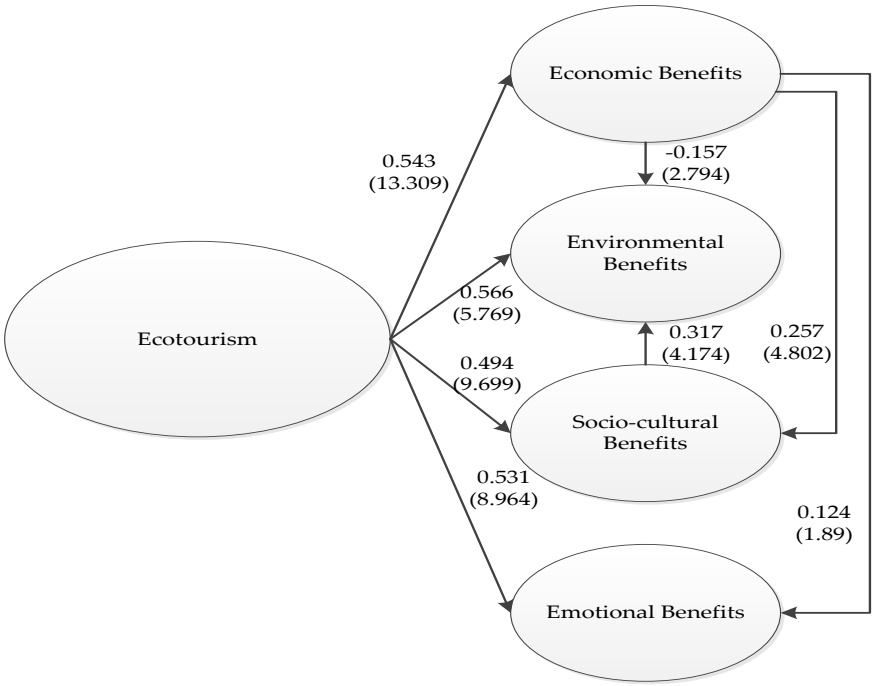

Figure 6.6: Outcomes of ecotourism

Table 6.15 indicates that ecotourism (EcoT) was significantly related to the first-order outcome constructs. Thus, this study confirmed that ecotourism can deliver economic benefits, natural benefits, socio-cultural benefits and emotional benefits to the people of a destination.

Table 6.15: Loadings and t-Statistics of path coefficients for the outcome components of the model

Path	Loadings	t-Statistics
EcoT → EOB	0.543	13.309
EcoT → NTB	0.566	5.769
EcoT → SOB	0.494	9.699
EcoT → EMB	0.531	8.964
EOB → NTB	-0.157	2.794
EOB → SOB	0.257	4.802
EOB → EMB	0.531	1.890
SOB → NTB	0.317	4.174

The assessment of a structural model also involves testing the explanatory power and significance of the path coefficients for the latent constructs (Chin and Newsted 1999). The predictive power of the exogenous variables in a structural model was evaluated by inspecting the R^2 values for the

endogenous variables. R^2 is suitable for multiple regression analysis, where it is used to specify the amount of variance in an endogenous variable that is explained by the model (Barclay, Higgins and Thompson 1995).

6.5.4.1 Nomological validity

Inspection of R^2 values was used to assess the nomological validity of the endogenous variables in the structural model. As shown in Table 6.16, the R^2 values were 0.285, 0.347, 0.381 and 0.366 for EOB, NTB, SOB and EMB respectively, well above the threshold used in this study (0.25). This indicates that the structural model is valid (Falk and Miller 1992).

Table 6.16 Nomological validity of the endogenous variables

Constructs	R^2
Economic Benefits	0.285
Environmental Benefits	0.347
Socio-cultural Benefits	0.381
Emotional Benefits	0.366

6.6 RESULTS OF HYPOTHESIS TESTING (H_1 TO H_4)

The primary hypotheses tested in this study were as follows:

H_1: Ecotourism will produce positive impacts on economic benefits.

H_2: Ecotourism will produce positive impacts on environmental benefits.

H_3: Ecotourism will produce positive impacts on socio-cultural benefits for the local community.

H_4: Ecotourism will produce positive impacts on emotional benefits for the local community.

6.6.1 Tests of hypothesis

Hypotheses 1, 2, 3 and 4 related to whether ecotourism delivered economic, environmental, socio-cultural and emotional benefits. Table 6.17 shows the results of testing these hypotheses. The model estimations show that ecotourism (EcoT) had a significant effect on economic benefits (EOB) (β = 0.543; t = 9.973), thus Hypothesis 1 was accepted. Hypothesis 2 posited that EcoT produces environmental benefits (NTB). The result pertinent to this

hypothesis illustrates significant result (β = 0.526, t = 10.973), thus Hypothesis 2 was also accepted.

Table 6.17: Results of the outcome constructs of ecotourism

Path	Loading	*t* Statistics
EcoT → EOB	0.543	9.973
EcoT → NTB	0.526	10.973
EcoT → SOB	0.494	8.483
EcoT →EMB	0.598	9.941

Hypothesis 3 posited that ecotourism produces socio-cultural benefits (SOB) for the local community; analysis indicated a significant relationship between EcoT and SOB (β = 0.494; t = 8.483), thus Hypothesis 3 was also accepted. Hypothesis 4 posited that ecotourism has a positive emotional impact on the local community; analysis indicated that there was an association between EcoT and EMB (β = 0.598; t = 9.941), so Hypothesis 4 was also accepted. The results of the hypotheses one to four are summarised in Table 6.18.

Table 6.18: Summary of hypothesis testing (H1 to H4)

	Hypothesis	Comment
H_1	Ecotourism will produce positive impacts on economic benefits.	Accepted
H_2	Ecotourism will produce positive impacts on environmental benefits.	Accepted
H_3	Ecotourism will produce positive impacts on socio-cultural benefits for the local community.	Accepted
H_4	Ecotourism will produce positive impacts on emotional benefits for the local community.	Accepted

6.7 MEDIATION ANALYSIS

This study investigated relationships among a set of variables presumed to be causally related to one another. There have been several attempts (e.g. Yu, Weiler and Ham 2002) to investigate potential mediators of the outcomes of ecotourism. A mediator is a predictor variable that affects the causal relationship between two variables. A variable can be considered a mediator if it influences the relationship between an independent variable and a given dependent variable. Generally mediation is considered to be present if (1) the independent variable significantly influences the dependent variable, (2) the independent variable significantly influences the mediator, (3) the mediator

significantly influences the dependent variable, and (4) the effect of the independent variable on the dependent variable diminishes after controlling for the effect of the mediator (Baron and Kenny 1986; Tepper et al. 1996). Figure 6.7 shows the mediation model for this study, which was reflected in the following hypotheses (see section 5.2.2):

H_5: Economic benefits mediate the relationship between ecotourism and environmental benefits.

H_6: Economic benefits mediate the relationship between ecotourism and socio-cultural benefits.

H_7: Economic benefits mediate the relationship between ecotourism and emotional benefits.

H_8: Socio-cultural benefits mediate the relationship between ecotourism and environmental benefits.

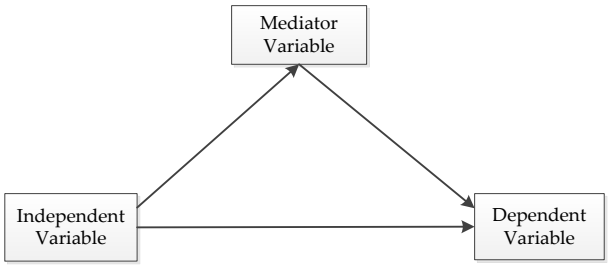

Figure 6.7: Mediation model

While analysing the mediation, firstly all the direct relationship between independent to dependent, independent to mediator, mediator to dependent variables were examined. If those paths were found significant the entire mediation model was examined. Figures 6.8, 6.9, 6.10, 6.11 and Table 6.19 illustrate the mediation models.

6.7.1 Mediation of Relationship between Ecotourism and its Environmental Benefits by Economic benefits

Table 6.19 shows that the predictor variable ecotourism (EcoT) was significantly associated with the criterion variable environmental benefits (NTB) and that EcoT was significantly associated with the mediator variable EOB; there was also a significant association between EOB and NTB.

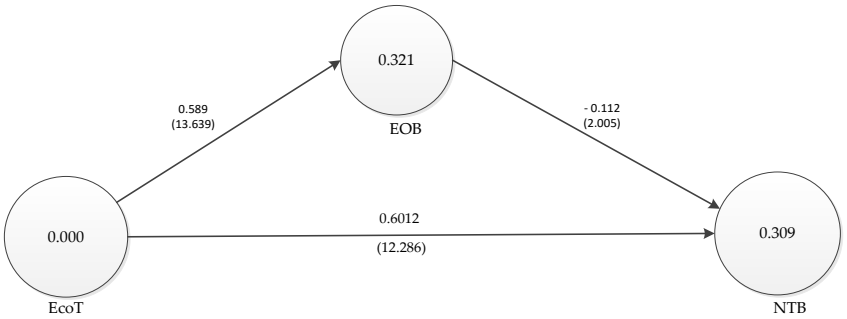

Figure 6.8: Economic benefits as a mediator of the relationship between ecotourism and its environmental benefits

Table 6.19: Results of mediation analysis

Hypotheses and propositions	Path	β	t-value	Outcome	Comment
H5: Economic benefits mediate the relationship between ecotourism and environmental benefits.	EcoT→NTB	0.605	18.324	Significant	No mediation
	EcoT→EOB	0.575	15.223	Significant	
	EOB→NTB	0. 571	18.107	Significant	
	EcoT→NTB (NTB controlling for EOB)	0. 601	12.286	Significant	
H6: Economic benefits mediate the relationship between ecotourism and socio-cultural benefits.	EcoT→SOB	0.624	21.941	Significant	Partial mediation
	EcoT→EOB	0.574	15.223	Significant	
	EOB→ SOB	0.502	11.673	Significant	
	EcoT→SOB (SOB controlling for EOB)	0.470	10.240	Significant	
H7: Economic benefits mediate the relationship between ecotourism and emotional benefits.	EcoT→EMB	0.677	19.523	Significant	No mediation
	EcoT→EOB	0.575	15.223	Significant	
	EOB→EMB	0.391	7.265	Significant	
	EcoT→EMB (EMB controlling for EOB)	0.620	11.818	Significant	
H8: Socio-cultural benefits mediate the relationship between ecotourism and environmental benefits.	EcoT→NTB	0.605	18.684	Significant	Partial mediation
	EcoT→SOB	0.624	21.941	Significant	
	SOB→NTB	0.495	10.943	Significant	
	EcoT→NTB (NTB controlling for SOB)	0.571	18.324	Significant	

Table 6.19 also shows the association between EcoT and NTB after controlling for EOB. This result shows that the two variables are significantly associated although the level of significance slightly diminished after controlling for EOB. Figure 6.8 shows that after controlling for EOB, EOB is negatively associated with NTB; thus from these results, it can be concluded that EOB does not mediate the relationship between EcoT and NTB. Hence, hypothesis 5 was rejected.

6.7.2 Mediation of Relationship between Ecotourism and its Socio-cultural Benefits by Economic Benefits

Table 6.19 and Figure 6.9 represent mediation of the relationship between ecotourism (EcoT) and socio-cultural benefits (SOB) by economic benefits (EOB). Table 6.19 shows that there was a significant association between the predictor EcoT and the criterion variable SOB. Similarly, EcoT was significantly associated with the mediator EOB, and EOB was significantly associated with SOB.

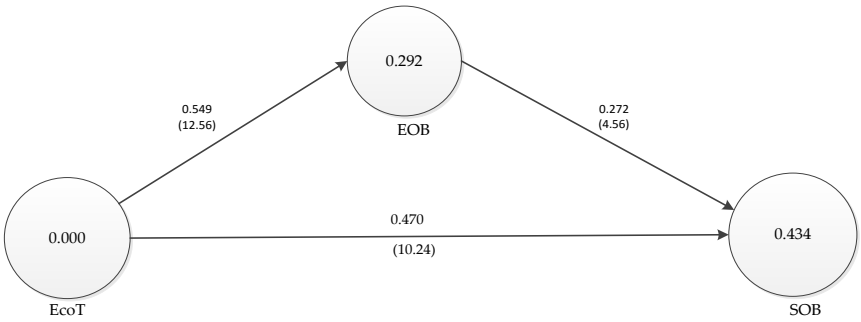

Figure 6.9: Economic benefits as a mediator of the relationship between ecotourism and its socio-cultural benefits

Table 6.19 shows the impact of EcoT on SOB after controlling for EOB. This result shows that the two variables are significantly associated although the level of significance substantially diminished after controlling for EOB. Figure 6.9 shows that after controlling for EOB, EOB influences SOB significantly. The study therefore concluded that EOB partially mediated the relationship between EcoT and SOB; Hypothesis 6 was accepted.

6.7.3 Mediation of Relationship Ecotourism and its Positive Emotional Impact by Economic Benefits

Table 6.19 shows the significant association between the predictor ecotourism (EcoT) and the criterion variable emotional benefits (EMB). Table 6.19 also shows that there were significant associations between EcoT and ecocomic benefits (EOB) and between EOB and EMB.

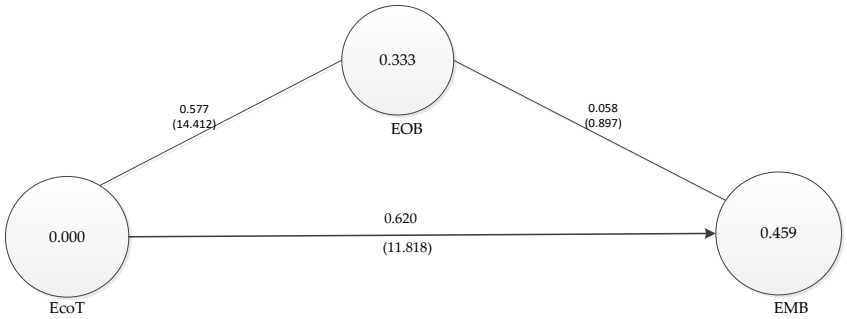

Figure 6.10: Economic benefits as a mediator of the relationship between ecotourism and its emotional benefits

Table 6.19 also shows the impact of EcoT on EMB after controlling for EOB. This result shows that the two variables are significantly associated although the level of significance slightly diminished after controlling for EOB. Figure 6.10 shows that after controlling for EOB, the path between EOB to SOB became insignificant. This study therefore concluded that EOB does not mediate the relationship between EcoT and EMB; Hypothesis 7 was rejected.

6.7.4 Mediation of the Relationship between Ecotourism and its Environmental Benefits by Socio-Cultural Benefits

Table 6.19 shows that the predictor variable ecotourism (EcoT) was significantly associated with the criterion variable environmental benefits (NTB). Table 6.19 also shows that there were significant associations between EcoT and socio-cultural benefits (SOB) and between SOB and NTB.

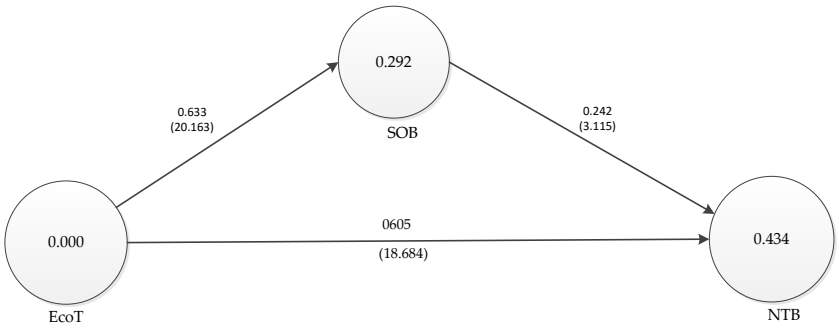

Figure 6.11: Socio-cultural benefits as a mediator of the relationship between ecotourism and its environmental benefits

Table 6.19 shows of the impact of EcoT on NTB after controlling for SOB. This result shows that the two variables were significantly associated

although the level of significance substantially diminished after controlling for SOB. Figure 6.11 shows that after controlling for SOB, SOB influenced NTB significantly. This study therefore concluded that SOB partially mediated the relationship between EcoT and NTB; Hypothesis 8 was accepted. Table 6.20 summarise the results of analysis of the mediation hypotheses.

Table 6.20: Summary of mediation tests

	Hypothesis	Comment
H_5	Economic benefits mediate the relation between ecotourism and environmental benefits	No mediation
H_6	Economic benefits mediate the relation between ecotourism and socio-cultural benefits	Partial mediation
H_7	Economic benefits mediate the relationship between ecotourism and emotional benefits	No mediation
H_8	Socio-cultural benefits mediate the relation between ecotourism and environmental benefits.	Partial mediation

6.8 MODERATING EFFECTS OF THE STAKEHOLDERS

Multi-group analysis of the three stakeholder groups surveyed in this study was used to assess whether the identity of the stakeholder moderated the outcomes of ecotourism. In the structural model, there were four paths from ecotourism (EcoT) to four outcome variables. The verification was checked among tourists vs. local community; tourists vs. tourism entrepreneurs and local community vs. tourism entrepreneurs. This study used the Wynne Chin formula (Chin 1998) to assess moderation effects. Tables 6.21, 6.22 and 6.23 show the results of the multi-group analysis.

6.8.1 Comparison of Tourists and the Local Community (H_9)

Table 6.21 presents the results of the multi-group analysis among tourist and local community pertinent to H_9. Tourists (β = 0.380) and the local community (β = 0.520) had different views of the socio-cultural benefits of ecotourism (t = 2.051). The results (sample means) indicate that the views in terms of economic, environmental and emotional benefits appeared to be different among these two stakeholders but were not found significant. The

results (sample means) however indicate that the local community thought ecotourism delivered more socio-cultural benefits than did the tourists.

Table 6.21: Multigroup analysis comparing how tourists and the local community perceive the outcomes of ecotourism

Path	Tourist			Local community			t-statistic	P (2- tailed)
	Path Coefficient	Sample Mean	SE from bootstrap	Path Coefficient	Sample Mean	SE from bootstrap		
EcoT →EOB	0.332	0.3211	0.0858	0.362	0.410	0.916	0.711	0.487
EcoT →NTB	0.465	0.5215	0.0721	0.395	0.413	0.1328	0.718	0.474
EcoT →SOB	0.380	0.3155	0.0857	0.520	0.5567	0.0814	**2.051**	0.041
EcoT →EMB	0.364	0.4487	0.968	0.250	0.2567	0.0857	0.200	0.841

6.8.2 Comparison of Tourists and Tourism Entrepreneurs (H_{10})

Table 6.22 presents the results of the multi-group analysis between tourist and tourism entrepreneurs pertinent to $H_{10.}$ The results show that tourists (β = 0.332) and tourism entrepreneurs (β = 0.3990) had different perceptions of the economic benefits of ecotourism (t = 1.996). Tourists (β = 0.380) and tourism entrepreneurs (β = 0.4720) also had different perceptions of the socio-cultural benefits of ecotourism (t = 2.025).

The results further indicate that the views in terms of environmental and emotional benefits appeared to be different among these two stakeholders but were not found significant. The results however suggest that tourism entrepreneurs perceived the economic and socio-cultural benefits more positively comparing to the tourist as the result indicated higher scores for tourism entrepreneurs. This finding indicated that tourism entrepreneurs believed that the economic and socio-cultural situation was developed substantially while tourists had different views.

Table 6.22: Multigroup analysis comparing how tourists and tourism entrepreneurs perceive the outcomes of ecotourism

Path	Tourist			Tourism entrepreneurs			t-statistic	P
	Path Coefficient	Sample Mean	SE from bootstrap	Path Coefficient	Sample Mean	SE from bootstrap		(2- tailed)
EcoT →EOB	0.332	0.3211	0.0858	0.3990	0.5620	0.857	**1.996**	0.047
EcoT →NTB	0.465	0.5215	0.0721	0.2740	0.2819	0.1378	1.544	0.124
EcoT →SOB	0.380	0.3155	0.0857	0.4720	0.5593	0.0854	**2.025**	0.044
EcoT →EMB	0.364	0.4487	0.968	.02540	0.0968	0.1183	1.220	0.224

6.8.3 Comparison of Local Community and Tourism Entrepreneurs (H_{11})

Table 6.23 presents the results of the multi-group analysis between local community and tourism entrepreneurs pertinent to H_{11}. As shown in the table, the findings demonstrate that there was no significant difference in the views among the said two stakeholders regarding the outcomes of ecotourism.

Table 6.23: Multigroup analysis comparing how the local community and tourism entrepreneurs perceive the outcomes of ecotourism

Path	Local community			Tourism entrepreneur			t-	P
	Path Coefficient	Sample Mean	SE from bootstrap	Path Coefficient	Sample Mean	SE from bootstrap	statistic	(2- tailed)
EcoT →EOB	0.362	0.410	0.916	0.3990	0.5620	0.857	0.122	0.0903
EcoT →NTB	0.395	0.413	0.1328	0.2740	0.2819	0.1378	0.688	0.482
EcoT →SOB	0.520	0.5567	0.0814	0.4720	0.5593	0.0854	0.022	0.982
EcoT →EMB	0.250	0.2567	0.0857	.02540	0.0968	0.1183	1.102	0.272

Table 6.24 summarises the results of the tests of the moderation hypotheses.

Table 6.24: Summary of hypothesis tests – multi-groups

	Hypothesis	Comment
H_{9a}	The views of tourists and those of members of the local community will differ in regard to the economic benefits derived from ecotourism	Not Accepted
H_{9b}	The views of tourists and those of members of the local community will differ in regard to the environmental benefits derived from ecotourism	Not Accepted
H_{9c}	The views of tourists and those of members of the local community will differ in regard to the socio-cultural benefits derived from ecotourism	**Accepted**
H_{9d}	The views of tourists and those of members of the local community will differ in regard to the emotional benefits derived from ecotourism	Not Accepted
H_{10a}	The views of tourists and tourism entrepreneur will differ in regard to the economic benefits derived from ecotourism	**Accepted**
H_{10b}	The views of tourists and tourism entrepreneur will differ in regard to the environmental benefits derived from ecotourism	Not Accepted
H_{10c}	The views of tourists and tourism entrepreneur will differ in regard to the socio-cultural benefits derived from ecotourism	**Accepted**
H_{10d}	The views of tourists and tourism entrepreneur will differ in regard to the emotional benefits derived from ecotourism	Not Accepted
H_{11a}	The views of local community and tourism entrepreneur will differ in regard to the economic benefits derived from ecotourism	Not Accepted
H_{11b}	The views of local community and tourism entrepreneur will differ in regard to the environmental benefits derived from ecotourism	Not Accepted
H_{11c}	The views of local community and tourism entrepreneur will differ in regard to the socio-cultural benefits derived from ecotourism	Not Accepted
H_{11d}	The views of local community and tourism entrepreneur will differ in regard to the emotional benefits derived from ecotourism	Not Accepted

Table 6.24 shows that three hypotheses about moderation effect were accepted and whilst the others were rejected; the results of the multi-group analysis were mixed.

6.9 SUMMARY

The main objective of the analyses reported in this chapter was to confirm the measurement and structural properties of the study model by assessing their reliability and validity. The aim of this study was to assess the relationships among the constructs of the model and to test hypotheses about these relationships, including hypotheses about mediation and moderation of certain relationships. PLS SEM was successfully applied in this study. The results supported seven out of the eight main hypotheses (H_1 to H_8). There was also support for three of the moderation hypotheses (H_{9c}, H_{10a} and H_{10c}); however, the remaining moderating hypotheses (H_{9a}, H_{9b}, H_{9d}, H_{10b}, H_{10d}, H_{11a},

H_{10b}, H_{10c}, H_{10d}, H_{11a}, H_{11b}, H_{11c} and H_{11d}) were not supported. The implications of the results and outcomes are discussed in the following chapter.

CHAPTER 7: DISCUSSION

7.1 INTRODUCTION

This chapter discusses the statistical significance, theoretical relevance and practical implications of the results. This study has aimed to identify whether ecotourism produces the following four outcomes: economic benefits; environmental benefits; socio-cultural benefits; and emotional benefits. It has also strived to identify whether the relationships between ecotourism and its effects are mediated or moderated by other outcomes or by the identity of the stakeholder involved.

This discussion is based on analysis of the survey, and the results of the hypothesis testing, as reported in Chapters 5 and 6 respectively.

7.2 HYPOTHESES RELATED TO ECOTOURISM OUTCOMES

This study has shown that ecotourism is likely to produce four types of positive outcomes – economic benefits, environmental benefits, socio-cultural benefits and emotional benefits – in a destination. Hypotheses H_1 to H_4 were relevant to these expected outcomes.

7.2.1 Hypothesis H_1

This study has found that ecotourism can produce economic benefits (β = 0.543, t = 9.973), thus supporting H_1. This result also corresponds with the outcomes of the field study, which suggested that ecotourism generates jobs in hotels and restaurants and creates opportunities for other similar or associated businesses which in turn create other financial opportunities for the local community.

This finding is line with previous studies that have indicated that ecotourism can produce economic benefits for both the local community and the destination country (e.g. Croes 2010; Choi and Sirakaya 2005; Sinclair 1998;

Sinclair-Maragh and Gursoy 2015; Reimer and Walter 2013; Sebele 2010; Buckley 2012; Schellhorn 2010). Such economic benefits are most often in the form of employment and business opportunities for the local community (Picard 2015; Schellhorn 2010). Ecotourism has also been shown to foster economic growth in the destination country (UNWTO 2013).

Aguila and Ragot (2014) support the idea that the beauty of a destination and its surroundings help to attract tourists; thus generating income for local government as well as the local community and private resort owners (Schellhorn 2010). This study has therefore assumed that ecotourism in an area gives the local economy momentum. That is, the influx of tourists increases the demand for road transport, water, infrastructure, hotels, restaurants and souvenir shops, and thus opens up various business opportunities, as well as increasing the revenue of existing businesses. The local community can become involved in tourism-related businesses as entrepreneurs, employees, or suppliers; such involvement generally increases their earnings.

The government also earns money from tourists in the form of tax and entry fees. Host countries can also earn foreign currency from foreign tourists. The monetary transactions and earnings from tourism result in various financial activities taking place around the destination, such as money exchanges, banking and money transfers.

In summary, tourism provides employment for the local community and various tourism-related business opportunities; both of which contribute to economic growth in the destination area. However, if ecotourism is to be sustainable, certain conditions must be met. For instance, the people involved in tourism industry should be appropriately trained and educated for their roles which could be as tour guides or hotel managers.

The findings of this study should enable the government and other authorities to create appropriate training programs to ensure that local communities benefit from the employment opportunities created by ecotourism. With such training, the locals could attain better paid jobs in the tourism industries and perform more effectively in them. This training should also help the current and potential business owners to run their businesses more efficiently and improve tourist satisfaction.

7.2.2 Hypothesis H_2

This study has also examined whether ecotourism produces environmental benefits, and the results ($\beta = 0.526$, $t = 10.973$) strongly suggest that it does. The survey findings are consistent with the qualitative study, which indicate that ecotourism improves both community members' and tourists' environmental awareness, which should eventually motivate all stakeholders to be more active in nature conservation.

Ecotourism is a nature-based tourism, and the main attraction in such tourism is the natural beauty (Hossen, Ahsan and Kamruzzaman 2015; Queiroz, Guerreiro and Ventura 2014). Environmental attractiveness plays a major role in ecotourism, with some studies indicating that it can have environmental benefits for the destination. Chiu, Lee, and Chen (2014) argue that ecotourism emphasises sustainable development of the environment. Many other authors (e.g. Liu et al. 2014; Cheung 2015; Picard 2015; Lee and Moscardo 2005) also claim that ecotourism can produce environmental benefits in the destination area. For example, Aguila and Ragot (2014) report that development of Ilijan as a tourist destination in Philippines has meant that environmental protection and waste management concerns have been addressed. Scheyvens (2000) adds that in developing countries, communities are often more motivated to conserve nature as they become involved in ecotourism.

This study's results also have revealed that its' main three ecotourism stakeholder groups – local community members, tourism entrepreneurs and tourists – are concerned about the natural environment because they are heavily involved in ecotourism-related activities. However, as local community members and tourism entrepreneurs are generally poor with less education, they often do not have the knowledge and skills necessary to directly contribute to nature conservation. In many cases, they are not in a position to make plans or decisions about nature conservation in their area.

This research provides policymakers, local management and governments with evidence about the flow-on benefits of nature conservation for ecotourism. These results recommend that the relevant authorities:

- allocate funds for nature conservation
- implement plans to conserve natural river depth, and construct canals which are consistent with the natural water flow
- arrange training for local communities to enable them to manage nature as a resource for ecotourism
- provide the resources necessary to control or eliminate destructive activities such as poaching and illegal logging.

7.2.3 Hypothesis H_3

This study has also investigated whether ecotourism generates substantial socio-cultural benefits, which the survey results ($\beta = 0.494$ with $t = 8.483$) strongly suggesting that it does. The survey data are consistent with the results of the qualitative study.

Numerous studies have indicated that ecotourism generates substantial socio-cultural benefits for local communities (e.g. Aguila and Ragot 2014; Caldicott and Fuller 2005). Scheyvens (1999) adds that ecotourism may offer

local community the opportunities to maximise their earnings along with enjoying some control over ecotourism occurring in their regions.

The arrival of tourists in a region can bring economic and socio-cultural benefits, including improved services to the host community; the impact on socio-cultural development can be broad and profound (Aguila and Ragot 2014).

Ecotourism has multiple effects on the destination area. First, it generates income for the local community. Second, it leads to development of communications and transport infrastructure; while mostly carried out for the benefit of tourists, it also benefits the local community. Third, ecotourism means an improved supply of commodities to the destination; although this is also primarily driven by tourist demands, the local community may also come to enjoy many of these commodities. Fourth, various educational programs are observed in the destination area, which eventually educates community members in various ways. Fifth, cultural activities are another key attraction in ecotourism that often motivate the local community to pursue cultural activities and produce traditional crafts. Sixth, by exchanging views and sharing experiences with tourists, community members can learn from the tourists and educate themselves.

In summary, ecotourism provides many socio-cultural benefits for the local community. This finding may motivate the government, local community and other stakeholders to support ecotourism in the study area. This finding should also motivate ecotourism stakeholders to create and maintain the environment, as such the local community receives the stated benefits for long.

7.2.4. Hypothesis H_4

Hypothesis 4 posits that ecotourism can have emotional benefits for local community members, with the significant results ($\beta = 0.598$; $t = 9.941$) supporting this. The qualitative field study also suggests that ecotourism can have a positive emotional impact on the local community.

A few previous studies have indicated that tourism can have emotional benefits (e.g. Scheyvens 1999; Waitt 2003). In line with this, this study hypothesises that ecotourism has several positive emotional effects on the local community. For example, they are more likely to appreciate the value of the land they live by, if it is admired by others.

Furthermore, ecotourism is a form of nature-based tourism that involves exploits cultural activities (Hipwell 2007). That is, ecotourism often involves tourists admiring natural attractions and cultural activities, which can make the locals feel happy and proud. The opportunity to interact with people from different regions and different countries can also be exciting (Wang, Yu and Fesenmaier 2002). Some local communities are also amazed to learn that people from other regions and from abroad value their land (Jackson 2002).

Emotion is one state of psychology; when people are happy and full of joy, they can be encouraged to get involved in positive activities. Ecotourism is a nature-based activity that needs proper activities so that the environment do not get damaged. When there is a positive psychological state, the relevant authorities can encourage the local community to get involved in pro-social and pro-environmental activities.

The findings of this study can be used for motivational purposes to increase the realisation of the potential social and ecological benefits of ecotourism, and thus ensure that all stakeholders benefit from a good natural environment and better socio-cultural atmosphere.

7.3 HYPOTHESIS RELATED TO MEDIATION

This study has identified that ecotourism can produce four outcomes for the destination. These outcomes are not always independent; they can influence and are influenced by one another. This study has also shown that several mediation effects work there, as discussed in the following subsections.

7.3.1 Hypothesis H_5

The study findings affirm that economic benefits (EOB) do not mediate the relationship between ecotourism (EcoT) and its environmental benefits (NTB). There was a significant relationship between EcoT and NTB (t = 18.324). The path between EcoT and the mediating variable economic benefits (EOB) was significant (t = .223), as was the path between EOB and NTB (t = 18.107). However, while controlling for EOB, the path from EcoT to NTB produced negative results, indicating that EOB does not mediate the relationship between EcoT and NTB.

Several studies (e.g. Liu et al. 2014; Lapeyre 2010) have reported that the economic benefits of ecotourism mediate the relationship between ecotourism and its environmental benefits; the mediation is even stronger in developing countries (Su, Wall and Ma 2014). Most scholars suggest that the economic benefits of EcoT encourage local communities to conserve the fragile natural environment, but no such effect has been identified in this study.

The most likely reason for this is that the local community in this study's ecotourism destination live on the periphery of the Sundarbans – the world's largest mangrove forest – rather than actually in the Sundarbans, and thus have few opportunities to contribute to improving its environment. The financial opportunities that ecotourism has brought to their area has instead made the locals more aware of the importance of the Sundarbans, and has

motivated them to conserve the forest to safeguard a source of income. The local community cannot, however, get involved in any nature conservation activities, and so the economic benefits of ecotourism do not mediate its environmental benefits in this particular destination.

This study should alert the authorities to the fact that only the government and other authorities can act to conserve the natural environment in this specific study destination. Thus, the government and other concerned authorities should be involved in nature conservation activities to maintain the environmental purity for the sake of ecotourism and for the sake of the country.

7.3.2 Hypothesis H_6

This study has sought to determine whether economic benefits (EOB) mediate the relationship between ecotourism and its socio-cultural benefits. There were direct significant relationships between ecotourism (EcoT) and soci-cultural benefits (SOB) (t = 21.941), between EcoT and the mediating EOB (t = 15.223), and between EOB and SOB (t = 11.673). Furthermore, there was a direct association between EcoT and SOB (t = 10.240) after controlling for EOB, indicating that the relationship between EcoT and SOB is partially mediated by EOB.

Numerous studies have reported that the economic benefits of ecotourism produce socio-cultural benefits for the local community (e.g. Liu et al. 2014; Mbaiwa and Stronza 2010; Eraydin, Armatli-Köroğlu and Uzun 2012). One could therefore argue that ecotourism produces multiple benefits for the local community. First, ecotourism is a potential source of income for the locals via employment in various tourism-related enterprises (Mbaiwa and Stronza 2010). Second, a lot of them can profit from tourism-related businesses. Third, additional earnings from ecotourism may improve the local people's ability to satisfy their needs for food, clothing, housing,

children's education and medication (Reimer and Walter 2013). All of these effects contribute to an improved standard of living. In addition, the economic benefits of ecotourism are not always confined to the local community or businesses; the government can also earn a substantial amount from ecotourism (Andereck et al. 2005; Farrelly 2011).

Such benefits often motivate governments to support the development of tourism in particular areas. As a consequence, the improvement of facilities in a destination can improve the lifestyle of the local community, with many of them gaining access to these facilities. Overall, ecotourism enables local communities to enjoy a better socio-cultural atmosphere.

This finding should motivate policymakers, local communities and other stakeholders to support ecotourism. In line with this, efforts should be made to ensure that the local community is involved in ecotourism-related activities and thus benefits from ecotourism.

7.3.3 Hypothesis H_7

This study has investigated whether economic benefits (EOB) mediate the relationship between ecotourism (EcoT) and its emotional benefits (EMB). This study has found a direct significant relationship between EcoT and EMB ($t = 19.523$). There were also significant paths from EcoT to the mediating variable EOB ($t = 15.223$), and from EOB to EMB ($t = 7.265$). However, while a model of EcoT to EMB was run while controlling the mediating variable EOB, the path from EOB to EMB was identified as non-significant ($t = 0.323$). This result indicates that economic benefits do not mediate the relationship between EcoT and its emotional benefits.

A few researchers suggested that tourism produces emotional benefits for the destination community (e.g. Waitt 2003). Furthermore, numerous studies have suggested that ecotourism produces economic benefits for the local

community (Zhou et al. 2013; Mbaiwa and Stronza 2010; Andereck et al. 2005; Wunder 2000). On the basis of these two findings, this study hypothesised that economic benefits mediate the relationship between ecotourism and its emotional benefits.

The study results indicate that emotional outcomes derived via ecotourism into the community are free from material matters. That is emotional feeling is entirely a psychological state that local community members and some other stakeholders enjoy. Economic affairs have less influence on emotional feelings.

One might also argue that the emotional benefits are all related to the pleasure locals feel on having tourists from other regions and from overseas visiting their home. Local people also enjoy being able to converse with foreigners and individuals from other parts of the country. They also often take pleasure in the tourists' appreciation of the beauty of their area. There are no monetary or other material elements that influence these feelings. Such positive emotions may make the local community more supportive of ecotourism, which is crucial to the success of EcoT initiatives.

These findings will encourage local management and government to maintain consistency and coordination among the relevant sectors while developing ecotourism. It will also encourage them to control the negative effects of ecotourism on the destination, so that the local community consistently feel proud to host ecotourists and want to continue to support ecotourism in their locality. Such an approach would be beneficial to both the local community and the country as a whole in the long term.

7.3.4 Hypothesis H_8

This study has also examined whether the socio-cultural benefits (SOB) of ecotourism (EcoT) mediate the relationship between ecotourism and its

environmental benefits (NTB). This study has found a direct relationship between EcoT and NTB (t = 18.324). There were also direct relationships between EcoT and the mediating variable SOB (t = 21.941), and between SOB and NTB (t = 10.943). Furthermore, there was a direction association between EcoT and NTB while controlling for SOB (t = 18.684), indicating that SOB only partially mediates the relationship between EcoT and its environmental benefits.

There are many reports of cases where ecotourism is not sufficiently community focused, and thus has a negative impact on the environment (Aguila and Ragot 2014); while other studies have shown that the socio-cultural benefits of EcoT may lead to environmental benefits (e.g. Jones 2005; De Beenhouwer, Honnay and Aerts 2013; Liu et al. 2014). This study therefore argues that whenever a local community participates in and benefits economically and socio-culturally from EcoT, that it will be more motivated to conserve the natural environment. This study indicates that ecotourism produces socio-cultural benefits in several ways:

- It is a source of income for the local community and thus enhances its standard of living.
- Infrastructural facilities established primarily for the benefit of tourists can also be enjoyed by the local community.
- The local community becomes better educated both independently and via interaction with the tourists.
- The local community learns that there are benefits to having an attractive natural environment, particularly as it becomes the primary source of income.

Socio-cultural development therefore makes the local community more aware that its quality of life depends on the quality of the natural environment, and hence they are more likely to want to protect it. The local

community may eventually develop into an effective force for nature conservation. Policymakers therefore have a significant role in educating the local community regarding retention of the natural beauty and quality, and supporting it in a positive way to foster natural conservation contributions.

This finding should encourage policymakers to be more proactive in ensuring that EcoT delivers socio-cultural benefits for the local community, so that the natural environment is better protected.

7.4 HYPOTHESES RELATED TO MODERATION

Ecotourism often involves a range of stakeholders, including the local community, tourism entrepreneurs, government, local management, tourists and tour guides (Velasquez 2014; Wanga et al. 2014). Yet there are often differences in how this range of stakeholders perceive the benefits of ecotourism (Wanga et al. 2014; Haugland et al. 2011). This study has investigated the views of three groups of stakeholders – tourists, local community members and tourism entrepreneurs – after predicting that these most context-relevant groups would have different views on ecotourism outcomes, as discussed in the following subsections.

7.4.1 Moderation of Perceived Economic Benefits by Stakeholder Group

Several studies have reported differences in stakeholder perceptions of ecotourism (e.g. Ruschkowski et al. 2013). This study has predicted that its three main groups of stakeholders would have different views of the economic benefits of ecotourism in relation to the study destination. Separate datasets of these three stakeholder groups were used for analysing the moderating effects. There were several steps in this moderation analysis, with the results shown in tables 6.21, 6.22 and 6.23.

To assess moderation of perceptions of economic benefits by the identity of the stakeholder, this study calculated the sample mean and the standard

error of the path via bootstrapping from ecotourism to economic benefits separately for tourists and local community members. The study then used a t-test to assess whether the views of the two groups were different (Chin 2004). The results of the t-test ($t = 0.711$, $p = 0.487$) indicate that the views of the tourists and local community members do not differ significantly. In addition, the mean score for local community members was higher than that of the tourists, indicating that local community members are more likely to perceive that ecotourism delivers economic benefits than the tourists. However, as the result was insignificant, it cannot be generalised to the population.

The same process was used to compare tourists' and tourism entrepreneurs' views of ecotourism outcomes. The mean and standard error were calculated for each group and compared using a t-test. The results ($t = 1.996$, $p = 0.047$) indicated that tourists and tourism entrepreneurs have significantly opposing views of the economic benefits of ecotourism (EcoT). As shown in Table 6.22, the mean score for tourism entrepreneurs is much higher than for tourists, indicating the former are more likely to believe that EcoT delivers economic benefits than the latter.

The same process was used to compare local community members and tourism entrepreneurs' views of ecotourism outcomes. Table 6.23 shows that the views of local community members and tourism entrepreneurs are not significantly different in relation to the economic benefits of ecotourism ($t = 1.220$, $p = 0.090$).

It may be that even though all stakeholder groups in this study perceive that ecotourism (EcoT) delivers some economic benefits, such benefits are more noticeable to those involved in tourism-related businesses than to tourists, as this group derives a greater personal economic benefit from EcoT. Policymakers should therefore attempt to ensure that earnings from

ecotourism are distributed to all sectors in the area, so that everyone can benefit.

As stated earlier, this survey was conducted at the periphery of the Sundarbans that are used as the gateways to the Sundarbans. Although the Sundarbans is a prominent destination in Bangladesh, the tourism sector remains underdeveloped; that is, few educated professionals are involved in the area's commercial activities in relation to ecotourism. The stakeholders involved in the various tourism-related businesses mostly belong to the local community and have substandard socio-cultural standing. Therefore, most often they are happy with the minimum economic benefits, while very naturally the tourists do not possess similar perceptions. In such a case, the perceptions of the tourist are more acceptable to the researcher, as the tourists are in a better position to compare the economic condition with other areas. This study therefore concludes that although ecotourism can produce several economic benefits, this is not currently being fully realised in the study area. This finding should therefore encourage policymakers to take steps to ensure that the local community derives greater economic benefits from ecotourism.

7.4.2 Moderation of Perceived Environmental Benefits by Stakeholder Group

This study predicted that its three main stakeholder groups would have different perceptions of the environmental benefits of ecotourism. The relevant moderation analysis involved several steps, with the corresponding results shown in tables 6.21, 6.22 and 6.23. The same procedure was used to compare the views of the stakeholders about the environmental benefits as was done in relation to the economic benefits (see previous subsection).

The views of tourists and local community members were not found significantly different in relation to environmental benefits ($t = 0.718$, $p =$

0.474), along with the views of tourists and tourism entrepreneurs (t = 0.688, p = 0.482), and those of local community members and tourism entrepreneurs (t = 0.688, p = 0.482). It has been discussed earlier that ecotourism generates environmental benefits, and that all of the stakeholder groups have similar perceptions of these benefits. This is a positive sign for the natural environment, and the relevant authorities should pursue policies to ensure this situation persists, and that the natural environment in this ecotourism destinations continues to be protected.

7.4.3 Moderation of Perceived Socio-Cultural Benefits by Stakeholder Group

This study predicted that its three stakeholder groups would have different perceptions of the socio-cultural benefits of ecotourism, as confirmed by the results shown in tables 6.21, 6.22 and 6.23; the comparison procedure was as described in section 7.4.1.

According to this study, tourists and local community members have different views of the socio-cultural benefits of ecotourism (Table 6.21; t = 2.051, p = 0.041). The perceptions of tourists and tourism entrepreneurs also different (Table 6.22; t = 2.025, p = 0.044); while the perceptions of local community members and tourism entrepreneurs were found to not be significantly different (Table 6.23; t = 0.022, p = 0.982).

These findings indicate that local community members and tourism entrepreneurs do not have any significant differences in terms of perceived socio-cultural benefits of ecotourism; in contrast, tourists' perceptions differ from both of the other stakeholder groups. In the context of this study, local community members and tourism entrepreneurs are mostly from the less educated and less privileged sections of Bangladeshi society (Iftekhar and Hoque 2005), and are satisfied with minimal improvements in terms of socio-cultural development. Hence, both stakeholder types have positive

perceptions in regard to socio-cultural development, which was not the same for tourists. Some of the tourists appeared to think that ecotourism was not delivering an adequate level of socio-cultural benefits.

It is more logical to accept the views of the tourists as in most of the cases they belong to a better socio-cultural background. This study has therefore concluded that even though ecotourism has produced some socio-cultural benefits in the chosen destination, the socio-cultural development on the local community is not adequate. Policymakers should pay attention to this and act to ensure that those contributing to ecotourism in this destination should be given importance when civic facilities are provided in their area.

7.4.4 Moderation of Perceived Emotional Benefits by Stakeholder Group

This study predicted that its three stakeholder groups would have different perceptions of the emotional benefits of ecotourism. The corresponding results are shown in tables 6.21, 6.22 and 6.23; and the comparison procedure was as described in section 7.4.1.

According to the results, tourists and local community members are not significantly different in relation to their views of the emotional benefits of ecotourism (Table 6.21; $t = 0.200$, $p = 0.841$), which applies to tourists and tourism entrepreneurs (Table 6.22; $t = 1.220$, $p = 0.224$), and local community members and tourism entrepreneurs (6.23; $t = 1.102$, $p = 0.272$).

This study has clearly indicated that ecotourism can generate emotional benefits for the local community. Furthermore, the results of the qualitative study have suggested that both tourists and local community members enjoyed sharing their views on culture, and that ecotourism provides some form of amusement for both tourists and local community members. This results further indicate that all of the three stakeholders possess similar views in terms of emotional benefits.

In summary, all of the stakeholder groups have positive feelings towards ecotourism. In addition to economic, environmental and socio-cultural benefits, ecotourism can also provide emotional benefits; all of this study's stakeholders share similar perceptions of the emotional impact of ecotourism. Thus, both governments and other concerned authorities should promote the positive impacts of ecotourism, to ensure that all stakeholders remain proactive as it is developed in their areas.

7.5 SUMMARY

This chapter has discussed the findings of the survey, which was analysed using PLS SEM (see Chapter 6). The arguments based on these study findings have been presented in support of the research hypotheses.

This chapter has also discussed the outcomes of ecotourism to extend the sustainability framework by adding an additional outcome: emotional benefits. This new outcome will add value to existing literature.

This chapter has also covered the mediation of ecotourism outcomes; that is, the partial mediation of the socio-cultural benefits by the economic benefits, and the partial mediation of the environmental benefits by the socio-cultural benefits. It has also discussed how perceptions of the economic and socio-cultural benefits of ecotourism are moderated by different stakeholder identities.

The next and final chapter draws conclusions on this study, and makes suggestions for future research in this field.

CHAPTER 8: CONCLUSION AND FUTURE RESEARCH DIRECTION

8.1 INTRODUCTION

The previous chapter discussed the quantitative survey results, while this chapter provides an overview of the research and summarises the conclusions drawn from the analysis.

The primary objective of this study was to propose a comprehensive ecotourism model that includes the antecedents and four outcomes of ecotourism in a developing country with an emerging economy perspective. Mediation and moderation of the relationships between ecotourism and these outcomes in an emerging economy context has also been examined.

This chapter summarises the study's research objectives, research gaps, methodology, analysis and the corresponding results. Furthermore, it explores how the findings may contribute to theory and practice in relation to ecotourism in emerging economies. The limitations of the research are also discussed in this chapter, including suggestions for future research avenues.

8.2 RESEARCH SUMMARY

Ecotourism is primarily focused on natural attractions (Beaumont 2011; Reimer and Walter 2013), but there are several other antecedents (Ahmad et al. 2014; Hall and Lew 1998). Numerous researchers have proposed about various antecedents in relation to ecotourism, and the following six were identified in this study, from the literature review: natural attractions (NTA); socio-cultural attractions (SCA); physical infrastructure and facilities (PIF); community support and involvement (PCA); local management (LMT); and government actions (GTA). However, the existing literature does not provide a comprehensive set of antecedents of ecotourism in a developing country context.

In addition, successful ecotourism is likely to produce several outcomes. Many researchers have suggested that economic, environmental and socio-cultural benefits are most likely outcomes (e.g. Priskin 2001; He et al. 2008; Pipinos and Fokiali 2009); while minimal research has identified emotional benefits. This study has therefore proposed that ecotourism may also deliver emotional benefits, and proposed a comprehensive model including six antecedents and four outcomes.

The theoretical framework of the research (as discussed in Chapter 2) was developed by combining stakeholder theory and sustainability framework. This proposition was in line with Jamal and Stronza (2009) and Stronza (2007) who have argued that stakeholder theory has the efficacy to work as an incentive for conservation of collaboration, and that stakeholders should have integrated relationships in relation to ecotourism. The findings of the study are also in line with the sustainability framework as suggested by Ross and Wall (1999a) and Reimer and Walter (2013).

This study's initial model of ecotourism was developed based on existing literature, stakeholder theory and sustainable framework. This study then carried out a qualitative field study based on semi-structured interviews with 12 local community members and 10 tourism entrepreneurs in two peripheral areas of the Sundarbans: Baniasanta and Mongla. The data were subjected to content analysis using NVivo 10 software, and the model was refined on the basis of these findings. That is, the six antecedents were divided into two groups, and two second-order constructs were added: resource dimension, representing the essential antecedents [natural attractions (NTA), socio-cultural attractions (SCA) and physical infrastructure and facilities (PIF)]; and support dimension, representing other less essential antecedents that still contribute to the success of ecotourism [government action (GTA), local management (LMT) and community

support and involvement (PCA)]. The revised study model is now comprised of two types of antecedents namely resource dimension and support dimension as well as four outcomes: economic; environmental; socio-cultural; and emotional.

This study has also aimed to identify the mediation effects involving the outcomes and the moderation of views of outcomes based on stakeholder identity. Most of the indicators used in the study were taken from existing literature, with the qualitative study supporting most of these while suggesting some additional indicators. Based on the literature and field study, a survey questionnaire comprising 60 Likert scale questions was developed. This questionnaire was pre-tested and piloted and revised accordingly, with the updated version used in the study survey.

This study surveyed three groups of stakeholders in ecotourism: tourists (n = 102); local community members (n = 104); and tourism entrepreneurs (n = 103). The data were analysed using PLS-based SEM (see Chapter 6). Assessment of the measurement model resulted in the removal of several indicators with low reliability. The refined model had acceptable indicator reliability, convergent validity and discriminant validity. Afterwards, the structural model was assessed to test the hypotheses on which the study model was based.

This analysis confirmed the validity of the proposed antecedent element of the study model. It also confirmed that ecotourism is likely to produce the four outcomes specified in the model. Furthermore, this study has revealed that economic benefits partially mediate the relationship between ecotourism and its socio-cultural benefits, and that socio-cultural benefits partially mediate the relationship between ecotourism and its environmental benefits.

The results of the moderation analysis are mixed. For example, perceptions regarding the economic benefits of ecotourism are moderated by stakeholder

identity, to the extent that tourists and tourism entrepreneurs have different views of the economic benefits. Perceptions of the socio-cultural benefits of ecotourism are also moderated by stakeholder identity, to the extent that the views of the tourists differ from those of local community members and tourism entrepreneurs.

8.3 CONTRIBUTIONS OF THIS RESEARCH

8.3.1 Theoretical Contributions

While Buckley (2003) has provided one model that has both antecedents and outcomes of ecotourism, no comprehensive model of antecedents and outcomes of ecotourism was found in the existing literature. This study has therefore identified and addressed a significant gap in the literature, and subsequently proposed a model that incorporates a large set of antecedents and also includes a comprehensive set of outcomes of ecotourism. Thus, this study's ecotourism model comprised of two types of antecedents and four outcomes including one new unique outcome makes it a significant contribution in the theoretical arena.

Besides, this study has identified that the economic benefits derived through ecotourism mediate delivery of socio-cultural benefits. This study also identified that socio-cultural benefits derived through ecotourism mediate delivery of environmental benefits. Further, this study found mixed moderating effects over the outcomes of ecotourism based on stakeholder identify.

The initial study model, which was based on stakeholder theory, sustainability framework and the existing literature, was first assessed using a qualitative field study. The model was then refined based on the results of the qualitative survey, which was used for the survey. Analysis of the survey data indicates that this model is both valid and applicable in the context of

Bangladesh. In addition to triple bottom line, this study proposed another outcome of ecotourism that is an extension of sustainability framework.

This study used stakeholder theory, and its application has been deemed most relevant for a destination like Bangladesh. It also seems likely that the model would be applicable in other similar destinations. These findings provide a new perspective of ecotourism, as well as a comprehensive description of the antecedents and outcomes. Some of the findings on mediation and moderation of the outcomes of ecotourism are also new. Furthermore, some new indicators were specifically developed for the survey, and were shown to be valid. In combination, these findings make significant theoretical contributions to the literature on ecotourism.

8.3.2 Practical Contributions

Bangladesh is a small country with a large population. It has abundant natural and socio-cultural resources which could be the basis of a successful ecotourism industry; but the natural environment is under threat from human encroachment. Owing to poverty and lack of job opportunities, the people living on the periphery of various natural destinations exploit these resources in ways that causes damage to the environment.

Bangladesh needs to find ways of employing its large population, but it lacks the financial capital for a program of mass industrialisation. Ecotourism might therefore generate multiple benefits, and has the potential to mitigate employment and environmental issues in certain parts of Bangladesh. It could provide jobs for local people while also ensuring the preservation of the fragile environment, and raising revenue for the national exchequer. The findings of this study should therefore encourage policymakers of Bangladesh to promote ecotourism in various destinations around the country.

These findings are also likely to provide guidelines for ecotourism in other destinations in relation to the following benefits:

Furthermore, this study can be used to inform policy on ecotourism in relation to the following. First, this study suggests that ecotourism can provide various economic opportunities for the local community, and thus discourage them from pursing activities that damage the natural environment, such as logging or hunting (Reimer and Walter 2013). Second, ecotourism is likely to educate the local community about the environment and its value as an ecotourism resource (Wallace and Pierce 1996). Third, the local community will learn that their income is primarily dependent on the natural attractions of the area, and hence take care to conserve the local environment. Fourth, the findings can be used to inform policy on ecotourism as it provides guidance on the antecedents of ecotourism and factors that will support for the growth of those antecedents. Fifth, these study findings provide evidence that ecotourism has economic benefits; thus, it should encourage the government to develop ecotourism and pay more attention to nature conservation. These findings should encourage and motivate the government and other interested parties to ensure that sufficient infrastructure is in place in potential ecotourism destinations; this will ultimately benefit the local community as well as the ecotourism sector.

In addition, the relevant authority will learn and facilitate others' learning regarding desired nature conversation behaviour, which in turn will be helpful for the natural environment. Furthermore, this study findings can be sent to the concerned organisations (e.g. Bangladesh Parjatan Corporation or BPC that monitors the tourism sector) to provide insight and build knowledge, including the proper way to nourish ecotourism in Bangladesh.

Above all, an understanding of the benefits of ecotourism should encourage stakeholders to support this industry, which has the potential to produce

significant benefits for the local community, tourism entrepreneurs, other ecotourism stakeholders, and the country as a whole. These study findings can be applied to other similar ecotourism countries.

8.4 LIMITATIONS OF THE STUDY

Most of the literature that informed this research was written from a Western perspective, and therefore does not provide an adequate basis for designing the empirical studies. Furthermore, as the stakeholders surveyed in this study differ in terms of socio-cultural backgrounds, several other limitations of this study have been identified. It should be noted, however, that every research method and design has its own flaws and constraints (McGrath, Martin and Kulka 1982). The perceived limitations of this study are as follows.

First, this study only surveyed three groups of ecotourism stakeholders, while there are many other relevant groups, such as government and local management. Incorporating such valuable stakeholders in the survey could have provided better insights. Including other stakeholders in future research could therefore produce a more comprehensive picture of ecotourism.

Second, this research was conducted in Khulna region, where ecotourism is centred on the world's largest mangrove forest, the Sundarbans. This destination is different from most other ecotourism destinations in terms of its nature, way to move around etc. Thus, incorporating some other ecotourism destinations might have provided some additional information about the ecotourism in Bangladesh.

Third, this research adopted convenience and snowball sampling techniques, while random sampling would have provided less biased data. Probability sampling was not used because there are currently no databases of the

populations; when such databases become available, probability sampling would be the recommended sampling technique.

Fourth, in addition to providing positive outcomes, ecotourism can generate negative consequences. However, as this study has assumed that if managed properly, ecotourism should yield benefits for the destination, which is why it has only focused on positive outcomes. This is another limitation of this study.

Fifth, this survey was conducted within a single tourism season. Collecting data over several seasons could provide variations of data and improve the knowledge of ecotourism.

8.5 FUTURE RESEARCH DIRECTIONS

The above stated limitations of the study suggest avenues for future research into ecotourism, particularly the outcomes of ecotourism. The recommendations for future research are summarised below.

First, this study has produced a model of ecotourism that incorporates a comprehensive set of antecedents and outcomes, and is valid in an emerging economy context. Either the antecedents or outcome components of the model could be tested in other actual or potential ecotourism destinations.

Second, this study has only incorporated three stakeholder groups in relation to ecotourism. These findings could therefore be more thoroughly tested by incorporating other relevant stakeholders.

Third, this study could be replicated in other types of ecotourism destinations such as hilly or coastal areas, and the findings compared to determine whether ecotourism has similar outcomes in destinations with different natural environments.

Fourth, the validity of the study model could be verified in other countries that possesses similar resources.

Fifth, this study identified that economic benefits partially mediate socio-cultural benefits, and that socio-cultural benefits partially mediate environmental benefits. However, unlike the other research findings, this research failed to identify that economic benefits can mediate both environmental and emotional benefits. Such mediation effects could be verified in other studies.

Sixth, the moderating effects of ecotourism stakeholders could be tested in other ecotourism destinations where the background of the stakeholders would be different from those in this study.

Seventh, this research could be replicated in a Western context to compare the antecedents and outcomes of ecotourism in developed versus emerging economic contexts.

8.6 CONCLUSIONS

The aim of this study was to develop a comprehensive model of ecotourism that includes both antecedents and outcomes. This study also sought to establish whether ecotourism in a developing country would have four specific outcomes, including one new type of benefit. This study further aimed to verify whether the outcomes of the ecotourism have any moderating and mediating effects.

All of these objectives were achieved, and a comprehensive model of ecotourism was developed and its validity in the Bangladesh context established. These study findings are in line with most of the existing literature with some exceptions. For example, the comprehensive model includes a set of four antecedents and four outcomes including a new outcome, which will add value to existing literature.

All of this study's findings could be useful for the government and other policymakers of Bangladesh so that they have better insights about the

antecedents and probable benefits of ecotourism. A deeper understanding of the benefits of ecotourism could influence them to pay more attention to developing and supporting ecotourism, which could yield benefits for local stakeholders, tourists and the country as a whole.

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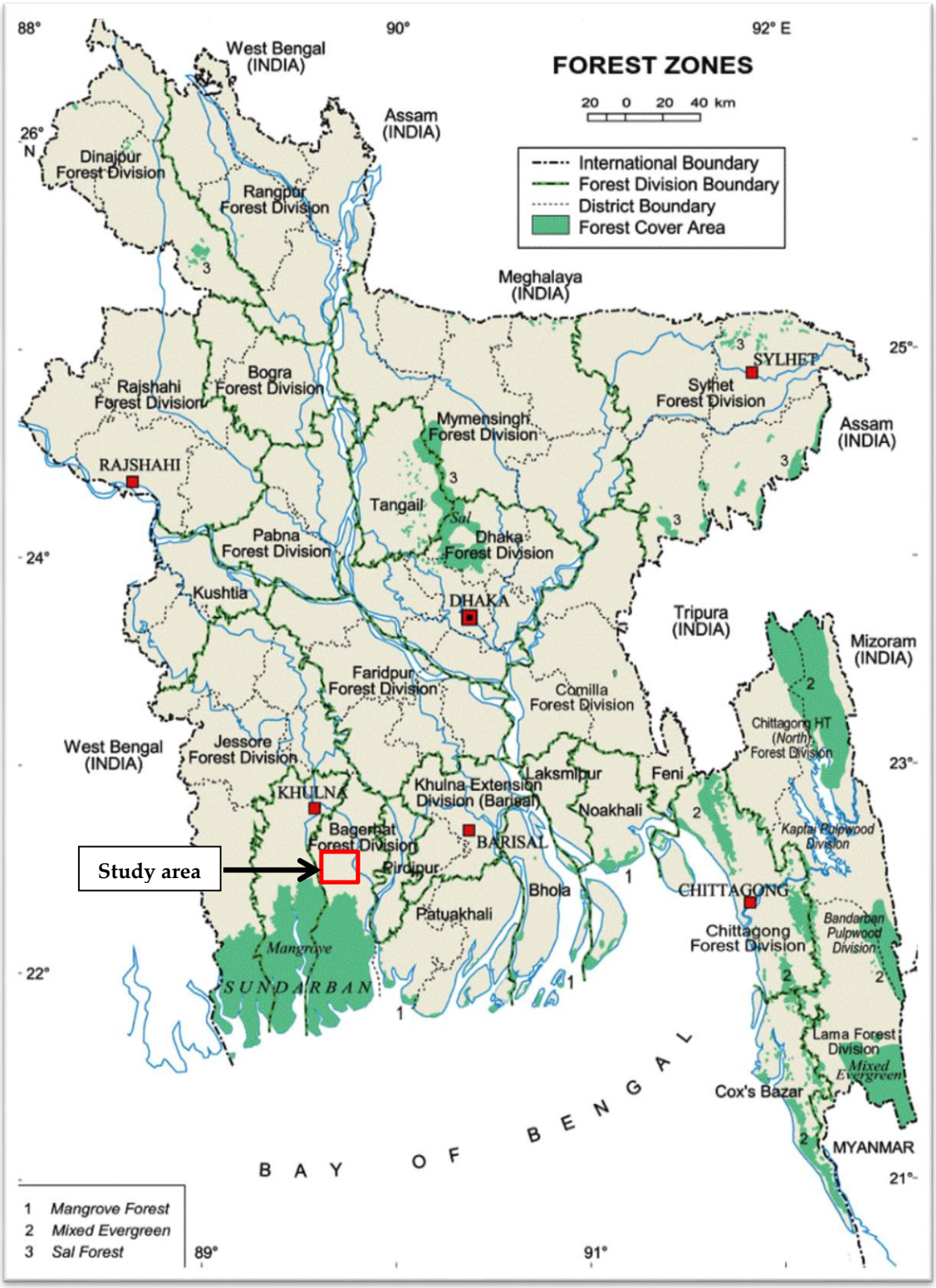
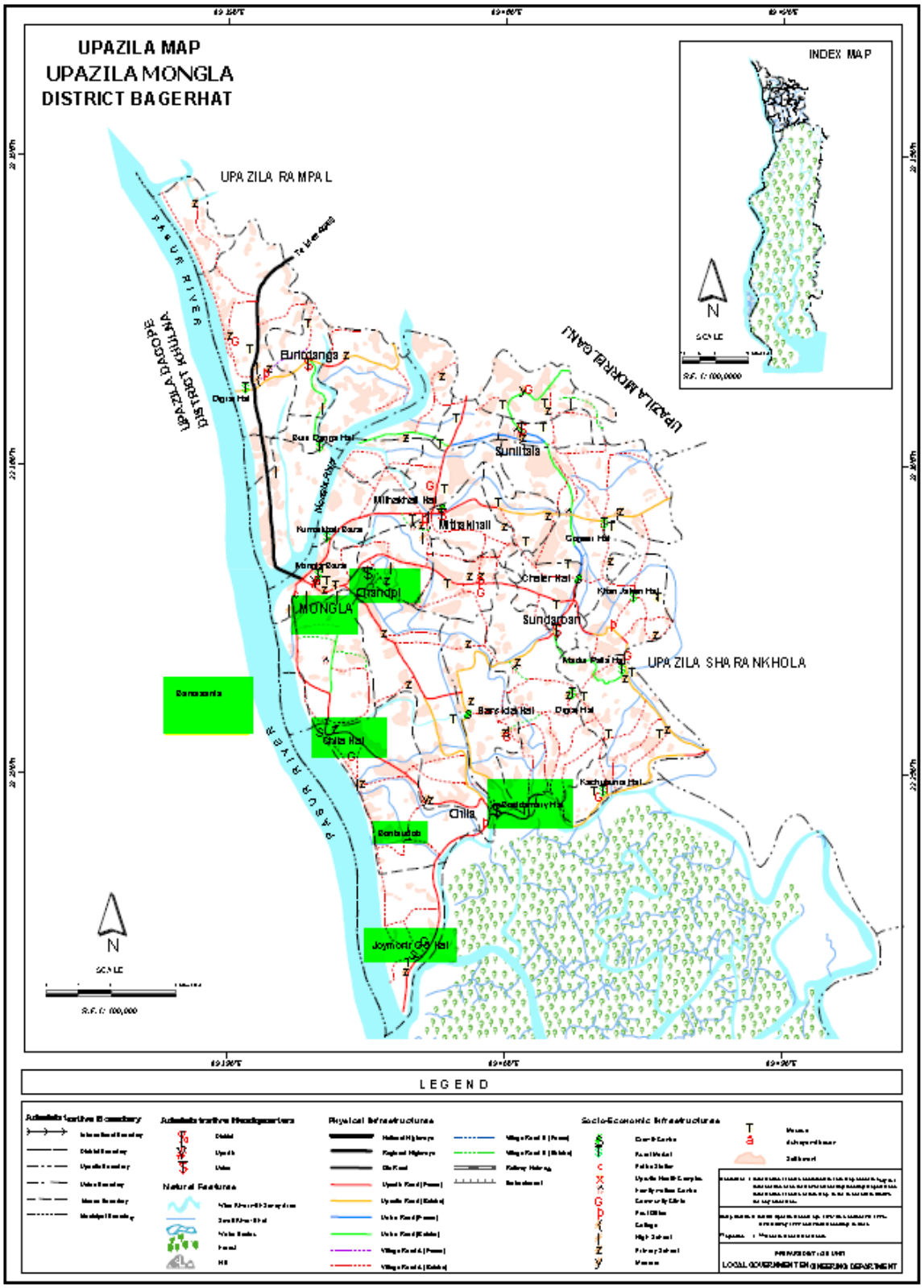
APPENDIX A: STUDY AREA IN BANGLADESH MAP



APPENDIX B: DATA COLLECTION AREA



APPENDIX C: INTERVIEW SCHEDULE

Questionnaire for local people/ tourism business people

Introductory Questions

Your name:

Occupation:

Number of years living in this area:

Key Questions

1. Could you please mention, what are the attributes that attract tourists/ecotourists in this place?

   Probe if necessary: Natural attraction, Cultural activities/diversity of the locality/country, Infrastructural development

2. How do you perceive tourist's attitude in your locality?

   Probe if necessary: Towards nature, Local food, Cultural values, Local people and the society.

3. Do you believe that tourism/ecotourism activities have some impact on the local business?

   Probe if necessary: Development of local business, any kind of tourism related business.

4. Could you tell me whether some support activities are required for tourism development in your area?

   Probe if necessary: Government rules/policies, Local authority/ management body, Supports relevant, adequate and important?

5. Have you noticed any changes due to tourism/ecotourism development in your locality?

Probe if necessary: economic development/benefit, Social development/ benefit, Environmental development/benefit, Emotional benefit, relationships among benefits!, Any link among these?

6. Do you believe tourism/ecotourism activities will last for a long time in your locality?

Probe for reasons.

Thank you very much for your cooperation and valuable time

APPENDIX D: TRANSLATION OF INTERVIEW SCHEDULE

Questions for Local People/ Local Tourism related Business People

প্রাথমিক প্রশ্নাবলি :

আপনার নাম :

পেশা :

এ এলাকায় বসবাসের সময়সীমা :

মুল প্রশ্নাবলিঃ

১। আপনি কি অনুগ্রহপূর্বক বলবেন, কী কী বৈশিষ্ট্যের জন্য পর্যটকগণ এ এলাকায় আসতে আগ্রহী?

Probe (প্রয়োজন সাপেক্ষে):

(প্রাকৃতিক দৃশ্যাবলির প্রতি আকর্ষণ, অত্র এলাকার সাংস্কৃতিক কার্যকলাপ বা বৈচিত্র্য, অবকাঠামো ইত্যাদি)

২। আপনি আপনার এলাকায় পর্যটকগণের আচরণ কিভাবে মূল্যায়ন করেন?

Probe (প্রয়োজন সাপেক্ষে):

(প্রকতি, স্থানীয় খাদ্যদ্রব্য, সাংস্কৃতিক মূল্যবোধ, স্থানীয় জনগণ এবং সমাজ)

৩। আপনি কি মনে করেন যে, পর্যটন-শিল্প স্থানীয় ব্যবসায় ৰেত্রে প্রভাব বিস্তার করে?

Probe (প্রয়োজন সাপেক্ষে):

(স্থানীয় ব্যবসায়ের উন্নয়ন, পর্যটনশিল্প সংক্রান্ত ব্যবসায়)

৪। আপনি কি অনুগ্রহ-পূর্বক বলবেন, আপনার এলাকায় পর্যটন-শিল্পের উন্নয়নে কিছু সহায়ক কার্যাবলি প্রয়োজন আছে কিনা?

Probe (প্রয়োজন সাপেক্ষে):

(সরকারি নীতি, স্থানীয় প্রশাসন বা ব্যবস্থাপক, সহায়তাসমূহের প্রাসঙ্গিকতা, পর্যাপ্ত ও গুরুত্বপূর্ণ কিনা)

৫। পর্যটন-শিল্পের উন্নয়নের ফলে আপনি কি আপনার এলাকায় কোনো পরিবর্তন লক্ষ করেছেন?

Probe (প্রয়োজন সাপেক্ষে):

(অর্থনৈতিক উন্নয়ন, সামাজিক উন্নয়ন, পরিবেশগত উন্নয়ন, মানসিক উন্নয়ন, এসবের মধ্যে যে কোনো সম্পর্ক)

৬। আপনি কি মনে করেন যে, আপনার এলাকায় পর্যটন-শিল্পের কার্যাবলি টেকসই হবে?

কারণসমূহের জন্য Probe:

আপনার মূল্যবান সময় এবং সহযোগিতার জন্য ধন্যবাদ।

APPENDIX E: QUESTIONNAIRE FOR THE TOURISTS

Dear Participants,

I am conducting a study on **"Does Ecotourism Produce Sustainable Outcomes? Testing the Direct and Mediated Effects"** for my PhD Dissertation at the Graduate School of Business, Curtin University, Australia**.**

The primary objective of this survey is to identify issues related to identify the antecedents of ecotourism and its outcomes in Bangladesh. Information you provide in this survey is very important. The information collected in this regard will be treated as confidential and used for academic purposes only. The survey will take approximately 20 minutes of your valuable time. You can withdraw from participating at any time without prejudice whatsoever.

This questionnaire has been approved by the Human Research Ethics Committee (Ref. No. GSB 33-13), Curtin University. If you have any questions about this survey, please contact me on +61404691967 (email: feroz1967 @yahoo.com); or my Supervisor Professor Mohammed Quaddus, on +618-92662862 (email: mohammed. quaddus @gsb.curtin.edu. au). If you have any questions regarding ethical issues, please contact or the Secretary, Human Research Ethics Committee, Curtin University on +618-9266 2784.

Your kind cooperation will be highly appreciated in this regard.

Sincerely yours,

(Feroz Ahmed)
PhD Candidate, Graduate School of Business
Curtin University of Technology
78, Murray Street, Perth 6000, WA

Section A

Please indicate your level of agreement with each of the following statement about tourism/ecotourism by placing a tick (√) in the box for each statement, where Strongly Disagree = 1, Moderately Disagree = 2, Slightly Disagree = 3, Slightly Agree = 4, Moderately Agree = 5, Strongly Agree = 6

Qn.	You are attracted to this area because…		Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
			1	2	3	4	5	6
1	natural beauty of the forest of this area is diversified.	NTA1						
2	you can enjoy river cruise.	NTA2						
3	the presence of nature based tourist spots like 'Koromjol'	NTA3						
4	there are opportunities for watching wildlife e.g. Royal Bengal tigers, deer, crocodiles etc.	NTA4						
5	you can enjoy the fresh air and pristine natural surroundings.	NTA5						
	You are attracted to this area because…		**1**	**2**	**3**	**4**	**5**	**6**
6	a famous cultural site like the shrine of 'Khan Jahan' is available in this place.	SCA1						
7	you can observe *puja* and similar religious activities in this area.	SCA2						
8	you can watch boat races or similar sporting activities here.	SCA3						
9	this area hosts cultural festivals.	SCA4						
10	speciality local foods are available in this place.	SCA5						
11	you can find diversified local cultural features in this area.	SCA6						
	You experienced that this area have the following …		**1**	**2**	**3**	**4**	**5**	**6**
12	good communication and transport links so that you can get to it.	PIF1						
13	good hotels and other accommodations options.	PIF2						
14	good transport infrastructure within the area (bridges etc.).	PIF3						
15	overnight accommodation in the forest.	PIF4						
16	good boats and motor boats.	PIF5						
17	good restaurants.	PIF6						
18	shopping facilities.	PIF7						
19	decent toilet and bathing facilities for tourists.	PIF8						
20	adequate security so that tourists feel safe in the area.	PIF9						
21	adequate supply of potable water.	PIF10						
22	electricity .	PIF11						

Qn.	You felt that people in this area…	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
		1	2	3	4	5	6
23	fully support the development of tourism in their area. PCA1						
24	love to see tourists in their locality. PCA2						
25	do not feel that the tourists disrupt their life. PCA3						
26	believe tourism in the area is good for local society and culture. PCA4						
27	believe that tourists arrival is the mode of their income opportunity. PCA5						
28	consider that tourism is beneficial to the area PCA6						
29	are actively involved in various tourism activities. PCA7						
30	are involved in making decisions about development of tourism. PCA8						
31	operate a business which is dependent on tourism in the area. PCA9						
32	like working in the hotels, restaurants, trawlers etc. that serve the tourists. PCA10						
	You felt that for proper tourism/ecotourism development, the local management…	**1**	**2**	**3**	**4**	**5**	**6**
33	provides an appropriate regulatory framework for tourism activities. LMT1						
34	provides guidance to others about the tourists activities. LMT2						
35	has an appropriate action plan to ensure that the natural environment is preserved and the area is clean. LMT3						
36	ensures maintaining the carrying capacity e.g. natural beauty of the area. LMT4						
	You felt that government or local authority supports ecotourism in this area by…						
37	working steadily. GTA1						
38	financing infrastructure projects. GTA2						
39	carrying out various development projects. GTA3						
40	providing a master plan to guide development of tourism in the area. GTA4						
	Regarding Economic Benefits **You sensed that ecotourism in this area has…**						
41	created jobs for local people. EOB1						
42	increased local wages. EOB2						
43	enhanced the business opportunities available in the area. EOB3						
44	generated substantial revenue for the government. EOB4						
	You got the impression that as a result of ecotourism…	**1**	**2**	**3**	**4**	**5**	**6**
45	the local community is conscious of the adverse effects of littering, water contamination and deforestation. NTB1						
46	the tourists are more concerned about nature and the natural environment. NTB2						
47	local people actively try to prevent degradation of the natural environment. NTB3						
48	the government plays an active role in conservation projects in this area. NTB4						

Qn.	Regarding Socio-cultural Benefits As per your observation and interpretation, due to ecotourism…	Strongly Disagree 1	Moderately Disagree 2	Slightly Disagree 3	Slightly Agree 4	Moderately Agree 5	Strongly Agree 6
49	most local people are able to feed their family properly. SOB1						
50	local people can afford basic medical care for family members. SOB2						
51	local people have enough money to buy decent clothing for their family. SOB3						
52	local people are now able to support their wider family financially and provide food, clothing and medicine form them. SOB4						
53	local housing and sanitation facilities are greatly improved. SOB5						
54	there are facilities for lifelong learning. SOB6						
55	local people can afford to send their children to school. SOB7						
56	local people benefit from better infrastructure. SOB8						
	Regarding Emotional Benefits **You felt that as a result of ecotourism and tourism in this area…**	**1**	**2**	**3**	**4**	**5**	**6**
57	local people are happy to see tourists from other parts of the country visiting their area. EMB1						
58	local people enjoy interacting with tourists from other regions and other countries. EMB2						
59	local people are proud that because of tourism and ecotourism people from other regions and countries can learn about their area. EMB3						
60	local people are pleased that the tourists appreciate the scenic beauty of their area. EMB4						

Section B

The questions under Section B are categorising responses for analysis and will not reveal individual responses. All responses will be used in aggregate form maintaining strict confidentiality.

Please answer all questions by ticking (√) in the boxes (□) provided or by writing in the spaces provided.

1. Your purpose of visit:

□ Visiting relatives □ Tourism

□ Business □ Other (please specify) _____

2. You are: □ Male □ Female □ Other _____

3. You are: □ Married □ Unmarried

4. You Status: ☐ Student ☐ Businessman

☐ Service/Employed ☐ Other (Please specify)_____

5. Your age: ☐ 20 Years or younger ☐ 21 to 30 Years ☐ 31 to 40 Years

☐ 41 to 50 Years ☐ 51 Years or older

6. Your highest formal education: ☐ Primary ☐ High School

☐ College/ University ☐ Other (Please specify)_____

7. Your family income (monthly): ☐ Tk. Less than 25,000 ☐ Tk.25, 000-50, 000

☐ Tk. 50,001- 100, 000 ☐ Tk. 100,001 or higher *($US 1=Tk. 78)

8. You are from: ☐ Bangladesh ☐ Foreign Country

9. If from Bangladesh:

☐ Dhaka Division ☐ Khulna Division ☐ Chittagong Division

☐ Rajshahi Division ☐ Rangpur Division ☐ Barisal Division

☐ Sylhet Division

10. If you are from foreign country:

☐ Asia – SAARC Countries ☐ Asia – Other than SAARC Countries ☐ Europe

☐ North America ☐ Australia ☐ South America ☐ Africa

11. How many times you have visited this area/spot?

☐ This is my first visit ☐ Repeat visit

12. Motivation for visiting this are:

_____

_____

_____

13. Could you please mention the problems that you faced while traveling this area?

_____

_____

_____

Thank you for your valuable time

APPENDIX F: QUESTIONNAIRE FOR THE LOCAL COMMUNITY AND TOURISM ENTREPRENEURS

Dear Participants,

I am conducting a study on **"Sustainable Ecotourism Development in Bangladesh: An Empirical Study of the Outcomes"** for my PhD Dissertation at the Graduate School of Business, Curtin University, Australia**.**

The primary objective of this survey is to identify issues related to sustainable ecotourism development and its outcome in Bangladesh. Information you provide in this survey is very important. The information collected in this regard will be treated as confidential and used for academic purposes only. The survey will take approximately 20 minutes of your valuable time. You can withdraw from participating at any time without prejudice whatsoever.

This questionnaire has been approved by the Human Research Ethics Committee (Ref. No. GSB 33-13), Curtin University. If you have any questions about this survey, please contact me on +61404691967 (email: feroz1967 @yahoo.com); or my Supervisor Professor Mohammed Quaddus, on +618-92662862 (email: mohammed. quaddus @gsb.curtin.edu. au). If you have any questions regarding ethical issues, please contact or the Secretary, Human Research Ethics Committee, Curtin University on +618-9266 2784.

Your kind cooperation will be highly appreciated in this regard.

Sincerely yours,

(Feroz Ahmed)
PhD Candidate, Graduate School of Business
Curtin University of Technology
78, Murray Street, Perth 6000, WA

Section A

Please indicate your level of agreement with each of the following statement about tourism/ecotourism by placing a tick (√) in the box for each statement, where Strongly Disagree = 1, Moderately Disagree = 2, Slightly Disagree = 3, Slightly Agree = 4, Moderately Agree = 5, Strongly Agree = 6

Qn.	Tourists are attracted to your area because…		Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
			1	2	3	4	5	6
1	natural beauty of the forest is diversified.	NTA1						
2	the tourists can enjoy river cruise.	NTA2						
3	the presence of nature based tourist spots like 'Koromjol'	NTA3						
4	there are opportunities for watching wildlife e.g. Royal Bengal tigers, deer, crocodiles etc.	NTA4						
5	tourists can enjoy the fresh air and pristine natural surroundings.	NTA5						
	Tourists are attracted to your area because it has…		**1**	**2**	**3**	**4**	**5**	**6**
6	a famous cultural site like the shrine of 'Khan Jahan'.	SCA1						
7	tourists can observe *puja* and similar religious activities.	SCA2						
8	tourists can watch boat races or similar sporting activities.	SCA3						
9	there are cultural festivals.	SCA4						
10	speciality local foods are available.	SCA5						
11	diversified local cultural features are available.	SCA6						
	Does your area have the following …		**1**	**2**	**3**	**4**	**5**	**6**
12	good communication and transport links so that tourists can get to it.	PIF1						
13	good hotels and other accommodations options.	PIF2						
14	good transport infrastructure within the area (bridges etc.).	PIF3						
15	overnight accommodation in the forest.	PIF4						
16	good boats and motor boats.	PIF5						
17	good restaurants.	PIF6						
18	shopping facilities for more than the essentials of everyday life.	PIF7						
19	decent toilet and bathing facilities for tourists.	PIF8						
20	adequate security so that tourists feel safe in the area.	PIF9						
21	adequate supply of potable water.	PIF10						
22	electricity .	PIF11						

Qn.	People in this area…		Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
			1	2	3	4	5	6
23	fully support the development of tourism in their area.	PCA1						
24	love to see tourists in their locality.	PCA2						
25	do not feel that the tourists disrupt their life.	PCA3						
26	believe tourism in the area is good for local society and culture.	PCA4						
27	believe that tourists arrival is the mode of their income opportunity.	PCA5						
28	consider that tourism is beneficial to the area	PCA6						
29	are actively involved in various tourism activities.	PCA7						
30	are involved in making decisions about development of tourism.	PCA8						
31	operate a business which is dependent on tourism in the area.	PCA9						
32	like working in the hotels, restaurants, trawlers etc. that serve the tourists.	PCA10						
	For proper tourism/ecotourism development, the local management…		**1**	**2**	**3**	**4**	**5**	**6**
33	provides an appropriate regulatory framework for tourism activities.	LMT1						
34	provides guidance to others about the tourists activities.	LMT2						
35	has an appropriate action plan to ensure that the natural environment is preserved and the area is clean.	LMT3						
36	Ensures maintaining the carrying capacity e.g. natural beauty of the area.	LMT4						
	The government or local authority supports ecotourism in this area by…		**1**	**2**	**3**	**4**	**5**	**6**
37	working steadily.	GTA1						
38	financing infrastructure projects.	GTA2						
39	carrying out various development projects.	GTA3						
40	providing a master plan to guide development of tourism in the area.	GTA4						
	Regarding Economic Benefits **Development of ecotourism and tourism in this area has…**							
41	created jobs for local people.	EOB1						
42	increased local wages.	EOB2						
43	enhanced the business opportunities available in the area.	EOB3						
44	generated substantial revenue for the government.	EOB4						
	As a result of ecotourism…		**1**	**2**	**3**	**4**	**5**	**6**
45	the local community is conscious of the adverse effects of littering, water contamination and deforestation.	NTB1						
46	the tourists are more concerned about nature and the natural environment.	NTB2						
47	local people actively try to prevent degradation of the natural environment.	NTB3						
48	the government plays an active role in conservation projects in this area.	NTB4						

Qn.	Regarding Socio-cultural Benefits As a result of ecotourism and tourism in this area…	Strongly Disagree 1	Moderately Disagree 2	Slightly Disagree 3	Slightly Agree 4	Moderately Agree 5	Strongly Agree 6
49	most local people are able to feed their family properly. SOB1						
50	local people can afford basic medical care for family members. SOB2						
51	local people have enough money to buy decent clothing for their family. SOB3						
52	local people are now able to support their wider family financially and provide food, clothing and medicine form them. SOB4						
53	local housing and sanitation facilities are greatly improved. SOB5						
54	there are facilities for lifelong learning. SOB6						
55	local people can afford to send their children to school. SOB7						
56	local people benefit from better infrastructure. SOB8						
	Regarding Emotional Benefits **As a result of ecotourism and tourism in this area…**	**1**	**2**	**3**	**4**	**5**	**6**
57	local people are happy to see tourists from other parts of the country visiting their area. EMB1						
58	local people enjoy interacting with tourists from other regions and other countries. EMB2						
59	local people are proud that because of tourism and ecotourism people from other regions and countries can learn about their area. EMB3						
60	local people are pleased that the tourists appreciate the scenic beauty of their area. EMB4						

Section B

The questions under Section B are categorising responses for analysis and will not reveal individual responses. All responses will be used in aggregate form maintaining strict confidentiality.

Please answer all questions by ticking (√) in the boxes (□) provided or by writing in the spaces provided.

1. Name of this area _____

2. Your age: □ 20 years or younger □ 21 to 30 years
□ 31 to 40 years □ 41 to 50 years □ 51 years or older

3. Your highest formal education: □ Primary □ High School
□ College/ University □ Other (Please specify)_____

4. You Status: □ Local People □ Business owner □ Employed in Business

5. You are living in this area: ☐ Below 5 years ☐ 5 to 10 years

☐ More than 10 years

6. If employed, you are working as: ☐ Manager ☐ Hotel boy ☐ Cashier

☐ Cleaner ☐ Other (Please specify)_____

7. For how many years tourism activities started in this area? _____years.

8. If you are a business owner, how long you are operating this business?

☐ Less than 5 years ☐ 5 to 10 years ☐ More than 10 years

9. Your family income (monthly): ☐ Less than Tk.10,000 ☐ Tk.10, 000-25, 000

☐ Tk. 25,001- 50, 000 ☐ Tk. 50,001 or higher

10. You are: ☐ Male ☐ Female

11. You are: ☐ Married ☐ Unmarried

12. No. of children in your family: ☐ 2 or less ☐ 3 to 5 ☐ More than 5

13. Please mention your religion: ☐ Hindu ☐ Muslim ☐ Christian

☐ Other (Please specify)_____

18. Your name and cell no. (optional) ……..

Thank you for your participation

APPENDIX G: BANGLA QUESTIONNAIRE FOR THE LOCAL COMMUNITY AND TOURISM ENTREPRENEURS

বাংলাদেশে ইকোট্যুরিজম উন্নয়ন সম্বন্ধে সামাজিক ও ব্যবসায়িক উপলব্ধি

প্রিয় উত্তরদাতা,

আমি কার্টিন বিশ্ববিদ্যালয়ের গ্র্যাজুয়েট স্কুল অব বিজনেস এর অধীন আমার পি এইচ ডি অভিসন্দর্ভের জন্য 'বাংলাদেশে টেকসই ইকোট্যুরিজম উন্নয়নঃ ফলাফল সমূহের উপর একটি প্রায়োগিক পর্যেষণা' শীর্ষক গবেষণা করছি।

এই জরিপের প্রাথমিক লক্ষ্য হল **টেকসই ইকোট্যুরিজম উন্নয়ন এবং বাংলাদেশে এর প্রভাব সম্পর্কিত বিষয় সমূহ চিহ্নিত করা**। আপনার কাছ থেকে জরিপে প্রাপ্তব্য তথ্য অত্যন্ত গুরুত্বপূর্ণ। প্রাপ্য তথ্য এক্ষেত্রে গোপনীয় বিবেচনা করা হবে এবং শুধুমাত্র শিক্ষায়তনিক উদ্দেশে ব্যবহৃত হবে। এই জরিপ সম্পন্ন হতে আপনার মূল্যবান সময়ের প্রায় কুড়ি মিনিট খরচ হবে। জরিপ চলাকালীন যে কোন পর্যায়ে নিঃশঙ্কোচে আপনি নিজেকে সাক্ষাৎকার প্রদান থেকে প্রত্যাহার করতে পারবেন।

এই প্রশ্নাবলি কার্টিন বিশ্ববিদ্যালয় (অস্ট্রেলিয়া) এর হিউম্যান রিসার্চ এথিকস্ কমিটি(স্মারক নং – জিএসবি ৩৩-১৩) কর্তৃক অনুমোদিত। জরিপ বিষয়ক যে কোন অনুসন্ধানের জন্য অনুগ্রহপূর্বক আমার সঙ্গে যোগাযোগ করুনঃ +৬১৪০৪৬৯১৯৬৭ (ইমেইলঃ **feroz1967@yahoo.com**) অথবা আমার তত্ত্বাবধআয়ক অধ্যাপক মোহাম্মদ কুদ্দুসঃ +৬১৮-৯২৬৬২৮৬২ (ইমেইলঃ **mohammed.quaddus @gsb.curtin.edu.au**)। নৈতিক প্রশ্নসম্পর্কিত অনুসন্ধানের জন্য অনুগ্রহপূর্বক যোগাযোগ করুনঃ সচিব, দি রিসার্চ এথিকস্ কমিটি, কার্টিন বিশ্ববিদ্যালয়: +৬১৮-৯২৬৬২৭৮৪।

সদয় সহযোগিতার জন্য আপনাকে অশেষ ধন্যবাদ।

আপনার একান্ত,

(ফিরোজ আহমেদ)
পি এইচ ডি শিক্ষার্থী, গ্র্যাজুয়েট স্কুল অব বিজনেস
কার্টিন ইউনিভার্সিটি
৭৮, মারে স্ট্রীট, পার্থ, ৬০০০, ডব্লিউ এ

১ম অংশ

নীচের পর্যটন/ ইকোট্যুরিজম সংক্রান্ত বিবৃতিগুলোর ব্যাপারে আপনার মতামতের ধরণ, বিবৃতির জন্য নির্ধারিত ঘরে টিক চিহ্নের মাধ্যমে প্রকাশ করুন, যেখানে,

পুরোপুরি ভিন্নমত=১, মোটামুটি ভিন্নমত=২, কিছুটা ভিন্নমত=৩, কিছুটা একমত=৪, মোটামুটি একমত=৫, পুরোপুরি একমত=৬

ক্রমিক নং		পুরোপুরি ভিন্নমত	মোটামুটি ভিন্নমত	কিছুটা ভিন্নমত	কিছুটা একমত	মোটামুটি একমত	পুরোপুরি একমত
	নিম্নলিখিত প্রাকৃতিক বৈশিষ্ট্য সমূহ আপনার এলাকার প্রতি পর্যটকদের আকৃষ্ট করে, কারণ এই এলাকায়...	**১**	**২**	**৩**	**৪**	**৫**	**৬**
১	বনের প্রাকৃতিক সৌন্দর্য বৈচিত্রপূর্ণ। NTA1						
২	পর্যটকরা নদীতে নৌভ্রমণ উপভোগ করতে পারে। NTA2						
৩	প্রকৃতি নির্ভর পর্যটন স্থান যেমন করমজল এর অবস্থান। NTA3						
৪	রয়্যাল বেঙ্গল টাইগার, হরিণ, কুমির ইত্যাদি বন্য পশু দেখবার সুযোগ আছে। NTA4						
৫	পর্যটকরা মুক্ত বাতাস ও অকৃত্রিম প্রাকৃতিক পরিবেশ উপভোগ করতে পারে। NTA5						
	নিম্নলিখিত সামাজিক-সাংস্কৃতিক বৈশিষ্ট্য সমূহ আপনার এলাকার প্রতি পর্যটকদের আকৃষ্ট করে, কারণ এই এলাকায়...	**১**	**২**	**৩**	**৪**	**৫**	**৬**
৬	'খান জাহান আলী'র দরগাহ এর মত বিখ্যাত স্থান আছে। SCA1						
৭	পূজা/এধরণের ধর্মীয় আচার অনুষ্ঠান দেখার সুযোগ আছে। SCA2						
৮	নৌকাবাইচ/অন্যান্য অনুষ্ঠান দেখার সুযোগ আছে। SCA3						
৯	বিভিন্ন ধরণের সাংস্কৃতিক উৎসব উপভোগ করা যায়। SCA4						
১০	ভিন্ন ধরণের স্থানীয়/বিখ্যাত খাবার পাওয়া যায়। SCA5						
১১	বৈচিত্রপূর্ণ স্থানীয় সাংস্কৃতিক বৈশিষ্ট্য দেখা যায়। SCA6						
	নিম্নলিখিত অবকাঠামো/ সুযোগ-সুবিধা সমূহ আপনার এলাকার প্রতি পর্যটকদের আকৃষ্ট করে ...	**১**	**২**	**৩**	**৪**	**৫**	**৬**
১২	এখানে পৌঁছাবার ভাল যোগাযোগ ব্যবস্থা। PIF1						
১৩	মানসম্মত হোটেল/ আবাসন সুবিধা। PIF2						
১৪	এলাকার ভেতর চলাচলের প্রয়োজনীয় সেতু, কালভার্ট ইত্যাদি। PIF3						
১৫	বনের ভেতর থাকবার ব্যবস্থা। PIF4						
১৬	ভাল মানের নৌকা/ যন্ত্র চালিত নৌকা। PIF5						
১৭	মানসম্মত রেস্তোঁরা। PIF6						
১৮	কেনাকাটার সুবিধা যেমন, বিভিন্ন ধরনের দোকানপাটের সহজলভ্যতা। PIF7						
১৯	পর্যটকদের জন্য সন্তোষজনক টয়লেট এবং গোসল করবার ব্যবস্থা। PIF8						
২০	পর্যটকদের জন্য পর্যাপ্ত নিরাপত্তা ব্যবস্থা। PIF9						
২১	পর্যাপ্ত খাবার পানি। PIF10						
২২	সহজলভ্য বিদ্যুৎ ব্যবস্থা। PIF11						

ক্রমিক নং	এই এলাকার সমাজ ও লোকজন...	পুরোপুরি ভিন্নমত	মোটামুটি ভিন্নমত	কিছুটা ভিন্নমত	কিছুটা একমত	মোটামুটি একমত	পুরোপুরি একমত
		১	২	৩	৪	৫	৬
২৩	এই এলাকায় পর্যটনের উন্নয়নকে পূর্ণ সমর্থন করে। PCA1						
২৪	তাদের এলাকায় পর্যটকদের আগমন পছন্দ করে। PCA2						
২৫	এলাকায় পর্যটকদের আগমনে বিরক্ত হয় না। PCA3						
২৬	বিশ্বাস করে যে, এলাকায় পর্যটকদের আগমন তাদের সমাজ ও সংস্কৃতির জন্য কল্যাণকর। PCA4						
২৭	বিশ্বাস করে যে পর্যটন তাদের আয়ের একটি উপায়। PCA5						
২৮	উপলব্ধি করে যে, এলাকায় পর্যটনের উন্নয়ন তাদের এলাকার জন্য লাভজনক। PCA6						
২৯	পর্যটন উন্নয়ন কর্মকাণ্ডে সরাসরি অংশগ্রহণ করে। PCA7						
৩০	পর্যটন উন্নয়ন সংক্রান্ত বিভিন্ন সিদ্ধান্ত গ্রহণ প্রক্রিয়ায় জড়িত। PCA8						
৩১	পর্যটকদের আগমন কেন্দ্র করে তাদের ব্যবসা পরিচালনা করে। PCA9						
৩২	পর্যটকদের সেবায় নিয়োজিত বিভিন্ন হোটেল, রেস্তোঁরা, যন্ত্র চালিত নৌকা ইত্যাদিতে কাজ করতে পছন্দ করে। PCA10						
	স্থানীয় ব্যবস্থাপনা সম্বন্ধে পর্যটন/ ইকোট্যুরিজম এর যথাযথ উন্নয়নকল্পে স্থানীয় ব্যবস্থাপনা ...	১	২	৩	৪	৫	৬
৩৩	পর্যটন কর্মকাণ্ড নিয়ন্ত্রণ করার জন্য যথাযথ বিধি-বিধান প্রবর্তন করেছে। LMT1						
৩৪	যথাযথ বিধি অনুসরণ করে এবং পর্যটকদের কর্মকাণ্ডের পথনির্দেশনা প্রদান করে। LMT2						
৩৫	এলাকার প্রকৃতি ও পরিচ্ছন্নতা রক্ষণাবেক্ষণের যথাযথ কর্মপরিকল্পনা গ্রহণ করে। LMT3						
৩৬	সর্বোচ্চ সক্ষমতা রক্ষণাবেক্ষণ/ নিশ্চিত করে, যেমনঃ এলাকার প্রাকৃতিক সৌন্দর্য। LMT4						
	পর্যটন/ ইকোট্যুরিজম এর উন্নয়নের স্বার্থে সরকার/স্থানীয় কর্তৃপক্ষ ...						
৩৭	নিয়মিত কাজ করে। GTA1						
৩৮	অবকাঠামো উন্নয়নে পর্যাপ্ত অর্থ বরাদ্দ করে। GTA2						
৩৯	বিভিন্ন উন্নয়ন কর্মকাণ্ড পরিচালনা করে। GTA3						
৪০	মহাপরিকল্পনা গ্রহণ করেছে। GTA4						
	অর্থনৈতিক সুফল সম্বন্ধে পর্যটন/ ইকোট্যুরিজম এর উন্নয়ন এই এলাকায় ...	১	২	৩	৪	৫	৬
৪১	স্থানীয় জনগণের কর্মসংস্থানের সুযোগ সহজতর করে। EOB1						
৪২	স্থানীয় জনগণের আয় বৃদ্ধি করে। EOB2						
৪৩	এই এলাকার ব্যবসার সুযোগ বৃদ্ধি করে। EOB3						
৪৪	সরকারের উল্লেখযোগ্য উপার্জনের ব্যবস্থা করে। EOB4						
	প্রাকৃতিক সুফল সম্বন্ধে পর্যটন/ ইকোট্যুরিজম এর কর্মকাণ্ডের কারনে...						
৪৫	স্থানীয় জনগণ এখন আবর্জনা, পানি দূষণ এবং বৃক্ষনিধনের প্রতিকূল প্রভাব সম্বন্ধে সচেতন। NTB1						
৪৬	পর্যটকরা এখন অনেক বেশি সজাগ এবং প্রকৃতির প্রতি মনোযোগী। NTB2						
৪৭	এলাকার জনগণ এখন প্রাকৃতিক অবক্ষয় রোধে সচেষ্ট। NTB3						
৪৮	এ এলাকায় প্রকৃতি সংরক্ষণ কার্যক্রমে সরকার এখন সক্রিয়। NTB4						

	সামাজিক সুফল সম্বন্ধে পর্যটন/ ইকোট্যুরিজম এর উন্নয়নের কারণে এ এলাকায়...	পুরোপুরি ভিন্নমত	মোটামুটি ভিন্নমত	কিছুটা ভিন্নমত	কিছুটা একমত	মোটামুটি একমত	পুরোপুরি একমত
		১	২	৩	৪	৫	৬
৪৯	বেশির ভাগ মানুষ পরিবারের মৌলিক খাদ্য চাহিদা মেটাতে সক্ষম। SOB1						
৫০	সাধারণ মানুষ তাদের পারিবারিক সদস্যদের মৌলিক ঔষধের চাহিদা পূরণে সক্ষম। SOB2						
৫১	সাধারণ মানুষ তাদের পরিবারের মৌলিক বস্ত্র চাহিদা পূরণে আর্থিক ভাবে সক্ষম। SOB3						
৫২	এখন খাদ্য, বস্ত্র এবং ঔষধ ছাড়াও সাধারণ মানুষ তাদের পারিবারিক সদস্য ও বাবা-মা এর জন্য অর্থ খরচে বেশী সক্ষম। SOB4						
৫৩	স্থানীয় লোকজনের ঘর-বাড়ির অবস্থা আগের চাইতে এখন অনেক ভাল। SOB5						
৫৪	অধিবাসীদের বয়স্ক শিক্ষার সুবিধা এখন অনেক সহজলভ্য। SOB6						
৫৫	এলাকার সাধারণ মানুষ শিশুদের স্কুলে পাঠাতে সক্ষম। SOB7						
৫৬	স্থানীয় জনগণ উন্নত অবকাঠামোগত সুবিধা ভোগ করছে। SOB8						
	মানসিক সুফল সম্বন্ধে						
৫৭	স্থানীয় জনগণ খুশি যে, দেশের বিভিন্ন প্রান্তের পর্যটকরা তাদের এলাকায় ঘুরতে আসে। EMB1						
৫৮	স্থানীয় জনগণ দেশের বিভিন্ন প্রান্তের/বিদেশের পর্যটকদের সঙ্গে সাক্ষাৎ করার সুযোগ উপভোগ করে। EMB2						
৫৯	স্থানীয় জনগণের জন্য এটা গর্বের বিষয় যে, পর্যটনের কারণে বিভিন্ন স্থান ও বিভিন্ন দেশের লোকজন তাদের এলাকা সম্বন্ধে জানতে পারে। EMB3						
৬০	স্থানীয় জনগণ খুশি যে, পর্যটকরা তাদের এলাকার প্রাকৃতিক সৌন্দর্য উপভোগ করে। EMB4						

২য় অংশ

অনুগ্রহ করে নীচের প্রশ্নগুলোর জন্য টিক চিহ্ন (√) ব্যবহার করুন বাক্সের (□) ভেতর অথবা খালি জায়গায় লিখুন। সকল উত্তর সমষ্টিগত আকারে ব্যবহৃত হবে এবং কঠোর গোপনীয়তা রক্ষা করা হবে।

১. এই এলাকার নাম _____

২. আপনার বয়স: □ ২০ বছর বা কম □ ২১ থেকে ৩০ বছর
□ ৩১ থেকে ৪০ বছর □ ৪১ থেকে ৫০ বছর
□ ৫১ বছর বা তার বেশি

৩. সর্বোচ্চ আনুষ্ঠানিক শিক্ষা: □ প্রাথমিক □ মাধ্যমিক □ কলেজ/বিশ্ববিদ্যালয়
□ অন্যান্য (অনুগ্রহপূর্বক নির্দিষ্ট করে বলুন)_____

৪. আপনার অবস্থান (সামাজিক বা পেশাগত):

□ স্থানীয় বাসিন্দা □ ব্যবসায়ী □ ব্যবসায় নিযুক্ত কর্মচারী

৫. আপনি এই এলাকায় বাস করছেন:

□ ৫ বছরের কম □ ৫ থেকে ১০ বছর □ ১০ বছরের বেশি

৬. চাকুরীরত হলে, আপনি কাজ করছেন:

□ ব্যবস্থাপক □ হোটেল বয় □ ক্যাশিয়ার

□ পরিচ্ছন্নতা কর্মী □ অন্যান্য (অনুগ্রহপূর্বক নির্দিষ্ট করে বলুন)_____

৭. কত বছর হলো এই এলাকায় পর্যটন কার্যক্রম চালু হয়েছে? _____ বছর.

৮. আপনি যদি ব্যবসায়ী হয়ে থাকেন, তবে কত বছর ধরে ব্যবসা পরিচালনা করছেন?

□ ৫ বছরের কম □ ৫ থেকে ১০ বছর □ ১০ বছরের বেশী

৯. আপনার পারিবারিক আয়(মাসিক): □ ১০,০০০ টাকার কম □ ১০,০০০-২৫,০০০ টাকা

□ ২৫,০০১-৫০,০০০ টাকা □ ৫০,০০১ টাকা অথবা বেশী

১০. আপনি: □ পুরুষ □ মহিলা

১১. আপনি: □ বিবাহিত □ অবিবাহিত

১২. আপনার পরিবারের শিশুর সংখ্যা:

□ ২ অথবা কম □ ৩ থেকে ৫ □ ৫ এর অধিক

১৩. অনুগ্রহপূর্বক আপনার ধর্ম উল্লেখ করুন:

□ হিন্দু □ মুসলিম □ খ্রীষ্টান

□ অন্যান্য (অনুগ্রহপূর্বক নির্দিষ্ট করে বলুন)_____

১৪. আপনার নাম ও মোবাইল নম্বর (যদি আপত্তি না থাকে) : _____

আপনার মূল্যবান সময়ের জন্য ধন্যবাদ