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## Crises and Conflicts on the Way to Sustainable Tourism Development: A Study of Cox's Bazar, Bangladesh

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### Abstract:

This study aims to measure the sustainable tourism conditions of Cox's Bazar, Bangladesh, concerning various crises and conflicts inflicted upon it in recent times. Recent crisis studies make it imperative that sustainability should set the bedrock of any industry for its longevity. Following Ko's (2005) tourism sustainability conceptual framework, this study uses a mixed-method approach to map the tourism sustainability of Cox's Bazar. Our studies find that the tourism sustainability in Cox's Bazar hit an intermediate level in the tourism sustainability map suggested by Ko (2005), which depicts that tourism sustainability in Cox's Bazar is neither sustainable nor unsustainable. Lack of reliable crisis response mechanism, lethargic attitudes towards safety and security issues, no control over the market and city development, relaxed attitudes towards the environment and littering in the tourist zones, and Rohingya people's engagement with drug, human trafficking, and flesh trade can be the most significant challenges to the long-term tourism sustainability of Cox's Bazar. However, a time-suited coordinated tourism action plan can put the tourism sustainability of Cox's Bazar back on the pedestal.

**Keywords:** crisis management; conflicts, tourism, sustainable development.

**JEL Classification:** H12; D74; L83; Q01.

### Introduction

Business sustainability in response to major environmental problems has been a significant trend of research in contemporary times (Palacios - Florencio *et al.* 2021; Buxel *et al.* 2015). Since the "Bruntland Report-1987," authorities and civil societies in every corner of the world have first thought to integrate environment, environmental concerns, and conservation into every successful development (Keeble 1988; Cochrane 2006). Sustainable Tourism is a crucial area to the sustainable development of society (Chakraborty 2021; Streimikiene *et al.* 2020). The United Nations World Tourism Organization (UNWTO) stressed the Sustainability of tourism on three principles: optimum resource usage, respect towards host community cultures and traditions, and viable and fair economic prosperity for stakeholders. According to UNWTO, Sustainable Tourism is "Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities." Sustainable tourism can become a potential solution to stimulate tourist movements and help revive the tourism industry (Palacios - Florencio *et al.* 2021).

The tourism industry is highly vulnerable to crises (Cinar & Sener, 2021), and the immensity of a risk/disaster is a matter of significant discussion for sustainable tourism (Ural 2016). Prior research suggests that

the image of a tourist destination can change over time and many tourist destinations suffer from various crises that have sufficiently altered the tourists' images of those destinations (Zenker & Kock 2020). Pappas (2019) mentioned that tourism research has inadequately covered the issues of chaos and complexities because of its strong adherence to a reductionist approach. Moreover, Sharma & Shruti (2015) opined that in tourism, various product options and more extraordinary services and facilities have been emerging than in previous times. Nevertheless, modern tourism is still highly vulnerable to acute crises and conflicts, and the matters need serious attention from the authorities.

This study aims to identify the sustainable tourism conditions in Bangladesh's most popular tourist destination, Cox's Bazar, in relation to the various crisis it has undergone recently. The study also provides the critical issues and solutions for tourism sustainability in Cox's Bazar. Cox's Bazar, named after the British Captain Hiram Cox, is famous as the world's unscathed longest sandy sea beach. Over time, the municipality's area has increased to 263 square miles, and its population stands at around 350 thousand. On the other hand, the district covers an area of 2,492 square kilometers with a population of about 2.5 million. The city is famous for its various exotic tourist locations that include Inani Sea beach, Technaf Sea beach, Saint Martin's Island, Himchhari Waterfall, Naf River, Chheradia Dip (Island), various other Buddhist Viharas and Monasteries, Muslim Mazar (Shrine) Sharifs, Hindu Temples and many others architectural sites (Ahmed 2022). In addition, Cox's Bazar is famous for its industrial potential, especially in dried fish, salt cultivation and manufacturing, and seaweeds. Every year about three (03) million tourists visit this location (Ahmed 2022) and contribute significantly to the national GDP of Bangladesh.

The choice of Cox's Bazar as the study site has two justifications. First, Bangladesh is one of the next eleven economies globally (Lawson, Heacock & Stupnytska 2007). It successfully aligns with the progression toward the sustainable economic growth target (Siddikee *et al.* 2022). So, the sustainable tourism development in Cox's Bazar closely connects with Bangladesh's economic growth sustainability. Second, Cox's Bazar has been the study site of several significant risks (Yaba Trade, Rohingya Influx, Crossfire Deaths, and Covid 19) in recent times (Lewis 2019; Gallien & Weigand 2021).

The study has several contributions to the literature. First, the study provides Tourism Sustainability Assessment Maps (TSAM) of Cox's Bazar, Bangladesh using an internationally accepted assessment procedure suggested by Ko (2005). Second, this study provides baseline data about sustainable tourism in Cox's Bazar at a critical time when many technical and social data about sustainable tourism indicators in Cox's Bazar are almost nil. Third, the study is an excellent example of how crises interact and influence sustainable tourism in Cox's Bazar, Bangladesh, including the local governance and contextual issues that differ from many other reputed regional and global tourist destinations. Finally, the study has policy-relevant suggestions for Bangladesh's various tourism-related entities. The study's findings will help the policymakers get a fair picture of the existing tourism sustainability scenarios of Cox's Bazar and accordingly take action to make the situations better and stronger there.

The remainder of the paper is organized as follows. Section 2 provides the theoretical background and reviews of previous relevant literature on the crisis, conflicts, and sustainable tourism. Section 3 discusses the research methodology, including data sample and model estimation. Finally, sections 4 and 5 present the descriptive analysis, including the study's results and concluding remarks, respectively.

## 1. Literature Review

### 1.1 Crisis and Conflicts

The word 'crisis' dates back to the Greek epoch. The Greeks used the word 'krino' to comprehend a crisis, which meant an eventual resolution in literal terms. Moreover, the word denotes the sensing of uncertainty and seeking rescue. In Latin origin, the word indicated a point of critical culmination (Gryz & Kitler 2007). In modern times, the crisis is a new reality. "Black swans" are growing as new normal; our systems, environments, and contexts are mechanically susceptible to crises (Lagadec & Topper 2012). Generally, the crisis signals a negative anomaly that constitutes instability and jeopardizes the functioning of a society or an organization (Czarnecki & Starosta 2014). Brecher (1996) stated that crises and conflicts are theoretically and empirically interrelated.

Crises in each jurisdiction seem to have a certain level of liberty. A crisis, irrespective of its nature (political or economic), has no connection with a preceding or succeeding crisis (Solimano 2005). Wobodo *et al.* (2020) point out that crisis and conflict are invariably linked to human life and the environment. They are highly related to the business world, where many threats and uncertainties always exist. Managers of firms should regularly diagnose the business environment so that early detection and protection can be timely ensued. The most crucial challenges and opportunities of recent times are accelerating climate variability, increased extreme poverty,

gender discrimination, humanitarian crisis, and conflicts, all of which intersect with the covid-19 pandemic (Brown 2021). Therefore, the preceding sufferings of crises and conflicts have inflated many folds, directly interpolating global economic, environmental, and social conditions (Lu *et al.* 2021). Hall *et al.* (2020) argued that the probable impact of crises and conflicts on global tourism would rise in size and frequency due to the hypermobility and increasing connectivity of the global economy.

### 1.2 Sustainability and Tourism

Sustainability and development are mutually reinforcing instruments of sustainable development as defined by the United Nations in its agenda as a multifaceted project aimed at improving the quality of life for all people while establishing reciprocally symbiotic and reinforcing social, economic, and environmental development mechanisms (Müller 2021). Typically, the phrase “sustainability” denotes an assemblage that confirms the link between world ecological and economic growth and how these two moves in tandem (Chiesa *et al.* 1999). Therefore, a sustainable system can function in a way that survives or persists without exhausting its supportive environment. It maintains a relationship of equilibrium without bilateral negative impacts (Costanza & Patten 1995; Faber *et al.* 2005).

The sustainable tourism concept is a mechanism that thoroughly considers current and future socio-economic and environmental implications. Moreover, it also recognizes needs corresponding with the industry. Besides, to attain sustainability in tourism, it is essential to consider the intrinsic relationship between the host community and the environment. Therefore, it works upon informed stakeholder participation and steady political leadership (UNEP & WTO 2005). It additionally refers to a system that ensures equilibrium between the economic, socio-cultural, and environmental prospects of tourism progression and preserving and perpetuating the biodiversity and ecosystem. In addition, sustainable tourism generates employment and income for both present and future generations and substantially curtails local environmental impacts (Neto 2002).

### 1.3 Tourism Sustainability Model of Ko (2005)

Ko (2005) proposed a conceptual model of tourism sustainability assessment of a tourist destination using two systems (the human system and the ecosystem) and eight dimensions (political, economic, socio-cultural, production structure, general environment impacts, ecosystem quality, biodiversity, environmental policy, and management). Each system has four dimensions, and every dimension can be constructed using the appropriate number of indicators for the study site, but at least four (Ko 2005). This assessment method is a quantitative approach based on important tourism stakeholders' opinions on a scale and mapping the responses on two models: 'Barometer of tourism sustainability' (BTS) and 'AMOEBAs of tourism sustainability indicators' (ATSI). The BTS model represents the extensive level of tourism at five levels (Unsustainable to potentially Unsustainable to Intermediate to Potentially Sustainable to Sustainable) of sustainability in a particular tourist site, combining human and environmental indicators into an index of sustainable tourism development without sacrificing one against the other. The ATSI model complements the BTS analysis and demonstrates the sustainability of individual tourism indicators. Several authors (Cernat & Gourdon 2007; Diaz & Espino-Rodriguez 2016) highly appreciated Ko's (2003, 2005) methodological procedures for sustainable tourism mapping of a particular study site.

### 1.4 Empirical Works on Crises, Conflicts, and Tourism Sustainability

The tourism industry went through an inexorable impact due to the COVID-19 pandemic. The pandemic dramatically altered travellers' behaviour and mental well-being (Abbas *et al.* 2021; Butcher 2021). This alteration negatively influenced the tourism industry as most travellers dropped out of their plans due to the threat of getting infected with the deadly virus (Uğur & Akbıyık 2020). Besides, travellers could potentially elevate the risk of carrying and spreading the infectious virus through their usage of public transportation such as airplanes or buses (Su *et al.* 2021). Jus (2022) reveals that the contribution of travel and tourism to global GDP reduced by 5.5% from 2019 to 2020, and about 62 million people from the worldwide tourism industry lost their jobs over the same period. Covid 19 was a significant disrupter for the global tourism industry and changed the whole spectrum. Various research on Covid 19 and sustainable tourism has emerged regarding content and type (Tauber & Bausch 2022). Interestingly, Jones and Comfort (2020) opined that the COVID-19 crisis, on the one hand, has posed significant challenges for the tourist industry but, on the other hand, has also signalled some environmental changes that may be core to future sustainability.

Migration and refugee crisis is another high research topic of sustainable tourism (Melotti *et al.* 2018; Choe & Lugosi 2021; Burrai *et al.* 2022). Pappas & Papatheodorou (2017) stated that tourism accommodation

managers need to appraise host behaviour patterns and align their functions with refugees from a social perspective rather than taking refugees as a menace to their business sustainability and fortune. Instead, they should take Greece's refugee crisis as a chance to create a warm hospitality experience based on multiplicity, liberality, and sympathy, refraining from inglorious past practices. For tourism accommodation providers, the researchers urged to focus on the quality of services and destination image, keeping in mind the attributes of the tourists. Mekinc *et al.* (2013) opined that drug cartels and double-dealing directly influence the sustainable growth of tourism destinations through eco-criminality. Tepelus (2008) pointed out two challenges: human trafficking and child sex, to the sustainable development of tourism and calls for switching to practical models for long-standing innovation and public policies.

The national policy for tourism in Bangladesh comprises policies that promote the tourism industry's sustainability and the environment's preservation. The policies comply with sustainability in economic progression through private sector investment that does not degrade biodiversity or hamper the local community (Masrurul 2019). Nevertheless, the tourism policies in Bangladesh have no emergency action plans to implement in times of crisis and disasters that could aid the tourism industry in maintaining sustainability. Extant work (Jamil & Siddique 2013) shed light on sustainable tourism scenarios in Bangladesh along with a band of researchers (Fatema *et al.* 2018; Amin 2017; Saxena *et al.* 2020) specifically work on the sustainable tourism situation in Cox's Bazar. Hasan *et al.* (2021) stated that following the global trend, the Cox's Bazar-Takenaf cape of Bangladesh, famous for its wildlife sanctuaries and reserve forests, is undergoing severe deforestation due to the shelter of nearly one million Rohingya refugees in that locality. Echoing a similar voice, Islam *et al.* (2021) pointed out that due to mass deforestation to shelter Rohingyas, the usual elephant corridors in Cox's Bazar-Teknaf peninsula now face hostile encounters between elephants and humans. This considerable amount of Rohingya population is causing environmental and security concerns and a growing fear of epidemics rising in Cox's Bazar, Bangladesh. Mazhar *et al.* (2021) found that of various health concerns, an eruption of Acute Jaundice Syndrome (AJS) spread out among the refugees that demand vital water and sanitation interventions; otherwise, chronic diseases may capture the locality.

The tourism sector of Bangladesh was dealt a heavy blow by COVID-19. During the pandemic, the government of Bangladesh inflicted strict restrictions on tourism and traveling. To restore the lost attractions and ensure sustainable tourism in Cox's Bazar, security, fair distribution of business profits, community development, better transportation networks, hotels, restaurants, and proper maintenance of tourism spots are essential (Mondal 2017). Though Cox's Bazar is open for tourism from the second half of 2021, the number of tourists is low, and hotels are empty. However, prices are within the limit, and guest care services and hotel staff behaviours are humble (Aiman 2022).

## 2. Methodology

Theoretically, this study employs methodological triangulation as it combines qualitative and quantitative data collection methods to present the sustainable tourism situation in Cox's Bazar, Bangladesh. Triangulation means overcoming research biases by combining theories, methods, or observers in a research study that may arise from using a single method (Noble & Heale 2019). It is emerging as the 'new' method in tourism research. (Oppermann 2000). Thurmond (2001) describes the benefits of triangulated research: developing confidence with research data, innovating new means of understanding a phenomenon, bringing unique findings to the problems, challenging or accommodating theories, and catering to a clearer understanding of the problem.

Existing literature on sustainable tourism research is theoretical, mainly qualitative, with limited practical value (Archer 1996; Bramwell and Lane 1993). Ko (2005) proposed a quantitative conceptual framework for sustainable tourism assessment based on perceptions of three core elements (residents, tourists, and natural environments) of sustainable tourism, which is adopted in this study for quantitative analysis. Ko (2005) justifies using stakeholders' perceptions in the study of sustainable tourism, giving the example of the SERVQUAL or SERVPERF model used in product or service marketing. He further opined that the contribution of tourism to technical data is immeasurable. Stakeholders of a tourist site have the best judgment of whether the site is going forward or backward in sustainable tourism. Ko (2005) argued that the tourism sustainability of a particular tourist location should be assessed in 5 to 10 years as tourist destinations are susceptible to both internal and external shocks. Fortunately, Cox's Bazar's tourism industry is returning to normalcy after several shocks, and in this crisis recovery phase, the study can prove highly useful to various stakeholders.

Furthermore, the study also used a qualitative data collection approach, interviews with various stakeholders (environmental activists, residents, cultural activists, tour operators, hotel and restaurant managers, transport managers, and international NGO staff) in Cox's Bazar, Bangladesh. The interviews follow the



saturation methodological principle, which is highly trusted and regarded in qualitative research (Morse, 2015; Guest *et al.* 2006). Moreover, Ko (2005), in his seminal work on sustainable tourism, suggested using in-depth interviews for ecosystem data collection.

## 2.1 Data Collection Procedures and Survey Instrument Development

The researchers first thoroughly studied the existing literature on sustainable tourism indicators. Then, they took a field visit to Cox's Bazar to get in-hand experiences of sustainable tourism issues there through consultation with various stakeholders. Based on the relevant literature review and field visit outcome, a list of indicators is prepared for all the eight dimensions of sustainable tourism by Ko (2005) for the Focus Group Discussions (FGDs). Before the FGDs, the researchers talked with a group of teachers who teach tourism-related subjects at the university level. The academic scholars agreed and termed the list an all-inclusive document for tourism sustainability indicators appropriate for Cox's Bazar Bangladesh. Three separate FGDs, each with ten (10) individuals, are arranged with three stakeholder groups (residents, tourists, and environmental activists of Cox's Bazar). The first FGD has been with Cox's Bazar residents for at least fifteen years. The second FGD is with the tourists, having visited Cox's Bazar at least three times in the last five (05) years and at least one in the last six months. The final FGD is with the environmental activists associated with various environmental and cultural organizations in Cox's Bazar, Bangladesh.

Table 1. Selection of Items for the Survey Questionnaire

Dimensions	Top Four (4) Items	Scores (Out of 75)	Mean	Standard Deviation
Political	Political Commitment and assistance for SDGS at all development levels of government (SI1).	71	4.73	.45
	Political control over internal business (SI2)	63	4.20	.86
	Local oriented development policy and community participation in development plan (SI3)	57	3.80	.86
	Collaboration between and across the tourism related establishments (SI4)	50	3.33	.81
Economic	Quality jobs for local people (SI5)	70	4.67	.48
	Capital formation/investment in the community (SI6).	68	4.53	.51
	Costs of living (SI7)	64	4.26	.59
	Seasonality/all-year-round tourism (SI8).	57	3.80	.77
Socio-Cultural	Cultural sites administration and management (SI9)	70	4.67	.48
	Community health and safety (SI10)	65	4.33	.61
	Social fabric (SI11)	58	3.87	.63
	Cultural education (SI12)	56	3.73	.70
Production Structure	Tourists' attractions and their management. (SI13)	71	4.73	.45
	Tourists' site's facilities and services (SI14)	69	4.60	.50
	Price and costs to the consumer (SI15)	65	4.33	.72
	Goodwill and image of the tourism destination (SI16)	60	4.00	.65
General Environment	Air quality (SI17)	67	4.46	.51
	Traffic gridlock (SI18)	65	4.33	.61
	Waste management system (SI19)	62	4.13	.74
	Scenic conditions (SI20)	58	3.86	.83
Ecosystem Quality	Pollution of beach zone (SI21)	70	4.67	.48
	Protection levels and protected areas (SI22)	63	4.20	.67
	Preservation of Land & forest resources (SI23)	57	3.80	.86
	Spread of Infectious diseases (SI24)	52	3.47	.74
Biodiversity	Diversity in marine habitats (SI25)	69	4.60	.50
	Plant variety in natural forests and parks (SI26)	67	4.47	.51
	Soil and land erosion (SI27)	61	4.06	.70
	Stress level and loss of endangered species (SI28)	54	3.60	.50
Environmental Policy and Management	Green guidelines for tourists' destination (SI29)	72	4.80	.41
	Environmental awareness & Training campaign (SI30)	69	4.60	.50
	Recycling, reusing and reducing (SI31)	65	4.33	.72
	Environmental accreditation scheme (SI32)	54	3.60	.63

Source: Construct from the three Focus Group Discussions.

At the outset of each FGD, the moderator orients the FGD participants' details of the session. Following the briefing session, the pre-prepared list of sustainable tourism indicators was distributed and discussed among the participants. The participants were then asked to rate the indicators covering all areas of tourism sustainability in Cox's Bazar. The participants rated all the indicators relating to various dimensions of tourism sustainability in Cox's Bazar on a scale of 1 to 5 (Where 1= the least relevant, 5= the highest relevant). The participants' responses were collected, scored, and ranked according to their highest to lowest scores. With the top-scoring four indicators on each dimension, the survey questionnaire of the study was prepared. Ko (2005) suggested using at least four indicators from each dimension to assess the sustainable tourism conditions of a particular tourist site.

Then, the survey questionnaire is prepared with 32 indicators selected for eight dimensions of sustainable tourism by Ko (2005) on a scale of 1 to 10 (where 1= lowest score attached to an indicator and 10=highest scores attached to an indicator) adapted the Prescott-Allen model (1997). The questionnaire survey occurs at Cox's Bazar town and nearby Upazila towns (Teknaf, Ukhia, and Moheshkhali). The entire survey process is self-administered, and survey data is collected from 300 respondents by following purposive sampling. The purposive sampling suggests using the most proper utilization of available resources. It involves identifying and selecting individuals or groups of individuals that are experts and well-informed about a situation of interest (Etikan, Musa, and Alkassim 2016). The concept of sustainable tourism in Cox's Bazar is still embryonic, which convince the researchers to take the survey in a self-administered and purposive manner. Though sustainable tourism research in the host community in world tourism literature is a growing trend, limited research on this topic from the perspective of Bangladesh is done (Jahan & Rahman 2016). During the survey time, it is ensured that the survey respondents have completed at least twelfth-grade education and have good experiences with the tourism sustainability trends of Cox's Bazar.

Moreover, to corroborate the survey findings, twelve (12) semi-structured in-depth interviews are conducted with the relevant stakeholders of tourism in Cox's Bazar. The interview follows the saturation principle and stresses the issues of contemporary crises and their impact on the tourism sustainability of Cox's Bazar, Bangladesh.

Table 2. Interview pattern and participants

SL	Interviewee's Profession	Work Area	Interview Mode	Number
1	Environmental and Journalist and Cultural Activist	Cox's Bazar Town, Ukhia, Teknaf & Moheshkhali Upazila Town.	Face to Face Interview, Zoom Interview	02
2	Top District Government Officials, Senior Officials of Danish Refugee Council.	Cox's Bazar Town	Face to Face Interview	03
3	Managers of Hotels, Restaurants and Resorts	Cox's Bazar Town	Face to Face Interview, Telephone Interview	03
4	Traders	Cox's Bazar Town	Face to Face Interview	02
5	Local and local politician	Cox's Bazar Town, Teknaf Upazila Town	Face to Face Interview	02

Source: Constructs from the interviews of the study.

The survey findings are analysed and presented in descriptive statistics, and with the models, Barometer of Tourism Sustainability (BTS) and AMOEBA of Tourism Sustainability Indicators (ATSI) suggested by Ko (2005). Finally, the interview outcomes are analysed by thematic content analysis and sorted into the broader themes of the study: human well-being and ecosystem well-being. The interview findings categorically matched individually with the eight different dimensions of tourism sustainability in Cox's Bazar. The highest importance is attached to research ethics throughout the data collection, processing, and analysis. Therefore, pseudonyms for interview participants keep the respondent's identity anonymous for ethical consideration.

#### 4. Findings and Analysis

Table 3 presents the demographic details of the 300 survey respondents. One-third of the survey participants are locals, and the remaining respondents are tourists from outside Cox's Bazar. Most surveyed tourists are male, and 60% fall into the age group (18-25). Unmarried people (62.66%) and students (52.0%) mostly dominated the survey participants list. A significant percentage of the respondents are graduates (45.3%) and postgraduates (18.3%), and the majority of the respondents (76.7%) have family incomes more than BDT. 25000. Diverse groups of people visit Cox's Bazar annually, and the survey sample represents that. Government officials have also been visiting the area significantly for recent developments attracting considerable national and international

attention. The Highest number of respondents are from the two most important business centers of Bangladesh: Dhaka Division (32.3%) and Chittagong Division (42.7%). Most of the survey participants come to visit Cox's Bazar either with friends or families. About 74% of the respondents travelled with their families, whereas 22.67% came with their friends, and 3.33% visited alone.

Table 3. Demographic Profiles of the Survey Respondents

Group	Subgroup	Number	Percentage
Gender	Male	199	66.3%
	Female	101	33.7%
Age	18-25	180	60%
	25-30	32	10.66%
	30-40	49	16.33%
	Above 40	39	13%
Marital Status	Unmarried	188	62.66%
	Married	112	37.33%
Occupation	Student	156	52.0%
	Govt. Service	47	15.66%
	Business	30	10.0%
	NGO	14	4.66%
	Others	53	17.66%
Education	Below Graduate	109	36.3%
	Graduate	136	45.3%
	Post- Graduate	55	18.3%
Monthly Average Family Income (BDT**)	Below 25000	70	23.3%
	26000-50000	100	33.3%
	51000-75000	98	32.7%
	76000- 100000	32	10.7%
Residential Area	Dhaka Division	97	32.3%
	Chittagong Division*	128	42.7%
	Others Division	75	25.0%
Number of people visit together	0-2	87	29.0%
	3-5*	177	59.0%
	Above 5*	36	12.0%
Number of times visited	First time	51	23.7%
	2-5 times	121	40.3%
	5 times & over*	128	36.0%
Information platform	Facebook	192	48.9%
	YouTube	90	30%
	Words of Mouth	76	19.3%
	Others	35	8.9%
Travelling Cox's Bazar with	Families*	222	74.0%
	Friends	68	22.67%
	Alone	10	3.33%
Types of participants	Local	100	33.3%
	Tourists	200	66.7%

Source: construct from the findings. \*Local people are considered in this category. \*\* Bangladeshi Taka

Surveyed participants gathered tourist information about Cox's Bazar from various platforms. Facebook (48.9%) is the most popular information source among the respondents, trail by YouTube (30%). Tourists also provide attention to word of mouth on the various tourist locations in Cox's Bazar, Bangladesh. Most respondents collect information from several sources at a time; even local people use social networking sites to get updated information about the locality. Most of the surveyed participants have visited Cox's Bazar five or more times, and only 23.7% of participants are first-time visitors to Cox's Bazar town.

Table 4 presents the index scores of eight tourism sustainability dimensions of Ko (2005) in Cox's Bazar, Bangladesh. The table shows that the human side of sustainable tourism scores better than the ecosystem side of sustainable tourism in Cox's Bazar. On the human aspect, the better-performing dimensions are economic (6.14) and production structure (6.21) compared to political (5.34) and socio-cultural (5.05) dimensions. In contrast, on the ecosystem aspect, the better performing dimensions are general environment (5.78) and

biodiversity (5.86) than ecosystem quality (4.77) and environmental policy and management (3.02). When the average scores of the human system (5.69) and the ecosystem (4.86) are mapped in the barometer of the tourism sustainability map (Figure 1), their intersection point hits the intermediate gradient of the map. The intermediate gradient states that the tourism sustainability of Cox's Bazar is neither potentially sustainable nor potentially unsustainable. However, it is hanging at a level from where it can move quickly in unsustainable conditions if the relevant tourism bodies in Bangladesh do not immediately take sufficient steps.

Table 4. Tourism Sustainability Indicators Scores in Cox's Bazar

Theme	Dimensions	Item Codes	Items Score	Average Score (Dimensions)	Average Score (Theme)
Human	Political	SI1	5.40	5.34	5.69
		SI2	7.02		
		SI3	4.61		
		SI4	4.34		
	Economic	SI5	4.27	6.14	
		SI6	5.01		
		SI7	7.83		
		SI8	7.45		
	Socio-Cultural	SI9	4.76	5.05	
		SI10	4.47		
		SI11	6.07		
		SI12	4.91		
	Production Structure	SI13	5.38	6.21	
		SI14	5.13		
		SI15	7.52		
		SI16	6.80		
Ecosystem	General Environment	SI17	7.55	5.78	4.86
		SI18	6.13		
		SI19	3.43		
		SI20	6.03		
	Ecosystem Quality	SI21	7.25	4.77	
		SI22	4.17		
		SI23	3.54		
		SI24	4.13		
	Biodiversity	SI25	7.97	5.86	
		SI26	5.96		
		SI27	6.27		
		SI28	6.23		
	Environmental Policy and Management	SI29	3.41	3.02	
		SI30	3.66		
		SI31	2.62		
		SI32	2.41		

Source: construct from the survey findings

On the political dimension (5.34), Cox's Bazar is cutting an average performance, indicating that political leadership is either giving less attention or failing to understand the tourism demand of Cox's Bazar. A local politician, P, pointed out that,

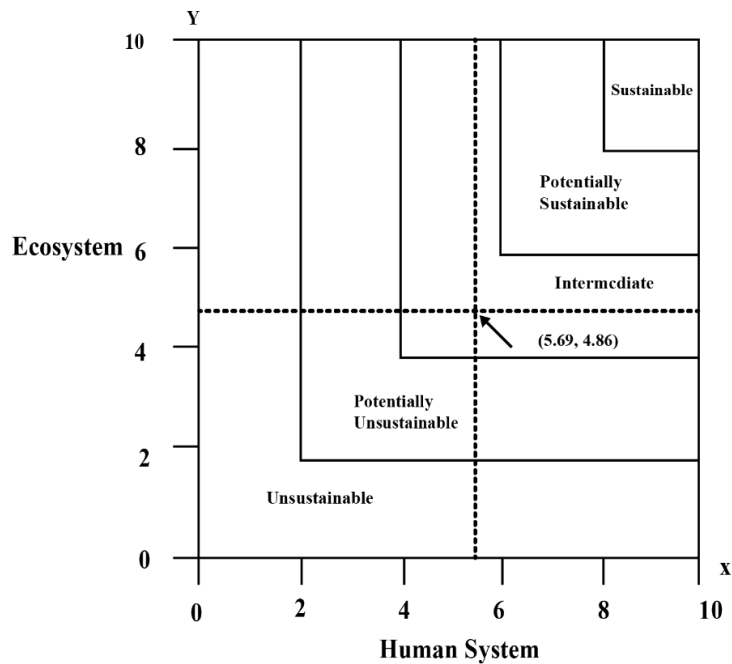
"The current lousy state of Cox's Bazar is mainly due to the lack of coordination among the various government agencies. In addition, several essential development works are lingering, damaging Cox's Bazar's image. Hopefully, after completing all major development works, Cox's Bazar will emerge as an international tourism site."

Moreover, all the government agencies are now busier in handling the several local and regional political issues that may ultimately hamper the sustainability of Cox's Bazar if not properly dealt. However, the current political government has set up a new authority named Cox's Bazar Development Authority with a particular focus on improving the overall development of Cox's Bazar. On the economic dimension (6.14), Cox's Bazar is doing comparatively better though is a hiccup in the economic environment. A Resort Manager, Q, said that,

“With the withdrawal of COVID-19 restrictions from Cox’s Bazar tourism, the business is gradually getting back to normalcy. The hotel occupancy rate is reasonable, and even during the COVID-19 times, many foreigners have stayed in the hotel. If Rohingya refugees continue to get international support in the future as they got in the recent past, the business will remain with us. However, the hotels and resorts industry in Cox’s Bazar needs complete monitoring by a competent authority as the hotels do not regularly publish their room tariff chart and occasionally follow very discriminatory pricing strategies to customers.”

On the socio-cultural dimension (5.05), Cox’s Bazar position is not at par with the expectation of a popular tourist site. A resident, S, said that,

Figure 1. Barometer of Tourism Sustainability Map of Cox’s Bazar, Bangladesh



“With the arrival of Rohingya refugees, many NGOs started working in Cox’s Bazar region, which opened an excellent window for many young locals with minimal qualifications. However, the sudden flow of foreign money due to Rohingya refugees, if not persist for long, the socio-economic conditions may worsen in the future. Currently, there is a massive scarcity of domestic aid in Cox’s Bazar as many former houses help workers now work in NGOs. Besides, during the holiday and Eid vacation, things become very tough for the locals. The prices of essentials skyrocket and even no good quality fish and vegetables can be available in the local market as big hotels and resorts have already purchased them.”

On the production structure (6.21), Cox’s Bazar is doing more than average performance, still millions of dollars of investment is poured in Cox’s Bazar every year by private investors. Most of tourism stakeholders are very much positive about the tourism potentials in Cox’s Bazar. A government official from the district administration, G, said that,

“Government is giving maximum importance to the development of Cox’s Bazar as an international tourist destination. Already, Cox’s Bazar development authority has started working for this purpose. District administration, in cooperation with other government agencies, is working to douse the multifaceted challenges the site is currently facing”.

Environmental policy and management have the worst-performing index value of all the eight dimensions index values of sustainable tourism in Cox’s Bazar. It indicates that the tourism service providers in Cox’s Bazar are not sincere about introducing and executing environmentally friendly practices in their operations. Regarding environment-friendly practices in their hotel management, a hotel manager ‘A’ commented,

“The use of the eco-friendly approach in the hotel management is merely notable in Cox’s Bazar. Very few top hotels and restaurants adopt limited green practices in operating hotels and restaurants. Even, most hotels and restaurants have no environmental certification or accreditation from the relevant and reputed authority. Moreover, the hotels and restaurant managers have no proper system to dispose of waste from their daily

activities. As a result, most small and medium-sized hotels and restaurants are throwing their wastages into the river canals and even the sea”.

The ecosystem quality is the second worst environment dimension in Cox’s Bazar, which also adds growing concern to the future of Cox’s Bazar as a tourist site. An activist of Bangladesh Poribesh Andolon (BAPA), ‘P’ said that,

“The environmental conditions in Cox’s Bazar are under serious threat. Unplanned constructions are taking place everywhere, and even powerful government offices are building establishments in the protected areas and close to the beach line. Due to the syndication, salt growers in Cox’s Bazar are not getting fair prices, and salts are importing from Myanmar and India. In addition, huge lands are acquired in Moheskali for coal-based power station and economic zones, which may jeopardize the region’s whole ecosystem. Once, the commonly seen water animals (dolphins, sharks, tiny ants) and plant species that were invisible for many years resurfaced along shorelines during Covid-19 is an example of damage we make to the ecosystem of Cox’s Bazar.”

Though the biodiversity dimension of Cox’s Bazar has the highest index value in the survey study, the situation is not strong enough to defuse tension with the sustainability of various animal and plant species. An executive from the Danish Refugee Council, ‘E’ remarked that,

“Unplanned construction is taking place in many areas of Cox’s Bazar; various temporary homesteads grew over cultivable land, even in small hills and protected zones. In addition, trees from nearby forests and hills are used by residents as cooking fuel. Animal habitat is being destroyed; wild elephants oftentimes come into the locality for food. Plant variety is gradually becoming extinct”.

Figure 2. AMOEBA of Tourism Sustainability Indicators in Cox’s Bazar, Bangladesh

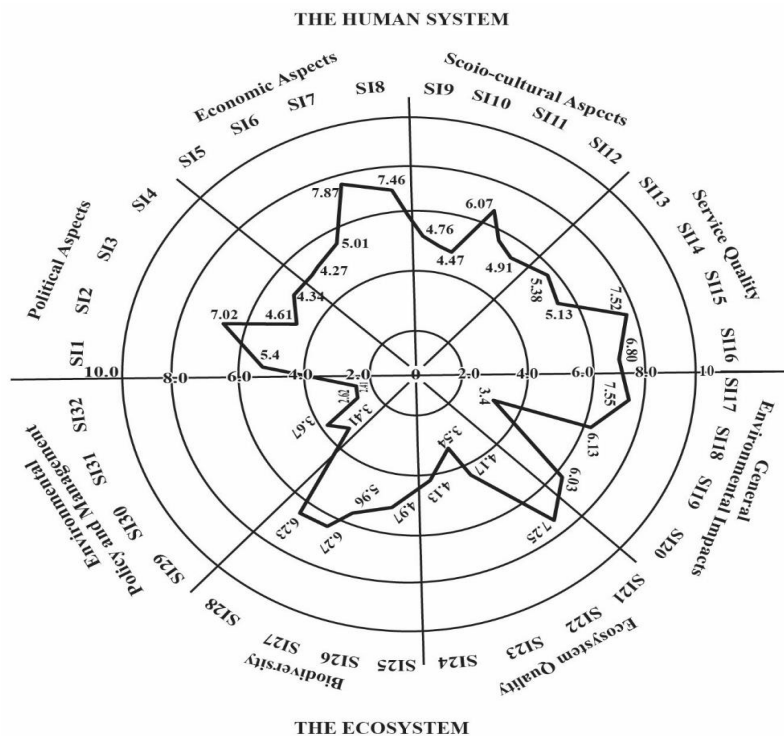


Table 4 also presents the indicator-wise index value of tourism sustainability in Cox’s Bazar, Bangladesh, which is graphically presented in figure (2). The findings show that tourists and locals consider several indicators, i.e., political control over business (7.02), costs of living (7.83), price and costs to the tourists (7.52), and pollution of beach zone (7.25) are excessively high, which can reduce the tourist attractions of Cox’s Bazar. The restaurant manager, N, commented,

“With the return of tourists after COVID-19, the restaurant business is doing well now even though the steep price rise of raw materials, fish, and vegetables is cutting the profit margin. Ingredients for popular food items sometimes become unavailable in the local market. Moreover, tourist arrivals are not consistent over the year. The continuous ups and downs with the tourists’ movement in Cox’s Bazar make the business tough and challenging.”

Similarly, indicators like green guidelines for tourists' destination (3.41), environmental awareness and training program (3.66), recycling, reusing, and reducing (2.62), environmental accreditation scheme (2.41), conservation of lands and forests (3.54), and waste management system (3.43) are very minimum which hurt the tourism sustainability of Cox's Bazar. The transport company manager, E, opined, "Transport sector of Cox's Bazar is a complete mess. The inter-district business terminal station in Cox's Bazar has no sufficient space for transport parking. As a result, transport companies usually park their vehicles roadside. For thousands of transport workers, insufficient toilet and sanitation facilities compel them to pee in the open space. Unnecessary harassment from law enforcement agencies and safety security issues are also damaging the profitability of the transportation business."

On the other hand, Cox's Bazar, as a sustainable tourism destination, is performing well in the areas of tourism seasonality (7.45), goodwill and image of the tourist destination (6.80), and air quality (7.55) according to the locals and tourists. On the remaining sustainable tourism indicators mentioned in this study, Cox's Bazar is scoring average performance, which is unsatisfactory. One trader from the Burmese market, B, lamented that,

"Once most popular Burmese market in Cox's Bazar is facing a severe shortage in sales now because of the delay roads construction leading to the market. In the past, they used to have daily sales of Bangladeshi taka (BDT) 70000-80000, now amounting to around BDT 10000-15000. Security is also decreasing; during night-time, tourists sometimes become the victims of hijacking and pickpocketing".

However, an auspicious picture is seen in the dry fish market. Dry fish items (Chhuri, Poa, Laitta, Lakkhya, Rupchanda, Matia, Poa, Chingri, Lakkhya, Korati, Kamila, and Rupsha) of Cox's Bazar are top-rated by domestic tourists. With the growth of tourists and international agencies in Cox's Bazar, the city is facing new social challenges that may hit its long-standing social fabric. A cultural activist, 'C', mentioned that,

"Many hotels secretly introduce Spa and Bar services to cater to the needs of a specific group of customers for more business profit. However, those hotels are not authorized to do so. This type of questionable business practice may malign the business environment and negatively affect Cox's Bazar's tourism in the future. In addition, illegal sex and trafficking of Rohingya girls are slowly increasing in the Cox's Bazar region. Owing to the Rohingya crisis, many outside people came to Cox's Bazar for job purposes. They got married to the local woman even though they are already married and have families elsewhere."

## Conclusion

Crises and conflicts are an inevitable part of the development journey of developing economies. As a developing economy, Bangladesh is growing very fast. However, unfortunately, a few crucial regional and global issues (Rohingya refugees, Yaba drug trade, and COVID-19) pose severe challenges to the growing tourism industry in Cox's Bazar of Bangladesh in recent times. This study emphasizes the current state of sustainable tourism in Cox's Bazar as the global pandemic COVID-19 reinforces the importance of sustainability for every industry worldwide, especially tourism.

This study finds that tourism sustainability in Cox's Bazar is hanging like a pendulum between sustainability and unsustainability. Using the tourism sustainability model of Ko (2005) and survey findings, it is seen that the current sustainable tourism condition in Cox's Bazar is equidistant from its sustainability and unsustainability levels. Though economically, Cox's Bazar tourism sector is still doing well as there is no alternative seaside town in Bangladesh. However, in the coming days, Cox's Bazar will not have the same advantage as many Bangladeshis are now looking for tourism services in neighbouring countries. In our survey findings, the best-performing tourism sustainability dimensions in Cox's Bazar are economic, production, the general environment, and biodiversity. The sociocultural and political dimensions are closer to the average level. In contrast, the dimensions of ecosystem quality and environmental policy and management are the worst-performing segments of tourism sustainability in Cox's Bazar. Several interviews with the local people, NGOs staffs, cultural and environmental activists, traders, and various tourism service providers also express the dismal conditions of tourism sustainability in Cox's Bazar.

All the study's tourism stakeholders surveyed and interviewed expressed dissatisfaction with the roads and highway conditions, drainage system, and waste disposing facility in Cox's Bazar and nearby towns. They are also complaining about the price spiral of daily commodities, house rent, and other essential services. Cox's Bazar town's scenic and natural beauty are gradually declining and turning into an unplanned city of bricks and mortars. Hotels, resorts, and residential buildings are being constructed haphazardly; various public entities and government structures are built up in protected zones that may endanger Cox's Bazar's ecosystem. Moreover, due to the sudden influx of Rohingya, various foreign and local NGOs started working in Cox's Bazar region, resulting in a new demographic in the locality. In the new emerging scenarios: many young people are getting

engaged in temporary jobs, Yaba drug smuggling across the border reaches an excessive level, human trafficking, illegal sex trade, and various unethical activities at the tourist locations of Cox's Bazar are slowly growing. Furthermore, salt cultivation, dried fish, and sea fish businesses also face less sponsorship and promotion. Many once popular tourist sites in Cox's Bazar currently are not getting sufficient attention from tourists because of a lack of marketing, restoration, and care.

The environmental health of Cox's Bazar is not at par with the general expectation of a tourist city. Most tourist service providers have no environment-related certification, even minimal green practices in their day-to-day operations. Local authorities and law enforcement agencies are not correctly monitoring the environmental compliance of the tourism industry, which results in the indiscriminate use of land, water, sea animals, forests, and plants of Cox's Bazar. As a result, animal habitats are gradually becoming extinct. Fish hatchery firms are discharging waste into the sea; plastic littering along the beach is excessive. Though there is a ban on catching a few types of sea fish, they are regularly captured from the sea and sold openly in Cox's Bazar town.

Bangladesh government has already taken a master plan to make Cox's Bazar an exclusive and international tourist attraction. The completion of several ongoing big projects (Cox's Bazar International Airport, Chittagong-Cox's Bazar Railway link, Matarbari Coal Power Plant, High-tech Park in Ramu, and others) will significantly change the tourism dynamics of Cox's Bazar. The interview findings with the tourism stakeholders in Cox's Bazar emphasize the coordination between the local authorities and various government establishments in implementing the tourism master plan. However, the continuing construction works in various locations also bring immeasurable pains for tourists and the locals. Therefore, relevant authorities must ensure to complete the underway construction by the deadline; otherwise, sufferings for people will increase.

Furthermore, Cox's Bazar is the epicentre of several security issues with crucial significance to local and regional geopolitics. Therefore, any failure to maintain law and order situations in Cox's Bazar will cause severe damage to tourism sustainability in the region. Local people also urge the authorities to focus on cultural and sports activities so that the local youths can grow physically and mentally rather than get trapped in illegal and unethical things. Therefore, a well-crafted tourism action plan ensuring the spontaneous participation of various tourism service providers in cooperation with all government agencies is essential to make Cox's Bazar a sustainable tourism site.

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