

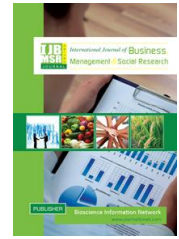


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## Community based ecotourism in income generation: a study on the sundarbans adjacent area of Bangladesh

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### ABSTRACT

*The rich natural and cultural attractions are valuable ingredients for community based ecotourism development in Bangladesh. Every year, a large number of tourists visit in the Sundarbans, which has a significant contribution in the household income to the people who are mostly involved in this sector. The result of the empirical model of Durbin-Watson test revealed the model significant at 1% and 5% level. The income counted here is considered as dependent variable and the age, education, experience, number of tourist served; poor infrastructure; poor communication and transportation; poor knowledge about CBET; lack of government policy etc. as independent variable, the eco cottage quality, natural beauty and security are the dummy variable. The result shows that, the age, number of tourist served and absence of leadership and entrepreneurship ability are significant at 1% and 5% level; experience and the eco cottage quality also found significant for income. However, community based ecotourism industry in Bangladesh is facing many problems, such as lack of transportation and communication system, poor investment, political unrest situation of the country, lack of government policy, poor marketing policy to attract the tourists, poor knowledge about CBET, lack of well-planned accommodation, food, entertainment and other services to satisfy diverse categories of tourists. The issue of safety and security of the tourists of both domestic and foreign origins is also very important for the development of ecotourism in Sundarbans area. Though a policy has been adopted in the recent time for ensuring sustainable development of this sector, the strategies adopted under the policy are not yet being seriously taken up for implementation. Besides, the country requires a strong physical planning strategy to develop its urban and rural areas, and national transportation and communication system to establish connectivity to the tourism spots. There should be a strong marketing policy, business planning as well for the promotion of tourism in the country.*

**Key words:** Community based ecotourism, eco cottage, eco site, ecotour guide and boatman

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## I. Introduction

Community Based Ecotourism (CBET) is 'environmentally responsible travel' through undisturbed nature and to enjoy the beauty that promotes conservation and provides economic benefit to the local people (Kaplan, 2013). In the year of 1999, UNESCO declared the wildlife sanctuaries of the Sundarbans as World Heritage. The Sundarbans provides both tangible and intangible benefit for the surrounding community and it also contributes to the national economy. The beauty of the Sundarbans has attracted people a lot and community based ecotourism activities have become ahead from the business and conservation perspective. The Sundarbans mangrove forest is one of the largest such forests in the world, is formed at the delta of the Ganges, Brahmaputra and Meghna rivers on the Bay of Bengal (Rahman & Asaduzzaman, 2013). The Sundarbans is composed of two sanctuaries (Sundarbans west and Sundarbans east) with a total area of 140,000 hectares. There are two types of tourism found in the South-West coastal region adjacent to the Sundarbans. The first one is mass tourism as a form of vessel tourism and other form is community based ecotourism. The mass tourism in the form of vessel tourism inside or surrounding the Sundarbans is degrading the environment of Sundarbans and for that the development of community based ecotourism surrounding the Sundarbans is one of the top priorities for the Forest Department. The government of Bangladesh is now in the process of developing the tourism policy with an emphasis on the community involvement and their livelihood improvement; and to protect or conservation of nature. That will contribute to the development of a healthy, responsible and sustainable type of ecotourism for the benefit of all (Islam et al., 2013). Community based ecotourism (CBET) can promote local enterprise development through continuous improvement of enterprises as well tourism sector (Iqbal et al., 2010). Different off-farm activities can be flourished based on the Sundarbans resources that can help to increase the households income and also can create the employment opportunities for large number of people, obviously community based ecotourism is not a new industry but growing ecotourism market in Bangladesh. Compared to other households' economic options, community based ecotourism is promoting the household income generation as well as creating the employment opportunity for the adjacent community people of the Sundarbans (Saiful et al., 2011). It will also help to preserve the environment and local culture.

Research questions that was considered, what was the positive and negative factors that affect the household income and employment generation in the Sundarbans region through community based ecotourism?; and what was the problems and prospects of existing system on community based ecotourism in the Sundarbans region?

Thus, this study was undertaken to find out the households income and employment generation of existing local eco-tour promoters and to identify existing mechanism of community based ecotourism in the Sundarbans region.

## II. Material and Methods

To meet the objectives of this study two type of methods like qualitative or described and quantitative analysis have been used. A questionnaire survey of 60 households (30 for Boatman and 30 for Ecotour Guide) has been conducted for the collection of quantitative information. Three (03) Focus Group Discussions (FGDs) have been conducted to collect the qualitative information. The Key Informant Interview (KII) method has also been used in 03 areas. The secondary information has been collected from different websites, Forest Department, Universities, journals and research papers etc.

**Study area:** The research has been conducted in Dacope and Shyamnagar upazilas, which are located at southern part of Bangladesh adjacent to the Sundarbans. Dacope upazila is located at 22.5722°N; 89.5111°E under Khulna district and Shyamnagar upazila is located at 22.3306° N; 89.1028° E under Satkhira district (LGED, 2014).

**Influential factors of household income through econometric models:** The basic model used in this study for assessing the level of households income as a function of factors such as, age of Ecotour Guides, highest level of education of Ecotour Guides, business experience of Ecotour Guides etc. Thus, the model for the Ecotour Guides has been specified as follows:

$$r_{ie} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12} + \beta_{13} X_{13} + \beta_{14} X_{14} + \beta_{15} X_{15} + e_{ie} \dots \dots \dots (eq. 1)$$

Where,  $r_{ie}$ =households income (BDT);  $\beta_0$ =intercept;  $X_1$ =age of ecotour guides(yrs);  $X_2$ =ecotour guides' highest level of education(yrs);  $X_3$ =number of tourists served(person);  $X_4$ =experience(yrs);  $X_5$ =infrastructure(used likert scale data);  $X_6$ =communication and transportation facilities(used likert scale data);  $X_7$ =geographical condition (used likert scale data);  $X_8$ =investment in this sector(used likert scale data);  $X_9$ =leadership and entrepreneurship ability(used likert scale data);  $X_{10}$ =political situation of the country(used likert scale data);  $X_{11}$ =government policy(used likert scale data);  $X_{12}$ =knowledge about CBET(used likert scale data);  $X_{13}$ =eco cottage/resort quality (used likert scale data);  $X_{14}$ =eco site security(used likert scale data);  $X_{15}$ =natural beauty (used likert scale data);  $\beta_1$  to  $\beta_{15}$ =regression coefficient;  $e_{ie}$ =error term.

**Table 01. Dependent and explanatory variables for ecotour guide**

Variables	Expected Sign	Description	Reference
Dependent Variable			
Households Income ( $r_{ie}$ )	+	Households income of the Eco Tour Guide (BDT)	(Khan, 2004)
Explanatory Variables			
Age ( $X_1$ )	+	Age of the Ecotour Guides(yrs)	(Iqball et al., 2010)
Education( $X_2$ )	+	Ecotour Guides' highest level of education (yrs of schooling)	„
Number of tourists served ( $X_3$ )	+	Number of tourists served by the Eco Tour Guide(person)	„
Business experience( $X_4$ )	+	Ecotour Guides' year of business experience (yrs)	„
Infrastructure( $X_5$ )	-	Infrastructure of the Eco site(used likert scale data)	„
Communication and Transportation facilities( $X_6$ )	-	Communication and Transportation facilities of the Eco site(used likert scale data)	„
Geographical condition ( $X_7$ )	-	Geographical condition of the Eco site(used likert scale data)	„
Investment in this Sector( $X_8$ )	-	Investment in this Sector for the development of the Eco site(used likert scale data)	(Khanam & Khan, 2005)
Leadership and Entrepreneurship Ability( $X_9$ )	-	Leadership and Entrepreneurship Ability of the ecotour service providers (used likert scale data)	„
Political Situation of the Country( $X_{10}$ )	-	Political Situation of the Country(used likert scale data)	„
Government Policy( $X_{11}$ )	-	Government Policy for the development of ecotourism in the Sundarbans region (used likert scale data)	„
Knowledge about CBET( $X_{12}$ )	-	Knowledge about CBET of the ecotour service providers about managing the Eco site(used likert scale data)	(Iqball et al., 2010)
Eco Cottage Quality( $X_{13}$ )	+	How cottage quality effect the income (used likert scale data)	„
Security( $X_{14}$ )	+	Security of the Eco site that affects the income(used likert scale data)	„
Natural beauty( $X_{15}$ )	+	Natural Beauty of the Eco site that affects the income(used likert scale data)	„

The model for the Boatman has been specified as follows:

$$r_{ib} = \beta_0 + \beta_1 Y_1 + \beta_2 Y_2 + \beta_3 Y_3 + \beta_4 Y_4 + \beta_5 Y_5 + \beta_6 Y_6 + \beta_7 Y_7 + \beta_8 Y_8 + \beta_9 Y_9 + \beta_{10} Y_{10} + \beta_{11} Y_{11} + \beta_{12} Y_{12} + \beta_{13} Y_{13} + \beta_{14} Y_{14} + \beta_{15} Y_{15} + e_{ib} \dots \dots \dots (eq. 2)$$

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Where,  $r_{ib}$ =households income (BDT);  $\beta_0$ =intercept;  $Y_1$ =age of boatman(yrs);  $Y_2$ =boatman highest level of education(yrs);  $Y_3$ =number of tourist served by boatman (person);  $Y_4$ =experience(yrs);  $Y_5$ =infrastructure(used likert scale data);  $Y_6$ =communication and transportation facilities(used likert scale data);  $Y_7$ =geographical condition (used likert scale data);  $Y_8$ =investment in this sector(used likert scale data);  $Y_9$ =leadership and entrepreneurship ability(used likert scale data);  $Y_{10}$ =political situation of the country(used likert scale data);  $Y_{11}$ =government policy(used likert scale data);  $Y_{12}$ =poor knowledge about CBET(used likert scale data);  $Y_{13}$ =eco cottage/resort quality (used likert scale data);  $Y_{14}$ =eco site security(used likert scale data);  $Y_{15}$ =natural beauty (used likert scale data);  $\beta_1$  to  $\beta_{15}$ =regression coefficient;  $e_{ib}$ =error term (Khan, 2004).

**Table 02. Dependent and explanatory variables for boatman**

Variables	Expected Sign	Description	Literature Reference
<b>Dependent Variable</b>			
Households Income ( $r_{ib}$ )	+	Households income of the Boatman (BDT)	(Khan, 2004)
<b>Explanatory Variables</b>			
Age ( $Y_1$ )	+	Age of the Boatman (yrs)	(Iqball et al., 2010)
Education( $Y_2$ )	+	Boatman highest level of education (yrs of schooling)	„
Number of tourists served ( $Y_3$ )	+	Number of tourists served by the Boatman (person)	„
Business experience( $Y_4$ )	+	Boatman year of business experience (yrs)	„
Infrastructure( $Y_5$ )	-	Infrastructure of the Eco site(used likert scale data)	„
Communication and Transportation facilities( $Y_6$ )	-	Communication and Transportation facilities of the Eco site(used likert scale data)	„
Geographical condition ( $Y_7$ )	-	Geographical condition of the Eco site(used likert scale data)	„
Investment in this Sector( $Y_8$ )	-	Investment in this Sector for the development of the Eco site(used likert scale data)	(Khanam & Khan, 2005)
Leadership and Entrepreneurship Ability( $Y_9$ )	-	Leadership and Entrepreneurship Ability of the ecotour service providers (used likert scale data)	„
Political Situation of the Country( $Y_{10}$ )	-	Political Situation of the Country(used likert scale data)	„
Government Policy( $Y_{11}$ )	-	Government Policy for the development of ecotourism in Sundarbans region (used likert scale data)	„
Knowledge about CBET( $Y_{12}$ )	-	Knowledge about CBET of the ecotour service providers about managing the Eco site(used likert scale data)	(Iqball et al., 2010)
Eco Cottage Quality( $Y_{13}$ )	+	How cottage quality effect the income (used likert scale data)	„
Security( $Y_{14}$ )	+	Security of the Eco site that affects the income(used likert scale data)	„
Natural beauty( $Y_{15}$ )	+	Natural Beauty of the Eco site that affects the income(used likert scale data)	„

### Data analysis and preparation of research paper

The collected data and information were analyzed, processed, and interpreted to find the result of the research. The paper of the research is written through the systematic way by using the computer program MS Word, MS Excel, SPSS. Firstly authors prepared the draft research paper and then the final research paper is submitted to concerned authority successfully.

**The factors that affect the household's income:** The majorities of the results are statistically significant and are consistent with the theoretical implications of Boatman and Ecotour Guides' Household income.

**Table 03. Descriptive statistics of variables**

List of Variables	Boatman			Ecotour Guide		
	Mean	Standard deviation	CV (%)	Mean	Standard deviation	CV (%)
Households Income(BDT)	8495.61	2652.25	31.22	4433.97	6.19	0.14
Age(yrs)	33.07	8.67	26.22	23.77	912.51	3838.91
Year of Schooling(yrs)	6.83	2.05	30.04	11.13	1.14	10.22
Experience(yrs)	10.40	5.88	56.50	3.50	1.14	32.49
Tourist Served(number)	2330	108.75	4.67	196.83	18.14	9.22
Infrastructure(used likert scale data)	3.93	0.76	19.31	3.93	0.82	20.94
Communication and Transportation facilities(used likert scale data)	4.80	0.55	11.48	4.77	0.50	10.57
Geographical condition (used likert scale data)	4.27	0.83	19.39	4.33	0.66	15.27
Investment in this Sector(used likert scale data)	3.83	0.75	19.50	4.63	0.94	20.30
Leadership and Entrepreneurship Ability(used likert scale data)	4.10	0.85	20.61	4.57	0.63	13.70
Political Situation of the Country(used likert scale data)	3.03	1.07	35.18	3.27	1.36	41.68
Government Policy(used likert scale data)	3.87	0.63	16.25	4.43	0.68	15.33
Knowledge about CBET(used likert scale data)	4.73	0.52	11.01	4.87	0.35	7.10
Marketing Policy to Attract the Tourists(used likert scale data)	4.70	0.60	12.68	4.83	0.38	7.85
Eco Cottage quality(used likert scale data)	3.13	0.51	16.20	3.50	0.94	26.80
Natural Beauty(used likert scale data)	27.60	1.01	3.66	28.50	1.31	4.60
Security (used likert scale data)	13.23	2.70	20.41	13.27	2.08	15.70

The mean income of the boatman is higher than the ecotour guide that is 8495.61 BDT and 4433.97 BDT respectively. Table 03 also shows that, the coefficient of variation which is a relative measure of dispersion of mean value. It shows the variation of household's income by using different independent variable among boatman and ecotour guide.

### III. Results

**Table 04. Estimated results of linear regression equation of ecotour guide**

Source	SS	df	MS	Number of Observation=30
Regression	<b>14194700.97</b>	<b>18</b>	<b>788594.49</b>	<b>F=0.872</b>
Residual	<b>9952835.11</b>	<b>11</b>	<b>904803.19</b>	<b>Prob&gt;F=0.616</b>
Total	<b>24147536.09</b>	<b>29</b>		<b>R-square=0.588</b>
Variables	Coefficients	Std. Error	t	Sig.
(Constant)	10645.129	13708.03	0.777	0.454
Age	85.814	73.047	1.175	0.265
Year of Schooling	-95.436	433.257	-0.220	0.830
Experience	301.758	329.168	0.917	0.379
Tourist Served	7.392	18.124	0.408	0.691
Infrastructure	-179.729	661.939	-0.272	0.791
Communication and transportation facilities	-913.288	557.269	-1.639	0.129
Geographical condition	423.792	613.907	0.690	0.504
Investment in this Sector	-977.463	844.529	-1.157	0.272
Leadership and entrepreneurship ability	1175.859	629.976	1.867	0.089
Political situation of the country	363.735	286.333	1.270	0.230
Government policy	-307.671	527.055	-0.584	0.571
Knowledge about CBET	-703.256	1214.335	-0.579	0.574
Marketing policy to attract the tourists	-1259.449	1401.844	-0.898	0.388
Eco cottage quality	881.41	1104.149	0.798	0.442
Natural beauty	122.339	880.31	0.139	0.892
Security	279.124	189.483	1.473	0.169

**Table 05. Estimated results of linear regression equation of boatman**

Source	SS	df	MS	Number of Observation=30
Regression	<b>128790753.30</b>	<b>19</b>	<b>6778460.70</b>	<b>F=0.901</b>
Residual	<b>75208303.67</b>	<b>10</b>	<b>7520830.36</b>	<b>Prob&gt;F=0.596</b>
Total	<b>203999056.97</b>	<b>29</b>		<b>R-square=0.631</b>
Variables	Coefficients	Std. Error	t	Sig.
(Constant)	8160.015	22742.22	0.359	0.727
Age(yrs)	160.117	93.662	1.710	0.118
Year of Schooling	490.405	629.883	0.779	0.454
Experience	62.649	168.742	0.371	0.718
Tourist Served	10.765	7.104	1.515	0.161
Infrastructure	-213.132	1502.973	-0.142	0.890
Communication and transportation facilities	-1414.036	1380.377	-1.024	0.330
Geographical condition	-147.278	1154.18	-0.128	0.901
Investment in this Sector	-482.208	1920.906	-0.251	0.807
Leadership and entrepreneurship ability	-1340.703	917.859	-1.461	0.175
Political situation of the country	-314.011	1732.902	-0.181	0.860
Government Policy	-825.31	1888.175	-0.437	0.671
Knowledge about CBET	-289.265	2434.217	-0.119	0.908
Marketing policy to attract the tourists	264.638	1747.758	0.151	0.883
Eco cottage quality	3416.967	1903.761	1.795	0.103
Natural beauty	2250.587	2031.06	1.108	0.294
Security	1306.811	8848.941	0.148	0.886

Source: Authors' Compilation Based on Field Survey, 2014.

#### IV. Discussion

It was found that the age of the ecotour service providers is within the range of 18-65 years, which shows a linear relationship between the age and household income (Khan, 2004). The income level increases by increasing the age but at the later stage the income level decreases. Youths are physically more active than the older ones but skill and experience is also counted here as mostly influential factor for the boatman. The research shows that the age of the boatman and ecotour guide is statistically significant near at 1% level where 't' values are 1.710 and 1.175 respectively. Tourists mostly prefer the boatmen who are at older and middle age but have more skill and experience to operate the boat while visiting in Sundarbans (Khan & Khan, 2009).

To measure the effect of education level of ecotour service providers on their income, two types of explanatory variables like the continuous variable representing the number of completed years of education and binary variable representing whether the ecotour service providers is literate or illiterate have been used (Khan & Khan, 2009). A positive relationship between the income and years of schooling is found. In most of the cases, the tourists prefer educated service providers' company at the time of visit to the Sundarbans.

It is found that the years of experience of the ecotour service providers are within the 2-20 years, which shows a positive relationship between the experience and household income. Experience of the ecotour service providers is statistically significant. The income of experienced ecotour service providers is found more than the less experienced ones.

The income of the ecotour service providers (boatman and ecotour guide) mostly depends on how many tourists he or she serve. The number of tourists served by the ecotour service providers shows statistically highly significant. When the ecotour service providers serve more tourists, then they get more money. There have a positive relationship between the number of tourists served and income of households of the ecotour service providers. So, if all other variables remain constant, the number of tourists served will be statistically significant at 1% level for boatman.

The infrastructural condition of the study areas is now not at satisfactory level, which is negatively affecting the households income. The income and the poor infrastructure of the eco site have the negative relationship (Fahim et al., 2013). The infrastructure like bank, ATM, government other facilities play the positive role to attract the tourists. If the tourists get such facilities in an eco-site, they mostly prefer to visit it.

Poor communication and transportation facilities play the same role like poor infrastructure. In most of the cases tourists expect comfortable journey at the time of visit. So, the poor transportation and communication facilities have a negative relationship with the income of the ecotour service providers.

Geographical condition affects the income a bit. It also negatively affects the income but most of the cases it is found that tourists have the preconception about the Sundarbans and its location. Most of the tourists visit Sundarbans area after knowing the geographical condition.

In most of the cases it is found that few tourism companies are involved with the business but not adequately found in the private sector and as well the government investment. So, the poor investment is negatively affecting the ecotourism sector (Khanam & Khan, 2005).

The leadership capacity and entrepreneurs' ability have insignificantly been observed at the time of research. The absence of leadership and entrepreneurship ability negatively affects the income of the ecotour service providers. The leadership plays two types of results both positive and negative relation. The results show that the negative relationship between leadership and household income. The boatman may have no or weak leadership capacity but the ecotour guide is found to have positive relationship. The ecotour guides have the fair leadership capacity to manage the tourists.



The country's political situation goes on to volatile condition in most of the time. When political unrest situation prevails in the country, little number of tourists visits the tourism spots and it has the negative implication on income of the ecotour service providers.

The government of Bangladesh drafted and approved the national tourism policy in 2010 but there have few limitations about to implement the ecotourism policy. So, the weak policy or its implementation is negatively affecting the income of ecotour service providers.

The concept of community based ecotourism is comparatively new in our country. The people of Sundarbans areas are not adequately aware about ecotourism issues. So, their poor knowledge has the negative effects.

The Sundarbans areas have a lot of resources and lot of places to visit. But, the tourism or destination branding itself is a problem for ecotourism marketing. So, the poor marketing policy negatively affects the tourism sectors and in some cases it fails to attract the ecotourists. The ecotour guides are mostly involved in the promotional activities like advertising, communicating private tour operators and as well as overseas tourists. But, it is not found in the case of boatman. So, the poor marketing policy negatively affects the ecotour guides income (Ahsanul et al., 2008).

Eco cottage quality plays the significant role for the household income of the entrepreneurs. Most of the eco tourists prefer good quality eco lodge for their home stay. The eco cottage quality and households income have a positive relationship. If the eco cottage quality is good, more tourists will prefer to home stay and that will ultimately impact on income of the ecotour service providers.

The security of the Sundarbans area is defined by some sub indicators i.e. political unrest situation of the area, Police/Coast Guard/RAB monitors the area, Village Police monitors the area, pirates attack the local people or tourists, local forest guards monitor the area. It is found that 55% people believe that the political situation of the Sundarbans area is good. About 38% people believe that Police/Coast Guard/RAB monitors the area regularly, 50% believe that Village Police monitors the area frequently. The 95% people have the previous experience about pirates' attack to the tourists; the 95% people state that the pirates do not attack any tourist at the present days. It is concluded that the security of the Sundarbans area is now in good condition and it has impacted significantly on income of the service providers.

The natural beauty of the Sundarbans area is measured by using the sub indicators like have nice canopy/dark green trees of the forest; have the reserve forest area; found nice birds/fish in that area; found deer, monkey, crocodile, dolphin on that area; eco site is surrounded by the river; and have the scope of safe boat journey. It is found that 77% people agree with the statement that the Sundarbans area has nice canopy/dark green trees of the forest, 68% people state that the Sundarbans area has the reserve forest, 59% people highly agree with the statement that nice birds/fishes are found in that area, 42% people highly agree with the statement that nice deer, monkey, crocodile, dolphin etc. are found in the area. Almost all i.e. 100% people highly agree with the statement that eco sites are surrounded by the river; and have the scope of safe boat journey. The natural beauty is good in the Sundarbans area. It is found a positive relationship between natural beauty and household income of the ecotour service providers.

## V. Conclusion

The contribution of tourism is related with the Gross Domestic Product. In Bangladesh, it is expected to rise from 3.9% (BDT265.9b or US\$3,786.4m) in 2010 to 4.1% (BDT788.4b or US\$8,781.7m) by 2020. Community involvement for the ecotourism activity is very satisfactory. The people of the ecotourism spots are directly and indirectly getting benefits from the tourism activity. Many poor people from ecotourism spots like boatman, tour guide, rickshaw puller, eco cottage owner, cultural actors, handicraft producer, tea stall or small grocery shop owner, Sundarbans resource harvester, day laborer, photographer, small and medium entrepreneurs find tourism as a stable source of income.

The people in Sundarbans adjacent areas are now operating the ecotourism activities in limited scale. The community people are now earning from ecotourism business, but mass people are not engaged now in this business. The people who are mostly engaged in this sector have been able to increase their household income from the ecotourism business. The household income through community based ecotourism business are mostly affected by the positive factors like how much tourists are served by the entrepreneurs, the years of schooling, age, experience, eco cottage quality and the negative factors like weak leadership to manage the business. They are facing the little bit problem due to the limited knowledge about community based ecotourism, poor transportation and communication facilities, infrastructure etc. More over there have limited or no policy instrument about ecotourism for the Sundarbans. Above all, emphasis has to be given on the security of the tourists, accommodation facility, improvement of safe transportation and communication infrastructure in the Sundarbans adjacent area by road, river and sea; arrangement of clean and hygienic food & beverage, sightseeing, publication of brochures, handicrafts marketing. The community based organizations should develop tourism management skills and improve their ability to coordinate with other agencies, commence local research, combine local knowledge with local curriculum and establish CBET networking among themselves and link with others. The government should support local tourism development programs with formulation and implementation of sound ecotourism policy.

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### ACRONYMS

**Boatman:** The man who rides boat and provides transport support to the tourist with exchange of money.

**Community Based Ecotourism:** A form of ecotourism the local community has substantial control over, and involvement in, its development and management; a major proportion of the benefits remain in the community.

**Eco Cottage:** The community or household lodge where there have the facilities to home stay for the tourist.

**Eco Tour Guide:** The community people who are providing the support at the time of tourist visit. Eco Tour Guide accompanies the tourist and provides the information support to the tourist about the Sundarbans.

**Ecotour Service Providers:** The people who are mostly engaged with the community based ecotourism and earning money from the business.

**Ecotourism:** "Ecotourism is about uniting conservation, communities, and sustainable travel. This means that those who implement and participate in ecotourism activities should follow the following ecotourism principles: Minimize impact, Build environmental and cultural awareness and Respect. It is responsible travel to natural areas that conserves the environment and improves the well-being of local people" (TIES, 1990).

**Mass Tourism:** Mass tourism is a form of tourism that involves tens of thousands of people going to the same resort often at the same time of year. It is the most popular form of tourism as it is often the cheapest way to holiday, and is often sold as a package deal.

**Sundarbans Resource Collectors:** The people who are most dependent to the Sundarbans resources for their livelihoods.

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