

Tourist Potentiality Index: A Case Study at Dibru-Saikhowa National Park in Assam, India

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ABSTRACT

Tourism is accepted as an important service industry with potential to contribute in the development process of an economy. There are various forms of tourism and eco-tourism is one among them which occurs in destinations along with attraction of flora, fauna, cultural, heritage and environment friendly activities. Eco-tourism has opportunities for spreading and maximizing economic benefits in a sustainable manner to villages, remote areas and national park. Community participation in eco-tourism is important whereby groups and individuals are empowered and have control over their lives. Eco-tourism is being considered as a sustainable solution to keep the tourism industry in harmony with the environment and communities. The present paper aims to examine the potential of eco-tourism in Dibru-Saikhowa National Park, located in the eastern part of Assam state, India, through a case study. The paper analyses the community participation and also try to capture the potentiality of the different attraction in Dibru-Saikhowa national park, which may enables the tourism providers to enhance facilities to attract tourist. Here, tourism potential index was developed considering both the supply and demand components. Potentiality of ecotourism in an area is indeed the result of interaction of tourist demand and supply and local availability of tourist resources.

Keywords: Eco-tourism, tourist potentiality, sustainable development

1. INTRODUCTION

Tourism is accepted as an important service industry with lot of potential to contribute in the development process of an economy. It is the largest and fastest growing industry, which has the best possibility for generating many new jobs worldwide. There are various forms of tourism and eco-tourism one among them which occur in destinations along with attraction of flora, fauna, cultural, heritage and environment friendly activities. Eco-tourism has opportunities for spreading and maximum economic benefits in a sustainable manner to villages, remote areas and national park. Local community participation in eco-tourism is important whereby groups and individuals are empowered and have control over their lives. Eco-tourism is being considered as a sustainable solution to keep the tourism industry in harmony with the environment and communities. Community participation is essential for eco-tourism as communities close to the

environment and hence can either preserve it or exploit it. Eco-tourism is an opportunity to mutually benefit the community through preservation of the environment as well as generate remuneration from it.

Dibru- Saikhowa National Park is one of the five national parks of Assam and a biodiversity hotspot of India which covers an area of 340 sq km. It is situated mainly in Tinsukia district and partly in Dibrugarh district (Tinsukia wildlife division).The uniqueness of the National

Park is that 1/7th portion is on the floodplains of Brahmaputra and is covered by wetlands making it vulnerable to floods. Among the five national parks of Assam, Dibru- Saikhowa National Park was selected for the study as it has not been research well in the context of potential of eco-tourism. The National Park is composed of 60 percent swamps, 25 percent woodland and the remaining 15percent by grassland. Dibru- Saikhowa is a safe haven for many extremely rare and endangered species of wildlife including 500 avi-fauna, both residential and migratory. In addition to this, a wide diversity of reptiles and amphibians and more than 60 species of different fish have been identified. The park is primarily meant for the conservation of white winged wood duck in its natural habitat, it is also famous for its semi wild horse. This is the only protected area in the country where these horses are found.

Wildlife and wilderness is one of the most viable eco-tourism products that can be successfully developed in the Tinsukia district of Assam. Dibru-Saikhowa National Park presents a ready, ideal and attractive destination for the development and promotion of Eco-tourism. With an impressive bird list and quite a few endemic species, ornithological tours could definitely be one of the most viable ecotourism products. Similarly nature treks and river-based trips combined with village and community experiences can be packaged as attractive option for tourists. The support of the local population in protecting and managing the area is crucial for successful attempts at sustaining and reviving the population of species such as the hoolock gibbon, the gangetic dolphin and the tiger. To this end eco-tourism seems to be the best means of conservation of the park. Tourism is one of the best means of conservation and Dibru-Saikhowa gifted with bounteous nature, abundant wildlife and scenic beauty has great potential in this regard. Besides the benefits accruing to the local economy will also inspire the local population to realize the importance of conservation.

2. LITERATURE REVIEW

Tourism started flourishing in Assam only after the establishment of the Directorate of Tourism of Assam in 1959. Over the years the department has made considerable progress in this sector and since then the number of tourist are keeping on increasing (Devi M. K., 2012). Tourism in Assam is essentially nature based therefore National parks, wildlife sanctuaries, rivers, lakes, thick wooded forest are the major components of tourist attraction in Assam. Like other places in India, Assam too has high prospects as to develop it as a tourism destination (Bordoloi, Das, & Priyata, 2012). Today tourism is not only just about sightseeing and entertainment but also agent of economic development of the country. Tourism as an industry is the largest in terms of revenue generation as well as employer in the world (Hussain, 2012). Assam has been fascinating millions of people by its aura of myths, mystery, music, mountains all the gifts of nature. The

ungrudging blessings of nature have made tourism in Assam essentially nature-centric, despite the fact that there are historical and religious places of tourist attractions,

Assam is indeed a land rich in natural beauty and diverse flora and fauna, historical monuments, pilgrimage center, tea gardens and her colorful cultural festivals. Assam is rich in natural resources about 35% of the state is covered with forest. There are 5 National Parks, 17 wildlife sanctuaries and 2 biosphere reserves (Devi M. K., 2012). Various initiatives are being taken by the Govt to promote tourism here. The number of visitors to Assam is keeping on increasing, different types of tourists come here as because there are different types of tourism which can satisfy different needs of different types of tourist. With the withdrawal of the Restricted Area Permit (RAP), tourism is poised for a major boom. Tourism has the greatest potential of

generating income and employment opportunities in Assam. It is the treasure house of various economic resources. It has a rich cultural and ethnic heritage that can easily make it a tourist spot. It is a heavenly place of the tourist for its world famous one horned rhino. Manas National park is famous for tigers and Dibru-Saikhowa National park is famous for birds (Das, 2012-2013).

The concept of sustainability has its origin in the environmentalism that grew to prominence in the 1970's. The explicit idea of sustainable development was first highlighted by the International Union for the Conservation of Nature and Natural resources (IUCN, 1980) in its World Conservation Strategy. In 1987, the Brundtland Commission Report defined sustainable development as 'development that meets the needs of the present without compromising the ability of the future generation to meet their own needs (Zhenhua, 2003). All tourism activities of whatever motivation – holiday, business, travel, conferences, adventure, travel and eco-tourism-need to be sustainable. Sustainable tourism means the tourism that widely uses and conserves resources in order to maintain long-term viability (Budowski, 1976). Sustainable tourism development means more than protecting the natural environment; it means proper considerations of host people, communities, culture, custom, lifestyles and social and economic system. It is tourism that truly benefits those who are on the receiving end, and does not exploit and degrade the environment in which they live and from which they must earn a living after the last tourist have flown back home (Debnath, 2011).

The term eco-tourism has received much attention in recent years. There is considerable debate over what the term mean and what it should mean. Based upon Nicoara's statement (1992), nature-based tourism, currently called eco-tour was launched in the 1980's and has become one of the fastest growing segments of the world tourist industry (Tungchawal, 2001). The term 'Eco-system' was coined in 1983 by "Hector Ceballos-Lascurian" as Mexican environmentalists and was initially used to describe nature-based travel to relatively undisturbed areas with an emphasis on education (Debnath, 2011). Eco-tourism has spread rapidly first because it has been extensively used opportunistically in marketing, where the tag 'eco' has come to be synonymous with responsible consumerism. Conservation of natural resources prevents environmental degradation. That is why; this form of tourism has received global importance. It is currently recognized as the fastest growing segment of the tourism market (Yadav, 2002). The World Eco-tourism Summit, held in Quebec city, Canada, from 19th to 22nd May, 2002 declared the year 2002 as the International Year of Eco-tourism (Devi M. K., 2012).

Some of the definition of eco-tourism given by different thinkers is:

According to Miller (1993) the term eco-tourism evokes a wide range of synonymous such as 'equality tourism', 'ethnic tourism', 'socio-ecological tourism', 'photo-safari tourism', 'cultural tourism', 'surfing tourism' and finally 'drive tourism' (Sirakaya, Sasidharan, & Sonmez, 1999).

The International Eco-tourism Society (TIES) define eco-tourism as: "The responsible travel to natural areas which conserve the environment and improve the well-being of local people" (McCormick, 2011). According to Valentine (1993) that states the characteristic of eco-tourism is: "Eco-tourism is restricted to that kind of tourism which is based on relatively undisturbed natural areas; Non-damaging, non-degrading, ecologically sustainable; A direct contributor to the continued protection and management of the natural areas; and Subject to an adequate and appropriate management regime"

Generally tourism can have both positive and negative impact on economy, culture and environment resources dependent on circumstances how it is managed (Strasdas, 2002)

Negative impacts: Tourism can cause three major negative impacts at tourist destination area. These are negative economic impact, cultural or social impact and environmental impact. The negative economic impact of tourism include the of seasonal and import of qualified personnel, the negative cultural impact of tourism include destroying tradition cultures (crime, prostitution etc) and the negative environmental impact of tourism include pollution and over consumption of natural resources(eg water) and destruction of habitats. (Strasdas, 2002)

Moreover, as demands for eco-tourism increases, eco-tourism sites are deteriorating, threatening their ecological sustainability. The major reason for deterioration is:-

i)Incompatible economic uses of land area for other economic activities such agriculture, industry, mining and urban development, ii) Inappropriate tourist development and infrastructures necessary to support those development willful destructions of ecotourism by tourists, iii) Numbers of tourists in excess of carrying capacities and adverse environmental externalities or spillovers which destroy ecotourism resources or assets (Tsidell, 2001)

Positive impact: - Tourism also causes three major positive impacts at tourists' destination areas. The positive economic impact of tourism include generating foreign exchange, diversification of the livelihood creating job opportunities for rural areas and increasing linkages, the positive cultural impacts of tourism include promoting modernization and cultural pride of host communities, and the positive impact of tourist include use of biodiversity (Strasdas, 2002) The other positive impact of tourism are increases the linkage between tourism business and local economy, reducing seasonality (Tsidell, 2001)

Assam, the most prominent state of North East India is said to be the hot spot for tourists for its natural beauty and climate. Tourism in Assam is essentially nature based, therefore National Parks, Wildlife Sanctuaries, rivers, lakes, hot water springs and thick wooded forest ,wildlife are the major component of tourist attraction in Assam. It is counted as one of the prime eco-tourism destination in India (Bordoloi, Das, & Priyata, 2012). Various initiatives are being taken by the Government and other organization to promote tourism here. The Government of Assam came

up with the Assam Tourism Policy 2008 having different objectives (Assam Industrial Development Corporation LTD, 2010). Tourism also helps in the economy growth of a particular area like creating opportunities for tourist guides, conducted tours, establishment of hotels it can also be a major source of employment in Assam (Kerela Tourism Policy, 2012). Assam has unique scope of eco-tourism destination because of its green forest, blue hills enchanting rivers on the basis of which eco-friendly tourism can be developed. For that most of the matters to be properly addressed including (a) development of good approach road to the spots of tourist attraction, (b) creation of infra-structural facilities like good quality tents with provisions for food and other logistics, (c) river cruising and water sports, bird watching towers etc. (Kerela Tourism Policy, 2012) Eco-tourism segment has not been very successful in Assam. It will not be wrong to say that eco-tourism is in a deplorable state in Assam today. Though Assam has sufficient resources, yet only six places are identified as eco-tourism destination. These are Kaziranga National Park, Manas, Orang, Nameri, Haflong and Majuli (Devi M. K., 2012).

3. OBJECTIVES

- a) To bring out the scope of Eco-Tourism in Dibru-Saikhowa National Park.
- b) To find out the development potentialities of this park and to attract tourist both domestic and foreign through developing the tourist potentiality index (TPI).

4. METHODOLOGY

To determine the potential of Dibru-Saikhowa National Park, case study approach was adopted for which secondary and primary data and information were gathered. Secondary data was collected through information from books, papers, report, discussion with Tourism Department, forest officials and NGOs. Primary data was collected through observation, interviews with resource people, community members and survey.

5. ANALYSIS

5.1: Communities perception on benefits from Eco-Tourism:

This section describes the responses of people benefiting from eco-tourism and it is found that 20 percent of the respondents are directly or indirectly involved in tourism activities. Out of the 30 respondents, 10 people engaged in eco-tourism activities felt the direct benefit from eco-tourism is income and three out of them also said that they benefit in their knowledge building in the form of knowing flora and fauna, awareness of conservation etc.

One of the important findings of the survey was that all the 30 respondents mention that there is a conflict over the resources of park as their lives and livelihood are dependent on natural resources of the park. This is an area of concern in the context of sustainability of tourism activities. The findings also bring out the need for eco-tourism, as eco-tourism would reduce the

conflicts by bringing about harmony and a balance between demand and supply to enhance environment, economic and social benefits. In the context of resolving the conflict 10 percent of the respondent mentioned that introducing eco-tourism development in the park would resolve the conflict and as high as 90 percent of the respondent mentioned that both the involvement of local people in the park and introducing of eco-tourism activities would be the best solution to resolve conflict. All the respondents expressed their interest in eco-tourism activities thereby showing a high potential for eco-tourism development in Dibru-Saikhowa National Park.

5.2: Tourist Potentiality Index:

Following and adapting the analytical framework of Das and Deori (2012), the present study tried to capture the potentiality of the different attraction in Dibru-Saikhowa national park, which will enable the tourism providers to enhance facilities to attract tourist. Here, tourism potential index was developed considering both the supply and demand components. Potentiality of ecotourism in an area is indeed the result of interaction of tourist demand and supply and local availability of tourist resources.

Demand component: The Tourist demand of an area can be accessed through the preference or choice of tourist towards various components. The ranking is based on a scale of 1 to 10 to counterbalance supply component where 10 represent highest demands and 1 represent lowest demand and this ranking is derived from interaction with the visitors and local inhabitants.

Supply component: To counterbalance the 'Demand component' an assessment of the position of the criteria selected has been made on the basis of personal observation in the field and interaction with the tourist visited the concerned locations. The supply component consists of six criteria which are Importance, Accessibility, Seasonality, Fragility, Popularity, and Admission. For assessing the 'Local availability' or 'Supply component' of tourist resources of an area, each of the above mentioned criteria were rated by adopting a nominal scale (i.e. good, moderate, bad, etc.). These six criteria are discussed below:

Importance: Some destinations have similar type of attraction but one may be well equipped and provide better facilities than the other.

Accessibility: A more accessible destination has more advantage than the other.

Seasonality: The areas which can be visited throughout the year are mostly preferred by tourists.

Fragility: Culture and nature based tourism site are usually inherently fragile. These sites are prone to lose their original natural and cultural characteristics with time. Therefore understanding their fragility is crucial for designing the eco-tourism activities.

Popularity: Reputation is very important to be a good destination as because tourists like to visit those places which are mostly visited by others before.

Admission: Physical accessibility to tourist attractions is restricted by admission fees and therefore can be enjoyed only by the people who can afford that fee

The valuation of 1 to 10 is based on preference of tourist for tourist activity. To rank the location, an aggregate weight of 10 is given and the lowest weight is given 1 for all the six criteria the highest weight is 2 and lowest is 0.5.

Table 1: Ranking scheme for assessing ‘Local Availability’ of Tourist Resource

Criteria selected	Rating scale	Weight
Importance	Among best attractions	2
	Good standard	1.5
	Moderate standard	1
	Less appeal	0.5
Accessibility	Excellent	2
	Adequate	1.5
	Limited	1
	Difficult	0.5
Seasonality	>6 months	2
	3-6 months	1.5
	2-3 months	1
	<2 months	0.5
Fragility	Large development potential	2
	Moderate development potential	1.5
	Controlled development potential	1
	No development potential	0.5
Popularity	>50% foreign visitor	2
	20 – 50% foreign visitor	1.5
	2 – 20% foreign visitor	1
	Rarely any foreign visitor	0.5
Admission	No permission	2
	Partial permission	1.5
	Adequate permission	1
	Restricted	0.5

Source: Das and Deori, 2012 titled Evaluation of Ecotourism Resources: a case study of Nameri National Park of Assam, India

Table 2: Demands and Supply Components and tourist Potentiality Index of Destination

	Destination	Appeal or Demand Component										Supply Component						Tourist Index	
		1	2	3	4	5	6	7	8	9	Total [DC]	A	B	C	D	E	F	Total [SC]	[DC+SC]/2
1	Kolomy	9							8		17	2	1.5	2	1.5	1.5	1	9.5	13.25
2	Raidang	9									9	2	1.5	2	1.5	1.5	1	9.5	9.25
3	Pagoli Pathar		9						8		17	2	1.5	2	1.5	1.5	1	9.5	13.25
4	Confluences of Memdubi			9							9	1.5	1.5	2	1.5	1.5	1	9	9
5	Eco-camp and surroundings				7		6	4			17	1.5	1.5	2	1.5	1.5	1	9	13
6	Villages around the Park		6				6	4			16	2	1	2	1	1	2	9	12.5
7	Tribal life						6	4			10	1	1.5	2	1.5	1	1	8	9
8	Kundan Ghat								8		8	1.5	1.5	2	1.5	1.5	1	9	8.5

Note:

Demand Component-1.Bird –watching 2.Wildlife 3.Dolphin sighting 4.Scenic beauty 5.Flora and fauna 6.Native life and culture 7.Local dance and festival 8.Trekking 9.Research

Supply Component: A. Importance B. Accessibility C. Seasonality D. Fragility E. Popularity F. Admission

Source: Field Study

A total number of 20 visitors were consulted to give a rank of each of the nine activities discussed in Table 2, which has both the demand and supply component. These activities range from wildlife sighting, wildlife sighting, local dance and festivals.

Each of the nine tourist sites and activities has two components, one is demand (A) and the other is supply (B). A meaningful 'Tourist Potential Index' (TPI) can thus be calculated with the help of the numerical values of demand and supply of resources in an area. Thus the tourist potential index of an area may be calculated as: $TPI = (A+B)/2$ as shown in Table 3

Table 3: Tourism Potentiality of Destinations in Dibru- Saikhowa National Park Based on Tourist Potential Index.

Sl. No.	Destination	Weights of demand element (A)	Weights of supply element (B)	Potentiality Index TP = (A+B)/2
1	Kolomy	17	9.5	13.25
2	Raidang	9	9.5	9.25
3	Pagoli Pathar	17	9.5	13.25
4	Confluences of Memdubi	9	9	9
5	Eco-camp and surroundings	17	9	13
6	Villages around the Park	16	9	12.5
7	Tribal life	10	8	9
8	Kundan Ghat	8	9	8.5

Source: Authors calculation based on field data.

Among the eight destinations within the Dibru-Saikhowa National Park having highest tourist potential index is found for Kolomy and Pagoli Pathar. Kolomy is famous for bird watching and trekking whereas Pagoli Pathar is famous for wildlife viewing and trekking. This is followed by a high tourist potential for eco-camps and surroundings indicating high demand and supply for eco-tourism. This is closely followed by rural tourism around the park which is known for cultural tourism. Among the eight sights Kundan Ghat has lesser potential for tourism as because there is only one activity that is trekking.

6. CONCLUSION

The above study vividly brings out the fact that Dibru-Saikhowa National Park is rich in biodiversity and a place of tourist attraction. Although, the park is yet to be recognized as an eco-tourism place, the study found out that it has immense potential. Regarding communities perception from benefits from eco-tourism, from the survey it is found that out of the 30 respondents, 10 people engaged in eco-tourism activities felt the direct benefit from eco-tourism is income and three out of them also said that they benefit in their knowledge building in the form of knowing flora and fauna, awareness of conservation etc. One of the important findings of the survey was that all the 30 respondents mention that there is a conflict over the

resources of park as their lives and livelihood are dependent on natural resources of the park. All the respondents expressed their interest in eco-tourism activities thereby showing a high potential for eco-tourism development in Dibru-Saikhowa National Park. The third and the last section of the findings is from the tourist potential index among the eight destinations within the Dibru-Saikhowa National Park having highest tourist potential index is found for Kolomy and Pagoli Pathar. Kolomy is famous for bird watching and trekking whereas Pagoli Pathar is famous for wildlife viewing and trekking. This is followed by a high tourist potential for eco-camps and surroundings indicating high demand and supply for eco-tourism. This is closely followed by rural tourism around the park which is known for cultural tourism. Among the eight sights Kundan Ghat has lesser potential for tourism as because there is only one activity that is trekking.

The study mainly aims to find the scope of eco-tourism in Dibru-Saikhowa National Park, and to find out the development potentialities of this park. From the findings presented above it can be concluded that there is a large potential for eco-tourism in Dibru-Saikhowa National Park which is yet not realized. In the National Park network can be built up to facilitate an effective conservation of the natural resources thereby providing the employment avenues for the local communities living close by using the prospects of the eco-tourism at a local level. The major eco-tourism activities that are practiced in Dibru-Saikhowa National Park are bird-watching, flood tourism, eco-camps, watching river dolphin, flora discovering, rural tourism among others. From the study it is quite clear that there is immense potentiality of Eco-tourism in Dibru-Saikhowa National Park. It is a place of eco-tourism but for many reason it is lagging behind. If some action towards its promotion is taken than the place can be a much developed tourist spot

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