

Impact of ecotourism on the environment, society and culture of Ratargul swamp forest in Sylhet, Bangladesh

ABSTRACT

Aims: The aim of the paper is to know the type of ecotourism going on Ratargul swamp forest and its impact on the environment, society and culture of the area.

Study design: qualitative study, empirical research

Place and Duration of Study: Ratargul Swamp Forest on Goainghat upazilla under Sylhet District, between August and September 2014.

Methodology: The respondent sample size was 100. Data has been collected from the local people by using structured observation, semi-structured interview and case study which were selected by stratified random sampling on the basis of education and profession.

Results: Observed evidence shows that foremost influence of ecotourism fall on economic aspect and environmental knowledge. Income level of 80% people has been increased after establishing ecotourism and 57% people are now changed their traditional occupation. Unplanned and unmanaged tourism may disrupt the life cycles of many aquatic biota that thrive there. Many tourists carry bottled water or juice, potato chips and other food stuffs while travelling the area and finally discard the resulting waste recklessly in the forest despite the use of warning signs by the forest department and other concerned authorities. More use of engine boats to carry the tourists in an undefined and multiple ways inside and around the forest also creating noise and polluting air and water there which are disturbing the life styles of the habitats inside the swamp forest to be settled like previous stable and natural environment.

Conclusion: To save this swamp environment, government and forest department should make and implement some management policies which should be maintained strictly considering the opinion of the local people.

Keywords: *Ecotourism, environment, culture, economy, impact, management.*

1. INTRODUCTION

Ecotourism is a new face of tourism which has been taken as an important element of sustainable development in the underdeveloped countries. Its main attraction is flora, fauna and cultural heritage. Though it has been established on the basis of local people and natural environment, so, besides society, culture, economy, it also has impact on environment. According to Vishwanath & Dr. Chandrashekara, 'Tourism impact studies need to address three tripartite theoretical domains. These domains are known as environmental, economic and socio-cultural' (Vishanath & Chandrashekara, 2014: 16). Again, Bangladesh constitution also presents the importance of the protection of forest and biodiversity in Article 18A. according to this article 'the state shall endeavour to protect and improve the environment and to preserve and safeguard the natural resources, bio-diversity, wetlands, forests and wild life for the present and future citizens. Bangladesh, a country of south Asia, has numerous potential spots of ecotourism opportunities. Ratargul swamp forest is one of them. It is the only swamp forest in Bangladesh, located in Gowainghat, Sylhet. Its main attraction is its watery plants and other species live on this. This evergreen forest is getting submerged under 20 feet water in some part during rainy season, which is the habitat of so many species (Hasan, 28 August 2011). Recently, it has become one of the most attractive sites of ecotourism which is significantly enriching our economy and also has impact on culture and environment of that area. In this research, impact of ecotourism on the environment, society and culture of the Ratargul swamp forest and the areas of it's around has been described from anthropological point of

view. For this, types of ecotourism in Ratargul swamp forest also have been described. Besides, its impact on the local people's culture, production system and environment are presented here.

2. MATERIAL AND METHODS / METHODOLOGY

2.1 Sampling, sample size

Stratified random sampling was used on the basis of education and profession. Data has been collected from 100 sample (80 male and 20 female age ranged 11-60).

2.2 Process and techniques of data collection

Key informant technique was used. Total 60 semi-structured interviews was taken with questionnaire, 20 semi-structured interview and 20 case study was taken by using checklists.

3. RESULTS AND DISCUSSION

Freshwater swamp forest consists of flood-tolerant evergreen trees of about 10 to 12 meters height. Ratargul swamp forest is one of the 22 Fresh Water Swamp Forests around the world. It is known as 'Sundorban' to the local people. Some also call it as 'the Amazon of Bangladesh'.

Tropical air from the north-west of Sylhet causes heavy rainfall. According to Sylhet Weather Centre, average rainfall is 4162 millimeter per year. Highest rainfall occurs in July which is 1250 millimeter. On the other hand, December is the driest season with 74% relative density which jumps up to more than 90% in July-August (Choudhury, J.K. et. al. 2004).

The topography of the side is chopping in general. Mainly, the flood plains are agricultural farmlands. The site is lowland and is oriented along the bank of the river Goain. The soil of this region is gray, heavy, silty clay loam with clays that predominant. The soils of the agricultural fields are loamy and are reported to be fertile (Choudhury, J.K. et. al. 2004).

Ratargul has become familiar to the tourists since 2011 and from 2012 and 2013, it has become a famous tourist spot for its natural beauty. 80% of its area is covered by trees. It contained around 73 species of tree, 26 species of mammals, 20 species of reptiles, 175 species of birds and 9 species of amphibian (Choudhury, J.K. et. al. 2004).

The Freshwater swamp forest is dominated by reed swamp species, locally known as pujaban and consists of tall grasses mainly Nall, Khagra and Ekra. It consist evergreen trees like Hizol, Koroch, Bhuri, Jarul, Murta, Bet, Banyan, Arjun, Varun, Kadam, etc.

Snake and worm snake can widely be seen in this water-drown forest. Mongoose can be seen in dry season. Monkey and Water Monitor also resides in the forest. Heron, Egret, Kingfisher, Parrot, Bulbul, Swan, Dove, Water fowl, Eagle and kite bird are some of the birds of the swamp forest. Cotton Pygmy Goose and other migratory birds and Vulture visit the forest in winter. Name of the some local fishes available in the forest are Batasio, Rita, Pabda, Rohu, etc south (Hasan, 28 August, 2011).

The type of ecotourism going on Ratargul can be called Community based ecotourism. Cause by the side of enjoying natural beauty it also makes income opportunity for the local people.

3.1 Impact of ecotourism on environment

3.1.1 Environment of Ratargul swamp forest is threatened greatly

Five years ago Ratargul was unknown to the people of the world. But since last five years this scenario has been changed greatly. Around 20 to 23 thousand tourists visited the swamp forest in a week during rainy season. Thus over crowd of the tourist is hampering the forests environment. Guideless tourists are roaming in the forest recklessly without thinking about the animals of the forest. They make too much noise, talk loudly, shouting, ride on the trees, playing music at a high volume, and so on. Many tourists carry bottled water or juice, potato chips, biriani, and other packed food stuffs while traveling the areas and finally discard the resulting waste recklessly in the forest despite the use of warning signs by the forest department and other concerned authorities. They though stone to the monkey or other animals as a matter of fun. But all thus activities are responsible to reduce the number of trees, birds and animals there.

3.1.2 Number of trees and animals are decreasing

Jamal Miah, a respondent inform that, 'a few years ago, we could see monkeys, entellus and other animals roaming through the branches of trees in the forest.' But after ecotourism introduce here, due to crowd of noisy tourists visited here, thus monkeys and other animals seem to have disappeared from the outskirts of the forest'. Respondents also inform that, there are major threats for the illegal collection of woody branches, reeds and woods. Some irresponsible local people cut branches of trees to use as fire wood or fuel, building and industrial raw materials. They also inform that, a group of politically influential locals are behind the deforestation of the swamp forest also. Reed forest comprising about 2400 ha were allocated to the Sylhet Pulp and Paper Mills (SPPM) for supply of fibrous raw materials in 1975 (FMP 1998).

3.1.3 Awareness regarding environmental conservation increased

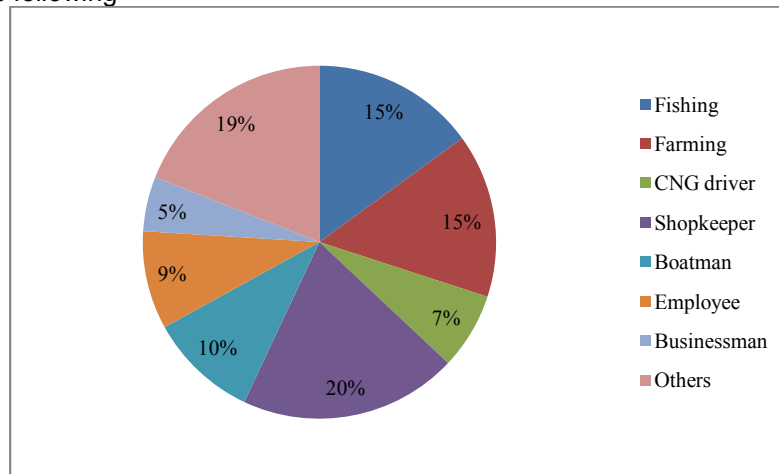
Local people are now more aware about environmental conservation. They take part in forest conservation, bio-diversity conservation and forest cleaning. They are knowledgeable about sustainable use of forest resources from many sources. They get thus knowledge from forest officer, journalist, NGO's and some are self-aware about preservation of forest. But on the other hand, the floating plastic bottles, polythene packets and other garbage's in the swamp area signify that tourist awareness is needed more and forest preservation laws should to be strictly maintained. Otherwise, unplanned and unmanaged tourism may disrupt the life cycles of many aquatic biota that thrive there. Besides, forest office has established watchtower inside the swamp forest. And many of thus activities are responsible to reduce the number of trees, birds and animals there. More use of engine boat to carry the tourists in an undefined and multiple ways inside and around the forest also creating noise and polluting air and water there which are disturbing the life of the habitats inside the swamp forest to be settled like previous stable and natural environment. To save this swamp environment, government and forest department should make and implement some management policies which should be maintained strictly considering the opinion of the local people.

3.2 Impact of ecotourism on society

Ecotourism in Ratargul swamp forest also involve the people of nearby villages. That is why their lifestyle has become tourism centered and fall great impact on environment. Now the impact of ecotourism on the society and culture of the local people are describing below:

3.2.1 Professional changes occurred mostly

Ecotourism in Ratargul swamp forest open a new door of income for the local people. Who caught fish or do farming for livelihood, now they work as boatman in rainy season to ferry tourists. Also some have shops near the tourist spot. Thus increase their income in high level. Variations in the profession of respondents are as following-



Source: Field data-2014

Figure 1: Variations in the respondents' profession

Above figure 1 shows that, among 100 respondents, 15 (15%) are fisherman, 15 (15%) are farmer, 7 (7%) are CNG driver, 20 (20%) are shopkeeper, 10 (10%) are boatman, 9 (9%) are employee, 5 (5%) are businessman, and 19 (19%) are working in other sector. By observing their professional variation, it can be say that they are not only dependent on fishing or farming but also do new types of job related to

tourism. Thus people are becoming more depended to the forest environment. By being such over exploited by people who are not so much aware about it, environment of the forest is going to lose its natural habitat.

3.2.2 Production system is changing

Though local people are being attached to the tourism, their profession is also changing. Many of them are now working as boatman by the side of farming and fishing. Some are sitting with shops nearby tourist spot. Some are driving CNG. As a result agriculture base economy has become business based. Numbers of respondents who take new job are as following-

New profession	Frequency	Percentage (%)
Boatman	20	43.86%
Shopkeeper	13	22.81%
CNG driver	19	33.33%
Total	57	100%

Source: Field data-2014

Table 1: Percentage of respondent's new profession

Table 1 shows that, 57 respondents change their profession. Among them, 25 respondents (43.86%) work as boatman, 13 respondents (22.81%) work as shopkeeper, and 19 respondents (33.33%) are working as CNG driver. So it can be said that, establishment of ecotourism in Ratargul swamp forest changed their profession. It changes their production system and creates vast opportunity for work. It has some negative impacts too. Without living on environment friendly farming or fishing, people of the Ratargul are becoming more involved in technology based earning, like driving motor vehicles, riding engine boats which increase the risk of environmental pollution by taking part in CFC gas emission.

3.2.3 Communication system is being developed

Local people come to Motorghat, Ratargul village and Chiringi with their boat to carry tourists in the Ratargul swamp forest and its nearby villages. Another way to go to thus places are CNG and tourists personal vehicle. A road has been made from Shaheb bazar to Motorghat for thus vehicle. Villagers of Ratargul made one kilometer road from Ratargul village to swamp forest for by their volunteer afford to make easy to go to the forest in other season. So, it can be say that communication system of that area are being developed as the blessing of ecotourism.

But it also has negative impact on environment. To carry tourists from Motorghat or other two places to the tourist spot, most of the boatman use engine boats. Thus engine boats use petrol as fuel that emits CO₂ high rate which causes harm for the environment. We all know that, CO₂ is very much responsible for greenhouse effect. More use of engine boats to carry the tourists in an undefined and multiple ways inside and around the forest also creating noise and polluting air and water there which are disturbing the life styles of the habitats inside the swamp forest to be settled like previous stable and natural environment.

3.2.4 There are local politics surrounding the ecotourism

Faction and conflicts are created around this village for tourism. Though Ratargul swamp forest is located on Gowainghat upozilla, Motorghat of Aolarkut village under Sadar upozilla is another way to go there. Therewithal this way is easier and most of the tourist use this way. But without inhabitants of Sadar upozilla, other villagers can't ferry tourists from this Motorghat. They only can ferry local people from this ghat. If they go to ferry any tourists, conflict has been started instantly. It seems that, only inhabitants of Sadar upozilla get the benefit from tourism. On the other side, staying such closer to tourism inhabitants of Gowainghat upozilla can't take any benefit from tourism. They go to local leader for a solution of it, they are not taking any steps to solve this. They also pray help to the government, but there is no solution of it.

Bangladesh government has established a bit office in Ratargul swamp forest for its maintenance. Also projects have been taken to announce this forest as ecopark. For the forest officers, modern office and residence are being made in the forest. Local people who are aware about it protest against this project (bdnews24.com; 11/4/2014). The project has nothing for the protection of the forest, but all about the tourism. Total 5 crore 61 lakh taka has been funded for the project. From this 80 lakh taka for bungalow and park inspection, 30 lakh taka for watch tower, 15 lakh taka for 7 engine boats, 20 lakh taka for box culvert, 20 lakh taka for jetty, 20 lakh taka for road construction and so on. These types of activities can extremely harm the environment of the forest. But this project is already going on and starting work in the nearby villages. Some villages (about 8-10) already get electricity connection.

3.2.5 Safety is being ensured

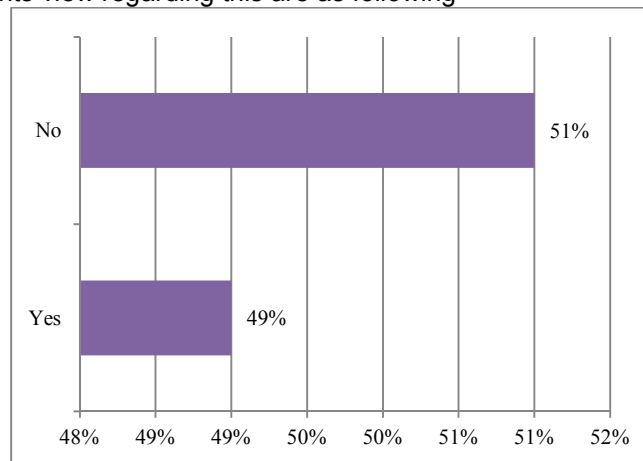
Everyday many tourists visit in Ratargul swamp forest. But as respondents opinion it does not fell any impact in their safety. They are living in peace as before. Tourists never disturb them.

Local people inform that, several steps have been taken to ensure the security of the local people. Like full time police patrol and local guard are there. Thus guards said that, generally there are no problem creates with the tourists. Thus guards are for extra awareness.

3.3 Impact of ecotourism on culture

3.3.1 Changes in local languages

Though it is a relatively new tourism area, so there are not mach change has been followed in local people's language. As it has become a famous tourist area, everyday lots of tourist of home and abroad visit here. Local peoples try to talk/communicate with the tourist by using standard Bangla language by the side of their mother tongue (Sylheti language). Its impact has been shown in their normal conversation. Respondents view regarding this are as following-



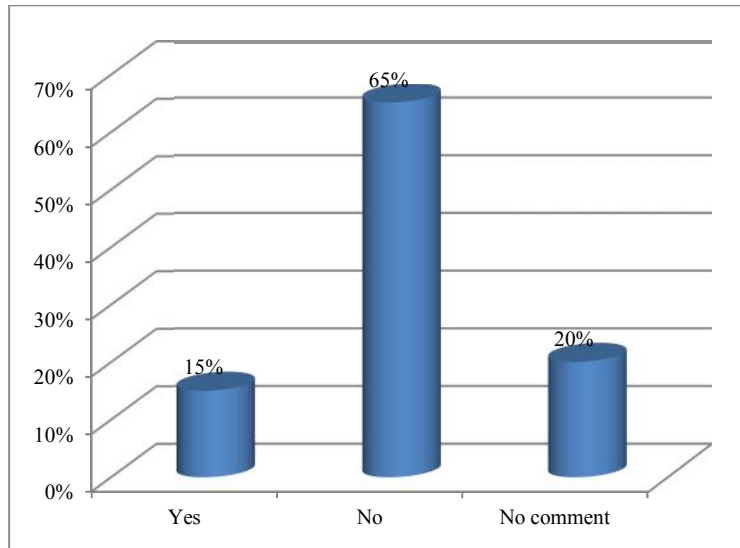
Source: Field data-2014

Figure 2: Percentage of changes in local language

Figure 2 shows that, 49 respondents (49%) thinks that there is a little change has been seen in their language. But other 51 respondents (51%) think that there is no change. That means, they think that there are no impact of ecotourism in their language.

3.3.2 Variation found in dress pattern:

Ratargul swamp forest is located in a remote village of Sylhet. But by following the tourists visited that place, local people also change their dress pattern. Respondent's opinions regarding changes in dress pattern are as following-



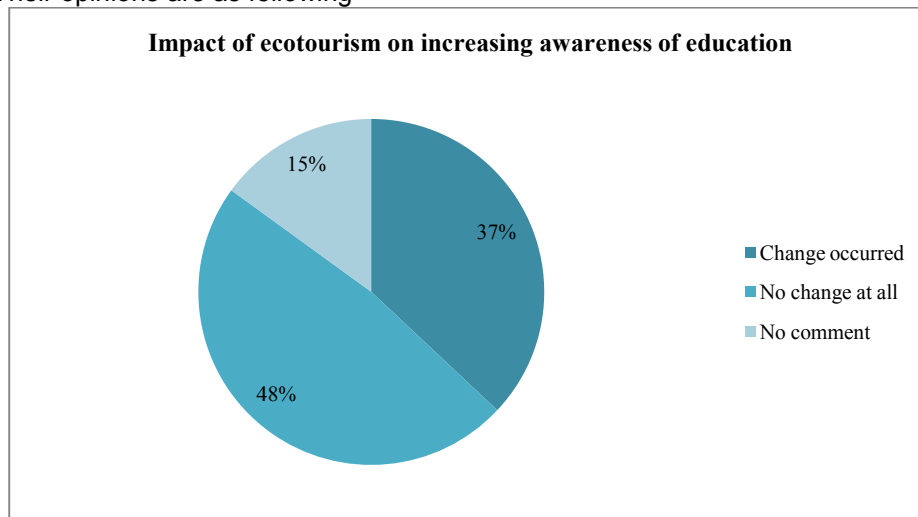
Source: Field data-2014

Figure 3 : Respondents opinion about changes in dress pattern

Above figure 3 shows that, 15 respondent (15%) thinks that there are some change occur in their style of using dress. They say that, local people especially young and teenagers are doing new style to attract tourist by following them. Again, rest 65 respondents (65%) say that there are no impacts of ecotourism on their changing style. They see it as modernity. And 20 (20%) of them have no comment on it. That means most of the respondent don't give much importance to the impact of ecotourism on the change of their dress pattern.

3.3.3Increasing awareness of education

There are 5 primary schools, 1 high school and 1 college in the nearby villages of Ratargul swamp forest. FIVDB (Friends In Village Development Bangladesh) and BRAC (Bangladesh Rehabilitation Assistance Committee) are working in the villages to increase the rate of education there. Further, being attached to different types of people also increases both awareness and rate of education. But there are differences in their opinion about the influence of ecotourism about it. Most of them say that there is not much influence of ecotourism on it. Rate of education are increasing naturally and without any influence of ecotourism. Their opinions are as following-



Source: Field data-2014

Figure 4: Impact of ecotourism on increasing awareness of education

Figure 4 shows that, 37 respondents (37%) say that ecotourism increase their income and that is why they can do more cost in the education of their children. That's the reason of the change in this sector.

Again, 48 of them (48%) say that there are no such impacts. Other 15 (15%) have no opinion about this. So, it can be say that most of the respondents are not aware about the impact ecotourism in education. They are knowledgeable about sustainable use of forest resources from many sources. They also can take part to make other people aware about it. This can increase the number of people who are aware about environmental pollution and can take part in nature conservation.

4. CONCLUSION

This research has been done with the objective of observe and analyze the impact of ecotourism on the environment, society and culture of the Ratargul swamp forest. Here types of ecotourism in Ratargul swamp forest has been described, besides impact of ecotourism on society, culture, economy, politics, production system, environment of the area. It creates job opportunity for unemployed peoples. Besides doing traditional jobs now local peoples are involve with additional economic activities. It enriches their economy. Ecotourism has not only positive impact, but also has some negative impacts. Tourism activities damaged the ecology, forest depleted, destroyed and biodiversity considerably degraded. To save Ratargul from ecological damage, Ratargul to be declared as reserved forest, a buffer zone to be made, core zone of the forest should fully prohibited for tourists, tourist management system to be introduced. For this, local people's participation should be ensured and also needed to take their opinion.

REFERENCES

- Appadurai, A. Modernity at large: Cultural Dimension of Globalization. Public worlds, Volume 1;Pp: 27-47. University of Minnesota press, Minneapolis, London; 1996.
- Barnard, R.H. Research Methods in anthropology: Qualitative and quantitative approaches. 2nd edition. Sage Publications; 1990.
- Center for Responsible Travel, The case for responsible travel: Trends & Statistics 2016. Washington, D.C 20005; 2016. Accessed 26 March 2014
Available: <http://www.responsibletravel.org/>
- Choudhury, J.K., Biswas, S.R., Islam, S.M., Rahman, O. and Uddin, S.N. Biodiversity of Ratargul Swamp Forest, Sylhet. IUCN, Bangladesh Country Office, Dhaka, Bangladesh; 2004 iv+24PP.
- Foster-Turley, P., Das, R., Hasan, M.K., Hussain, P.R. Bangladesh Tropical Forests and Biodiversity Assessment. USAID; 2016.
- Hasan, Istiak, Swamp Forest Ratargul. Spot light. The Daily Kaler Kantho; publish date: 28 August, 2011. Accessed 13 August 2014
- Spreadley, J.P. 1980 Participant Observation. USA. 1st Edition. ISBN-13: 978-0030445019.
- Vishwanath, S. & Chandrashekara. Dr. B. Economic Impacts of Ecotourism-A Perceptual Study. International Journal of Innovative Research & Studies. Vol 3, Issue 3. Page: 15-23. ISSN 2319-9725; 2014. Accessed 20 August 2014.
Available: www.ijirs.com/ .
- World Travel & Tourism Council .Travel and Tourism: Economic Impact 2015, World. Annual update; 2015. Accessed 14 August 2018
Available: <http://www.wttc.org/>

281 World Travel & Tourism Council. Travel and Tourism: Economic Impact 2015, Bangladesh. Annual
282 update; 2015. Accessed 14 August 2018.
283 Available: <http://www.wttc.org/>