

PROBLEMS AND PROSPECTS OF ECOTOURISM OF GOSABA BLOCK: AN ANTHROPOLOGICAL STUDY OF SUNDARBAN

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Abstract: Ecotourism is coterminous with sustainable tourism meaning management of tourism and conservation of nature in a way as to maintain a fine balance between the requirements of tourism and ecology on the one hand and the need of the local community for jobs, new skills and better status of women on the other hand. The present study has been carried out in Pakhirala, Dayapur and other adjoining villages of Gosaba block which fringe Sunderban Tiger Reserve (STR) of West Bengal in India. Gosaba block attracts good number of both domestic and foreign / international tourists of which the numbers of the nature lover tourists are comparatively more. The study focuses on inter-play among three significant aspects of ecotourism i.e., nature, tourism and local communities against the backdrop of infrastructural availability of transport, road condition, water, hotels and restaurants, shops, travel agents, tourist guides, etc. All the more the study also looks into the aspect of role of the stakeholders in the ecotourism with emphasis on local communities. Ecotourism has created opportunities of income generation but a large share of it is corned by the outside players. Since tourism has provided alternative means of livelihood, the dependency on STR has come down to some extent. Besides the awareness of tourists about restrictions inside STR has further helped in minimizing the adverse impact. Evaluation of ecotourism activity on the available infrastructural facility and other aspect of tourism have also been studied. The study mainly highlights the problems of each stakeholder along with their suggestions for further development with emphasis on flourishing local economy. In case of STR, which has a fragile ecosystem, a greater participation of local community along with decisive government intervention in management of tourism is suggested to safeguard the interest of the local community and protect the ecology.

Keywords: Ecotourism, Sundarban Tiger Reserve, ecology, economy, community

INTRODUCTION

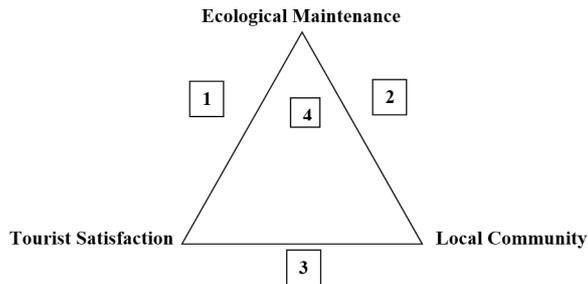
Sustainable development is the slogan of 21st century and sustainable tourism is one section of sustainable development. The word *sustainable tourism* is synonym of ecotourism. The concept of ecotourism is defined as avoiding environmental degradation besides sharing economic benefits with local people. Travel by individual or small groups to relatively untouched natural areas – where they can experience both biotic and abiotic environment and encounter local people directly. The first formal definition credited to Ceballos- Lascurian (1987, cited in David B. Weaver ed.) who defined it as “traveling to relatively undisturbed or uncontaminated natural areas with specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas. The Ecotourism Society (1991) defines it as “responsible travel to natural areas which conserves the

environment and improves the well-being of local people” (cited in David B. Weaver ed.). According to the World Tourism Organization (WTO, 1991) “tourism that involves traveling to relatively undisturbed natural areas with the specified object of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural aspects (both of the past or the present) found in these areas” is defined as ecotourism. Ecotourism is distinguished from mass tourism or resort tourism by having a lower impact on the environment and by requiring less infrastructure development. The World Wild Fund for Nature (WWF cited in Lesley France ed.) defines ecotourism as “tourism to protected natural areas, as a means of economic gain through natural resource preservation. A merger of recreation and responsibility” (Kallen: 1990: 37; c.f. France, 1997), Mowforth (1993, c.f. France, 1997) suggests, there is no single perspective on ecotourism. Instead, the various actors involved each have their own distinctive definition and they fail to provide a consensus. The aims of ecotourism include “ecological and socio-cultural integrity, responsibility and sustainability” (Cater: 1994: 3, c.f. France, 1997). Its emergence in specific destination areas depends on a number of factors, such as: the political stability of the area; the commitment of host governments and communities to ecotourism; the degree of promotion by governments and tour operators; the amount of controversy associated with the area; the range of accommodation, infrastructure and other available; and continued demand for this increasingly popular and ‘politically correct’ form of tourism (Kallen, 1990; Moore and Carter, 1993; Smeding, 1993; France, 1997). Analysis of definition such as these indicates that three dimensions can represent the main essence of the concept. According to this interpretation, ecotourism is: nature based, environmentally educated, and sustainably managed.

Ecotourism activities have been expanding rapidly over the past two decades world-wide and further growth is expected in the future. Recognising its global importance, the United Nations designated the year 2002 as the International Year of Ecotourism, and its commission on Sustainable Development requested international agencies, government and the private sector to undertake supportive activities. In recent years ecotourism in India has got momentum. Government of India has earned huge amount of foreign exchange through tourism. To quote Ministry of Tourism, Government of India (2006) “As many as 3.88 million foreign / international tourist arrivals took place till November this year recording a 12.9 per cent increase over that of last year. This fruitful outcome has earned Rs.25, 934 crore in foreign exchange. The foreign exchange earnings also grew by 16.9 per cent over that of last year” (Ministry of Tourism, Government of India, 2006). International tourist arrivals in India have risen from 7.1 to 7.5 million in 2014. As one of the world’s largest economic sectors, Travel and Tourism creates jobs, drives exports, and generates prosperity across the world. The global economic and employment impact of Travel and Tourism in 185 countries and 25 regions, the World Travel

and Tourism Council (WTTC) research reveals that this sector accounted for 10.4% global GDP and 319 million jobs or 10% of total employment in 2018. Securing India contributes 108.3 billion U. S. dollar 8th position after United States, China, Germany, Japan, Italy, France and United Kingdom. Tourists both domestic and foreign / international visit reserve forests with wild life, small islands, sea coast, sea beach, deserts, mountains, of India as ecotourism spots. The provision of tourism in biosphere is attracting a large number of tourists to biosphere reserves. Sundarban Biosphere Reserve is one of the most attractive tourist spots among 18 biosphere reserves in India as of 2021. But the tourism in relation to biosphere has to be ecotourism considering the endemic of species and fragility of ecosystem. Ecotourism means management of tourism and conservation of nature in a way as to maintain a fine balance between the requirements of tourism and ecology on one hand and the needs of the local communities for jobs, new skills, income generating employment and a better status of women on the other hand.

Figure-1: Lesley France's model of strategic approaches to sustainable tourism



[Source: France, 1997]

In order to make the tourism sustainable, four possible strategic approaches have been discussed which are as follows:

Situation (1) could be demonstrated by small numbers of tourists who visit a relatively remote area, thereby gaining a high level of satisfaction from their visit and leaving their destination relatively unchanged. If such a visit is organized and operated by an external company, perhaps a multinational, benefits are unlikely to filter down to the local community and therefore will not improve the quality of life of those in most need. Specialized package holidays, like small scale safaris typically satisfy these criteria.

A small-scale local guest house could illustrate situation (2). It would provide accommodation within a physical and social environment that has been modified relatively little. The standard of comfort provided for tourists is likely to be low. Nevertheless, the original environment is preserved and any economic benefits that do accrue will go directly to the local community.

Situation (3) can occur when a large tourism enterprise employs many local people. Not all members of the local community will get jobs and a large enterprise such as this may well satisfy certain types of tourists but, in the process there may be irreparably damage to the environment.

Situation (4) Small-scale, locally managed tourism enterprises that may spread benefits more widely through the community are the best example. Typical are the Casamance scheme in Senegal and ecotourism developments in Belize, where a measure of satisfaction of a variety of sustainable aims has been achieved, according to participants.

Two of the important cardinal principles of Indian National Ecotourism Policy are involvement of the local community and the overall economic development of the area and the type and scale of tourism development should be compatible with the environment and socio-cultural characteristics of the local community (Bezbaruah, 2002).

Against the backdrop of sustainable tourism and Indian National Ecotourism Policy, the present study has been carried out in the Sundarban Tiger Reserve (STR), Gosaba block, and its adjoining areas of 24 Parganas (South) district, West Bengal to highlight problems and prospect of ecotourism.

METHODOLOGY OF PRESENT STUDY

The total area related to ecotourism for Sundarban Tiger Reserve is vast. It includes to vast tract of Canning, Sonakhali, Basanti, Gosaba, Sundarban Tiger Reserve and its adjoining areas. Considering the size of the area falling under ecotourism, the population residing therein and the large flow of tourists, sample survey was conducted systematic random sampling technique to meet the objective. Accordingly, a vertical section of the population of Gosaba and its adjoining areas along with tourists of both domestic tourists of different states and international/foreign tourists were taken as the samples. The sample included the very rich, the middle class, with its various sub-classes and people in the lower economic strata as well as different educational background. An attempt was made to draw the sample as representative as possible, by including people having different occupational backgrounds. Pakhirala village is selected for in depth study as most of the hotels are located in this village and also it is very close to Sajnekhali Ecotourism spot, just across the Gomor river. There are 800 households in Pakhirala village which is near to Sundarban Tiger Reserve. For in depth study on demography in Pakhirala village, 400 households were selected which had been chosen by systematic random sampling. Households were selected by covering representative of all the communities, their occupation, religion etc in consultation with the panchayet and knowledgeable persons of Pakhirala village. All the schedules were administered personally and it helped gain an insight into the respondent's mind.

Structured schedules on Tourists, Hotels / Lodges, Restaurants / Tea Stalls, Tour operators / Travel agents, Tourist Guides, Shops, Peoples' Involvement in Tourism Sectors, Local Peoples views' on Ecotourism, Non-Government Agencies, etc. were administered in different locales such as tourist spots like Sajnekhali, Sudhanyakhali, Dobanki, Netidhopani and Burirdabri; entry points like Canning, Sonakhali and Basanti and villages like – Pakhirala, Dayapur, Jamespur, Dulki, Arampur, Sonagaon, Chandipur, Jatirampur, Rangabelia, Gosaba Bazar etc. as per requirement. In total 392 individuals were interviewed on different aspects of ecotourism.

Structured schedules on tourists were administered at Sajnekhali, Pakhirala Tiger Morh, Dayapur village, Gosaba bazar, Sudhanyakhali, Netidhopani, Dobanki and Burirdabri. Schedules on tourists were canvassed in tourist spots, hotels and also in launches (mechanised big boat) while travelling from one spot to another spot. Altogether 140 domestic tourists and 40 international / foreign tourists are interviewed (2005).

Structured schedules on hotel and lodge were administered at Pakhirala and Dayapur village, Gosaba Bazar and Basanti. Altogether 23 hotel and lodge owners were interviewed (2005). Structured schedules on petty restaurants and tea stalls were administered at Pakhirala and Dayapur villages and also at Gosaba Bazar. Altogether 24 restaurant and tea stall owners were interviewed. Structured schedules on 26 tour operators / travel agents were administered at Pakhirala, Dayapur, Gosaba, Canning and Basanti. Structured schedules on 17 tourist guides were administered at Sajnekhali, Pakhirala. Structured schedules on 19 shops were administered at Sajnekhali, Pakhirala and Dayapur villages, Gosaba Bazar and Sonakhali (2005). Structured schedules on 44 people involved in different tourism sectors such as hotel workers, travel agent workers, restaurant workers and other workers were administered at Pakhirala and Dayapur villages, Gosaba Bazar and Canning (2005). For collecting data on different tourism sectors such as hotels and lodges, restaurant and tea stalls, shops, tour operators and travel agents and tourist guides, structured schedules, case studies, observation, participant observations, genealogy etc. methods were applied. Structured schedules on 59 local people of different categories such as agriculturist, businessman, teacher, political leader, government employees, doctor, daily wage labour, singer, van rickshaw puller etc. were administered in Pakhirala, Dayapur, Rangabelia, Arampur, Dulki and Jatirampur villages (2005) of Gosaba block. Structured schedules were also administered to know about views on available infrastructural facility and other related aspect of tourism for evaluation of ecotourism activity.

Without structured schedules, it could not be possible to gather major quantum of information on different aspects from the field as the subjects are very critical to such kind of queries. The schedule and the response thereof were subsequently tabulated. Tourism is such an enterprise where everything is formal and equated

with money and business. Establishing rapport with different informants is a challenging task to the anthropologist today particularly in this arena of research where the subjects like the tourists (mobile in nature), workers in hotels and lodges, petty restaurants and tea stalls etc. are not in a position to spare their time for the queries because they are always in hurried mood.

Local people are interviewed how they are benefiting through ecotourism by involving in hotels, restaurants, tour operators, shops, tourist guides. sectors. It is observed whether Indian National Ecotourism Policy being followed regarding involvement of local people and also about the type and scale of tourism development is compatible with the socio-cultural characteristics of local community or not. Tourists, local people, and the people involved in different sectors of tourism were asked whether they were satisfied about the available infrastructure and also about problems they faced. For evaluation of tourism activity, the factors which were taken into account were : Nature Interpretation Centre, Sajnekhali (as majority of the tourists visit the spot); roads' condition, road and water transport, accommodation, restaurant, tour operators and travel agents, tourist guides, shops, hospitality (as tourist flow depend on it), security (as problem of Bangladeshi and domestic poachers), cleanliness / hygiene, drinking water, telephone, electricity, and river banks' condition (as flood is a regular phenomenon in the region) besides national ecotourism policy and Lesley France's model of strategic approaches to sustainable tourism {2005}.

Ecotourism is practised in the Sundarban Tiger Reserve (STR), Gosaba and its adjoining region. Sajnekhali, Sudhanyakhali, Dobanki, Netidhopani and Burirdabri of Sundarban Tiger Reserve; Dayapur and Jamespur villages of Satjelia *anchal* (consisting of few villages); Pakhirala, Rangabelia and Jatirampur of Rangabelia *anchal*; Sonagaon, Arampur, Dulki, and Gosaba Bazar of Gosaba *anchal* of Gosaba block; Dakghat, Basanti and Sonakhali of Basanti block; and Canning station area is considered as study area.

The period of field work for collection of the present data was from 2005 to 2010 in different phases. As it is the authors' Ph.D dissertation field work area, the author always remains in touch with key informants up to 2021. The present study has also been compared with data collected in 2005 with 2020 in certain areas such as involvement of local communities in different tourism sectors as well as other basic needs of local communities. Besides structured schedules, case studies, observation method including participant and non-participant, interview, group discussion, genealogy, photography etc were applied for collecting primary data.

LOCALE AND POPULACE

Sundarbans is the largest delta and also the largest mangrove forest in the world. The mangrove ecosystems are unique. This ecosystem is the inter-phased between sea and land, which protects the coastlines from natural calamities like soil erosion, cyclonic storms, and strong tidal water current. The Sundarbans covering an area

of 10, 000, 00 ha of land and water are part of one of the world's greatest deltas formed by sediments deposited by three great-rivers the Ganga, Brahmaputra and Meghna. Almost 62 per cent of the Sundarbans is situated in Bangladesh, while the remaining 38 per cent of the region lies in India. These two portions together comprise the largest continuous block of mangrove in the world. Indian Sundarbans are located between 21°32' - 22°40' north latitude and between 88°85' - 89 ° east longitudes. The Sundarban Biosphere Reserve (SBR) extends over an area of 9,630 sq. kms. in the state of West Bengal and presents a unique situation of biodiversity. "The Sunderban Biosphere Reserve has three zones for coordination of its main function – Core Zone (1330 sq. kms.), Buffer Zone (1255 sq.kms.) and reserve forest of south forest division (1678 sq. kms.) which totals 4263 sq. kms. The area of Transition Zone / Non- Forest area / Settlement area is 5367 sq.kms. Core zone is included in Sundarban Tiger Project as well as in the Sundarban National Park (1330 sq. kms.). Out of which 2585 sq. kms. has been reconstituted as Sundarban Tiger project from the year 1973, {Land area – 1680 sq. kms. and water area – 905 sq. kms.}. Core zone is included in Sundarban Tiger Project and includes the Sundarban National Park (1330 sq. kms.)" [Raha, 2004]. The National Park area of Sundarban Tiger Reserve (STR) has also been inscribed as 'World Heritage Site' in 1987. Buffer Zone of mangrove forest is the area where restoration of mangrove vegetation, research and monitoring are carried out. The Transition area along the northern boundary of reserve is the reclaimed Sundarbans where agriculture and coastal aquaculture is extensively practiced. It is a dynamic zone of cooperation with local communities. This part is used for agriculture, fishing, settlements and sustainable use of local ecosystem resources.

"The biosphere reserve nurtures many globally important rare and endangered species of flora and fauna. The region is home of 1100 species of Angiosperm, 150 species of Algae, 15 species of prawns, 67 species of crabs, 23 species of mollusc, 163 species of birds, 40 species of mammals, 56 species of reptiles, 165 species of fishes. Globally important rare mangrove plant species e.g., *Acanthus volubilis*, *Amoora cucullata*, *Bruguiera parviflora*, *Heritiera fomes*, *Nypa fruticans*, *Rhizophora apiculata*, etc. are available in Sunderbans. This only mangrove tiger land of the planet harbours rare and endangered mammals like – *Panthera tigris tigris*, *Prionailius bengalensis*, *Platanista gangetica*, etc. The rare birds are *Ardea goliath*, Sea Eagle, Osprey, Fishing Eagle, Hawk eagle, Bramhiny kite. The reptiles *Batagur baska*, *Crocodylus porosus*, *Chitra indica*, *Kachuga tecta*, etc. are endangered" (Debnath, 2002).

"Sundarban is the only tropical semi evergreen mangrove reserve inhabited by 'Royal Bengal Tiger' in the world. It was constituted by the Government of India in March, 1989 to protect the natural ecosystem and received the recognition of UNESCO in Man and Biosphere Programme (MAB) in November, 2001" (Raha, 2004).

The ethnographic atlas of the area shows an agglomeration of different ethnic groups of both non-tribals and tribals. The non-tribals mainly represent communities namely the Poundra Kshatriya, Bagdi, Chamar, Jele Kaibarta, Malo, Namasudra, Rajbanshi, Brahman, Bauri, Gowala, Tanti, Kayastha, Mahishya, Napit and so on. There are people also who belong to the faiths of Islam and Christianity, all of whom subsist on agriculture or agriculture related labour, business and other professions. There are communities who depend on forest and river for the collection of honey and fish because agriculture does not fulfill their need. But now fishing from Sundarban Tiger Reserve is strictly prohibited for both tribals and non-tribals. For honey collection, forest department issues permit for limited period. The major tribal groups of the area are Munda, Bhumij, Oraon and the Santal. The economic pursuits of these tribal groups are based on food producing like agriculture and agricultural labour. Even there is overlapping of two or more economic activities, which have a direct bearing to their ecological conditioning and economic need. Very few of the local communities involve in government jobs such as teaching, employee of panchayet office, *samabay sammity* (Cooperative Society). The area is mono-crop in nature. The forest products like honey and wax are the main source of commerce to local people. Besides other professions they work as a very cheap labourer for additional source of income. During agricultural lean season, people resort to fishing by spreading net in the rivers and collection of prawn seeds even risking their lives at man-eating tigers, *Kamoth* and crocodiles. During April-May some people also enter the Reserve Forests with permits, for collection of honey. Sometimes the local people kill the tiger and sell its' skin and other body parts to businessmen in exchange of huge amount of money. The near total dependence of the people on the natural resources of the ecosystem is due to many factors. One of the reasons is uncontrolled population growth with low-income level. "A steep rise population – 176 per cent between 1947 and 1991 census has led to loss of forest cover in 54 of the 102 islands of Sundarban" (Debnath, 2002). The islands of Sundarban are inaccessible even to the inhabitants and the facilities of communication like road and water transport are very poor. The well to do persons made their second accommodation in Sonarpur, Subashgram railway station areas in the southern expansion of Sealdah section and its adjoining region which is nearer to Kolkata.

Out of common fear from nature and ferocious animals the Hindus and Muslims of Sundarbans have been used to worship of *Bonobibi*, *Dakshin Rai*, *Panchanan Pir*, *Kalu Rai*, *Manasa*, *Sitala*, (local deities). irrespective of their religious belief. These gods and goddesses are worshipped by common people generally under trees or by the riverside in open place. *Bonobibi* deity is worshipped by the local people on different occasions. Such idols were perhaps created by the people by their own imagination to help them in troubles. *Tusu* song and dance are common in local villages among tribals. *Dukhe Yatra* (local form of theatre) is also performed in local villages. Tourists enjoy *Dukhe Yatra*, *Mansamangal*, *Jhumur Gaan* (local folk song) etc. at evening.

ECOTOURISM SPOTS OF SUNDARBAN TIGER RESERVE

The eco-tourism spots of Sundarban Tiger Reserve are Sajnekhali, Sudhanyakhali,

Dobanki, Netidhopani and Burirdabri.

Sajnekhali Mangrove Interpretation Centre – Visitors from Canning and Sonakhali first visit Sajnekhali. There are two watch towers, one Mangrove Interpretation Centre, one crocodile pond and one turtle breeding centre. These are the main attraction for tourists. Deers are easily found here and there. The famous *Bonobibi* temple is also here.

Sudhanyakhali - In Sudhanyakhali a watch tower for tiger sighting and a Mangrove Park have been opened for tourists. Deers and wild boar are easily found here.

Dobanki - Dobanki was opened for tourists in 2003 where a canopy path running for almost 250 meters has been built 12 feet above the ground. The path is enclosed by netting that allows tourists to look down upon the dense wooded region and watch the wildlife in all its natural splendor. Dobanki is also one of the tiger sighting zones in the STR.

Netidhopani - Netidhopani is one of the most important tiger sighting zones in the STR. One watch tower serves as tiger seeing event for curious visitors. Journey from Sajnekhali to Netidhopani is the most adventurous one. The width of the rivers is so broad here as the rivers falls in the Bay of Bengal in nearby areas.

Burirdabri - Burirdabri Ecotourism complex was opened for tourists in November, 2003. A shielded tunnel that runs along the ground for a kilometer into the forest is found at Burirdabri. From behind a fence tourists can get a glimpse of wildlife in the heart of the jungle. Burirdabri is one of what are called the 'tiger sighting zones' in the STR. one watch tower is also found here for seeing wild animals. Bonobibi temple is found in all the tourist spots as well as in different points near the coastal side of the rivers.

Jharkahli and Harikhali are the two new tourist spots added to Sundarban Tiger Reserve.

The other spots of tourist's interest in Gosaba block are – Hamilton Bungalow, Bungalow used by Rabindra Nath Tagore, Museum at Gosaba Bazar area, *Gasifire* (i.e., electricity from wood and diesel), Tagore Society for Rural Development, Rangabelia etc.

ASPECTS OF TOURISM

Since the inception of Tiger Reserve, the flow of tourists has been gradually increased in Sundarban which is shown in tabular form-

TABLE 1: TOURISTS VISITED ONLY SUNDARBAN TIGER RESERVE FROM 1999-2002

Year	Domestic Tourists	Foreign Tourists	Total
1999-2000	28,619	324	28,943
2000-2001	21,758	417	22,175
2001-2002	28,775	260	29,035

[Source: Jana, 2004]

Only 0.6 per cent tourists of total tourists of West Bengal visit Sundarbans. Only 0.2 per cent foreigners of total foreigners visited West Bengal visit Sundarbans. The flow of tourists is gradually increasing in Sundarban Tiger Reserve. In 2000-2001 the tourists flow had been decreased in STR. After that it is gradually increasing in STR (Table 1).

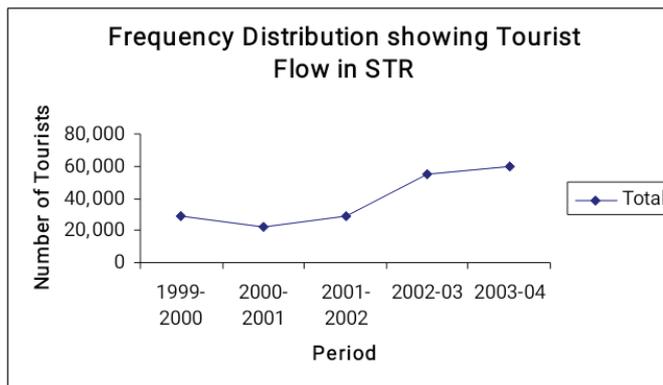
The flow tourists in different entry points are shown in tabular form from 2002 to 2004.

TABLE 2: TOURIST VISITED STR IN DIFFERENT ENTRY POINT WISE FROM 2002 – 2004

Year	No. of Tourists (per entry point) [Excluding crew]										Total
	INDIAN					FOREIGNER					
	*	**	***	****	*****	*	**	***	****	*****	
2002-03	13020	7421	33824	454	54719	5	276	281	-	562	55281
2003-04	9380	14906	32909	2030	59225	-	339	297	-	636	59861

* HQ, Canning Range; ** Sonakhali; *** Sajnekhali; **** Basirhat; ***** Total

[Source: Annual Report, 2003--2004, Sundarban Tiger Reserve]

**Figure- 2: Frequency Distribution showing Tourist Flow in STR**

Most of the tourists demand their entry permission from Sajnekhali followed by

Canning range, Sonakhali and Basirhat range. The flow of foreigners has increased over the year (Table 2 and Fig. 2). The tourist flow has increased about 106 per cent in 2003-2004 compared to the period 1999-2000. The flow of tourists had been increased from the period 2002 - 03 to 2003 - 04.

In peak tourist season i.e., November to January, there are about 20-25 launches from Canning gather in Sajnekhali. Each launch carries about 40-45 tourists. About 800 to 1100 tourists generally arrive in Sajnekhali everyday by launch (mechanized boat) from Canning in (2005).

Key informant told me in 2018-2019 that more than one lakh fifty thousand tourists visit Sundarban Tiger Reserve (STR). Now the tour initiating point mostly deviate from Canning to Gadkhali as the point is directly connected through road form Kolkata. He also informed that about 200 luxury boats which are basically from Satjelia, Chanipur, Gosaba bazaar, Pakhirala, Sonagaon and Bally region (2019) of Gosaba block. He also informed that only 20 luxury boats ply from Canning to Sundarban Tiger Reserve. Hence, most of the tourists both domestic and international / foreign tourists visit STR with the facilities available at Gadkhali and hotels of Pakhirala, Dayapur, Goasaba Bazar and Jamespur villages of Gosaba block.

MANAGEMENT

The key players in the eco-tourism business are the governments, both central and state levels, the local authorities, developers and the operators, visitors and the local community. Each one of them has to be sensitive to the environment and local traditions and follow a set of guidelines for the successful development of tourism. In addition, non-governmental organizations and scientific / research institutions also have to play a key role in the development of ecotourism. Each one of them has a set of standard operational guideline in ecotourism (Bezbaruah, 2002). Among four major project pipeline of the Government of West Bengal, development of Sundarbans as a world class 'Ecotourism' destination is one of the important projects (2005).

The administrative head in charge of Sundarban Biosphere Reserve (SBR) is the Chief Conservator of Forest (South) and Director, Biosphere Reserve, Government of West Bengal. The core area is under supervision of Field Director, Sundarban Tiger Reserve, Canning, 24 Parganas (South), West Bengal. The buffer zone is under supervision of Field Director, Sundarban Tiger Reserve (STR), Canning and also under Divisional Forest Officer, 24 Parganas (South) Division; Alipore, Kolkata. Four tourists permit issuing centers are Canning, Sonakhali, Sajnekhali and Basirhat. Recently one full time ranger is appointed for the overall in charge of eco-tourism region posted at Sajnekhali. Forest department imposes standard rules for journey and conditions for undertaking tour / movement in Sundarban Tiger Reserve.

West Bengal Tourism Development Corporation Limited (WBTDCL Ltd.)

is the functional agency of tourism department of Government of West Bengal. Conducted tours are organized by the Tourism Directorate as well as by the West Bengal Tourism Development Corporation. Sajnekhali tourist lodge is the only accommodation run by WBTDC Ltd. in STR. Majority of tourists visit Sundarbans through privately managed tour operators of Canning besides tour operators of Pakhirala, Dayapur, Jamespur, and Gosaba. Limited number of tourists visit STR through government managed establishment (2005). After Gadkhali tour initiating centre, majority of tourist visit STR by availing luxury boats of Gosaba block. Tourists visit the spots by using tour operator's launch / mechanized boat of Pakhirala, Dayapur and Jamespur villages. Tourist spots are managed by employees of forest department. Forest department provides one tourist guide for each launch for managing and guiding tourists in STR if tourist guides are available.

Most of the key informants and hotel owners informed that except inclusion of two new tourist spots - Jharkhali and Harikhali tourist spots, there is no such initiative taken by new Government of West Bengal after 2011.

TOURIST PROFILE IN SUNDERBAN

In total 140 domestic tourists and 40 foreign tourists were interviewed during present field work in 2005-2006. Tourists from all over the continents visit Sundarbans for enjoying the thrill of the 'mangrove – tiger' land. Among 180 tourists 80.00 per cent tourists were from Asian countries, followed by Europe (17.23 per cent), North America (1.67 per cent), Australia (0.55 per cent) and Africa (0.55 per cent). Out of 140 domestic tourists 78.57 per cent and 21.43 per cent of the domestic tourists are males and females respectively. Among 140 domestic tourists 89.29 per cent, 2.86 per cent, 2.15 per cent, 1.44 per cent are respectively from West Bengal, Gujarat, Uttar Pradesh and Odisha. Each 0.71 per cent domestic tourists are from Madhya Pradesh, Karnataka, Tamil Nadu, Maharashtra, Punjab and Uttaranchal states. The frequency of tourists from other states is less mainly due to improper advertisement and marketing policies.

Out of 40 foreign / international tourists 77.50 per cent, 10.00 per cent, 7.50 per cent, 2.50 per cent, and 2.50 per cent foreign tourists are from Europe, Asia (except India), North America, Australia and Africa respectively. In total 57.50 per cent and 42.50 per cent foreign tourists are males and females respectively. Foreign tourists are from Russia (5 per cent), South Korea (2.50 per cent), Siberia (2.50 per cent), Germany (27.50 per cent), United Kingdom (20 per cent), France (7.50 per cent), Czechoslovakia (7.50 per cent), Switzerland (5 per cent), Ireland (5 per cent), Spain (2.50 per cent), Norway (2.50 per cent), U.S.A. (7.50 per cent), Australia (2.50 per cent), and Nigeria (2.50 per cent) during the year 2005 – 2006 when the study was conducted.

Both domestic and foreign / international tourists were interviewed whether

they aware about the restriction of biosphere reserve or not. This is shown below in tabular form-

TABLE- 3: DISTRIBUTION OF DOMESTIC TOURISTS BY AWARENESS ABOUT RESTRICTION OF SUNDARBAN TIGER RESERVE (2005)[N=140]

Sl.no.		Male		Female		Total	
		No	%	No	%	No	%
1.	Yes	58	41.43	15	10.71	73	52.14
2.	No	52	37.14	15	10.71	67	47.86
	Total	110	78.57	30	21.43	140	100

TABLE- 4: DISTRIBUTION OF FOREIGN TOURISTS BY AWARENESS ABOUT RESTRICTION OF SUNDARBAN TIGER RESERVE (2005)[N=40]

Sl.no.		Male		Female		Total	
		No	%	No	%	No	%
1.	Yes	21	52.50	16	40.00	37	92.50
2.	No	2	5.00	1	2.50	3	7.50
	Total	23	57.50	17	42.50	40	100

Foreign tourists (92.50 per cent) are much more aware about the restriction of STR than domestic tourists (52.14 per cent). The female tourists are less aware about restrictions of STR. So, it is high time for tourists aware about restrictions of biosphere reserve by hanging do and don't board / hoardings at the tourist spots, in streamers and boats and also at the entry points. Regarding awareness of the restriction of Sundarban Tiger Reserve, most of tourists were aware about on restriction particularly viewed as "not to touch plants, not to disturb wild animals, not to make any noise, not to use polythene bags" (Table 3 and 4). The awareness of the tourists about restrictions inside STR has helped in minimizing the adverse impact.

Involvement of Persons in different tourism sectors

The number persons involved in different tourism sectors within are shown in the following table on the basis of their origin Gosaba block and outside Gosaba block.

TABLE- 5: PERSONS INVOLVED IN DIFFERENT TOURISM SECTORS IN STR (2005)

Category	No. of Persons (Local i.e., within Gosaba block)	No. of Persons (Outsiders i.e., outside of Gosaba block)	Total
Hotel owners	15	6	21
Restaurant owners	19	5	24
Tour operators	20	450	470
Tourist guides	17	0	17
Shops	23	0	23
Craftsman	1	1	2
Workers involved in different tourism sectors	90	8	98
Total	185	470	655

Number of persons sometimes varies as per situation demands [Source: Dinda, 2011]

The involvement of local people in different tourism sectors in Gosaba block is much less than the number of people come from outside Gosaba block (Table 5).

Besides this a good number of people are involved in managing tourism in Canning Station area. They are involved in supplying vegetables, fish, meat, drinking waters grocery items, egg, generator, etc. to the tour operators. A good number of people are also involved in marketing and advertisement of ecotourism of Sundarbans in Canning station and also in Kolkata.

The fruits of economy flourishing on account of tourism are not percolating down to the villagers of Pakhirala, Dayapur, Jamespur, Gosaba market area and its adjoining areas as is evident from their economic condition due to their lesser role in tourism. Besides this, the other contributing factors like – ignorance, inaccessibility, poor economy etc. are responsible for their lesser role in tourism (2005).

Key informants (2018) opined that after the introduction of tour initiating point at Gadkhali, majority of employees of tour operators are from different parts of Gosaba block such as Satjelia, Chandipur, Gosaba Bazar proper, Pakhirala, Sonagaon and Bally areas as the luxury boat owners are from these areas. Hence it differs with the situation of 2005 -2006 regarding involvement of local communities in different tourism sectors. But now travel agents of Kolkata play an important role in ecotourism of Sundraban Tiger Reserve after introduction of Gadkhali tour initiating centre as most of hotel owners of Pakhirala, Dayapur and Jamespur villages are depended on tours and travel agents of Kolkata.

PROBLEMS OF ECOTOURISM IN STR AREA

Meeting tourism demands requires investment in infrastructure that may also meet

community needs. Tourism planning must look ahead to infrastructure needs. There is little point in developing attractions if there is a deficiency in basic services that will lead to problems for residents or visitors. Therefore, the top priority for tourism development is roads, health, security, comfort and convenience. Due to introduction of ecotourism, new job opportunities are opened for the local people in different tourism sectors such as hotels and lodges, petty restaurants and tea stalls, shops, tour operators and travel agents, tourist guides, transport and communication. Sustainable development of local people occurs in this way.

The Tourists

Proper infrastructural facilities such as waiting hall / resting place, drinking water, proper toilet are lacking in almost all the tourist spots of Sundaban Tiger Reserve namely Hamilton Bunglow, Bunglow, Museum at Gosaba Bazar proper, Gasifire (i.e electricity from wood and diesel) at Gosaba Bazar area, Tagore Society for Rural Development, Rangabelia project founded by Late Tushar Kanjilal at Rangabelia. A greater number of jetty *ghats*. at entry points as well as in all tourist spots and in Pakhirala Tiger Morh of Pakhirala village are urgently needed. Proper road, proper transportation facilities are needed for improving tourism in this area. During 2005 to 2006, cycle van rickshaw (locally known as *trolley van*) were the main means of transport from Gosaba Bazar to Pakhirala jetty ghat as well as Pakhirala ghat (opposite to Dayapur jetty ghat) approaching to Dayapur village jetty ghat. From 2018, Auto rickshaw, *Toto* (mechanized battery- operated van) and cars are available to reach Pakhirala Tiger Morh from Gosaba Bazar. Gomor river is flowing between Pakhirala and Dayapur village and Sajnekhali Ecotourism spot. Sajnekhali tourist spot is opposite to both Pakhirala jetty ghat and also opposite to Dayapur village. Local boats are the only means of transport for reaching Sajnekhali. During low tide it is very difficult to reach up to wooden boat due to muddy area on the sloping of the banks of the rivers.

Hotels, Lodges: Issues with Accommodation

Of all infrastructures, accommodation is most vital aspect of tourism sector. In initial phase of tourism in Gosaba region, availability of hotels and lodges were very scanty. But due to increasing flow of tourist traffic over the years its necessity was badly felt. During 1990s five hotels came up in the Gosaba and its adjoining areas. The total number of hotels and lodges found in the Gosaba and its adjoining area is 23. Out of 23 hotels and lodges, there are 8 private hotels and one Zillah Parishad Guest House (39.13 per cent of total accommodation) in Pakhirala village, 3 private hotels and one non-government organization providing accommodation in tourist seasons (17.39 per cent) in Dayapur village, Sajnekhali Government Tourist Lodge (4.35 per cent) in Sajnekhali, 6 private hotels (26.09 per cent) in Gosaba Bazar and 3 private hotels (13.04 per cent) in Sonakhali and Basanti area of total accommodation sector do their business. Sundarban

Tiger Camp Hotel of Dayapur village accommodates both domestic and foreign tourists. They have their own mechanized boat. Of total 16 permanent employees, 12 employees are from adjacent villages and four are outsiders (2005). Sundarban Tiger View Point Hotel of Dayapur village has three permanent outside employees and six temporary local employees. Sundarban Tiger Camp Hotel and Sundarban Tiger View Point hotel of Dayapur village act as a large tourism enterprise and is following Lesley France's situation number (3) in Indian scenario. WBTDC Ltd.'s tour is also following France's situations number (1). But Hotel Madhuban, Hotel Krishna Kunja, Hotel Aram, Hotel Purbasha, Promila Tourist lodge, and Amari Lodge of Pakhirala village: Sundarban Green House of Dayapur village, and Lodge Suryatapa, Hotel Samrat, Hotel Kamala Kamini, Jay Maa Tara Hotel, Lakshinarayan Hotel, and Annapurna Hotel of Gosaba Bazar is following Lesley France's situation number (4). Affluent tourists generally avail the facilities of Sundarban Tiger Camp and Sundarban Tiger View Point hotels of Dayapur village and also avail the tour conducted by WBTDC Ltd.'s by M.V. Madhukar, M.V. Chhitrekhya and M.V. Sarbajaya along with the facility of Sajnekhali Tourist Lodge. Budget tourists generally stay in Hotel Madhuban, Hotel Aram, Purbasha Lodge, Promila Tourist Lodge, Hotel Mangrove, Hotel Krishna Kunja, Swastik Lodge of Pakhirala village and Sundarban Green House of Dayapur village and all the hotels of Gosaba Bazar area. Out of 23 hotels and lodges, six hotel owners are from Kolkata. Due to introduction of new hotels, the land price of Pakhirala and Dayapur villages is increasing day by day.

The growth of hotels and lodges in the Gosaba and its adjoining area is given below in tabular form (Table 6) –

TABLE- 6: GROWTH OF HOTELS AND LODGES IN GOSABA AND ITS ADJOINING AREAS (2005) [N=23]

Up to 1990		1991 – 1995		1996 – 2000		2001 – Feb., 2005		Total	
No	%	No	%	No	%	No	%	No	%
3	13.04	5	21.74	5	21.74	10	43.48	23	100.00

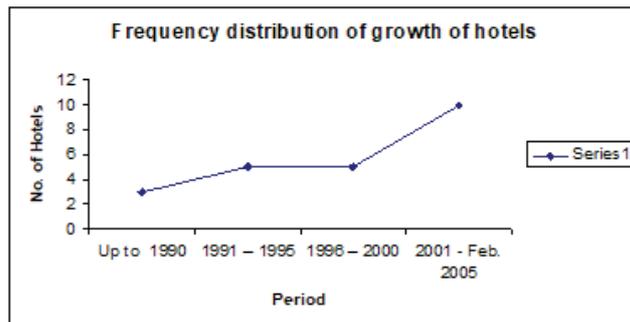


Figure- 3: growth of hotels in Sunderban

About 13.04 per cent hotels came up till 1990. About 21.74 per cent hotels came up in period between 1991-1995 and 1996-2000. But from 2001 to February, 2005 the percentage growth of hotels and lodges has been doubled (43.48 per cent) compare to previous period. About 21.74 per cent hotels and lodges came up only in the month of December, 2004 (Table 6 and Fig.3).

Hotel and lodge owners and employees of hotels and lodges are the important tourist managers. About 23 hotel owners' families, 80 families of employees are directly depending on tourism business in 2005. Indirectly the supplier of goods i.e., local villagers are also benefited through tourism. Most of the hotel employees are from villages of Pakhirala, Dayapur, Jamespur, Dulki, Sonagaon, Rangabelia, Arampur, Kachukhali, Bijohnagar, Manmathanagar and Kumirmarhi of Gosaba block. Very few employees are from outside of Gosaba block in hotel sector.

One of my key informants who is also a hotel owner informed (2020) that the number of hotels of Pakhirala, Dayapur and Jamespur villages are 35, 20 and three respectively.

The Hotel and Lodge Owners

Hotel and Lodge owners viewed that there is only three months' tourist season in Gosaba and its adjoining areas. Their business is not flourishing due to improper advertisement both print and electronic media both by the government and private agencies. The marketing policies of both government and private sectors for ecotourism are not at all satisfactory. Hotel and lodge owners always demand for proper advertisement and marketing policies. A section of hotel owners is depended on fishing during cyclonic storms occurred 'Aila' in 2009, 'Amphan' in 2020 and 'Yaas' in 2021 and also during Covid -19 period.

Petty Restaurants and Tea Stalls and their Problems

Out of 24 establishments, 13 establishments are tea stalls and 11 are petty restaurants. In such an interior destination 24 petty restaurant and tea stall owner's families are directly benefited through eco-tourism (2005).

Decadal growth of tea stalls and restaurants are given below in tabular form –

TABLE- 7: GROWTH OF PETTY RESTAURANTS AND TEA STALL IN GOSABA AND ITS ADJOINING REGION (2005) [N=24]

	1940s	1950s	1960s	1970s	1980s	1990s	2000+	Total
No	1	-	1	2	2	9	9	24
%	4.17	-	4.17	8.33	8.33	37.50	37.50	100.00

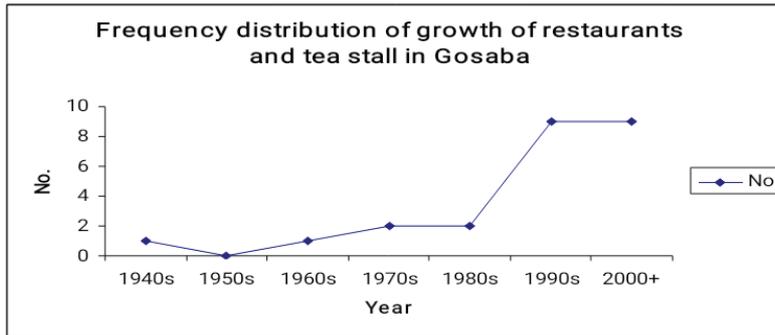


Figure – 4: Frequency distribution of growth of petty restaurants and tea stall in Gosaba

It is important to note that first tea stall (4.17 per cent) was opened in the year 1949. The growth of tea stalls and restaurants was higher (37.50 per cent) in 1990s and also since 2000 to till Feb, 2005 (37.50 per cent) [Table 7 and Fig. 4].

Key informants (2020) informed that there are about 25 and 15 petty restaurants in peak tourist season in Pakhirala and Dayapur villages respectively.

The small restaurants and tea stall owners of Pakhirala, Dayapur and Jamespur villages, and Gosaba bazaar of Gosaba block state that they have only three month's peak tourist seasons. Rest of the year they are depended on fishing and little bit of agriculture which is again not much productive as most of the time their agricultural land is full of saline water due to the fact that the river has swollen with flood-waters frequently enter the islands for the poor condition of river bank made of mud.

Tour Operators, problems

Tour operating sector is the most important sector of tourism. The success of tourism at a particular spot depends on the works of tour operators. In total 26 tour operators are surveyed during the field work. There are about 50 tour operators at Canning whereas there are about twenty tour operators in Gosaba (having an average of one or two employees). Tour operator's business requires three to ten persons. Each tour operator is having on an average 7 employees to manage his business (2005). Tour operators provide daily food to tourists. Most of the tourists of mechanized launch stay in hotels during night. Employees of tour operators come from Pakhirala, Dayapur, Gosaba Bazar, Masjidbati, Canning, Basanti, Diamond Harbour, and Sonarpur of 24 Parganas (South) district; Hasnabad, Hingalgunj and Basirhat of 24 Parganas (North) district; and Geokhali of Purba Medinipur district.

Key Informants (2020) viewed that there are only 20 and 200 mechanised boats in Canning and Gadkhali respectively available for operation in peak tourist season in Sundarban Tiger Reserve

Proper infrastructures in entry points such as a greater number of jetty *ghats*

in Pakhirala Tiger Morh, Gosaba Bazar, Dayapur and Jamespur villages as well as in all tourist spots are urgently required. Proper advertisement in print and electronic media by both Government of India and Government of West Bengal about Sundarban Tiger Reserve is needed as the stakeholders opine. Shallowness of river bed both in Gomar and Bidyadhari, fishing nets in rivers, tourist guide's departure after tour in distant places away from both Pakhirala and Dayapur villages, itinerary of visits, tour and foreigner's entry permission from Kolkata, etc. are major problems for tour operators of Canning. But in case of Gadkhali entry point there is no such problem of tourist guide's departure.

Tourist Guides

Without tourist guide, tourism cannot sustain. Biodiversity of Sundarbans cannot be understood without tourist guide facility. Forest department tries to provide tourist guide in each boat or streamer. Forest department has recruited 23 tourist guides from Eco Development Committees (EDC) of Pakhirala, Dayapur, and Jamespur villages of Gosaba block. Out of 23 tourist guides, only 17 tourist guides are performing their job at present (Feb, 2006). Key informants informed that in January, 2020 there are total 50 tourist guides in Sajnekhali. In peak tourist season there are 30 private tourist guides in Pakhirala village and 2 tourist guides in Dayapur village.

Shops are necessary for tourism. In total 19 shops are studied during field work. Petty gift shop, telephone booth, book shop etc. are found Sajnekhali, Pakhirala and Dayapur village, Gosaba Bazar and Sonakhali. The items sold by shops are honey; tender coconut; mineral water; clay replicas of tiger, deer, crocodile, shark, crab and *Bonobibi* deity etc. Some of the shop owners also sell *Sundari* and *Kakra* tree, *Kath Badam*, Bee hives, etc. Key informants said that in January, 2020 there were 30 and 4 shops respectively in Pakhirala, and Dayapur villages.

People of different age groups and castes involve in different tourism sectors. People involved in different tourism sectors are from different villages of Gosaba block, Basanti block, Canning, and Diamond Harbour of 24 Parganas (South) district; Hingalgunj, Hasnabad, and Basirhat of 24 Parganas (North) district; contai and Geokhali of Purba Medinipur district. Among different workers, only 44 workers are interviewed. Out of nine ladies, seven persons were engaged as hotel workers and two as petty restaurant workers in Gosaba. The caste-wise distribution of 44 workers was like the following: Poundra Kshatriya (65.92 per cent), Mahishya (20.45 per cent), Dhopa (4.54 per cent), Tantubai (4.54 per cent), Jele Kaibarta (2.28 per cent), and Muslim (2.27 per cent). They work as hotel and restaurant attendants, travel agents, van rickshaw pullers etc.

Distribution of workers involved in different sectors of tourism as per their average monthly income is given below in tabular form –

TABLE- 8: DISTRIBUTION OF WORKERS INVOLVED IN TOURISM SECTOR BY AVERAGE MONTHLY INCOME ONLY FROM TOURISM (IN RUPEES) IN 2005[N=44]

Sl.no.	Category	Male		Female		Total	
		No	%	No	%	No	%
1.	Below Rs.500/-	2	4.54	4	9.09	6	13.63
2.	Rs.501/-to Rs.1000/-	12	27.27	4	9.09	16	36.36
3.	Rs.1001/- to Rs.2000/-	13	29.55	1	2.27	14	31.82
4.	Rs.2001/- +	8	18.19	-	-	8	18.19
	Total	35	79.55	9	20.45	44	100.00

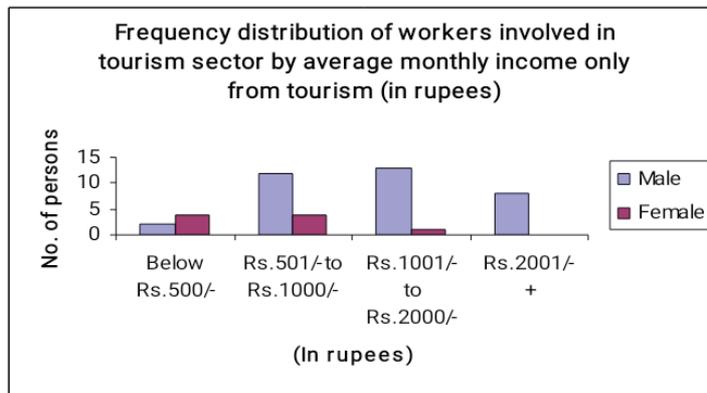


Figure- 5: Frequency distribution of workers involved in tourism sector by average monthly income only from tourism (in Rupees)

About 13.63 per cent workers have below rupees 500/- monthly income. About 36.36 per cent and 31.82 per cent workers have rupees 501/- to rupees 1000/- and rupees 1001/- to 2000/- monthly income respectively. Only 18.19 percent workers have more than rupees 2002/- monthly income from tourism (Table 8 and Fig.5). It has been observed that there is a greater number of low paid wage workers with prolonged duty hours in contrast to high income people with lesser working hours. Key informants (2020) said that the wages of hotel and tour operator sector employees vary from Rs. 8,000/- to Rs.10000/- and a greater number of females are involved in eco-tourism sectors. But in petty restaurant and tea stalls and shops, the wages vary from Rs. 3,000 /- to Rs. 5,000/- in peak tourist season only.

ROLE OF LOCAL COMMUNITIES IN ECOTOURISM

The persons who have vast experience about the jungle (especially those attacked by tigers) of Pakhirala and Dayapur villages are *Bauley* (those who collect wood

from jungle) and *Maulay* (those who collect honey from jungle) and *Jele* (those who catch fish) of Pakhirala and Dayapur villages, sometimes the priest of *Bonobibi Puja* and others are the main attraction for the tourists as story tellers. *Dukhe Yatra* is one of the important cultural performances which are revived due to tourism. *Baba Tarak Nath Opera* of Dayapur village perform *Dukhe Yatra*, *Mahisasurmardini*, *Krishnalila*, *Tusu* dance and other cultural programmes in different hotels and lodges of Pakhirala and Dayapur villages. Employees of Sundarban Tiger Camp perform *Dukhe Yatra* in their hotel. For *Dukhe Yatra* about twenty persons are needed. For *Dukhe Yatra* local groups demand about fifteen hundred rupees in 2005 and in 2018 they demand rupees two thousand only. Besides this demanded amount, the local groups also collect tips (in rupees) during their performance such as '*bhikha de ma nagarbasi*' in *Dukhe Yatra*. Local artists including two boys and girls also perform *Baul* and *Adhunik* song, *Bratachari* dance, *Rabindra sangit* (song) etc. Some non-tribals and tribals, both perform *Tusu* dance in different hotels. *Mahisasurmardini*, *Krishnalila*, *Tusu* dance and other cultural programmes need about three to ten persons. In 2018 key informants told me that, the performer demand only rupees twelve hundred for *Jhumur* song. For *Mahisasurmardini*, *Krishnalila*, *Tusu* dance and other cultural programmes local groups demand about five to six hundred rupees besides tips (in rupees). Tourists are very much impressed by observing such enriched local cultural performances. By interacting with the local artists, tourists also perform songs, music, etc. *Bonobibi*, *Durga*, *Saraswati* and other *pujas* are in the tour programmes of different hotels. During *Durga puja*, tourists also distribute clothes to local boys, girls and others. Artisans both tribals and non-tribals of Dayapur and Pakhirala villages are now busy in making clay models of tiger, deer, crocodile, crab, *Bonobibi* deity, etc. which were sold to the tourists. Van rickshaw pullers of Pakhirala, Rangabelia, Dulki, Arampur and adjoining areas earn major income from tourists in peak tourist season. Some more information can be added additional.

- i) The villagers of Pakhirala, Dayapur, Rangabelia and its adjoining villages of Gosaba block demand for concrete cemented structure of all river bank encircled different islands of Gosaba block as most of the years their villages have been flooded with saline water. After flood agriculture is impossible for about three years.
- ii) Better water and road transports in all villages of Gosaba block are urgently needed for local communities.
- iii) Price hike of commodities in tourist seasons at Pakhirala Tiger *Morh* and land price hike at Pakhirala and Dayapur villages is setback for villagers. In 2020, Pakhirala Tiger *Morh* and its adjoining areas of Pakhirala village and Dayapur village, the land price per Bigha (Local unit) are Rupees 30 lakh and Rupees 20 lakh respectively.
- iv) Siltation in riverbed both in between Pakhirala and Dayapur villages and

Sajnekhali Ecotourism spot has been increased day by day. Siltation in Bidyadhari river will also create problem in eco-tourism in near future in STR. Hence, problem for ecotourism arises both in Gomor river, *Piskhali* river (local communities called it) near Sajnekhali and Bidyadhari river due to siltation in rivers in near future.

- v) Local villagers opine that tourists' drunkenness, dress, free mixing ('*drishya dushan*' termed by local people), etc. are not healthy for villagers.
- vi) Frequent movements of launches and *bhatbhati* (locally made boat) break the solitude of Sundarban Tiger Reserve which hampers the normal life of wild animals and plants besides oil spillage in the rivers.
- vii) Besides these problems, cyclones namely 'Aila' (2009), 'Amphan' (2020) and 'Yaas' (2021) and previously occurred cyclones had many adverse impacts on ecotourism, fishing in sweet water ponds and as well as drinking and domestic use of water from pond (2005), agriculture and other economic activities.

Advantages of Ecotourism in Gosaba block

- i) In addition to economic development, intercultural contact occurs through conversation, and cultural programmes participating by both the local people and tourists. When tourists and local people come together, both have the opportunity not only to know how they live, but also to reflect on their own lives through the eyes of others. Dress, use of cosmetics, liquor consumption, etc. are frequently borrowed by the local people from tourists. As a result, cross – cultural interactions are occurring. Awareness of fundamental rights, education, availing of better health facilities etc. enrich them while making contact with the domestic as well as foreign tourists.
- ii) Key informants held that Car, Auto Rickshaw and *Toto* (battery-operated mechanized van) are plying besides cycle van rickshaw due to ecotourism's demand as well as local communities demand from 2018.

EVALUATION OF ECOTOURISM ACTIVITY IN SUNDARBAN TIGER RESERVE

For evaluation of eco-tourism activity on the available infrastructural facility and other aspects of tourism 392 informants i.e., tourists, local people, and the people who are involved in different tourism sectors are interviewed whether they are satisfied or not satisfied about the available infrastructures.

For evaluation of tourism activity, the available infrastructural facility and other aspects of tourism considered for the present study are nature interpretation centre, Sajnekhali (as majority of the tourists visit the spot); road condition, road

and water transport, accommodation, restaurant, tour operators and travel agents, tourist guides, shops, hospitality (as tourist flow depend on it), security (as problem of Bangladeshi and domestic poachers), cleanliness / hygiene, drinking water, telephone, electricity, and river banks' condition (as flood is a regular phenomenon in the region) are considered.

TABLE- 9: TOURISTS, PEOPLE INVOLVED IN DIFFERENT INFRASTRUCTURES AND LOCAL PEOPLE'S VIEWS ON AVAILABLE INFRASTRUCTURAL FACILITY AND OTHER RELATED ASPECTS OF TOURISM [N=392]

Sl.no.	Category	Satisfactory		Not Satisfactory		No Comments		Total	
		No	%	No	%	No	%	No	%
1.	Nature interpretation Center (Sajnekhali)	284	72.45	78	19.90	30	7.65	392	100
2.	Road condition	135	34.44	231	58.93	26	6.63	392	100
3.	Road and Water Transport	243	61.99	118	30.10	31	7.91	392	100
4.	Accommodation	259	66.07	72	18.37	61	15.56	392	100
5.	Restaurant	281	71.68	72	18.37	39	9.95	392	100
6.	Tour operator / travel agent	253	64.54	69	17.60	70	17.86	392	100
7.	Tourist Guide	176	44.90	144	36.73	72	18.37	392	100
8.	Shop	233	59.44	118	30.10	41	10.46	392	100
9.	Hospitality	344	87.75	11	2.80	37	9.45	392	100
10.	Security	224	57.14	128	32.65	40	10.20	392	100
11.	Cleanliness/Hygiene	339	86.48	18	4.59	35	8.93	392	100
12.	Drinking Water	28	7.14	320	81.64	44	11.22	392	100
13.	Telephone	12	3.06	332	84.70	48	12.24	392	100
14.	Electricity	12	3.06	332	84.70	48	12.24	392	100
15.	Riverbank Condition	20	5.10	331	84.44	41	10.46	392	100

Source: Dinda, 2007

It is seen that levels of satisfaction are not up to the mark in the aspects related drinking water (81.64 per cent), telephone (84.70 per cent), electricity (84.70 per cent), river bank condition (84.44 per cent), and road condition (58.93 per cent), road and water transport (30.10 per cent), tourist guide (36.73 per cent), security (32.65 per cent), and shop (30.10 per cent) {2005} [Table 9].

In comparison with 2005, key informants (2021) said that drinking water is a major problem for villagers and also electric street light in river-side road. They also said that river bank should be of concrete structure with cement on urgent

basis. Village paths, better hospital facility schools' mid-day meal along with other stationery, ration shop etc are better than that of in 2005.

For tourists, key informants (2021) found that greater number of resting place /waiting hall, a greater number jetty ghat in Pakhirala Tiger Morh and Dayapur village as well as in all tourist spots and concrete bridge between Gadkhali and Gosaba Bazar proper which is under construction are urgently required. Tourist use mineral packet bottled water. Telephone problem has been solved in 2009 onwards but in a slow speed. There is no such major internet problem in Pakhirala, Dayapur and Jamespur villages and Gosaba Bazar proper in 2021.

CONCLUSION

Unique 'mangrove – tiger' land of Sundarban Tiger Reserve attracts eco-tourists though in limited number from all over the globe. Since the inception of Tiger Reserve, the tourist flow has been sharply increased. The tourist flow in Sundarban Tiger Reserve has been sharply increased about 106 per cent in the period 2003-2004 as compared to the period 1999-2000. Gosaba *bazar* (market), Pakhirala and Dayapur of Gosaba block are the fringe villages of Sundarban Biosphere Reserve and tour initiating centre to Sundarban Tiger Reserve (STR) and also point of tourist attraction and tourist halt. Over the years a steady flow of both domestic and foreign tourists has been registered at this place. However, the fruits of economy flourishing on account of tourism are not percolating down to the villagers of Pakhirala, Dayapur, Jamespur, Gosaba market area and its adjoining areas as is evident from their economic condition due to their lesser role in tourism. Coupled with it, the other contributing factors are – ignorance, inaccessibility, poor economy etc. Only recently the local people have begun participating in small scale private entrepreneurs like – hotels, tour operators, shop owners etc.

Jobs in different tourism sectors, village poultry and animal products, village youths as guides, village elders as story tellers (about tiger, fishing and honey collection), platform for performing artists (*Dukhe yatra*, *Tusu* dance, folk dance, folk song), rural artisans, etc. are the products of eco-tourism of Sundarban Tiger Reserve.

The involvement of people from Canning and its adjoining areas is much more than the people involved in eco-tourism of Pakhirala, Dayapur, and its adjoining areas of Gosaba block. Hence, it does not lead to overall economic development of Pakhirala, Dayapur, and its adjoining areas of Gosaba block. The emerging trend showing lesser participation of local people in tourism industry is certainly not following the Indian National Ecotourism Policy where a greater role of local people is desired. After introduction of Gadkhali tour initiating centre, the involvement of local communities has been increased but travel agents of Kolkata play an important role in controlling the ecotourism business of Gosaba block.

Villagers on the other hand observe that certain cultural deviations such as tourists' drunkenness, dress, and free mixing ('*drishya dushan*' termed by local villagers) in tourist season in Pakhirala Tiger *Morh* and Dayapur village are not culturally accepted to them.

Frequent movements of launches and *bhatbhati* (locally made mechanized boat) break the solitude of Sundarban Tiger Reserve which hampers the normal life of wild animals and plants besides oil spillage in the rivers.

Ecotourism acts as a protective agent of Sundarban Tiger Reserve. 'Mangrove – tiger' land should be protected in the interest of avoiding natural calamity in deltaic West Bengal as well as for ecotourism purpose.

It is suggested that improvement in different sectors can help in flourishing ecotourism in Sundarban Tiger Reserve besides developing local economy the issues that need attention are mentioned below:

- i) Proper advertisement in print and electronic media about Sundarban Tiger Reserve by both Government of India and Government of West Bengal is urgently required for ecotourism.
- ii) Better water and road transport is urgently required.
- iii) Gadkhali – Gosaba concrete bridge should be completed on urgent basis.
- iv) Better electricity is required for all villages of Gosaba block.
- v) Number of jetty *ghat* should be increased in all tourist spots as well as Pakhirala Tiger *Morh* and Dayapur village.
- vi) River bank should be protected from flood with saline water by any means with concrete cemented structure in all islands of Gosaba block.
- vii) Home stay facility should be encouraged by the government for the villages which are near to Sundarban Tiger Reserve. Government should provide loan for this purpose.
- viii) Drinking water, waiting hall / resting place, etc. should be in all tourist spots as well as in all entry points.
- ix) Shallowness of river bed, fishing net in the rivers, problem for taking tour and foreigners' entry permission from Kolkata, tourist guide's departure after tour, etc. is the major problems for the tour operators.
- x) The major problems faced by the workers involved in tourism sectors are – low payment with long duty hours.
- xi) Difficulty of communicating in English, Hindi and other foreign languages, waiting hall at Sajnekhali, and other areas. are the problems of tourist guides of eco- development committee of local villages.
- xii) The basic need of the local people, i.e., water for both drinking and irrigation should be developed on priority basis as there is water scarcity.
- xiii) *Dukhe / Bonobibi* yatra, *Tusu* and Folk dance, Folk songs, etc. are the

sources of income of some of local villagers in tourist season. It should be encouraged through the entrepreneurship of government and non-government sectors.

Eco-tourist's degree of satisfaction depends on several factors. Some of the important factors are availability of proper infrastructural facility, involvement of local community in ecotourism activity, proper tourism management, maintenance of eco-tour spots and fragile ecosystem.

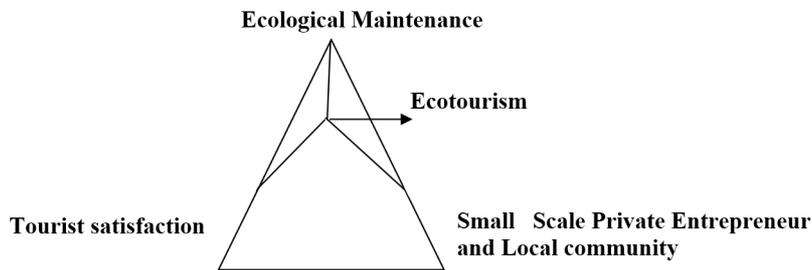


Figure- 6: Strategic approach to sustainable tourism for Sundarban Tiger Reserve

In the management process of tourism, the interplay of three indicators *viz.* local community, small scale private entrepreneurs and government determine the degree of management in terms of availability of infrastructure, conservation of ecology, benefit to local community and satisfaction to tourists. In case of Sundarban Tiger Reserve, which has a fragile ecosystem, a greater participation of local community along with decisive government intervention in management of tourism is suggested to safeguard the interest of the local community and protect the ecology. It, in turn, will ensure maximum satisfaction to tourists. So far as private entrepreneurship is concerned the small-scale private entrepreneurs' involvement should be encouraged (Fig.6).

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