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# SWOT Analysis of Forest Protected Area Based Sustainable Tourism Development: A Case Study in the Lawachara National Park, Bangladesh

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*Keywords Community, decision, eco-tourism, management, wildlife sanctuary*  Abstract

Lawachara National Park (LNP) is one of the most important protected areas in the Sylhet region included in the blessed with the natural beauty of the forest and diverse wildlife of Northeast Bangladesh. This paper explores the possibility of sustainable forest tourism development in the study arearegarding the sensible usage of the resource and local resident communities. To plan and properly implement this, various managements and decision-making tools were used, including interviews of local residents, visitors and the staff of the park, with the help of survey questionnaire (primary data) and secondary data acquired from Bangladesh ParjontanCorporation, conference proceedings, books, and journals. Based upon these data the strengths, weaknesses, opportunities, and threats (SWOT) were analyzed to identify the required management strategies to improve the sustainable forest protected area tourism in the hilly area. While introducing both domestic and international tourist attractions in the area, the influential factors in the region categorized into the four headings of strengths; weaknesses; opportunities and threats were included in our considerations and strategies or guidelines for a sustained eco-

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tourism development in the region provided. The research findings, the well-established area forest tourism destination with a variety of natural attractions and unique culture of local people retaining ancient culture are the strengths of the area while lack of infrastructures and fundamental facilities are significant weaknesses. To maximize the internal strengths and external opportunities and to minimize internal weaknesses and external threats on the several strategies have been suggested for the sustainable forest protected area tourism development and management. However, there is a scope for the continuous improvement of the SWOT analysis in identifying more viable options for the strategic management of sustainable tourism.

## Introduction

It is widely predicted that the tourism industry is making a significant contribution to the socio-economic development of many countries in the Asian and Pacific region (IUCN 1994) through its role in expanding their economic base, increasing foreign exchange earnings, providing employment opportunities and enhancing standards of living (Chape et al 2003; Islam 2014). As a tool of potential for contributing to sustainable livelihoods of local communities (Chowdhury 2010) and conservation of natural environments, FPA tourism has been recognized paradigm internationally (Alam et al 2010; Butowski 2012). It provides an opportunity to create funds for sustainable conservation (Monavari 2007; Miandehi and Morteza 2013) benefits directly the economic development and political empowerment of local communities (Larson and Alexander 2008) and fosters respect for different cultures and human rights (Hanna et al 2015) which very significant for future generations as a sustainable environment (UNEP and UNWTO. 2005). In short, nature-based tourism is a small sub-section of the tourism industry catering tourists (Martha 2008) who wish to visit natural areas to observe wildlife, natural landscapes and traditional cultures (IUCN. 2012). Forest-based tourism, popularly known as 'ecotourism' which combined with 'ecology' and 'tourism', is defined as to enjoy and appreciate with nature environmentally responsible travel to natural areas, as to promote conservation, provide for beneficially active socio-economic involvement of local peoples and the low visitor impact (The Nature Conservancy, 2009). As defined by IUCN (The World Conservation Union) nature-based tourism is "environmentally responsible travel and visitation to relatively undisturbed natural areas, to enjoy and appreciate nature (and any accompanying cultural features both past and present) that promotes conservation, has low negative visitor impacts and provides for beneficially active socio-economic involvement of local people" (Ceballos Lascurain, 1996). There exist forest resources and indigenous culture to attract the tourists who were collecting trees and other non-timber products for their livelihood, in different income generating activities within conservation areas (Alam et al 2010). Bangladesh is a country of diverse attractions that include the lush green countryside, colorful cultural diversity;

remains of ancient civilization and the world's largest single patch mangrove forest (Islam and Tapan 2014). There are numerous potential tourism spot opportunities throughout the country.

In recent times, with the gradual development of infrastructure facilities and increasing exposition, Bangladesh is fast emerging as tempting tourist spots (Aminu et al. 2013). FPA is one of the most explored areas for the local and international tourist and the number of visitors in the FPA is increasing day by day. It is noteworthy the young tourist community is one of the most important tourist communities in the FPA. To retain the growth of the number of visitors, it is necessary to emphasize the service quality. To anticipate the actual requirements of the tourists, the focus should also be given on their present state of service satisfaction. But a very small number of researches has been conducted regarding the tourism potentiality of wildlife although wildlife sanctuary is one of the most important Forest Protected Area (FPA) in Bangladesh (Hanna et al. 2015). Unfortunately, no relevant literature has been found regarding trends and function of tourism development in FPA in Bangladesh. Ministry of Finance (2010) Bangladesh Economic Review states that Bangladesh has three sectors of generating revenue: Industry, Agriculture and Service. Tourism is one of the parts of the service sector which is contributing a leading part of the total GDP of Bangladesh(Reddy et al. 2016). Though the contribution of tourism in GDP is only 7% in 2004-05; it has increased to 9.44% by the year 2009-10 (Bangladesh Economic Review 2010, Ministry of Finance and 2011 Bangladesh Economic Impact Report, World Trade and Tourism Council). This data could be helpful to understand how eco-tourism, especially hilly area based sustainable eco-tourism promising the sector is for Bangladesh. Nowadays' many developing and under-developing countries have prepared plans, particularly at the central level to guide sustainable tourism development, as they have recognized the tourism sector as an important source of foreign currency earning and employment.

At the beginning of Bangladesh, tourism was not included as an industry but from 1999 it's included as an industry it represents the importance of the tourism as well as a major provider of jobs and a significant generator of foreign exchange at the national level. FPA e.g. Aila Bee Wildlife Sanctuary, Bhawal National Park, Chimbuk Wildlife Sanctuary, Chunati Wildlife Sanctuary, HakalukiHaor Wildlife Sanctuary, Lawachara National Park, Satchari National Park, Sundarbans East, South, and West Wildlife Sanctuary, etc. tourism are one of a new horizon for sustainable rural development. In fact, tourism in Bangladesh is becoming an emerging issue both for the public and private sectors to establish their eligibility for accomplishing a successful business as well as marketing activities development (Akteruzzaman and Ishtiaque, 2001). Thus, it can be stated that this paper is the first initiative to measure the service satisfaction of tourists in the FPA. This paper emphasizes on Strengths, Weaknesses, Opportunities, and Threats on future tourism development in the FPA considering the Wildlife Sanctuary tourism development and strong potentiality to be the future visitors of the FPA.

# Study area

The Lawachara National Park (LNP) covers approximately 1,250 ha (12.5 km2) as a major national park and nature reserve in Bangladesh (BBS. 2016). It is located at Kamalganj Upazila, Maulvi Bazar District in the northeastern region of the country which located within the 2,740 ha (27.4 km2) West Bhanugach Reserved Forest. (BBS. 2016). Considering its biodiversity values and conservation needs, the government declared a part of the Reserved Forest as the declared a national park by the Bangladesh government on 7 July 1996 under the Wildlife Act of 1974 under the





IUCN category of Protected Area (II). LNP is the part of Tarap Hill Reserve Forest in under ChanurughtUpzila, the Maulvi Bazar District of Sylhet Division. This Tarap hill Reserved forest remains for its diverse flora, fauna and high conservation value which is about 76% of the forest is still in a natural condition, plantations only cover about 9% area of the forest(Subroto et al. 2016). Under the 1st gazette ( No. 11/ FR-68/81/882, dated 7-1- 1982) Notified the area about 1095 ha approx. (2705 acres) and another 2nd Gazette Notification(No. PBM (Sec-3) 7/96/371, dated 7-7-1996) for extension 700 ha approx (1730 acres). Biological diversity in the Lawachara National Park consists of 460 species, of which 167 species are plants, 4 amphibian species, 6 reptile species, 246 bird species, 20 mammal species, and 17 insect species. One of these is the critically endangered western hoolock gibbons, of which only 62 individuals remain in the area(Islam et al. 2019). Rahman and Alam (2016) mentioned that the LNP is bordered along most of its northern and western boundaries by forest department lands, along part of its southwestern boundary Tea Estate lands, along its southern and eastern boundaries by India, and along a small portion of its northern boundary by Khas lands. It is one of the reaming patches of tropical natural hill forest in Bangladesh which is under extreme threat due to climate change-driven natural calamities and anthropogenic pressure. It is also home to various indigenous communities including Tripura, Marma, Chakma, Orang and local people living inside and adjacent to the park and who depend heavily on forest resources for their food and livelihoods (Rana and Akter 2010). This protected area (PA) is unique from the perspectives of biodiversity richness as well as for the high level of exploitation and human interference.

S. No.	National Parks	Location	IUCN Category	Area (ha.)	Gazette notification date
1	Bhawal National Park	Gazipur	IV	5022.29	11-05-1982
2	Madhupur National Park	Tangail and Mymensingh	IV	8436.13	24-02-1982
3	Ramsagar National Park	Dinajpur	IV	27.75	30-04-2001
4	Himchari National Park	Cox's Bazar	IV	1729.00	15-02-1980
5	Lawachara National Park	Moulavibazar	II	1250.00	07-07-1996
6	Kaptai National Park	Chittagong Hill Tracts	II	5464.78	09-09-1999
7	NijhumDweep National Park	Noakhali	II	16352.23	08-04-2001
8	Medhakachhapia National Park	Cox's Bazar	IV	395.92	04-04-2004
9	Satchari National Park	Habigonj	II	242.91	10-10-2005
10	Khadimnagar National Park	Sylhet	IV	678.80	13-04-2006

Table 1: Major National park and sensitive ecosystems in Bangladesh base on IUCN Category

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S. No.	National Parks	Location	IUCN Category	Area (ha.)	Gazette notification date
11	Baroiyadhala National Park	Chittagong	II	2933.61	06-04-2010
12	Kuakata National Park	Patuakhali	II	1613.00	24-10-2010
13	Nababgonj National Park	Dinajpur	IV	517.61	24-10-2010
14	Singra National Park	Dinajpur	IV	305.69	24-10-2010
15	Kadigarh National Park	Mymensingh	IV	344.13	24-10-2010
16	Altadighi National Park	Naogaon	IV	264.12	14-12-2011
17	Birgonj National Park	Dinajpur	IV	168.56	14-12-2011
18	National Botanical Garden, Mirpur	Dhaka	-	87.10	27-08-2018
19	Sheikh Jamal Inani National Park	Cox's Bazar	-	7085.16	15-04-2019

Source: http://www.bforest.gov.bd/

# Methodology

To complete the objectives of the study, the primary and secondary data have been collected from different categories of fields, people and institutions involved in promoting nature-based tourism in the protected area. The primary data have been collected from the field, formal and semi-formal interviews with tourists and local people and use the statistically designed questionnaire to collect the opinions and information from the local residents, tourists and the staff of the wildlife sanctuary. The research was carried out in the period from February 2019 to April 2019 and only the respondent from a household, representing the household, participated in the research, and the total number of samples was 117. The respondents aged between 25 and 59 (72.9%), with secondary (58.6%) and high (31%) education, were the most numerous. The secondary data have been collected during different stages of work. Accordingly, the methodological selection suitable for this data was on SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis. It was considered the most valuable representatives and people who are most familiar with the area, local opportunities, and social, ecological and economic needs. The questionnaire consisted of two sets of questions. The first set was comprised of closed questions and

based on the social and economic needs of local communities. Based on the Likert\* scale, the answer to each question is given on a scale from 1to 5.

The second part comprises of four open-ended questions about the strengths and weaknesses, opportunities and threats to the sustainable development of tourism and sustainable development of local communities (under the impact of tourism) in the FPA zone. Employing the qualitative SWOT analysis, respondents' responses were collected. The SWOT analysis can be conducted at different levels to gain a holistic understanding of the potential of a destination. This analysis allows the identification of the most effective strategy that maximizes strength and cap-abilities and minimizes weaknesses and threats (Saaty 1987). Strengths and opportunities represent the values and appeal of the assessed site and weaknesses and threats refer to the constraints of sustainable tourism development (Mondal 2013). Geriszewska and Romanowska (2002) highlighted that SWOT is not a method of strategic analysis but is a "unique algorithm of the strategic study process, a systematic proposal and a wide-ranging evaluation of external and internal factors which specify tourism in the current status and its development potential."SWOT analysis is also known as SWOT matrix, has often been used in the field of development and extended to that of natural resources management to assess a given decision, project or policy directive in a methodical way (Sofique, 2010). The quality of life of the local population in the study area is directly influenced by the basic dimensions of sustainable development (ecological sustainability, economic efficiency, and social responsibility). Data processing was carried out in the IBM SPSS Statistics No.22, the program that loads data perform analyses and generates output results. Based on the answers to the first set of questions, their average values, which are in the second part connected to the defined parameters according to their affinities, are determined, after which the factor of influence (weight) for each of the parameters is determined. After data processing, the second set of questions, the relative frequency was derived as quantitative data from SWOT analysis (Hashemi, 2010; Hashemi and Ghaffary, 2017). In each category (strengths and weaknesses, opportunities and threats), the five most important parameters would be used as indicators. Elsewhere, much research on different aspects of tourism development including the role of nature-based tourism promotion was carried out using SWOT (see, Geriszewska and Romanowska, 2002, (Khanal and Shimizu 2019)). Finally, based on the collected data, simple statistical tables and tables for SWOT were prepared and analyzed. Along with primary data, substantial secondary literature, information and data were used collecting from multiple published and unpublished sources.

tors	External	Opportunities	Threats
Fact	Internal	Strengths	Weaknesses
		Positive	Negative
		Fa	ctors

## Figure 2: A SWOT matrix (Based on Geriszewska and Romanowska, 2002)

#### Results

Based on the results of primary and secondary data, SWOT analysis was run through an internal factor evaluation matrix and external factor evaluation matrix to determine the priorities. After collecting primary and secondary data SWOT analysis was focused to assess the suitability of sustainable nature-based tourism in LNP through analyzing the results and causing the dominances. Although SWOT analysis, the research method is frequently used in business fields it has now been extended to natural resource management to assess the proper decision and policy and as a tool of an assessment of sustainable tourism. The strengths and weaknesses (local analysis) remain the internal factors while opportunities and threats (global analysis) are external factors (Rauch 2007; Harfst et al., 2010; Miandehi et al 2013). Evaluation of internal and external environmental factors is an important part of strategic planning (Reihanian et al 2012) which is instrumental in adopting the strategies and becomes a component of sustainable ecotourism management (Tahernejad et al 2013). In this study, the SWOT analysis was conducted on the LNP to assess the sustainability of ecotourism development. In this process, the internal factors (strengths and weaknesses) and external factors (opportunities and threats) were identified and listed. For evaluation of Internal Factor Estimate Matrix (IFEM) and External Factor Estimate Matrix (EFEM) were used. IFEM represents internal strengths and weaknesses while EFEM indicates external opportunities and threats. In formulating the matrices, each factor was evaluated by giving a weight between zero (non-important) to one (most important) such a way that the total point in each matrix is unity. Further, each factor was scored with a number between one and five (1 = poor; 2 = lower than average; 3 = median; 4 = above average and 5 = good). After the weight and score have been determined, the weighted score has been given to each factor which is useful in assessing the attractiveness of each factor. In IFEM the total

of weighted scores (attractiveness) with a value of more than 2.5 indicates strengths are more than weaknesses. Similarly, in the case of EFEM, the totals of weighted scores with a value of more than 2.5 means opportunities are more than strengths (Wasike et al 2011). Weighted scores for the strengths and weaknesses (IFEM) and the opportunities and threats (EFEM) are tabulated in Tables 1 and 2.

	Strengths	Weight	Score	Weight Score
1	LNP is a well-established tourism destination with a variety of natural attractionslike Ben- gal Slow Loris, Assamese Macaque, Northern Pig-tailed Macaque, Phayre's Leaf Monkey, and Capped Langur), endangered Fishing Cat, and nationally rare Black Giant Squirrel.	0.119	5	0.476
2	The local people strongly supporting the need for nature base tourism in this region as a good number of domestic tourists visit this destina- tion.	0.068	3	0.234
3	The unique ecosystem, great biodiversity, and valuable wildlife	0.061	4	0.182
4	The existence of a large number of protected areas (national, natural parks and reservations) included in the Fifth National Report to the Convention on Biological Diversity (2015) with reduced deforestation and pollution in the ma- jority of rural areas;	0.084	3	0.169
5	The variety and ethnic richness in indigenous areas with traditional culture and regional spe- cialties;	0.032	4	0.208
6	In terms of alternative income generation for the local people from tourism	0.065	3	0.195
	Weaknesses			
1	Lack of coordination among local people and low involvement of local people in tourism.	0.076	4	0.227

Table: 1 The weighted score of strengths and weaknesses (IFEM) in LNP

2	Lack of infrastructures and fundamental facili- ties like accommodation (hotels and resorts), travel and ecotourism agencies, public transport, recreation facilities.	0.077	3	0.336
3	The lack of promotion to attraction foreign tour- ists;	0.050	3	0.100
4	The lack of strategies to ensure the promotion and marketing of nature-basedtourism in the forest protected areas.	0.063	3	0.188
5	Seasonality of ecotourism and unequal distribu- tion of tourism	0.100	4	0.299
6	The high rate of inflation and unsuitable domes- tic economy which hardens the development of ecotourism and increases the expense of travel;	0.071	2	0.357
7	Absence of strict rules for entering the LNP as there isan absence of proper zoning and border fencing around the wildlife parameter	0.046	3	0.169
8	Lack of adequate funding for conservation and scientific research and education in the region	0.039	5	0.078
9	Lack of security and awareness among the local community about biodiversity conservation	0.050	3	0.346
	Total	1.000		3.574

Field survey data, 2018

# Table: 2 Opportunities and threats (EFEM) in LNP

	Opportunities	Weight	Score	Weight Score
1	Proper nature base tourism package develop- ment involving local people in decision making and planning so that there is a larger involve- ment of the local people	0.103	5	0.514
2	Diversification of natural products which will help in retaining the majority of the alternative income generated by the local people which will help in job creation directly benefiting the local community	0.051	2	0.103

3	Sustainable Conserving natural ecosystems and making an effort to decrease negative impacts	0.043	4	0.171
4	The feasibility of implementing tourism plans in LNP considering environmental requirements with an emphasis on conserving native culture and prevention of the traditional context altera- tion.	0.041	3	0.154
5	High international interestinecotourism, adven- ture tourism, agro-tourism, and rural tourism ;	0.039	4	0.158
6	The climate, with soft summers and cold spring, favorable for the tourist activity during the year;	0.046	3	0.093
7	Possibility to attract tourists by exploiting historical, indigenous cultural, spiritual and traditional inheritance;	0.042	2	0.185
8	The proper legislative framework which al- lows the conservation and management of the protected areas.	0.050	1	0.099
9	The geographical position of this country (Closeness to tourist generating countries).	0.031	2	0.031
10	Satisfaction of tourists after visiting LNP.	0.026	5	0.385
11	The basic infrastructure of utilities are satisfac- tory	0.067	3	0.283
	Threats			
1	Potential negative cultural and environmental impacts with lack of favorable circumstances for foreign tourists, intensification of the economic crisis and instability of the national currency;	0.072	3	0.216
2	Transport infrastructure not to the community standards and emergency medical services are unsatisfactory;	0.062	4	0.247
3	Presentation of an unsuitable image of Iran in International societies to international tourists;	0.054	2	0.188
4	Insecurity which causes the number of interna- tional tourists to decrease;	0.099	4	0.397
5	Exposed to land destruction and land use conversion;	0.057	3	0.099

6	Locally threaten plants and animals have not been identified;	0.050	2	0.188
7	Deforestation high without proper monitoring and local political interest;	0.031	3	0.031
8	Population growth rate high and immigration to another area	0.036	4	0.169
	Total	1.000		3.710

# Field survey data, 2018

Internal factor estimate matrix (IFEM): Regarding strengths six factors were identified (Table I). The weights allocated for these factors were between 0.0519 and 0.1190 and the score ranged between 2 to 4. When considering weaknesses 8 factors were detected with the highest weight of 0.0996 and lowest weight of 0.0390 with a score ranging between 2 to 4. The final weighted score was 3.227 implying that strengths were more than weaknesses.

External factor estimate matrix (EFEM): There were 12 factors pertaining to opportunities (Table II) with weights between 0.0257 and 0.1027 and scores between 1 and 5. There were 4 treats determined with the lowest weight of 0.0616 and highest of 0.0993 and sores between 2 to 4. The final weighted score was 3.274 indicating opportunities were more than threats.

# Discussion

Thus, by comparing internal and external factors in the matrix of strengths, weaknesses, opportunities, and threats (SWOT) acceptable strategies were formulated which are as follows.

*S-O strategies*: Proposed opportunities that fit well with the forest protected area strengths are

	S-O Strategies	
٠	Forming of partnership for tour package	
	between hotel owners, local community	
	and forest management;	
٠	Develop proper entrance fee	
٠	Develop nature and cultural heritage and	
	forest-based tourism	IS
٠	Develop local community based sustainable	acto
	tourism	щ
٠	Promote and emphasize on the domestic	
	and international tourist	
٠	Encourage local communities and local	
	indigenous to develop attractive tourist	
	traditional products	
٠	Awareness building sustainable PA	

conservation



*W-O strategies*: The strategies which can be used to overcome weaknesses by pursuing opportunities are

## W-O Strategies

- Establish sustainable e-marketing strategies of the nature-based tourism industry so that all tourism stakeholders will get maximum benefits
- Develop proper entrance fee Improving the safety and security of local and foreign tourists to encourage tourism
- More efforts to provide quality services with minimum spending of both tourists
- Allocate sufficient fund and management to conserve natural and cultural heritages
- Planning of solid waste rules and regulations



*S-T strategies*: The following strategies have been identified by which the strengths can be used to reduce its vulnerability to external threats.

	S-T strategies		
٠	Improving local political commitment to		
	reduce political instability		
٠	Develop sustainable nature-based tourism		
	to reduce environmental impacts in natural		IJ
	and cultural heritage		erna
٠	Creating awareness among local people,	ors	Ext
	especially young people to inform about the	acto	
	benefit of sustainable nature-based tourism	H	rnal
	and conservation		Inte
٠	Conflict resolution with all stakeholders		
٠	Promote tourism, tours to the region to visit		
	the area and create prosperity		
٠	Law Enforcement for the illegal hunters		
	and impose heavy financial penalties for		
	noncompliance		
٠	Manage the use of agricultural pesticides		
	and herbicide and the use of organic		

farming and sustainable in the region



W-T strategies: To establish a defensive plan to prevent the park's weaknesses from making it highly susceptible to the external threats following strategies that have been suggested.

	W-T strategies	
٠	Ensure the highest level of security for	
	tourists by the state even with political	
	instability	
٠	Development of borders/fencings around	
	the PA	
٠	Introduction to natural and economic	s
	values through the media to increase public	actor
	awareness	Ë
٠	Collaborative proper planning so that	
	local communities, ethnic minorities,	
	businessmen and tourists will get optimum	
	economic benefits from tourism	
٠	Strong environmental management	
	regulations to ensure the sustainability of	
	nature, of the study area	
•	Educate people including local	
	communities on sustainable nature tourism	
	development	

Infrastructure development (roads, hotels, tourist spots) to attract tourists



According to studies in line with the most favorable usage of the PA land and establishing certain support to preserve natural lands with valuable biological resources. The fundamental way of preventing environmentally deteriorating consequences is to develop land preparation programs and the implementation of project development. Existing habitat of LNP due to the diverse habitat conditions, the presence of diverse and valuable species that sometimes they are also vulnerable to threat and risk and cultural and historical heritage is the first priority to protect. Pay attention to the dissatisfaction of tourists from facilities in this area, thus the creation of accommodation and suits leisure not only adds capabilities in this area to attract tourists but also for tourists and indigenous people is very important in terms of job creation and recreation. On the other hand, the satisfaction of tourists will attract participation (EPLER, 2002). LNP is composed of many villages. With the development of rural tourism, can be minimized environmental and cultural damage, provide visitor satisfaction and help to region's economic growth. Bangladesh parental Corporation (2018) reported that this fact indicates that the arrival of tourists to rural areas makes connections between indigenous people and the tourists have a significant impact on growth and promote social and cultural higher education, and increase participation levels. The local tourism as a tool for generating employment and economic development throughout the region can be reduced poverty and increased income. On the other hand, the use of public information databases, information networks, distributes posters about the attractions of LNP. The use of experts in the field of tourism and using local guides can be very effective. What is certain, ancient culture, valuable cultural and natural resources of this region can have many roles in attracting tourists. This development requires the cooperation of industry, government agencies such as the cultural heritage and tourism organization, the population is indigenous and foreign investors.

# Conclusion

The SWOT analysis provides an overview of strengths, weaknesses, opportunities, and threats of the tourism industry in Bangladesh. The present tourism activities in Bangladesh are unsustainable. In this study, exiting weaknesses and threats of the tourism industry were critically analyzed and based on those and weaknesses and threats a list of WT strategies were suggested for the future development of the tourism industry sustainably. The current stakeholder's involvement and monitoring weaknesses such as safety and security, high-profit motive business design, shorter length of stay due to improper management of tourist destinations, poor infrastructure, weak investment, lack of local community participation in tourism development and improper marketing strategies, and threats such as Political instability, fragile natural ecosystems, the uncertainty of return from the investment, lack of awareness, degradation of the natural environment, mismanagement in tourist demand management and entry alien culture can be materialized through ensuring the highest level of security for tourists, appropriate planning so that all tourism-related stakeholders will get optimum economic benefits from tourism, strict environmental policy to ensure the sustainability of nature, educate people on sustainable tourism development and infrastructure development to attract tourists. The findings of this study will help the policymakers and other tourism stakeholders to analyze present problems of tourism and find out the most realistic and time-fitting actions for the sustainable development of the tourism industry in Bangladesh.

#### References

- Akteruzzaman & Ishtiaque. (2001). Potenga Seashore, A Rising Horizon for Tourism and Prospects. *The Chittagong University Journal of Commerce*, 16, 109-111.
- Alam, M., Yasushi F., & Salma A. (2010). Forest-based tourism in Bangladesh: Status, problems, and prospects. *Tourismos*, 5 (1): 163–172.

Aminu, Mansir, Ahmad Nazri Bin Muhamad Ludin, Abdul-Nassir Matori,

Khamaruzaman Wan Yusof, Lawal Umar Dano, & Imtiaz Ahmed Chandio. (2013). A spatial decision support system (SDSS) for sustainable tourism planning in Johor Ramsar sites, Malaysia. *Environmental Earth Sciences*, 70 (3): 1113–1124.

- BBS. (2016). Statistical pocketbook Bangladesh 2015. Dhaka: Bangladesh bureau of statistics, Ministry of Planning, Government of the People's Republic of Bangladesh.
- Butowski, L. (2012). Sustainable Tourism-A Model Approach. In Visions for Global Tourism Industry: Creating and Sustaining Competitive Strategies, ed. Murat Kasimoglu. Croatia: InTech.
- Ceballos-Lascurain H. (1996). Tourism, Ecotourism and Protected Areas. IUCN. The World Conservation Switzerland and Cambridge, UK.
- Chape S., Blyth S., Fish L., Fox P., & Spalding, M. (2003). United nations Rahman et al. J For Sci 29(1), 15-28 27 list of protected areas. *The World Conservation Union (IUCN) and Cambridge*, United Kingdom: UNEP-WCMC.
- Chowdhury M.S.H & Koike, M. (2010). An overview on the protected area system for forest conservation in Bangladesh. *J Forest Rese*, 21, 111-118.
- Chowdhury, M.S.H., Koike, M., & Izumiyama, S. (2014). Impact of Co-management on Rural Development: Evidence from Community Surveying and Around Lawachara Wildlife Sanctuary. In Forest Conservation in Protected Areas of Bangladesh: Policy and Community Development Perspectives; Chowdhury, M.S.H., Ed.; Volume 20 of World Forests; Springer: Cham, Switzerland, pp. 111– 141.
- Gierszewska G. & Romanowska M. (2002). Analizastrategicznaprzedsiębiorstwa, PWE, Warszawa.
- Hanna, P., Katherine J., Paul S., & Matt, A. (2015). Foucault, sustainable tourism, and relationships with the environment (human and nonhuman). *GeoJournal*, 80 (2), 301–314.
- Harfst J., Wirth P., Lintz, G., & Bieberstein, C. (2010). Strengths, weaknesses, opportunities and threats of European mining regions (SWOT Report I). Leibniz Institute of Ecological and Regional Development (IOER), Dresden, Germany.
- Hemmati, M., & Koehler, N. (2000). Financial leakages in tourism. *Sustainable Travel and Tourism*, 25-29.
- Islam, Kazi Nazrul et al. (2019). "Analyzing Multi-Temporal Satellite Imagery and Stakeholders' Perceptions to Have an Insight into How Forest Co-Management Is Changing the Protected Area Landscapes in Bangladesh." *Forest Policy and Economics* 101(February), 70–80. https://doi.org/10.1016/j.forpol.2019.01.011.

- Islam, M. J. & Tapan K. N. (2014). Forest-based betel leaf and betel nut farming of the Khasia indigenous People in Bangladesh: Approach to biodiversity conservation in Lawachara National Park (LNP). *Journal of forestry research*, 25 (2), 419–427.
- Islam, Md. J. & Nath, T. K. (2014). Forest-based betel leaf and betel nut farming of the Khasia indigenous People in Bangladesh: Approach to biodiversity conservation in Lawachara National Park (LNP). Journal of forestry research 25 (2): 419–427.
- IUCN. (1994). Guidelines for Protected Area Management Categories. IUCN, Gland.
- IUCN. (2012). The IUCN Red List of Threatened Species. Union. Gland, Switzerland Version 2012.2. http://www.iucnredlist.org.
- Khanal, B.P. & Shimizu. T. (2019). "Strategies for Development of Yoga, Ayurveda, and Meditation-Based Health Tourism in Nepal: Using SWOT Analysis." *Journal* of Tourism & Adventure 2(1): 85–107. https://www.nepjol.info/index.php/jota/ article/view/25934.
- Langholtz, J. & Brandon, K. (2001). Privately Owned Protected Areas. pp.303–314. In D.B. Weaver (Ed.). *The Encyclopedia of Ecotourism*. CABI Publishing, Wallingford, UK.
- Larson, S, & Alexander H. (2008). Sustainable tourism development in remote regions? Questions arising from research in the North Kimberley, Australia. Regional Environmental Change, 8 (1), 1–13.
- Martha H. (2008). Ecotourism and Sustainable Development: Who Owns Paradise? Island Press, USA.
- Miandehi, P. M. & Morteza Y. M. (2013). Assessment of SWOT model on tourism industry in sustainable development of rural areas: Case study on Bandar-E Anzali. *World Applied Sciences Journal*, 21 (3), 455–464.
- Ministry of Finance MOF (2010). Bangladesh Economic Review 2010. Ministry of Finance, Finance Division. Dhaka: Bangladesh Goverment Press.
- Monavari, M., A. Karbasi, & R. Mogooee. (2007). Environmental strategic management. Tehran: KavoushQalam.
- Mondal, M. K. (2013). Factors affecting to choice cox's bazaar sea beach of Bangladesh as a tourist destination, *The International Journal Of Management*, Vol 2.
- Rahman, M.H.; & Alam, K. (2016). Forest Dependent Indigenous Communities' Perception and Adaptation to Climate Change through Local Knowledge in the Protected Area—A Bangladesh Case Study. Climate.4 (1), 12; doi:10.3390/ cli4010012.

- Rana, M.P. & Akter, F.J. (2010). Use of invasive alien plant species in Lawachara wildlife sanctuary of Bangladesh. *Journal of Mountain Science*, Volume 7, Issue 4, pp 380-385, doi:10.1007/s11629-010-1008-4.
- Rauch, Peter. (2007). SWOT analyses and SWOT strategy formulation for forest owner cooperations in Austria. *European Journal of Forest Research*, 126 (3), 413–420.
- Reddy, C. Sudhakar et al. (2016). "Development of national database on long-term deforestation (1930–2014) in Bangladesh." *Global and Planetary Change* 139: 173–82. http://dx.doi.org/10.1016/j.gloplacha.2016.02.003.
- Reihanian, Anita, Mahmood, Noor Zalina Binti Mahmood, Esmail Kahrom, & Tan Wan Hin. (2012). Sustainable tourism development strategy by SWOT analysis: Boujagh National Park, Iran. *Tourism Management Perspectives*, 4, 223–228.
- Saaty RW. (1987). The analytic hierarchy process and SWOT analysis–what it is and how it is used. *Mathematical Modeling*, 9, 161-178.
- Sofique. D. M. A. (2010). An Evaluation of Economic Prospects and Constraints of Cox's Bazar -A Rising Tourist Spot in the World, Department of Tourism Management, The University of Burdwan, Burdwan – 713104, West Bengal, India.
- Subroto, Sujoy, Margarita Cuadra, Manzoor Rashid, & Örjan Bartholdson. (2016). "Forest Resource Governance and the Devolution of Power through Co-Management Approach: Policy vs Practice-A Case Study in Rema-Kalenga Wildlife Sanctuary, Bangladesh." http://stud.epsilon.slu.se.
- Tahernejad, Mohammad Mehdi, Mohammad Ataei, & R. Khalokakaei. (2013). A strategic analysis of Iran's dimensional stone mines using SWOT Method. *Arabian Journal for Science & Engineering*, 38 (1), 149–158.
- UNEP and UNWTO. (2005). Making Tourism More Sustainable: A Guide for Policy Makers. Paris and Madrid: UNEP DTIE and UNWTO.
- Wasike, C., Thomas, M. M., Alexander. K. K., & Kurt, J. P. (2011). Factors that influence the efficiency of beef and dairy cattle recording system in Kenya: A SWOT–AHP analysis. *Tropical Animal Health and Production*, 43 (1), 141–152.