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The Road Less Travelled: A Case Study on Ecotourism and Sustainable Development in the Sundarbans, Bangladesh

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Abstract

Ecotourism has been touted globally as a tool that promotes sustainable development. Yet ecotourism and sustainable development are neither simple to define, nor straightforward in regards to their implementation. The aim of this thesis is to critically investigate ecotourism's relationship to sustainable development. In doing so it develops its own conceptual framework on the sustainability goals of ecotourism. The framework is then applied to the case study of two eco-sites in the Sundarbans, Bangladesh with the purpose of identifying the sustainable or non-sustainable practices of these sites. There are however key factors beyond the scope of ecotourism that influence its potential. Thus the final aim involves exploring key factors within the Sundarbans that compromise the sustainable development of ecotourism. A qualitative research overview employing secondary data is used as the empirical foundation. The findings underline the need for: considering more viable and environmentally sound transport mechanisms to and from the two eco-sites; generating more income through cottage stays to better sustain livelihoods of the locals; and acquiring sufficient resilience to allow for recovery against the threats of climate change as necessary steps to enhance the sustainability of the sites. The findings further reveal that the construction of a government proposed power plant near the reserve as well as impending threats from climate change are key factors that jeopardize the sustainable development of ecotourism in the area. The study concludes that the government of Bangladesh currently lacks the necessary influential independent body to help bolster the long-term strategy of ecotourism development, further affecting the coordination of other public-private sector industries in the area.

Keywords: Ecotourism, Bangladesh, Sustainable Development, Sundarbans

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List of Abbreviations

BFD– Bangladesh Forest Department

BPC – Bangladesh Parjatan Corporation

FOA – Food and Agriculture Organization of the United Nations

IRMP – Integrated Resources Management Plans

IUCN – International Union for Conservation of Nature and Natural Resources

RI– Relief International

SD – Sustainable Development

NTO – National Tourism Organization

UNEP – United Nations Environment Programme

UNESCO –United Nations Educational, Scientific and Cultural Organization

USAID – United States Agency for International Development

UNWTO – United Nations World Tourism Organization

WCOED – World Commission On Environment and Development

1. INTRODUCTION

1.1 Background to Research Area: The Sundarbans

Known for its natural resources and a wide biodiversity of mangrove flora and fauna, the Sundarbans is a unique ecosystem comprised of densely covered mangrove forests; home to threatened species such as the Royal Bengal Tigers, Irawadi river dolphins and salt-water crocodiles (UNESCO, 2017). In what is known as the world’s largest mangrove forest, the area is spread across Bangladesh and India where 60% lies within the Southern Bangladeshi borders and the remaining 40% in India (ibid) (See figure 1). This thesis concerns itself with the Bangladeshi side.



Figure 1: Map of Sundarbans (Source: Singh, 2012)

The Sundarbans translated literally means “ beautiful forest” in Bengali. UNESCO declared it a world heritage site in 1997 “in order to protect the unique natural resources, plants, animals and the existing ecosystem” (UNESCO, 2017). The vicinity supports some 3 million people who are directly or indirectly dependent on the forest, providing livelihoods for the locals living in small villages surrounding the area (World Bank, 2014). Here precarious livelihood activities in certain seasons consist of farming tiger prawn seeds in the waters, fishing, gathering honey, and cutting wood to name a few (UNESCO,2017). These activities however are fraught with challenges of their own. The locals’ dependence on the natural resources are limited by organizations such as the Bangladesh Wildlife Preservation acts, which control and regulate activities of fishing, hunting, and extracting resources (UNESCO, 2017).

Traditional communities such as the Mowali people for example are allowed to extract honey from the forest in the months of April and May (FAO, 1998). The Sundarbans plays an important role in the national economy of Bangladesh. The Bangladesh Forest Department (BFD) maintains the Sundarbans “is the single largest source of forest produce in the country, accounting for about 45% of all timber and fuel wood output” (FAO, 1998). It becomes clear, as UNESCO has stated that a delicate balance is needed in order to facilitate the ecological components of the Sundarbans on a sustainable basis. Cyclonic storms are also a threat to the area, in that they can severely damage the forest and devastate communities not sheltered by the mangrove forest, which serves as a protective biological shield. Climate change related factors such as rising sea levels and other natural calamities threaten the tidal mangroves.

Nonetheless, tourists are drawn to the aesthetics of the area, compelled by the forest that inspired *The Jungle Book* novel. Over 303 million tourists travelled to Asia and the Pacific last year. Growth in South Asia was particularly strong with a 9% increase in arrivals than the previous year (UNTWO, 2017; Kenny, 2017). Indeed tourism is seen as an instrument for regional development but if unregulated, it can culminate in high economic, environmental and socio-cultural costs for the people living in these destinations. Ecotourism, an alternative travel ethic on the other hand, has been hailed as a panacea for developing nations. Many definitions of ecotourism are in circulation but in her book *Ecotourism and Sustainable Development*, Martha Honey prefers: “responsible travel to natural areas which conserve the environment and improves the welfare of the local people” (Honey, 2008:6). While many view ecotourism as a tool and means in which countries can promote sustainable development as is evident from international organizations such as United Nations Environment Programme (UNEP) incorporating ecotourism as a component of their sustainable agendas, ecotourism’s relationship to sustainable development is far from clear-cut and hotly debated among scholars.

Bangladesh has struggled to develop tourism of which ecotourism is a subset of such as can be seen in Figure 2 on data published by the World Bank. The data fluctuates significantly with the highest received international tourists intake in 2008 amounting to 467,000 tourists and has steadily been decreasing since, due to a number of factors beyond the scope of this thesis. It should be noted that this graph does not include domestic tourists, and many domestic tourists travel yearly in Bangladesh.

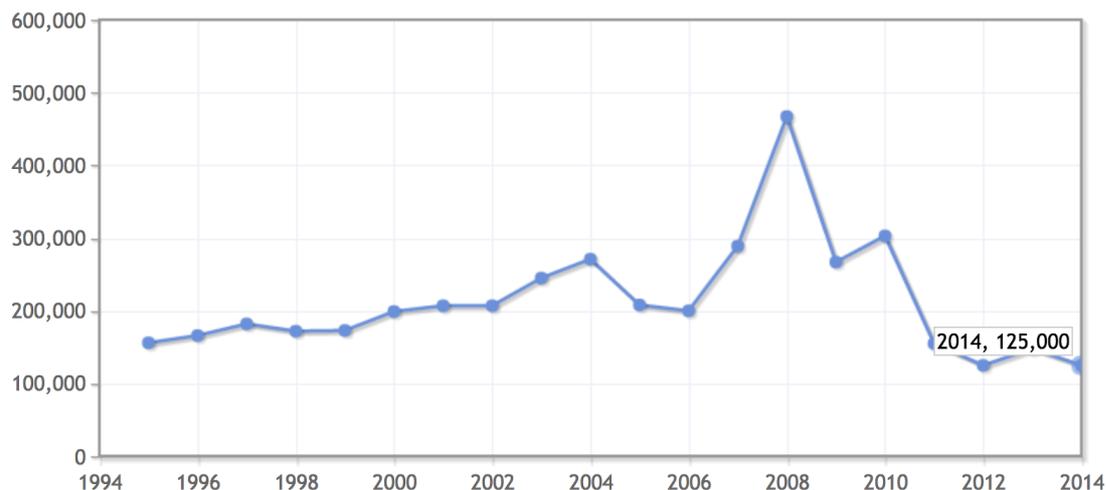


Figure 2: Number of arrivals in International inbound tourists: Bangladesh

(Source: World Bank, 2016)

In the past four years alone Bangladesh has had one of the highest growth rates in GDP expanding 7.05 percent in 2016 from the previous year and is striving for middle-income status by 2020 (World Bank, 2017b). Despite their impressive growth and progress, 28 million people still live below the poverty line. The World Bank sees the nation as “both an inspiration and a challenge for policymakers and practitioners of development” (World Bank, 2017b). So while it can be argued that tourism here has suffered from a poor image and not really kicked off, the potential of ecotourism is inviting and rated highly, constituting one of the many ways in which Bangladesh can sustain growth (Khanom *et al.*, 2004).

In 2013, the NGO Relief International with funding from the European Union, established eight eco-sites in the Sundarbans in a bid to encourage local communities to incorporate ecotourism into their livelihoods, thereby reducing dependency on the resources of the forests and becoming entrepreneurs to generate their own alternative income (Relief International, 2016). Relief International is a non-profit humanitarian agency that provides development assistance worldwide. The programme in Bangladesh works with communities and grassroots movements to deal with issues of poverty, health and the environment (Relief International, 2016). But if ecotourism can unite conservationists and contribute to the socio-economic development for local populations, then why is the Sundarbans not sprawling with more of these ecotourism sectors? It is no secret that certain ventures employ the concept as a marketing tool to exploit the ‘eco-consciences’ of travellers. So how does one then distinguish between a sustainable ecotourism business and an unethical one? What are the

criteria that classify ecotourism as being sustainable and how can ecotourism contribute to sustainable development? These are the questions that demand deeper analysis.

1.2 Aims and Objectives

The first part of this thesis aims to critically investigate and determine a relationship between ecotourism and sustainable development. In doing so I will develop a unique conceptual framework on the sustainability goals for ecotourism, which will later take the form of a table. The development of this framework stems from a literature review composed of principles, definitions, historical and theoretical dispositions and academic articles by scholars on ecotourism and sustainable development and will thus combine key elements from their respective studies into one comprehensive framework. The second aim is to then apply this framework to the case study of two eco-tourist sites, *Gol Kanon* and *The Mangrove Eco Cottage & Tree House* in the Sundarbans, Bangladesh established by Relief International with the purpose of identifying the sustainability or non-sustainable practices of those eco-sites. The selections of these sites are representative of the other eight from the programme in that they are largely implemented in the same manner with similar goals and objectives. Additionally this study's objective is to identify some of the key factors in the Sundarbans that affect the sustainability of ecotourism such as the government's role in promoting ecotourism, the construction of a power plant, and natural calamities in relation to climate change threats. The research questions are:

1. *To what extent can Ecotourism be considered a mechanism that facilitates Sustainable Development?*
2. *To what extent does Relief International's ecotourism project adhere to the conceptual framework developed of the sustainable goals of ecotourism in the Sundarbans, Bangladesh?*
3. *What are the main factors that compromise the Sustainable Development of Ecotourism in the Sundarbans?*

1.3 Significance of Study

Despite a wealth of literature covering the discourses of ecotourism and sustainable development, little attention has been paid to determining a methodology of measurement of the two collectively (Price and Murphy, 2000:8). In the absence of a relevant framework, this study attempts to aggregate relevant material from a number of academics and develop its own conceptual framework identifying some of the core sustainability goals of ecotourism.

While the framework is later applied to a context-specific area, the model itself can prove to be useful for ecotourism entrepreneurs, community decision-makers, local authorities, tour operators, and the government to name a few in understanding the inputs and conceptual links between ecotourism and sustainable development possibly even incorporating them into their own ecotourism development strategies. Other prime beneficiaries of this study are the researchers and scholars concerned with ecotourism and sustainable tourism. Case studies in Africa, Latin America, and Southeast Asia dominate the ecotourism literature (Weaver and Lawton, 2007:7). Conversely South Asian countries, particularly Bangladesh, have struggled to promote mass tourism in comparison to these other countries, let alone ecotourism. It is in this sense that the research hopes to fill a gap in the state of existing knowledge by exploring a territory in Bangladesh where ecotourism exists only in limited scale. Finally, this study is significant in that tourism is a key driver in socio-economic growth and unlike mass tourism, ecotourism is supposed to benefit all. It is therefore in Bangladesh's interest to maximize the benefits of environmentally sound ecotourism.

1.4 Delimitations

This thesis attempts to cover a lot of ground, however it cannot claim to be an exhaustive study of the entire scope of ecotourism and sustainable development. As Weaver (2006) recognizes, "the topic of sustainable tourism encompasses an enormous body of information and knowledge that expands by the day. It is therefore inevitable that much important material will be excluded in various bodies of literature and perceived in more ways than one" (Weaver, 2006:4). This logic also applies to the conceptual framework developed in this thesis. The reader should be aware that the formulation of such a framework, involved addressing literature in other studies and filtering and sorting through recurring information deemed most important to include. It can also be argued that certain terminology employed in the conceptual framework is of vague nature, however this is intended so as to permit flexibility and fine tuning to meet the needs of context-specific areas. Additionally, case studies imply limitations in terms of generalizing findings to a broader extent. Whilst most findings in this study are context-specific and geographically limited, the actual framework developed on the sustainability goals of ecotourism, can be used as a tool externally. Most of the sources collected include peer-reviewed articles, books and official organizational statements with clear indications of reliability. Bryman's checklist for evaluating documents is also consulted to evaluate official government publications and other sources (Bryman, 2008:561). Important to note, there might be some uncertainty in some views of credibility

with regards to one particular reference from Relief International's Ecotourism Facebook website. Bryman is right to note that for industries like ecotourism, one should be aware of the possible distortions that can occur in the interest of selling (Bryman, 2008:554), however I have chosen to keep the one single reference in the text published by Relief International's Ecotourism Facebook page to show that ecotourism management agencies are starting to realize it is critical to use social media as destination marketing tools (Schegg *et al.*, 2008). They are publishing legitimately on these platforms over websites knowing it will reach the audience (potential eco-tourists) faster. Relief International updates this page regularly in order to promote these remote eco-sites to the public. The page is also liked by the official European Union's Facebook, further validating it. Finally another delimitation in this thesis is the use of secondary accounts, which involves the use of material gathered for a different purpose. It is taken heavily into consideration throughout the study by applying source criticism.

1.5 Disposition of Thesis

The first part of the research is dedicated to establishing a relationship between ecotourism and sustainable development. First it will trace tourism ideologies within the stages of development paradigms to set the stage for the historical/theoretical emergence of the two concepts. It will then provide an overview on principles, debates of sustainable development and ecotourism separately before delving into a section on the symbiosis of the two concepts followed by a conceptual framework I have developed on the Sustainability goals for Ecotourism. I will then apply the framework to two eco-sites in the analysis of *Gol Kanon* and *The Mangrove Eco Cottage & Tree House* located in the Sundarbans, established by Relief International. The second part of the analysis will address factors outside the conceptual model that threaten the sustainability of ecotourism in the Sundarbans including the government's role in promoting ecotourism, the construction of a power plant, and natural calamities in relation to climate change.

2. METHODOLOGY

This study is undertaken as a qualitative research overview employing secondary data as the empirical foundation. The materials include UNESCO state of conservation reports, including Bangladeshi government publications within these reports from various departments such as the Ministry of Environment and Forests Bangladesh. An Integrated

Resource Management Plan produced by the Bangladesh Forest Department is also heavily consulted, bringing together many of the resource groups in the area and providing an analysis of the status and management situation of the Sundarbans as well as projected goals and objectives for a ten year stretch. Relief International publications are used to assess the eco-sites, and further organizations such as Food and Agriculture Organization of the United Nations, The World Bank, are addressed to back up facts and display statistics.

Academic peer-reviewed articles and books by various authors relating to the fields of ecotourism and sustainable development serve as the backbone to the development of my own conceptual framework of a table identifying the key Sustainability goals for Ecotourism corresponding to the three dimensions (economic, environmental, socio-cultural) of sustainable development. This table will then serve as the analytical framework, which will be applied to the two eco-lodge cases of *Gol Kanon* and *The Mangrove Eco Cottage & Tree House* in the Sundarbans. The secondary data has also been the basis for selection of the two of eight eco lodges implemented by Relief International, funded by the EU. All sites are more or less similar in design and implementation; thus for the sake of time and repetitiveness the conceptual model will be applied to two sites from the programme.

In using second-hand accounts, there is always the risk of interpreting data collected for another purpose and altering it to fit the research (Bryman, 2008). This research takes careful consideration of such sources, applying source criticism wherever relevant based on where the articles originate. Case studies have been critiqued for being too speculative and limiting external validity of the findings (Ibid, 69). However, for this study it is the most appropriate way for describing and understanding the complex phenomena that is ecotourism in a specific setting. Furthermore the conceptual framework developed can be generalized and applied to other context specific areas thereby increasing the external validity of parts of this thesis.

3. PREVIOUS STUDIES

This section consists of a summary review of previous research found most relevant to the aims of this paper. It should be noted that more studies are consistently referred to throughout the remainder of the thesis. Khanom, Shah, and Chaudhary's (2004) case study explores some of the major constraints related to tourism in the Sundarbans, and what needs to be done to develop ecotourism. The study, in which Khanom who is UNESCO project officer in Dhaka and Shah whose credentials include a programme officer for IUCN Bangladesh,

conducted interviews with both tourists and tour operators all throughout the Sundarbans on questions pertaining to the facilities, attractions, and the difficulties present while visiting. The authors identify several threats arising from tourism including poor sanitation, noise pollution from motorized boats, and unsuitable garbage disposal. More importantly, their analysis stresses there is a lack of information about the cultural and natural significance of the Sundarbans among tourists resulting in the need for strengthening capabilities to include training and awareness programmes for tour operators and tourists (Khanom *et al.*, 2004:5). The research also proposes a conservation tax for the management of ecotourism and conservation, however the study fails to indicate how many tourists and operators would be willing to support this action. Instead, they elaborate that “both tourists and tour operators are more likely to contribute in the entrance fees, which can be utilized for ecotourism management and conservation actions and research in the Sundarbans” (Khanom *et al.*, 2004:7). A drawback of the study is that it is timeworn, however the information is still valuable in that it shows the urge of tourists wanting to convert to sustainable practices, requesting for the proper mechanisms to be put in place in order to do so.

A dissertation by Rahman (2010) calls for the use of GIS (Geographical Information System) technology to be used as a decision-supporting tool for ecotourism planning in the Sundarbans. The study is able to display the land use change between 1977-2010 and deduces the density of the forest has declined considerably over the study period. The study is useful in that the technology can help audit the environmental conditions of a site including examining the suitability of a location for the proposed development of an ecotourism site and managing visitor flows (Rahman, 2010:64). While the study identifies the geographical location of tourism facilities, ranger offices, and land mass change, the fact that it is able to show climate change impacts based on this land mass change is a bigger cause to couple this technology with ecotourism development, something which the author touches upon, but does not delve into too deeply.

Many authors have grappled with the concepts of ecotourism and sustainable development as will be shown in the forthcoming sections on these two terms. However, one of the most relevant studies found in connection to this thesis is Jiang’s (2008) case study dissertation on ecotourism contributing to local sustainable development in Tengtou, China with a specific interest in local villagers’ perception towards ecotourism. Jiang develops her own framework on ecotourism’s relationship to sustainable development based on the works of three established academics frequently cited in ecotourism literature. The findings point to a lack of community involvement in the management and decision-making process of

ecotourism in Tengtou, and the absence of professionally skilled tour guides in the village (Jiang, 2008). While this thesis is similar in the sense that it too develops a framework by combining key elements from scholar studies on ecotourism and sustainable development, it goes a step further and combines the principles of 8 scholars, thus providing a more holistic understanding of ecotourism's relationship to sustainable development.

4. THEORETICAL UNDERPINNINGS

The upcoming section aims to explore the relationship between ecotourism and sustainable development. There is a lack of relevant theory integrating the two concepts, and this section will help develop my own conceptual model. To do so, it will begin by sketching tourism ideology within the stages of development paradigms to understand both the theoretical and historical background behind the emergence of the two concepts. It will then provide an overview of the two concepts separately, before bringing them together, and presenting the conceptual framework in table form that has been assembled from the preceding sections.

4.1 Tourism Ideologies under Development Paradigms

Telfer and Sharpley, (2002) argue that the evolution of tourism theory has largely coincided with the evolution of development paradigms. The tourism ideologies were formed by Jafari (1987) to describe the sequential and at times concurrent stages of tourism development. These are: advocacy, cautionary, adaptancy, and the knowledge-based platform. Tracking tourism ideology within development paradigms of *modernization*, *dependency*, *alternative*, and *post- development* is fundamental to understanding the contemporary relationship between alternative tourism's foundation in which 'ecotourism' emerged from and the concept of 'sustainable development'.

Modernization theory & the advocacy platform: The end of the Second World War marked the beginning of fundamental transformations in world affairs and in development thinking. Modernization theory sought to bridge the gap between traditional societies and the modern world, in which following a number of fixed stages would enable traditional societies to evolve into modern ones (Potter *et al.*, 2008:27; Elliott, 2012). This approach held that the causes of underdevelopment stemmed internally in third world nations that could be fixed by external factors such as technology diffusion, transferal of knowledge, capital and expertise. Ideals of the West were to be strived for. What followed from the then prevalent tenets of the

modernization paradigm was what Jafari refers to as *the advocacy platform* in tourism in the 50's and 60s. Fuelled by theories of modernization, tourism during this time was seen as a crucial vehicle of economic development and generating foreign exchange celebrated for the positive impacts it could bestow as a development strategy with little or no regard to the negative effects (Jafari, 1987).

Dependency theory & the Cautionary Platform: Dependency theory arose as a critique to the modernization paradigm in the late 1960's. Key arguments of this paradigm were that the wealth of richer nations appeared to be at the expense of the poverty of those impoverished nations, enriching the latter at the expense of the former (Potter *et al.*, 2008:34-36). Therefore de-linking and strengthening internal markets was necessary in order to break dependency from other countries (Elliott, 2012:19; Telfer and Sharpley, 2002). Based on the values of the dependency paradigm, the *cautionary platform* of tourism emerged as a response to the former advocacy platform where a range of negative impacts in mass tourism began to evolve (Jiang, 2008; Weaver, 1998:11). It saw that unregulated tourism culminates in high economic, environmental, and socio-cultural costs for the people living in these destinations. Mass tourism specifically, was associated with large-scale foreign-owned investments and leakages and was thus a means in which the developed countries could continue their exploitation of the periphery countries (Jafari, 1987).

Alternative theory & the adaptancy platform: The critique put forth in the dependency theory paved the way for the next solution-based development paradigm dominant in the 1980's. This is also where sustainable development grew to prominence. Alternative theory in this generation of development called for alternative means of addressing development with particular attention to sustainable development, environment, gender, and participatory frameworks (Potter *et al.*, 2008:16; Honey, 2008:9). Mirroring this shift in development thinking, the *adaptancy platform* of tourism surfaced. Based on the cautionary platform's critique of mass tourism this platform stressed the negative impacts could be avoided or minimized by alternative forms of tourism (Weaver, 1998:11-14). Alternative tourism included the search for tourism models that were sustainable and ethical to counter the negative effects of mass tourism (Telfer and Sharpley, 2002; Jafari, 1987; Jiang, 2008). In this sense, the socio-cultural, environmental as well as financial dimensions associated with tourism would be addressed for both host communities and travellers. Examples include volunteer tourism and community-based tourism more respective to host communities. Most

importantly ecotourism came into prominence here as a manifestation of alternative tourism, emphasizing a symbiotic relationship between tourism and the natural environment (Weaver, 1998:12).

Post-development theory and the Knowledge based platform: Finally, recent thinking of development can be considered within the radical perspectives of the post development school and the people centered type of development. The post development school also known as the anti-development view is that the concept of development is merely a tool of cultural and economic imperialism dominated by the West (Elliott, 2012; Jiang, 2008; Potter *et al.*, 2008:49). Here alternative development is seen as naïve and too idealistic, ignoring larger complexities of local contexts (Telfer and Sharpley, 2002). What separates this set of thinking from the previous paradigms is it seeks to focus on ‘alternatives to development’, rather than ‘alternative development’ like the latter with emphasis on localized grassroots movements, informal sectors, local culture, and knowledge promoting diversity. What followed from this thinking was *The Knowledge-Based platform* of tourism, which arose from several factors in the late 1980s and 1990s (Jafari, 1987). First was the recognition that alternative tourism is at best only part of the solution to broader problems of global tourism (Honey, 2008; Jafari, 1987). Second it was realized that any type of tourism in a destination yields both positive and negative outcomes “suggesting that ideologically polarized advocacy, cautionary and adaptancy platforms offer a limited and biased world view of an increasingly complex global tourism sector that defies such simplistic analysis” (Jafari, 2001 cited in Weaver, 2006:9). This platform called for a holistic approach where types of tourism in particular destinations should be based on a scientific analysis of its specific characteristics when determining impacts and capacities of that place. We are still in this platform today, where modes of alternative tourism i.e. ecotourism and their actual impact are debated among scholars. This platform calls for the adherence to the principles and practice of sustainability (Weaver, 1998:12).

It becomes clear that tourism development thinking has been heavily influenced by development theories. The third development paradigm introduced with it the concept of ‘sustainable development’ and ‘alternative tourism’; that of which incorporates ecotourism as an alternative form. In the case of Bangladesh, it was not until 1971 that the country gained independence from the former East Pakistan, making this a particular case of late blooming. Thus the platforms have not evolved in a steady path. Indications of sustainable development

thinking corresponding to alternative theory and the adaptancy platform can be seen in the Environment Conservation acts passed by the government in 1997, the same year the reserve was inscribed on the World Heritage list, in which three wildlife sanctuaries were established (Gopal and Chauhan, 2005). Further reports on Sundarban resource management began to include recommendations on the development of ecotourism in the reserve more than a decade after ecotourism grew to prominence from alternative theory and the adaptancy platform (FAO, 1998). In order to see whether ecotourism and sustainable development are symbiotic, the two concepts must first be disseminated.

4.2 Sustainable development: An Overview

As mentioned earlier, Sustainable Development (SD) grew to prominence in the 1980's. It has since then become "the watch-word for international aid agencies, the jargon of development planners, the theme of conferences and learned papers, and the slogan of developmental and environmental activists" (Sharachchandra, 1991:607). Yet the literature reveals uncertainty in its meaning and instead, diverging interpretations are in circulation (Elliott, 2012). This section sets out to give an account of these diverse arguments put forth by academics on the strengths and weaknesses of the concept of SD. It does not seek to provide an ultimate definition of the term, rather to understand and appreciate its conceptual reach within these interpretations. The most widely cited definition to be found on SD was introduced in 1987 by the World Commission on Environment and Development, also known as the Brundtland Commission. It defined sustainable development as, "development which meets the needs of current generations without compromising the ability of future generations to meet their own needs" (WCOED, 1987). A key element in this definition as chairman Brundtland noted in the foreword of the report is, " 'the environment' is where we live; and 'development' is what we all do in attempting to improve our lot within that abode. The two are inseparable" (Brundtland, 1987) This study privileges this definition of SD because it unites the environment and development and pushes for a comprehensive understanding of the two concepts together, stressing they should not be distinguished as separate entities. The two working concepts of this thesis are similar in this sense. This Brundtland formula however has followed in a stream of criticism on SD's ambiguity, permitting people to define it to suit their own interests (Telfer and Sharpley, 2015; Elliott, 2012). Terms like "Greenwashing" came to life here where companies promote green-based environmental initiatives when in actuality operate in a way that is destructive and opposite to their intended

goal to satisfy their own needs (Telfer and Sharpley, 2015). Furthermore, Wall (1997) offers a convincing argument that the long-term perspective SD propels, makes it impossible to determine what experiences will be desired by future residents or tourists in terms of sustainable practices like tourism. In other words, while it can be argued the term has strength in that it would keep opportunities open, given climate change, emerging technologies and changing tastes, what is sustainable now might not necessarily be sustainable tomorrow (Wall 1997:5). Elliott furthers the argument, adding growing populations in relation to resources and development is of growing concern in the SD discourse. This also makes projections of future patterns difficult. (Elliott, 2012:54).

One of the strongest supportive debates of SD by authors like Redclift (1993), Elliott (2012) and Wall (1997), is that the term's vagueness can be seen as a strength. "The ambiguity of the term potentially permits flexibility and fine tuning to meet the needs of different places and cultures, encourages greater consideration of the environment, and more effectively integrates environmental and economic matters in decision making by encouraging dialogue between individuals with different perspectives" (Wall, 1997:485). Indeed SD is complex and context specific with no common blueprint on how to achieve it. But there is at least agreement on three common principles of SD, employing sociological, economic, and environment consideration (Elliott, 2012). However regarding the appropriate parameters of each criterion is also contested seeing as many issues overlap in each criteria (Weaver and Lawton, 2007). The year 1992 was pivotal for sustainable development at the conference in Rio de Janeiro in which prescribed Agenda 21 documents included commitments by world leaders to ensure sustainable development on all levels of society. These were reformulated in 2015 as the Sustainable Development Goals (SDGs), which together with 193 member states and the United Nations, set in motion 17 global goals to be achieved by 2030. Ecotourism's role in the SDGS will be addressed in a forthcoming section. Nonetheless, skepticism towards the concept continued. Critical voices called for more emphasis on the socio-cultural pillars of SD (Wall, 1997; Scheyvens, 1999) They also stressed that the pillars should not be seen as independent of one another, and that the pillar such as the economic one, is integrated into all parts as a whole (Elliott, 2012).

Another prevailing issue in the SD discourse is how the goals of sustainability differ between developing and developed countries based on their own distinctive economic, social, and physical contexts. Gould (2004) and Redclift (1993) shed light on the distinction in

sustainability goals in which developed countries tend to focus their efforts to problems of environmental protection and the global market, whereas developing countries prioritize basic needs and issues of poverty and reducing the gap of inequality when designing sustainable development. However Elliott, in response to this distinction argues that, “income levels remain a key factor in shaping access to natural resources and to basic environmental improvements, in influencing the security of livelihoods” (Elliott, 2012:327). David Weaver adds to the discussion in his book *Ecotourism in the less developed World*, by asserting “chronic underfunding, inadequate levels of local expertise, and corruption often result in the haphazard of paper-effective environmental laws and regulations in lower developed countries” (Weaver, 1998:62).

4.3 Ecotourism: An Overview

We now turn the discussion to ecotourism. Ecotourism emerged in the 1980s within Jafari’s *adaptancy platform* and as a result of the call for alternative models of development. It was realized that mass tourism often spurred uneven development and amounted to high social and environmental costs, therefore alternative sustainable tourism means had to be sought (Honey, 2008:9). Like SD, ecotourism too has no universal definition. In fact Fennel (2001 cited in Cheia, 2013:58) noted there exists over 85 published definitions of ecotourism all based on the notions of “conservation”, “sustainability”, “education”, and “local benefit”. Yet the existing literature on ecotourism is extensive and controversial. On the one hand, ecotourism is being hailed as an economic and environmentally friendly panacea guiding development (Honey, 2008). On the other hand, Boo (1990 cited in Alexander & Whitehouse, 2004:131) voices concern of the economic dependency of ecotourism where factors ranging from weather conditions, fluctuating politics, to volatile currency exchange rates can make ecotourism an unstable source of income, one that is vulnerable and out of one’s control. Telfer and Sharpley (2015) add the concern of ecotourism often being employed as a marketing tool, rather than a resource management one. Nonetheless, many credit ecotourism’s origin to environmentalist Ceballos-Lascurain where his 1983 definition was later modified and officially adopted by the (IUCN) International Union for Conservation of Nature and Natural Resources in 1996 to define it as follows:

Ecotourism is environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features - both past and present) that promotes conservation, has low negative visitor impact, and provides for beneficially active socio-economic involvement of local populations (Ceballos-Lascurain, 1996).

The latter, active socio-economic involvement of local populations is one of the key components that separate ecotourism from other forms of tourism. Definitions like the one above, embrace the common understanding that for ecotourism to contribute to sustainable development, it should be economically viable, environmentally sensitive, and culturally appropriate (Wall, 1997:5; Alexander and Whitehouse, 2004). These however, are not mutually exclusive and the general consensus is that compromise between the three pillars is always a part of the process in successful ecotourism projects (Weaver, 2006). These “trade-offs” as Wall notes, vary within locations and have to be sought between the legitimate aspirations of different actors seeing as it has adverse effects on the local residents and the natural resources they depend on (Wall, 1997:484). The next few sections will explicitly state when elements are drawn from authors’ work to contribute to my own framework, which will be displayed in the form of a table.

4.3.1 Economic Dimension

While conventional forms of tourism contribute largely to the national economy of a country in that tourism is a big GDP contributor; what ecotourism does is it can contribute to local economic development by providing locals with a source of income that helps bolster sustainability (Honey, 2008; Scheyvens, 1999; Price and Murphy, 2000; Wall, 1997; Weaver, 1998). By sustainability it is meant that the income from ecotourism would relieve pressure on the natural resources on which the locals depend. Therefore creating permanent employment and additional income for local communities, will be added to the economic sustainability goals for ecotourism. One factor to be aware of however, as Alexander and Whitehouse’s (2004) case study on ecotourism in Belize revealed, is that while ecotourism provided jobs and additional income to the locals in Belize, the money was still largely in foreign hands and much of the tourist dollar succumbed to American and European investors. Where the money goes, is very important. The earnings can help finance and upgrade local infrastructure in the area and within local communities (Ross & Wall, 1999; Honey, 2008; Scheyvens, 1999). Due to the vast amount of authors that contend exactly this, it will be added to my framework. Wall asserts, “there are indications of a correlation between ‘ecotourists’ and higher incomes, as well as higher trip expenditures” (Weaver, 1998: 24). Thus financial contributions for conservation help generate much-needed funds for protected areas. For eco-tourists and eco-entrepreneurs alike, resorting to local products when it comes to

spendings, also helps stimulate the economy of the area. This includes spending money on local handicrafts, activities, or food products in the area. Gurung's 1992 case study on ecotourism in Annapurna, Nepal, highlighted how only 20 cents of 3 dollars per day was obtained by local villages due to the lodge's imports of goods, classifying this a form of ecotourism which was not community based and certainly not largely benefitting the local economy (cited in Weaver, 1998:49)

4.3.2 Environmental Dimension

In terms of the environment, the biggest benefit ecotourism has to offer is its incentive value for preserving natural environments (Weaver, 1998:23). Price and Murphy (2000) hold that ecotourism principles should be *biocentric* rather than *homocentric* meaning it is an ethical view of the world centered around nature and all living things, and not solely human centered. Furthermore, a crucial element of ecotourism incorporates environmental education for both residents and tourists (Cheia, 2013; Honey, 2008; Wall, 1997; Weaver 1998). This way, education helps foster environmentally responsive attitudes and molds eco-tourists into advocates for the visited area upon returning home. In order to minimize the impact of environmental footprint, using environmentally and culturally sensitive architectural design through the use of available local building materials, recycling and disposal of waste is of great importance according to Honey (2008). Honey's case study on one ecotourism project in Matemwe, Zanzibar is a good exemplar where bungalows were constructed using local materials of limestone and coral from the island and palm fronds for the roof, thus making use of available resources (Honey, 2008:277). Low impact construction through use of available local building material will therefore be added to the framework. Furthermore, authors like Alexander and Whitehouse (2004) highlight the environmental challenges in that the ecotourism spots are usually located in sensitive areas. They therefore call for considering the "en route impact" from travelling to the site, adding that the consumption of resources adds to global climate change (Alexander and Whitehouse, 2004:4). Weaver (1998) adds that in terms of climate change, ecotourism cannot be expected to have a significant amount of influence, but what it can do, is to have efficient mobilization to prepare for natural calamities which will help foster a resilient sector (Weaver, 1998:231). This is something that will be noted in the conceptual framework.

Ecotourism usually implies small-scale projects with small groups of tourists. Some argue there should be a focus on the amount of visitors a protected area can sustainably accommodate to limit environmental deterioration. This situation poses a complex problem for the overlapping pillars of economic and environment where yes, more visitors would equate to more money coming in, but more visitors also puts higher pressure on the ecosystem. Macfarland (cited in Honey, 2008:89) argues it is not about controlling numbers per se, it is controlling behaviors, activities and what equipment you allow at a particular site. However authors like Honey (2008) and Wall (1997) are quick to argue that a few unruly tourists can do more damage than large numbers of carefully managed environmentally friendly eco-tourists. Again, compromise and trade-offs are inevitable here.

4.3.3 Socio-cultural Dimension

In the Socio-cultural dimension of ecotourism, authors like Honey (2008), Elliot (2012) and Scheyvens (1999) pitch for a community-based model of ecotourism as a management approach to achieving local sustainable development. These authors see the participation and inclusivity of locals as imperative to sustainable ecotourism implementation where eco-tourist lodges and projects should strive to coordinate communication between the host communities and tourists, involving them in the processes of management and planning. That being so, promoting the participation and inclusivity of locals shall be added to the framework. Ross and Wall (1999a) and Weaver (1998) advance the promotion of local ownership as necessary to ensure long-term sustainable change. This too shall be incorporated into the framework. Using the case study example of North Sulawesi Indonesia, it was found that the local communities were not receiving substantial benefits from ecotourism and they noticed benefits were accrued by outsiders spurring negative attitudes from the locals to the initiative (Ross and Wall, 1999b:678). This seems to be a common theme among past ecotourism projects and should be countered. Important to note, ecotourism involves unequal power relations between visitors and the host a lot of the time, therefore its role in respecting the local culture and fostering intercultural appreciation is of great importance and will be included in the framework. Sensitivity to the political environment also abides where the voices and concerns of a community should be represented in broader decision-making bodies. (Scheyvens, 1999) expands on four different kinds of empowerment that enhance the local community's equilibrium (social, economic, psychological, and political empowerment). Social empowerment for example, overlaps into

the financial aspect where profits earned from tourist activity help fund social development projects in the local area and can contribute to improved social welfare (Scheyvens, 1999:3). In sum, empowerment, education, and providing tools and infrastructure are some of the elements that should be happening in unison with the local communities and will as a result be added to the framework (Honey, 2008 85).

4.3.4 External Agents

At the same time, there are protagonists that play a critical role in conserving biodiversity and promoting ecotourism. UNESCO, Relief International, USAID, the World Bank, and The World Wildlife Fund (WWF) among others, are organizations that fund and assist in biodiversity projects in the Sundarbans. Often they enter partnerships with private organizations as opposed to government agencies or “financially strapped park systems” as Honey (2008) calls it. However, this push towards privatization by international aid agencies and private-public partnerships often entail state-provided subsidies to the private sector (Honey, 2008:18). The government entity Forest Department (FD) in Bangladesh is an example of such with one of their main goals being, “the Forest Department will seek public private partnerships, consistent with the guidelines and principles established by the Government of Bangladesh to improve the ecotourism services and facilities” (BFD, 2010:15). One does however have to be careful with privatization so that profits from ecotourism in a given area do not fall into the pockets of foreign companies as stated earlier and away from the communities.

5. CONCEPTUAL FRAMEWORK

5.1 The Symbiosis of Ecotourism and Sustainable Development

In light of the preceding sections, two important conclusions can be drawn. One, that sustainable development is a process, and not an end goal to be achieved (Cheia, 2013). Two, is to answer whether or not ecotourism is an effective tool for sustainable development, one cannot simply regard ecotourism as an isolated phenomena. The nature and opportunities for the sustainable development of ecotourism is manifested spatially and locally (Elliott, 2012; Honey, 2008). To a large extent it can be argued that ecotourism is based on the philosophy of sustainable development. An indication of such is ‘sustainable tourism’, where ecotourism is considered a form of such that employs SD motives to practices in the field of tourism. We

can even place ecotourism broadly within the context of the Sustainable Development Goals (SDG) to further highlight this relationship. The SDGs provide a broad general frame of reference for the analysis of sustainable tourism, which includes ecotourism as a form of such. Specifically, goal 8: target 8.9 states that “by 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products” (UNWTO, 2015). Goal 12, target 12b mirrors the prior statement, with emphasis on the need to “develop and implement tools to monitor sustainable development impacts for sustainable tourism” (UNWTO, 2015). The important role of ecotourism as a tool to promote economic growth in respect to environmental sustainability is further highlighted in Chapter 7, *promoting sustainable human settlement development* in Agenda 21 Paragraph 11.20-11.21 (UN-DESA, 2017). It is also mentioned that sustainable tourism is seen as a significant contributor to the three dimensions of sustainable development and that member states need to “support sustainable tourism activities and relevant capacity building that promote environmental awareness, conserve and protect the environment, respect wildlife, flora, biodiversity, ecosystems and cultural diversity, and improve the welfare and livelihoods of local communities” (UN-DESA, 2017). Indeed the SDGs validate ecotourism’s potential in driving sustainable development. However, despite 193 countries signing on, it has been made explicit in the agenda that these goals are newly established, transformational, and come with a lot of complexities attached. Given the amount of substance they have to cover, they fail to provide a comprehensive account of how to progress sustainable ecotourism phenomena alone. Often however, it is international organizations that influence the international sphere and mandate the importance of certain phenomena over others. In 2012, The UN General Assembly adopted the resolution on “promotion of ecotourism for poverty eradication and environment protection” (General Assembly resolution 67/223). This resolution validates ecotourism as a tool for promoting sustainable development. Recognizing it creates opportunities, and is one of the keys in the fight against poverty.

5.2 Presentation of Conceptual Framework

Based on the literature review above and by conferring with the authors of Alexander & Whitehouse (2004), Elliott (2012), Honey (2008), Price and Murphy (2000), Ross and Wall (1999a), Scheyvens (1999), Weaver (1998), and Wall (1997), it is worthwhile to consider and utilize their studies as measurable indicators and tools for ecotourism’s capacity to achieve sustainable development. These authors aggregate a wealth of information for me and from

cross examining what they have to say on the three pillars of successful ecotourism practice in their own studies, a conceptual framework was developed. The subsequent table identifies some of the key sustainability goals for ecotourism corresponding to the three dimensions (economic, environmental, socio-cultural) of sustainable development. This will serve as the analytical framework, which will be applied to the case study of the Sundarbans in the analysis.

THE SUSTAINABILITY GOALS FOR ECOTOURISM

The Economic sustainability goals for Ecotourism
<ul style="list-style-type: none"> • Creates permanent employment opportunities & additional income for local communities (<i>ex. profits kept within local communities, not foreign owned</i>) • Encourages donations from visitors to environmental protection, and resource conservation • Improves the local infrastructure • Finances the protection, establishment and maintenance of reserve areas • Proactive use of available local building materials and natural resources (<i>ex. Local products, and materials as opposed to exported resources in generating revenue</i>)
The Environmental sustainability goals for Ecotourism
<ul style="list-style-type: none"> • Ensures environmental education for visitors and locals • Mobilization plan to prepare for natural disasters • Builds environmental awareness among eco-tourists and local population • Considers “en route” impact travelling to the site (<i>ex. Emissions from transportation to and from site</i>) • Low impact construction (<i>ex. through use of available local building materials, recycling and disposal of waste etc.</i>)
The Socio-cultural Sustainable goals for Ecotourism
<ul style="list-style-type: none"> • Promotes participation and inclusivity of locals (<i>ex. involves coordination communication between host communities and tourists</i>) • Empowers local communities and promotes local ownership (<i>ex. Locals must feel sense of control over planning process involving resource use. Tourism relies on goodwill of locals</i>) • Fosters intercultural appreciation (<i>ex. through encouraging understanding, appreciation, and conservation of cultural elements of host community</i>)

(Source: Own compilation)

6. ANALYSIS

The analysis is divided into two sections. The first sets out to analyze to what extent the two eco-sites established by Relief International with funding from the European Union, meet the criteria formed in the conceptual framework, the sustainability goals of ecotourism. A more systematic summary of the table and its application to the two eco-sites can be found in the Appendix. The second section addresses some of the key threats affecting the sustainable development of ecotourism in the Sundarbans. The first of which addresses government entities dealing with ecotourism and their drawbacks, followed by the factors of the construction of a power plant near the vicinity, and the threat of climate change.

6.1 Eco-Sites of Gol Karon and Mangrove Eco Cottage & Tree House



Figure 3: Gol Karon
(Source: Jovago, 2017)



Figure 4: Eco cottage tree house
(Source: Relief International, 2017)

Named after the Nypa palm tree ‘golpata’, *Gol Karon’s* eco-site has two cottages. The cottages are comprised of a bamboo structure with Nypa palm thatched roofing and are equipped with solar lamps, solar batteries and solar fans to cool down the interior for those humid months (Relief International, 2017a). This fulfills part of the criteria of ‘*low impact construction*’ in the environmental sustainability goals of ecotourism. Through using the abundant and traditional Golpata plant as thatching for the roof, as well as bamboo in the interior, the construction blends in with the environment. Thus the ‘*proactive use of available local building materials and natural resources*’ also a criterion in the economic sustainability goals of ecotourism is achieved. Using what is locally available and cutting down on costs rather than resorting to exported resources. The second eco-site *Mangrove Eco Cottage & Tree House* is situated in the Khulna district. It has two cottages constructed with the same

material as *Gol Kanon*, also satisfying the previously mentioned criterion but with the addition of a tree house built from the local Sundari mangrove tree, for the purpose of providing an aerial view of the area (Relief International, 2017b).

There are concerns in the economic sustainability table of both sites where two of the criteria are ‘*improves the local infrastructure*’ and ‘*finances the protection, establishment and maintenance of reserve areas*’. *Gol Kanon* does not display its prices openly, but the *Mangrove Eco Cottage & Tree House* does, so we can assume they are similar based on the fact they offer similar services. Cottage rent per night is 1500 taka (roughly \$18 US) with an additional 450 taka (\$5) per meal costs (Relief International, 2017b). While it is understood that other activities spur the economy, as Weaver (1998) previously indicated, there is a correlation between eco-tourists and higher incomes. \$18 dollars/night per cottage could be increased substantially to twice its amount and would still be affordable to most eco-tourists, more so to foreigners. Certainly monetary situations are relative, and 1500 taka goes a long way on the receiving end. But while the current set price may be able to finance the establishment and maintenance of certain features of the area, more money intake could make a pivotal difference for upgrading local infrastructure and would also make up for factors like the seasonal tourist intake limitations in the monsoon seasons. The two cottages in *Gol Kanon* as well as the two in the *Mangrove Eco Cottage & Tree House* are only able to support a total of four people in each site at a time. As Wall (1997) contended earlier, “local economies cannot be expected to benefit substantially from a limited number of visitors” (Wall, 1997:6). However given the rural area, as Lindberg and Enriques (1996) note, even a few new jobs can make the biggest difference here. Through on-set activities such as local dance performances as will be described below, more employment being spurred from activities of boat rides and eco-guides for the visitors help draw in more money.

While *Gol Kanon* can be credited for having a blend of low impact construction, built with Nypa Palm and using recyclable materials and energy sources, the fact that infrastructure such as a modern toilet facility is in place rather than composting toilets for example, makes it hard to claim the site implements environmentally sound innovations to its full potential. Location wise, the two sites are in close proximity of each other in neighboring villages. Accessing these sites however, involves extensive travel to a remote location. From Dhaka, the capital, to Jessore, a 40-minute flight results in an additional hours bus ride to Khulna, which is one of the biggest cities in Bangladesh (McCrohan, 2013). From there, an hour and a half by car to Mongla, followed by an additional motorized boat ride of roughly one hour to reach the final destination. In regards to the environmental sustainability goals of

ecotourism criterion ‘*considers en route impact*’ travelling to the site, suffice it to say, the objectives of this criteria are exhausted and not met. Again, the site entrepreneurs see this as a trade-off, in which the visitors must be able to access the site to be able to make an impact on the other pillars. The environment is that trade-off to help fulfill that function. Perhaps a trade-off is not necessary though and instead to mitigate emission impacts, these sites should implore the use of non-motorized vehicles and other forms of environmentally sound transport mechanisms so as to minimize carbon footprint. One indication of hopeful progress and acknowledgement of this issue is the projected goal of developing specific routes in designated areas of the Sundarbans Reserve Forest to enhance the ecotourism experience, promised by the Bangladesh Forest Department in their Integrated Resources Management Plan between 2010-2020 (BFD, 2010). This report concerns goals, objectives, and strategies for sustainably managing the Sundarbans, consolidating other actor initiatives as well. Whether this applies to Relief International’s area or not is not specified.

As for the environmental sustainability goals criterion ‘*encourages donations from visitors to environmental protection, and resource conservation*’, due to evidence restriction, this criterion is non-applicable to these two case sites. In terms of the environmental criteria of ‘*mobilization plan to prepare for natural disaster*’, neither *Gol Karon* nor *The Mangrove Eco Cottage & Tree House* show any indication of resilient measures taken to deal with the threat of climate change. Weaver asserts that effective mobilization helps prepare the sector to “(i) survive relatively intact, in the face of smaller-scale events, (ii) become re-established in the event of large-scale widely destructive events” (Weaver, 1998:232). The natural environment upon which these sites are established are prone to the threats of climate change, including more cyclonic storms and rising sea levels estimated in the coming years. If they are to remain sustainable, it is strongly suggested that the sites prepare to deal with and reduce the impact of such forces.

Most telling in *Gol Karon* and *The Mangrove Eco Cottage & Tree House*, is the efforts to address the socio-cultural sustainability goals for ecotourism in both sites:

Dabble at cooking traditional food with the host family, as you cut vegetables on the local “boitee” or curved kitchen cutter” and Bob bibi performance by local cultural troupe with a live band of musicians at the multipurpose shed as the entire neighborhood watches beside you”. Visit local houses as the neighborhood sprawls round the cottages with the sights and sounds of a village surrounding you (Relief International, 2017a; Relief International, 2017b).

These indicators satisfy the criterion of *'fostering intercultural appreciation'* through encouraging and showing appreciation towards conservation of cultural elements of the host community, in this case, the traditional *Bob bibi* performance with the live band of musicians. Both sites make use of performance troupes that offer the similar songs and dances about Bon Bipi: a guardian spirit of the forest, believed to protect Sundarban residents from the dangers of the forests like tigers (Relief International, 2016). The Mangrove Cottage Eco-site specifies further that the performances also involve skits on the importance of conservation (Ibid). This wittingly combines the environmental and socio-cultural sustainable ecotourism criterions of *'ensures environmental education for visitors and locals'*, *'builds environmental awareness among eco-tourists and local population'* and *'promotes participation and inclusivity of locals'* into one activity. The educational aspect conveys the meaningful relationship of the Sundarbans and its importance in continuing to be sustainable. It is further stressed "a handicraft center in each site offers jute wall hangings, hand-stitched cushion covers and other locally crafted items for tourists to take home" (Relief International, 2016). Indeed initiatives like these not only meet the criterion of *'fosters intercultural appreciation through encouraging understanding, appreciation, and conservation of cultural elements of host community'* but additionally contribute to the local economy through the crafted items that are bought by the eco-tourists. The other criterion of promoting local ownership is also evident in both *Gol Kanon* and *the Mangrove Eco Cottage & Tree House* in that local host families own the separate cottages. Sripati Bachar, an ecotourism entrepreneur whom used to be a seasonal farmer has instead transformed the land into what is now the *Gol Kanon* eco-site (Sundarban Mangrove Ecotourism, 2017). Certainly, "When a local community is involved in the running and ownership of the tourism ventures the well-being of the local population is more likely to be sustained, as they are less likely to be exploited from within" (Luck and Kirstges, 2003:150). The host families in each site own and live beside the cottages and are the main entrepreneurs involved in the development and management of the sites. Thereby classifying this a form of community based ecotourism grassroots initiative supported by the scholars of (Honey, 2008; Elliott, 2012; Scheyvens, 1999) to name a few.

6.2 Conclusions on Sites

There is no denying the impact Relief International's Sundarbans ecotourism project is having on providing communities with various employment roles and incomes especially with regards to the socio-cultural sustainability goals of ecotourism developed in the table

through promoting local culture through entrepreneurship. While the sustainability goals of ecotourism were met to a large extent, others fell through such as the transport mechanisms to and fro. The sites are gaining more recognition as the days go by, with The United Nations World Tourism Organization marking the project as a second runner-up for an award in Innovation for Tourism through NGO's last year (UNWTO, 2016).

6.3 Factors that compromise the Sustainability of Ecotourism

Even if an ecotourism site were to tick off on all the criteria for sustainable ecotourism, there are still prevailing factors that threaten its success and continued management in the Sundarbans. In this next section, the anthropogenic and natural factors threatening the sustainability of ecotourism that will be discussed are but not limited to, a conflicting government agenda regarding the construction of a power plant and natural calamities in relation to climate change threats. But first, in order to understand these factors, logically we must understand where the government stands and their initiatives undertaken to promote ecotourism in the Sundarbans.

6.3.1 Government Entities concerned with Ecotourism

In the most recent monitoring mission report of the Sundarbans conducted by UNESCO together with members from IUCN, recommendations entail “the state party should put in place a system that allows management of the property in a more integrated manner” (Doak *et al.*, 2016:32). The Ministry of Environment and Forests Bangladesh in reports to UNESCO claim “Co-Management Committee (CMC) have been formed with the local people in the impact zone to work jointly with Bangladesh Forest Department (MOEF, 2016). They further acknowledge the EU, World Bank and USAID to name a few funded projects for locals to help reduce dependency on resources in the area. In 2010, the government reformed the national tourism policy where criticism of the previous 2009 tourism policy did not adequately address matters regarding sustainability and the environment (Roy and Roy, 2015). Major objectives of the new policy were to develop ecotourism and enter more private-public partnerships. Following this was the Integrated Resources Management Plans for Sundarbans (IRMPS) report produced by the Bangladesh Forest Department as previously mentioned, which is an entity within the Ministry of Environment and Forests. The report makes many assumptions and sets goals between 2010-2020 to ensure sustainability in the Sundarbans for the next ten years. It should be noted however that for a report that claims to

have a vested interest in the importance of ecotourism, it comes as a paradox that the word ecotourism is only mentioned twelve times through the entirety of the 325 page document. That of which is mentioned, includes proposals for the FD to seek private-public partnerships to improve ecotourism services and restoring and maintaining ecological functions (BFD, 2010:15). Similar to how Alexander and Whitehouse note in their own study on ecotourism in Belize, where government policies mandate the promotion of environmentally sound tourism, in the case of the Sundarbans for ecotourism too: “The intent for conservation is clear; the enforcement of policy is less clear” (Alexander and Whitehouse, 2004:12).

Bangladesh Forest Department initiatives in the Sundarbans are primarily concerned with establishing eco-tourism activity centers. For example, the Karamjol Ecotourism wildlife-breeding center, was established in 2002 in a bid to conserve the wildlife crocodiles and promote ecotourism activities (BFD, 2010). However the present status of sites set up like these is being threatened by overcrowding and poor infrastructure unable to support the visitors. This reflects largely what Elliot (2012) earlier stressed in that growing populations in relation to resource development is at the forefront of concerns for the sustainability of ecotourism, especially considering Bangladesh is the most densely populated country on earth. These activity sites are important entities that ecotourism has to offer on the side, which is why when FD asserts “demand for eco-tourism sites is increasing rapidly[...]Current strength of the FD field staff is unable to control/manage current visitor use as they are not trained to deal with tourists” (BFD, 2010:271), it comes as a threat to ecotourism establishments as well.

Finally, intersectoral ecotourism planning and collaboration is difficult to commit to when prime actors like the Bangladesh Parjatan Corporation, which is the National Tourism Organization (NTO) of Bangladesh, provide little information about their initiatives in the Sundarbans on their websites (BFD, 2010: 271). It is a clear weakness where the absence of appropriate information to the public hinders transparency. This too was realized by Roy and Roy (2015) as well as Hassan and Burns (2014), where in their article on Tourism Policies of Bangladesh it was noted that the Ministry of Civil Aviation and Tourism, Bangladesh Parjatan Corporation, and the Bangladesh Tourism Board who have the main responsibilities for implementing the national tourism policies, lack up-to-date information and statistics on their ministry websites. The National Tourism Policy is further only available in Bengali. “This uneasy access of the National Tourism Policy in other languages and particularly in

English is creating ground for conflict between International and local experts” (Hassan and Burns, 2014:464). Upon a new search this is still the case today. Indeed as Honey contends there is a “need for governments to develop clear standards, guidelines, and monitoring procedures[...]and investment and promotional strategies that support sound national, particularly community-based ecotourism enterprises” (Honey, 2008:394). But as will soon be revealed, the government too has their own agenda.

6.3.2 The Rampal Power Plant: A Trade-off?

It seems contradictory, that the Bangladeshi government would promote ecotourism when at the same time, they are in the midst of planning the Rampal coal-fired power plant to be built less than 14 kilometers north of the Sundarbans mangrove forest that will affect all the pillars of sustainable development (Doak *et al.*, 2016). Construction would imply millions of dollars being put into the project without gains until much later. In 2016, UNESCO issued a warning to the Bangladeshi Government stating the Rampal power plant poses as a serious threat to the Sundarbans World Heritage Site. Based on a mission reviewing the potential impacts of the construction of the plant, key concerns were voiced, including, the shipping of about 4.72 million tons of coal per year and dredging, which would move through the mangrove reserve, threatening the breeding grounds of species such as river dolphins. (Doak *et al.*, 2016) This would further expose downriver forests to pollution and acid rain from coal ash in the air, and cause pollution from wastewater and waste ash. In other words, the project would devastate and degrade the ecosystem. Ecotourism is not compatible with such agendas interfering with the natural environment and it could very well be the downfall for ecotourism staying sustainable or even existing in the future (Weaver and Lawton, 2007). Furthermore, Bangladesh is a low-lying nation, most vulnerable to global warming, which is why activists and protesters argue this strategy is reckless and would contribute to global warming. Threatening to inscribe the reserve under the list of World Heritage in Danger, UNESCO made recommendations for the project to be cancelled and relocated to a more suitable area and further urged the State Party to respond by the end of 2016 (Doak *et al.*, 2016:20).

The Bangladeshi government in response to UNESCO’s warning, issued a report by the Ministry of Environment and Forests, rejecting the allegations of the project harming the Sundarbans reserve. “The Rampal power plant is being implemented with highest mitigation measures” (MOEF, 2016:9). The government entity, Ministry of Power, Energy and Mineral Resources further justifies it by claiming that energy security is one of the preconditions of

sustainable development and is needed for the people to reach 24,000 Megawatt by 2021 in Bangladesh (PSMP, 2016). Referring to UNESCO's claims as 'factual inaccuracies', the State Party vindicates the construction through the use of "modern Ultra Supercritical Technology, with state-of-the-art environment protection/emission control abatement measures"(MOEF, 2016:9). Clearly there are diverging interests at stake here. On the one hand you have UNESCO solely concerned with the conservation of the reserve, taking on the role of the police of the environment with international and environmental organizations such as WWF backing them up. On the other hand, there is the government that yes wants to promote environmental conservation and ecotourism as part of that, but have other aims that contradict this purpose. Going back to the literature on developing and developed nations' different approaches to sustainable development, Gould (2004) and Redcliff's (1993) assertion on developing nations prioritizing basic needs and issues of poverty can clearly be seen in the efforts of the Bangladeshi government prioritizing electricity and coal power generating gains for the national economy over the environment. It furthermore demeans ecotourism initiatives in the area, where small steps are taken to contribute to a bigger environmental cause, only to have the very ecosystem it is based on threatened by other purposes. The government will not acknowledge it but these are the trade-offs they are grappling with that Wall (1997) and Alexander and Whitehouse (2004) were referring to earlier, in this case between the environmental pillar and the economic one. Between development and conservation.

6.3.3 Natural Calamities and Climate Change

It is widely known that cyclonic storms are not only a threat to the ecosystem of Sundarbans, but to ecotourism as well (Dasgupta *et al.*, 2016). The changing climate in the growing years will affect all aspects of ecotourism and specifically have serious ramifications on tourist travel decisions, which further affects the host population's employment and other labor related demands in these remote areas. Already now tourism season is limited to 3-4 months a year in the Sundarbans due a lack of access during monsoon season with high river tides and heavy rainfall. 2007 saw cyclone Sidr damage the coast and wipe out mangrove forest sections in the southern areas of the Sundarbans, resulting in 10,000 fatalities (BFD, 2010:53; UNESCO, 2017). Inhospitable climate change impacts like this, are a dramatic reminder of how fragile the ecotourism industry is and how much of it is dependent on the growing threat of climate change. Mangroves serve as natural barriers protecting the surrounding

communities, including places where ecotourism is established, however loss of mangroves due to agricultural land conversion and other factors equates to higher risk of disaster. The dilemma for ecotourism within this factor is that realistically the influence exerted by ecotourism on climate change is limited, and so the strategy these sectors need to incorporate in this setting is to “acquire sufficient resilience to allow for recovery” (Weaver, 1998:223).

There is both a growing awareness and concern of all actors in the region in the future preservation of the Sundarbans. The Sundarbans is vulnerable and threatened by climate change and further damage to the ecosystem is expected in the coming years (Dasgupta *et al.*, 2016; Doak *et al.*, 2016). A recent report published by The World Bank, adds that an increase in salinity of river water due to climate change will adversely impact fish species in the Sundarbans, which will further affect livelihoods of families depending on these species” (World Bank, 2017a). This in turn threatens the very activities ecotourism is able to provide in the Sundarbans. Fishing with the locals, which in the two sites previous analyzed is one of them. The two eco-sites further show no visible indication of efforts to deal with the rise in sea levels or threat of cyclones in the coming years. Steps like these are crucial if the ventures are to be sustainable. Cyclonic storms and floods are expected to increase in the wake of climate change and UNESCO considers the construction of the previously mentioned Rampal power plant as a prime example of pressures on the ecosystem, the Sundarbans could do without in the face of growing climate change (Doak *et al.*, 2016:25).

7. CONCLUSION

The purpose of this research was to explore to what extent ecotourism can be considered a mechanism that facilitates sustainable development. To a large extent, ecotourism can be considered a useful tool that promotes sustainable development. However it is contingent on the fulfillment of certain conditions and the legitimate aspirations of ecotourism sectors to instill sustainable principles. The conceptual framework developed in this thesis has been used to help in understanding some of the key factors, which both undermine and promote sustainable ecotourism practices. While the two sites embody sustainable ecotourism practices, most notably in improving the livelihoods of the local communities and encouraging them to become ecotourism entrepreneurs, thus providing them with permanent employment, there remains steps these sites could take to enhance sustainability and contribute to the more equitable development of communities. In both cases of *Gol Kanon* and *The Mangrove Eco Cottage & Tree House* this includes: considering more viable

transport mechanisms that are environmentally friendly; generating more income through the cottage stay; and finally acquiring sufficient resilience to allow for recovery against the threats of climate change.

In examining the question of what the main factors in the Sundarbans are that threaten the continued sustainable development of ecotourism, three things become clear. Firstly, as demonstrated by looking at the government actions in the IRMPS report, the government of Bangladesh suffers from a lack of coherent action. This further affects the coordination of other public and private sector activities in the area. Secondly, it becomes evident that ecotourism is highly susceptible to the proposed construction of the Rampal power plant due to the long term impacts that would impose environmental degradation to the area ecotourism is founded on. Thirdly, in regards to climate change, while ecotourism may have its role to play in mitigating climate change impacts, realistically ecotourism cannot be expected to have a profound impact. Indeed climate change serves to undermine sustainable development in the Sundarbans and knows no boundaries. This makes it imperative for integrative action and coordination to be taken among all stakeholders that share the ecosystem, to ensure sustainable development. Honey sums it up best by adding, “At its core, ecotourism is about power relationships and on-the ground struggles. It will take much stronger grassroots movements, combined with alliances among activists, experts, and NGOs and carefully planned and implemented national ecotourism strategies, to curb the power” (Honey, 2008:394).

Currently, the government of Bangladesh lacks the necessary influential independent body to help bolster the long-term strategy of ecotourism development. The intent for conservation may be clear but the enforcement of it is less so. It is thus suggested from this research, the government not leaves it primarily to the Forest Department to enact most of these changes alone, but instead should work to create a separate department within the Ministry of Tourism that deals with ecotourism and other forms of sustainable tourism. Currently, the Bangladesh Parjatan Corporation deals with all tourism. Until this is done, development in the area will remain in a rudimentary stage. Furthermore, future studies would serve well to conduct analyses on the different sustainable tourism establishments in Bangladesh and the Sundarbans; bringing them together into one database or information set so that stakeholders can share capacities and learn from each other’s initiatives resolving potential conflicts of interest.

Finally, the concept of sustainable development begs the question of what can we as nations, governments, and organizations do to propel human development goals whilst sustaining natural systems? At the essence of ecotourism is the question, what can we as the individual eco-tourist do (regardless of natural calamities, government agendas and factors that are out of our control) to bring about positive change both for the environment and human host populations? We need to dispel this idea that ecotourism and sustainable development have become less relevant due to the complexity of their relationship which has contributed significantly to the loss of their momentum. The two concepts do however need to be approached with vigilance. The ecotourism industry is dependent and fragile, but underneath it all, is the will to conserve the environment we tread on. We owe it to future generations, to bequeath them with the same opportunities we have today. In the meantime, local communities are being empowered, and our actions are meaningful. The fact remains the Sundarbans is at a critical point in its ecotourism development. With the projected growth of Bangladesh expected to increase in the next few years in GDP, it will be interesting to see how ecotourism influences this nation in the coming years on the unremitting path to development.

REFERENCES

- Alexander, S.E. and Whitehouse, J.L. (2004). *Challenges for balancing conservation and development through ecotourism: Insights and implications from two Belizean case studies*. In F.D. Pineda, C.A Brebbia & M.Mugica, Sustainable tourism. (pp129-142). Southampton. WIT press.
- Bangladesh Forest Department (2010). *Integrated Resources Management Plans for the Sundarbans (2010-2020)*. Forest Department, Ministry of Environment and Forests. Dhaka
- Brundtland, G.H. (1987). Foreword. In World Commission on Environment and Development (WCEOD), *Our Common Future-Brundtland Report*. Oxford University Press, Oxford
- Bryman, A. (2008). *Social Research Methods*. 1st ed. Oxford: Oxford University Press.
- Ceballos-Lascurain, H. (1996). *Tourism, Ecotourism and Protected Areas*. IUCN, Gland, Switzerland and Cambridge, UK.
- Cheia, G. (2013). *Ecotourism: Definition and Concepts*. Journal of Tourism, (15), pp.pp 56-59.
- Dasgupta, Susmita; Sobhan, Istiak; Wheeler, David. (2016). *Impact of Climate Change and Aquatic Salinization on Mangrove Species and Poor Communities in the Bangladesh Sundarbans*. Policy Research Working Paper;No. 7736. World Bank, Washington, DC. World Bank. Available at <https://openknowledge.worldbank.org/handle/10986/24653>
- Doak, N., Murai, M., and Douvère, F. (2016). *Report of the joint World Heritage Centre/IUCN Reactive Monitoring mission to the Sundarbans World Heritage Site, Bangladesh*. Following World Heritage Committee Decision 39 COM 7B.8. Dhaka: UNESCO.
- Elliott, J. (2012). *An Introduction to sustainable development*. 4th ed. Abingdon, Oxon: Routledge, pp 1-362
- FAO (1998). *Integrated Resource Development of the Sundarbans Reserve Forest: Project Findings and Recommendations*. FO:DP/BGD/84/056. [online] Rome: Food and Agriculture Organization of the United Nations. Available at: <http://www.fao.org/docrep/field/383933.htm> [Accessed 4 May 2017].
- Gopal, B. and Chauhan, M. (2006). *Biodiversity and its conservation in the Sundarban Mangrove Ecosystem*. Aquatic Sciences, 68(3), pp.338–354.
- Gould, L.A. (2004). *Ecotourism and Sustainable Community Development*. Ecclectica. Available at <http://ecclectica.brandonu.ca/issues/2004/2/gould.asp>
- Hassan, A. and Burns, P. (2014). *Tourism Policies of Bangladesh: A Contextual Analysis*. Tourism Planning and Development, pp.463-466.
- Honey, M. (2008). *Ecotourism and sustainable development: Who Owns Paradise?*. 2nd ed. Washington, D.C.: Island Press, pp. 3-390

- Jafari, J. (1987). *Tourism models: the sociocultural aspects*. *Tourism Management*, 8(2), pp.151-159.
- Jiang, J. (2008). *Evaluation of the Potential of Ecotourism to contribute to local sustainable development: A case study of Tengtou Village, China*. Masters. Massey University, New Zealand, pp 1-184.
- Kenny, L. (2017). *Final Paper*. Lund University, p.1.
- Khanom, S., Shah, M. and Chaudhary, A. (2004). *Towards ecotourism: issues of current tourism practices in the Sundarban mangrove forest, Bangladesh*. Paper presented in Peace, Environment and Tourism Conference 2011, 20-21 September, 2011 Pokhara, Nepal pp.1-9.
- Lück, M. and Kirstges, T. (2003). *Global ecotourism policies and Case Studies*. 1st ed. Clevedon, Buffalo: Channel View Publications. pp.150-153
- Mccrohan, D. (2013). *Planning Your Sundarbans Adventure*. [online] Lonely Planet. Available at: <https://www.lonelyplanet.com/asia/travel-tips-and-articles/77644> [Accessed 5 May 2017].
- Ministry of Environment and Forest Government of Bangladesh. (2016). *Updated Report of the Government of Bangladesh on Decision 39 COM 7B.8 by the World Heritage Committee*. World Heritage Papers 35. Paris: UNESCO, pp.1-49.
- Price, G and Murphy, P. (2000). *The relationship between ecotourism and sustainable development: A critical examination*. La Trobe University, Bundoora. Vic, pp1-14
- Potter, R., Binns, T., Elliott, J. and Smith, D. (2008). *Geographies of Development: An introduction to Development Studies*. 3rd ed. New York: Routledge, pp 16-50
- Power and Energy Master Plan (PSMP). (2016). [online] Dhaka: Ministry of Power, Energy, and Mineral Resources. Government of People Republic of Bangladesh, pp.61-65.
- Rahman, A. (2010). *Application of GIS in Ecotourism development: A case study in Sundarbans, Bangladesh*. Masters. Mid Sweden University. Available at <https://pdfs.semanticscholar.org/649e/607aef832f4e31ffcf91e063f8a47a63c35.pdf>
- Redclift, M. (1993). *Sustainable Development: Needs, Values, Rights*. *Environmental Values*, [online] 2(1), pp.3-20. Available at: <http://www.environmentandsociety.org/node/5485> [Accessed 4 May 2017].
- Relief International. (2016). *Linking Jute to Jobs: Ecotourism in Bangladesh*. [online] Available at: <https://www.ri.org/from-the-field/linking-jute-jobs-ecotourism-bangladesh> [Accessed 5 May 2017].
- Relief International. (2017a). *Gol Kanon Mangrove Eco Site*. [online] Available at: <http://sundarbans-ecotourism.org/gol-kanon/> [Accessed 28 Apr. 2017].
- Relief International. (2017b). *Mangrove Eco Cottage And Tree House*. [online] Available at: <http://sundarbans-ecotourism.org/mangrove-eco-cottage-and-tree-house/> [Accessed 28 Apr. 2017].
- Ross, S. and Wall, G. (1999a). *Ecotourism: towards congruence between theory and practice*. *Tourism Management*, 20(1), pp.123-132.

- Ross, S. and Wall, G. (1999b). *Evaluating Ecotourism: The case of North Sulawesi, Indonesia*. *Tourism Management*, 20(6), pp.673-682.
- Roy, S. and Roy, M. (2015). *Tourism in Bangladesh: Present Status and Future Prospects*. *The International Journal of Management Science and Business Administration*, 10(8), pp.1-9.
- Sharachchandra, L. (1991). *Sustainable development: A critical review*. *World Development*, 19(6), pp.607-611.
- Shegg, R., Liebrich, A., Scaglione, M., and Ahmad, S.F.S. (2008). *An exploratory field study of web 2.0 in tourism*. *Information and Communication Technologies in Tourism*. 5. 152-163
- Sundarban Mangrove Ecotourism. (2017) *Meet Sripati Bachar* [Facebook] Relief International. Available at <https://www.facebook.com/ecotourisminsundarbans/posts/971400922993615> [Accessed 7 May 2017].
- Telfer, D. and Sharpley, R. (2002). *Tourism and Development in the Developing World*. 1st ed. London, etc.: Routledge.
- Telfer, D. and Sharpley, R. (2015). *Tourism and development in the developing world*. 2nd ed. London: Routledge, pp.1-432
- UN-DESA. (2017) *Sustainable Tourism*. [online] Available at: <https://sustainabledevelopment.un.org/topics/sustainabletourism> [Accessed 5 May 2017].
- UNESCO. (2017). *The Sundarbans*. [online] Available at: <http://whc.unesco.org/en/list/798/> [Accessed 5 May 2017].
- United Nations General Assembly resolution 67/223, (2012), *Promotion of ecotourism for poverty eradication and environment protection*, A/RES/67/223 (21 December 2012), available at <http://undocs.org/A/RES/67/223>
- UNWTO (2015). *UNWTO welcomes the adoption of the Sustainable Development Goals*. [online] Available at: <http://media.unwto.org/press-release/2015-09-28/unwto-welcomes-adoption-sustainable-development-goals> [Accessed 22 May 2017].
- UNWTO (2016). *Sustainable tourism initiatives recognized by the UNWTO Awards*. [online] Available at: <http://media.unwto.org/press-release/2016-01-21/sustainable-tourism-initiatives-recognized-unwto-awards> [Accessed 4 May 2017].
- UNWTO, (2017). *Sustained growth in international tourism despite challenges*. [online] Available at: <http://www2.unwto.org/press-release/2017-01-17/sustained-growth-international-tourism-despite-challenges> [Accessed 14 Mar. 2017].
- Wall, G. (1997). *Is Ecotourism Sustainable?*. *Environmental Management*, 21, pp.483-491.
- Weaver, D. (1998). *Ecotourism in the Less Developed World*. Wallingford UK: CAB International, pp. 1-231.
- Weaver, D. (2006). *Sustainable Tourism: Theory and Practice*. 1st ed. Oxford: Elsevier Ltd.
- Weaver, D. and Lawton, L. (2007). *Twenty years on: The state of contemporary ecotourism research*. *Tourism Management*, 28(5), pp.1168-1179.

WCOED, (1987) *Our Common Future - Brundtland Report*. Oxford University Press, p. 204.
Available at: <http://www.un-documents.net/ourcommon-future.pdf>

The World Bank. (2014). *A Resilient Future for Bangladesh Sundarbans*. [online] Available at: <http://www.worldbank.org/en/news/feature/2014/07/02/a-resilient-future-for-bangladesh-sundarbans> [Accessed 5 May 2017].

The World Bank. (2017a). *Increasing Salinity in a Changing Climate Likely to Alter Sundarban's Ecosystem*. [online] Available at: <http://www.worldbank.org/en/news/feature/2017/01/22/increasing-salinity-in-a-changing-climate-likely-to-alter-sundarbans-ecosystem> [Accessed 5 May 2017].

The World Bank. (2017b). *Where We Work - Bangladesh Overview*. [online] Available at: <http://www.worldbank.org/en/country/bangladesh/overview> [Accessed 5 May 2017].

IMAGE REFERENCES

Jovago (2017). *Gol Kanon Mangrove Eco-Site*. [image] Available at: <https://www.jovago.net/en-gb/bangladesh/o27351/gol-kanon-mangrove-eco-site-khulna> [Accessed 21 May 2017].

Relief International (2017). *Mangrove Eco cottage and tree house*. [image] Available at: <http://sundarbans-ecotourism.org/mangrove-eco-cottage-and-tree-house/> [Accessed 21 May 2017].

Singh, V. (2012). *Map of Sundarbans*. [image] Available at: <https://easyvivek.wordpress.com/2011/06/23/sundarbans-the-dying-delta/sundarbans-eco-region/> [Accessed 22 May 2017].

The World Bank. (2016). *International tourism, number of arrivals: Bangladesh*. [image] Available at: <http://data.worldbank.org/indicator/ST.INT.ARVL?locations=BD> [Accessed 5 May 2017].

APPENDICES

This table provides a simple visual presentation of the conceptual framework applied to the Eco-sites. The criterion are Yes, No, To some extent, and Not applicable due to a lack of information.

Appendix A: Sustainability Goals for Ecotourism - Gol Kanon

= YES = NO = to some extent N.A.= not applicable

The Economic sustainability goals for Ecotourism	
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Creates permanent employment opportunities & additional income for local communities (<i>ex. Profits kept within local communities, not foreign owned</i>)
N.A	<ul style="list-style-type: none"> Encourages donations from visitors to environmental protection, and resource conservation
<input type="checkbox"/>	<ul style="list-style-type: none"> Improves the local infrastructure
<input type="checkbox"/>	<ul style="list-style-type: none"> Finances the protection, establishment and maintenance of reserve areas
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Proactive use of available local building materials and natural resources(<i>ex. Local products, and materials as opposed to exported resources in generating revenue</i>)
The Environmental sustainability goals for Ecotourism	
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Ensures environmental education for visitors and locals
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Mobilization plan to prepare for natural disasters
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Builds environmental awareness among eco-tourists and local population
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Considers “en route” impact travelling to the site (<i>ex. Emissions from transportation to and from site</i>)
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Low impact construction (<i>ex. through use of available local building materials, recycling and disposal of waste etc.</i>)
The Socio-cultural sustainability goals for Ecotourism	
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Promotes participation and inclusivity of locals (<i>ex. involves coordination communication between host communities and tourists</i>)
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Empowers local communities and promotes local ownership (<i>ex. Locals must feel sense of control over planning process involving resource use. Tourism relies on goodwill of locals</i>)
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Fosters intercultural appreciation (<i>ex. through encouraging understanding, appreciation, and conservation of cultural elements of host community</i>)

Appendix B: Sustainability Goals for Ecotourism - Mangrove Eco Cottage & Tree House

= YES = NO = to some extent N.A.= not applicable

The Economic sustainability goals for Ecotourism	
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Creates permanent employment opportunities & additional income for local communities (<i>ex. Profits kept within local communities, not foreign owned</i>)
N.A	<ul style="list-style-type: none"> Encourages donations from visitors to environmental protection, and resource conservation
<input type="checkbox"/>	<ul style="list-style-type: none"> Improves the local infrastructure
<input type="checkbox"/>	<ul style="list-style-type: none"> Finances the protection, establishment and maintenance of reserve areas
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Proactive use of available local building materials and natural resources (<i>ex. Local products, and materials as opposed to exported resources in generating revenue</i>)
The Environmental sustainability goals for Ecotourism	
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Ensures environmental education for visitors and locals
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Mobilization plan to prepare for natural disasters
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Builds environmental awareness among eco-tourists and local population
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Considers “en route” impact travelling to the site (<i>ex. Emissions from transportation to and from site</i>)
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Low impact construction (<i>ex. through use of available local building materials, recycling and disposal of waste etc.</i>)
The Socio-cultural sustainability goals for Ecotourism	
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Promotes participation and inclusivity of locals (<i>ex. involves coordination communication between host communities and tourists</i>)
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Empowers local communities and promotes local ownership (<i>ex. Locals must feel sense of control over planning process involving resource use. Tourism relies on goodwill of locals</i>)
<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Fosters intercultural appreciation (<i>ex. through encouraging understanding, appreciation, and conservation of cultural elements of host community</i>)