

Sustainable Development of Coastal Tourism in Digha, West Bengal : An Investigation of Local Residents' Attitude

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Abstract: The sustainable development as a strategic tool requires a process of planning and management that brings together a series of interests and stakeholder's concerns in the form of planning and development. The impacts of coastal tourism on local community involve social, cultural, political and economic issues. Therefore, keeping in view the importance and relevance of the stakeholder cooperation for sustainable coastal tourism development, and the local community/residents being the key stakeholders, the objective of this quantitative research is to study the local Residents' Attitude in Coastal resort Digha, West Bengal, India- towards the impacts of coastal tourism as also to suggest the strategic interventions for current problems and future needs. In this process the researcher collected primary data from 180 respondents in the study area by survey method and further analysis done through Mini Tab & SPSS using different statistical tools & techniques like- simple statistical calculations, co-relation, regression to come to the conclusion. The study finding suggests that the residents' participation and co-operation is necessary to make the development more sustainable.

Keywords- sustainable tourism, coastal tourism, environment, local community, residents' attitude

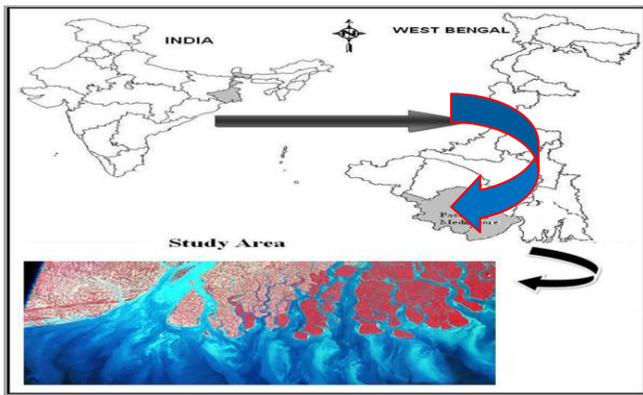
I. INTRODUCTION

Tourism over the years cropped up to be a revolutionizing phenomenon and it is emerging as a catalyst of the development process due to economic and employment generation as well as generates a number of socio-economic benefits, particularly in remote and backward areas at the regional, national as well as global levels. The objective of sustainable tourism is to ensure that development brings a positive experience for different stakeholder's like-host community, tourism operators and the tourists themselves (Yazdi, 2012). There are three major elements for any tourism activity like-visitor, host community & environment/place. We can examine the interdependent relationships between tourism and the environment in terms of the interaction of the visitor, the place, and the host community (UNWTO, 2004). The growth of tourism in general, and in coastal areas in particular, is related to three main factors: increased personal incomes and leisure time, improvements in transportation systems, and greater public awareness of world destinations due to improved communications (EEA, 2001). This growth,

which has reached its peak in recent decades, exerts pressures on the environmental and cultural resources of coastal areas, and negatively affects the social, economic and cultural patterns of tourist destinations (Marina & Alessio, 2009). Sustainability principles refer to the environmental, economic, and socio-cultural aspects of tourism development, and a suitable balance must be established between these three dimensions to guarantee its long-term sustainability (UNEP & UNWTO, 2005).

Background

West Bengal is a rich in tourism and natural resources with long and unique cultural and historical identities that attract both local and international visitors. From the Himalayas in the north, to the Bay of Bengal in the south, the state of West Bengal abounds in a staggering variety of tourist destinations including alpine mountains and tropical forests, wildlife sanctuaries and national parks, historical and pilgrimage spots, open beaches and mangrove forests which attract a large number of tourists every year. The state thus offers a variety of opportunities for leisure/recreation and pilgrim tourism as well as adventure and ecotourism. The state is spread over an area of 88,752 sq. km. and a population of nine and half crore (Approx.) as per 2011 census. There are 20 districts, 341 blocks and 40782 villages. West Bengal stands fifth in terms of foreign tourist inflow and sixth in terms of domestic tourist inflow in the country (As per Govt. tourism data, W.B, 2012). A statics from the state tourism department shows that there had been 49, 34,173 tourists in the year of 2000 while in 2013 the figure has shot up to 267.92 crores. The coastal areas of the West Bengal fall within three districts viz. North 24 Parganas, South 24 Parganas and Purba Medinipur districts. The entire coast line of West Bengal may be subdivided into three principal sectors from east to west as eastern sector, central sector and western sector. West Bengal offers the tourists an opportunity to experience long unending beaches with gentle rolling sea lined with casuarinas forests and a most important sea resort Digha have sprung up on the East coast (Western sector) of Bengal. The extents of the study area is between latitudes 21o36'50" N and 21o30'00" N and longitudes and 87o29'40" E and 87o37'00" E.



Digha, the first beach tourist centre in West Bengal has a historical background and we got this particular name from the personal letters of Warren Hasting, who wrote to his wife about the appreciation of Digha Sea Beach. During the British colonial period this small village on the shore of the Bay of Bengal was rarely known to the outsiders and little number people visited this place. After independence the state government has taken several steps to make it a well-fashioned sea beach tourist center. Since then the place has got the attention of the government as well as different other stakeholders who established several hotels, lodges, refreshment joints and other amenities for tourism development whose numbers are still increasing not only in the same place but with extension to other adjoining places along the sea beach (Chakraborty, Chatterjee & Das, 2012). On the way to New Digha, one can stop to view marine life at one of Asia's largest aquariums, or visit the Science centre for some scientific facts. Digha is now identified as 'Old Digha' by the tourists and the hosts. Many people of the locality are attached to the industry by varied means in a patterned way and they together form a flexible system through which the industry works. Different types of aquatic life, flora- fauna, rolling seas, sand dunes, casuarinas forest, red crabs, eye catching beautiful scenario, made this coastal town an important tourist destination. During the last four decades road connections have improved and a fleet of transport operations with the incorporation of railway connectivity led to significant influx of tourists, which in turn necessitated development of hotels, holiday houses, private lodges, etc (Mandal, Dandapath & Shukla, 2013). In this coastal region of West Bengal, there are varieties of trees, shrubs, climbers, herbs, and medicinal plants etc. which are creating a colorful spectrum of bio-diversity. Other basic infrastructures like- medical facilities, market, electricity, post office, library, health centre etc. also make the destination attractive for tourists as well as different interest groups. The temperature of coastal belt in winter is about 10-13 degree C and in summer it reaches about 36 degree C. Population of Digha (Area as indicated by Digha Shankarpur tourism development authority) is 16, 212 (Source: Census of India, 2001). As per the Census 2011 the population growth is about 12% in the East Midnapore district and accordingly considering total population in the study area (Area under DSDA) is

Approx.18000. The total tourist coming to Digha is 25, 47,017 annually (Dept. of tourism, West Bengal, 2010) and the daily average is around 6978 and the figure is still increasing day by day. Majority of tourists visits the destination from mid range distance (Within 150-200 km), mainly some neighbor districts of East Midnapore, West Midnapore, Howrah, Hooghly, Kolkata, 24 Parganas, Bankura and Burdwan. Very few tourists are visiting the destination from far distance. Highest percentage of tourists visiting in the study area is that of day trippers. Many tourists also prefer to stay in the destination for couple of days in weekend where very less number of tourists prefers to stay for long duration in the destination and maximum tourists visit the study area in average size of groups of 3 to 5 persons where people loved to visit the destination with family members than individual.

Present Scenario

The Geological Survey of India in its report on the Digha coastal belt pointed out that the erosion and accretion have been accelerated by several man-made interventions due to human activities near the coastline. The exact impact of tourism development on the coastal belt of Digha cannot be measured by quantity but, the continuing dumping of solid waste and raw sewage in the coastal water causes an alarming situation which continuously increasing with every tourist season. It is also to be noted that most of the biota once recorded as common in Digha coast have disappeared along with intensification of tourism and resultant increased dumping of untreated waste water and garbage. Sustainable development demands an integrated and interactive approach that allows for the understanding of the complex relationship between society and environment, simultaneously respecting the need for the local community and assuming that environment is a vital dimension of the future of the human kind. Moreover, the complex and conflicting interactions of social justice, human protection and environmental sustainability within the natural and social process of shaping and building development for present as well as for future generations are important issues to address for long term sustainability. Tourism activity invariably leads to accelerated road transport (diesel driven), hotel industry, illegal encroachment and mushrooming of construction by different stakeholders. Each of these activities has a direct impact on natural environment and human life. The natural environment of this region provide a unique combination of resources and constrains (like beaches, sand dunes, wetlands, barrier island, reefs etc. and storms/cyclone, sea level rise, more vulnerable erosion by fluvio-marine processes and anthropogenic activities etc) which may be considered to explore the opportunities for development of coastal tourism which is one of the assuring effective management of the coast.

Problem Statement

There is a major issue regarding the awareness from different stakeholders about sustainable tourism in the coastal resort-

Digha, West Bengal. Environmental issues are big concern to maintain for the future sustainability as the area is facing erosion, congestion (Old Digha sea beach), sewage and garbage's etc. The Economy of the area is also not very sound in spite of having a beautiful sea resort. The shortage of some facilities like quality accommodations, recreational opportunities, hospitality skills from local people are the major hindrances of coastal tourism development. The main problem is to understand residents' attitudes on the impacts of tourism development and it is complicated because opinions towards tourism are formed from residents' perceptions of many factors. Proper co-ordination is required amongst stakeholders involved in this tourism development process to maintain long term sustainability on environmental, economic and socio-cultural fields. Moreover, need to ensure community participation (which may not be up to the satisfactory level) by increasing benefits of local people and local needs for sustainable coastal tourism.

Aims & Objectives

The main objectives of the study are-

1. To study the existing tourism status & feasibility and effectiveness of environmental contingences for sustainable development of tourism in the study area.
2. To study the community attitude towards tourism development and the impacts caused by the tourism in the above mentioned area.
3. To suggest the measures for the sustainable Tourism development in the region.

Hypothesis-

1. Tourism development Impacts local community to some extent.
2. Sustainable development can resolve the current tourism related problems addressing the futuristic community needs.

II. REVIEW OF LITERATURE

Coastal Tourism & Environment

Our country has a long coastline of about 7500 km including that of its island territories. The coastal zone of India is under increasing pressure due to rapid urbanization, tourism development, discharge of waste effluents, municipal sewage, over exploitation of coastal resources and continued development in hazard prone areas (Jayanthi Natarajan-Minister of State, Environment & Forest: Govt. of India, 2012). There are many studies on coastal tourism emphasize on the tourism system rather than on the interaction of the tourism and related environmental systems (Wong, 1993).

Low-lying delta, low-elevation reef islands and coral atolls are especially sensitive to sea level rise, as well as to changes in rainfall, storm frequency and intensity (Ehler et al.,1997). Indeed, the beauty & unique character of coastal environment gives opportunity to various types of tourism development with coastal and marine management (Mason, 2003). One of the impact of coastal tourism are damage to coastal ecosystems such as beaches and wet lands, deforestation and erosion, excess use and increased pressure on limited energy and freshwater resources, ecological disruption and degradation of biological diversity, pollution and waste generation, resource use conflict and threats to local people for their culture and traditions (UNWTO-1994). Excess use of natural resources such as fresh water, energy, land and marine resources can lead to resource depletion and degradation and the same causes conflicts between locals and the industry (Gossling 2003; Mc Laren 2003; Neto 2003). Concentrated tourism development can also affect natural landscapes through process such as deforestation, loss of wetland and soil erosion (Neto 2003). This is a major issue in coastal areas where large scale development occurs in clusters (Gossling 2003; Mc Laren 2003). There are different studies about the changes of climate in coastal areas by natural process or by manmade intervention (Ehler, et, al, 1997; UNWTO, 2008; IPCC, 2007; UNEP,2007a; Simpson, et.al. 2008), and due to such changes there are different natural hazards (man induced process) and natural disasters (Fritz,1961; Burton & Kates,1964; Cutter, 1996; Quarantelli,1998) which causes a huge damage to coastal ecosystem (Henderson,2007; Ramanamurthy et, al, 2007; Birkland et, al, 2006; Trumbic & Randic,1998). Different studies also emphasis on coastal hazards (Kaiser,2006) & their cause and effect on tourism like coastal erosion (Bird,2000; Bryant,2005; Leatherman et. al, 2000; Capobianco et, al, 1999;), storm & associated storm surges (Harris, 1963; Nott & Hayne, 2000), coastal flooding (Kaiser,2006; Burston, 2007), sea level rise (McGranahan et, al, 2007; Douglas,2001; Ablain et. al, 2009; Kaiser,2006). Biodiversity loss due to urbanization in coastal areas also negatively affects the tourism (CI, 2003). All these enhanced biogeophysical effects will impact upon the socio-economic sectors of the coast in terms of loss of land & resources as well as reduction in their economic, cultural and ecological values (Klein & Nicholls, 1999).

West Bengal has a substantially long coastline of almost 100 kilometers (including island) characterized by high floral and faunal biodiversity, diverse geomorphic features and anthropogenic intrusions (Bhattacharya et. al., 2003). The whole area is ecologically sensitive & falls under the norms of Coastal Regulation Zone notified by the Ministry of Environment And Forests, Govt of India (2001). According to the CRZ demarcation has been made for the study area Ministry of Environment & Forest, (2001) & as obtained from DSDA (Digha-Shankarpur Development Authority), the Old Digha & New Digha area all the hotel & commercial sectors, Hospitals, other public offices & water works fall under the category of CRZ II, whereas all other areas in Old & New Digha fall under the category of CRZ III. Coastal area of West

Bengal (Digha-Midnapore District), is characterized by sand dunes, long shore currents, high salinity, low turbidity and low vegetative coverage (Annon, 2005; Paul, 2002).

The need of Integrated Coastal Management in India is well known, on account of the growing population pressure due to accelerated urbanization, itself fuelled by demographic growth and industrialization (TERI, 2011). There is a need for research on how societal driving forces (social and demographic, political and institutional, economic and commercial, cultural and technological) affect the nature and distribution of human activities by different stakeholders like-tourists, local community and tourism companies on coastal zones of West Bengal and its impacts on coastal environment and tourism sustainability associated with the prevailing and possible alternative patterns of human activity (TERI,2011). For sustainable tourism and development and a growing need for success, the integrated coastal planning and management (ICPM) and integrated coastal zone planning (ICZP) frameworks are necessary as ways of planning and managing coastal environments (Sorensen 1993; Capobianco and Otter 2000). As tourism is an environmental phenomenon, it stands to be boosted and sustained by adhering to the tenets of ICPM and ICZP, which together are referred to as coastal zone management (UNEP, 2009). In order to mitigate some negative effects due to coastal tourism development, both governments and the private tourism sector can play an important role. The foreign tourism industry, which consists mainly of transportation, hotel and tour-operator companies, should ensure that their business decisions take full account of the environmental, social and, in particular, economic sustainability of the destination in which they operate (Ashe, 2005). It is therefore vital to develop a solution that balances environmental degradation with social equity and economic growth, i.e. sustainable tourism (Kanji, 2006). Many authors and researchers have suggested integrated coastal zone management and application of different tools like- strategic environmental assessment (IESWM, 2010; Gazzola.P, et. al., 2009; Fischer. T. B, 2007), carrying capacity analysis (IL&FS IDC, 2012), environmental impact assessment (IESWM, 2010; Sadler. B, 2004), sustainability indicators (WTO,1996; Gilbert & Feenstra, 1992; Atkisson, et. al., 1997; Hart, 1999), zoning (Miller et. al., 2002) etc. as policy guideline & management of sustainable coastal tourism. Carrying Capacity Assessment (CCA) as a precise technique was born in the 1960s as a method of numerical, computerized calculation for prescribing land-use limits and development control (Clark, 1996). As per IL&FS Infrastructure Development Corporation Ltd (IL&FS IDC) & the interim report (West Bengal) submitted by them to Ministry of Tourism, Government of India on April-2012 it was noticed a huge infrastructural gap at the coastal zone of West Bengal. There is available capacity to hold the tourists at the destinations of priority circuit of West Bengal till 2020 apart from Digha Beach which does not have capacity to hold the tourist even in 2010 and will be a major concern for sustainable tourism development in the coastal zone of West Bengal.).As per ICZM Project Report, School of Oceanographic Study, Jadavpur University, 2005-2006 & i-

win (Nodal body DSDA, Govt. of W.B), 2013 suggested the zoning plan for the management of coastal resort Digha.

Sustainability & Sustainable Coastal Tourism

The concept of sustainability and sustainable development has been much discussed in the literature (Pearce, Barbier & Markandya, 1990; Pezzey 1993; Munasinghe & Shearer 1995; Atkinson, Dubourg, Hamilton, et. Al. 1997; Backer & Jahn,1999). The literature reveals a concern with three issues- equity across and within generations; importance of the environment to humans, as a constraint to economic activity in terms of the biophysical limits it can pose as well as a contributor to human well-being and a concern with the poor and disadvantaged, both with regard to intra-generational equity and to protection of the environment for future generation. Sustainability thus requires attention to the domains that support or influence human health and well-being- economic, social and environmental. Inskeep (1991), and McCool (1995) furthered this idea indicating that, if tourism development was planned improperly it could destroy the very resources (e.g. economic, environmental, and social) that are the foundation of tourism in a community. Responding to the sustainable development concept Barbier (1989) sees it as the balance among environmental impacts, economic development, and participatory processes, intergenerational equity and sustainable livelihoods and so on. Due to heavy growth in the recent decades, those who manage tourism are aware that it is sustainability in coastal areas that is strongly dependent upon the quality of these particularly fragile environments (CoastLearn, 2009). Social sustainability should be ensured by including community stakeholders while planning and managing tourism (Moseley, 2002; Pearce et. Al., 1996; Choi & Sirakaya,2006). Environmental sustainability should be ensured by respecting the carrying capacity of ecosystem and reducing all type of the pollution (Durovic & Lovrentjev, 2014). Economic sustainability should be achieved with high quality of tourist product (Durovic & Lovrentjev, 2014). UNWTO, 1994 suggested plan for sustainable tourism development by environmental planning, community based tourism, quality tourism, long range comprehensive planning and strategic planning. Natura 2000 suggested biological inventories, the participation of all factors, management plans, zoning & the restoration of degraded sites for sustainable coastal tourism development. The planning of coastal areas for sustainable development urgently needs to take into account all potential risks, e.g. floods, forest fires, loss of biodiversity, coastal erosion (EEA, 2006). The environmental impact assessment approach is essential to effective sustainable coastal management (Clark, 1992). At the local level many city governments have utilized their planning departments to recommend approaches to issues related to public use of the shoreline and natural resources, the revitalization of water fronts and zoning appropriate to sustainable resort and marina development (Miller et. al.,2002).

Local Community (Perception & Participation)

Over the past several years a number of studies have been conducted in Europe, Australia, New Zealand, the South Pacific, Asia, Africa and America to examine the attitudes of local residents towards tourism and the impacts tourism on the community (Ap and Crompton 1993; Haralambopoulos and Pizam, 1994; Andereck and Vogt 2000; Kayat 2002; Sirakaya et al, 2002; Harill, 2004; Jurowski and Gursoy 2004; McGehee and Andereck, 2004; Andereck et al., 2005; Petrzela et al., 2005; Zhang et al., 2006; Dyer et al., 2007; Lepp, 2007; Sharma, et al., 2008; Diedrich and Garcia-Buades 2009; Marzuki, 2009; Aref, 2010; Rastegar, 2010; Brida et al., 2011; Nunkoo and Ramkissoon, 2011; Vargas-Sanchez et al, 2011; Deery et al., 2012; Eshliki and Kaboudi, 2012; Nunkoo and Gursoy, 2012; Dimitriadis et al., 2013; Seyfi et al. 2013; Simão and Mósso, 2013; Snyman, 2014). Many authors have explored that attitudes tend to fall into some basic categories: economic, socio-cultural & environmental.

Studies on resident attitudes toward tourism have identified factors that influence resident goodwill. These include: the potential for economic gain, environmental attitudes, socioeconomic status, feelings held about the community, extent of the use of the tourism resource base, perceptions of the ability to control the development of tourism, and perceptions of the impact of tourism on the quality of life (Ap, 1990;Faulkner & Tideswell, 1997;Gursoy, Jurowski, & Uysal, 2002;Jurowski, Uysal, & Williams, 1997; Lankford &Howard, 1994; Liu, Sheldon, & Var, 1986; Mc-Cool & Martin, 1994; Um &Compton, 1987).

Local community must organize themselves at all levels for positive role in development and interact with Govt. and tourism role players at all levels (McIntyre,et.al 1993). Locals should identify the tourism resources and attractions within their communities and support responsible tourism which will in turn help community development.

Tourism development transforms destination, usually with many negative outcomes (Cohen, 1978). Residents in mass tourism destinations face congestion & traffic, noise, neighborhood and environmental dereliction, and higher prices resulting from competition with tourists for scarce resources like water, electricity etc. consequently resulting in decreased community satisfaction (Cavus & Tanrisevdi, 2003). Resident attitude surveys have found that residents who value economic impacts will have favorable attitudes towards tourism but their attitudes towards environmental and cultural change are negative (Lindberg & Johnson, 1997; Walpole & Goodwin, 2001). However, local people who participated in tourism business got the economic benefit from the tourism business for life long (Kotuwegoda, 2010). Even beside the economic gains, residents who feel that they have a voice in tourism planning are more positive towards tourism (Cavus & Tanrisevdi, 2003). On the other hand residents perceive that the cost of tourism outweigh the benefits, feelings of resentment and irritation towards tourists and develop lower

community satisfaction (Doxey, 1975; Faulkner & Tideswell, 1997; Ko & Stewart, 2002).

Smith and Krannich, (1998) have found that increasing levels of tourism dependence in a community are associated with increasingly negative attitudes about its development, as well as lower levels of local satisfaction and higher levels of crime concern. Allen, Long, R.R. Perdue, and Kieselbach (1988) have found that the negative attitudes about tourism appear to be confined to certain dimensions of community life related to public service satisfaction and opportunities for public, civic, and social involvement.

Liu, Sheldon and Var (1987) shows that the growing pressure from tourism, in turn generates stronger criticism of tourism, with a growing public awareness among the population of environmental and cultural problems that it creates and consequent increase in opposition to tourism development. Pearce (1980) argues that areas with a high level of tourism development generate resident dissatisfaction due to traffic and parking problems, crime, inflation, etc.

A comparison of residents' attitudes towards tourism in 10 New Zealand destinations' carried out by Lawson, Williams, Young and Cossens (1998) have identified differences in the residents' perceptions of every type of social impacts, however there were many similarities in the context of economy and employment.

Gursoy, Jurowski and Uysal (2002) have suggested that tourism development can be modeled by using six factors namely the level of community concern of local residents; the utilization of the tourism resource by local residents; the level of ecocentric values of local residents; the state of local economy; the perceived cost and the perceived benefits of tourism development. Allen, Long, Perdue & Kieselbach (1988) observed that, the degree of impacts depends upon the frequency of interaction between residents and tourists, their willingness to serve as gracious hosts. Sheldon and Abenoja (2001), stressed that sustainable tourism cannot be successfully implemented without the involvement of those affected by tourism.

III. RESEARCH METHODOLOGY

Research design

The scope of the study is limited to the resident attitude towards development of Coastal Tourism in the Coastal resort Digha, West Bengal as one of the important tourist destination. To assess the residents' attitude the study area relates to the rural and sub urban villages and beaches in the periphery of Digha, that constitutes to twenty two villages (As identified by Digha-Shankarpur Tourism Development Authority) and fifteen beaches. These villages have an approximate population of 18,000, as per Census 2011. The secondary data were collected as fundamental data to be verified with primary data later on. For a survey, a total of 180

residents which represents approximately 1% of the total universe, i.e. the residents of the study area, the locations were chosen six villages and three beaches as per the judgment of research scholar and sampling from those specified areas in equal proportion by systematic random sampling. After applying filters and adopting other appropriate techniques to reduce response error researcher could get 150 (83%) usable completed questionnaires. The field survey and observation of the study area was focused on capacity, involvement/participation and reaction of local community on tourism development. An in-depth interview was conducted with community members on three main topics of sustainability like- environmental, economic and cultural to know the impact of sustainable tourism on community. The survey instrument was self-administered, three part questionnaire. The questions in the first part include respondent's socio-demographics as need to understand the reasonable representation from all related demographic aspect of society. In second part, 15 item attitudinal index for Tourism impacts which were grouped into 4 major categories viz. environment (En), economic (Ec), socio-cultural (SC) and overall attitude for tourism impacts. Third part of the questionnaire includes 3 variables to examine the role and contribution of sustainable development for the resolution of the current problems to address future needs of the community. The pilot survey was conducted with an initial 25 residents, to find out the scope needed for improvement in the research instrument. However, as no major improvement was required, so rest of the data collection was done. For each item, respondent used 5 point Likert scale to rate their opinion and attitude, where 1-Strongly Disagree, 2-Disagree, 3- Undecided, 4- Agree, 5- Strongly Agree.

Test of research instrument (questionnaire) is also important for reliability test. In statistical term, the usual way to look at reliability is based on the idea that individual items (or set of items) should produce results consistent to the overall questionnaire. As per Andy Field (2005), any value between 0.7 to 0.9 considered as highly reliable.

The statistical techniques used for the analysis of the data include percentage method, mean, standard deviation, and multiple regression. Statistical tools used as SPSS & Minitab. The percentage method is used for explaining the description of the respondent. Mean and Standard Deviation were used to measure attitude of residents toward tourism impacts 5 point Likert scale. Multiple regression techniques have been used to study the joint influence of selected group variable of residents' attitude on overall attitude. Response mechanism has been used to examine the role and contribution of sustainable development for the resolution of the current problems to address future needs of the community.

Findings & Analysis

The study is confined to the rural residents' attitude towards coastal Tourism Development in and around coastal resort Digha. A profile of respondent, rural residents is depicted in table 1.

Table I: Profile of Respondent Rural Residents

N=150

Description		No of Respondents	Percentage of respondent
a)	Age (years)		
	i) Below 25	32	21.33
	ii) 25-40	83	58.66
	iii) Above 40	35	23.33
b)	Marital Status		
	i) Married	107	71.33
	ii) Unmarried	43	28.66
c)	Gender		
	i) Male	116	77.33
	ii) Female	34	22.66
d)	Qualification		
	i) Under Matric	87	58
	ii) Matric & above	63	42
e)	Household Monthly Income (Rs)		
	i) Below 10,000	73	48.66
	ii) 10,000-25,000	47	31.33
	iii) Above 25,000	30	20
f)	Involvement in Tourism		
	i) Direct	55	36.66
	ii) Indirect	67	44.66
	iii) No Involvement	28	18.66

Of the total 150, more than half of the survey residents were from the age group of 25-40 years, followed by above 40 years which comprised 23.33%, , and the rest of the age groups i.e. below 25 represents about 21 % of the respondents. Surveyed residents represents more married (71.33%) than Unmarried (28.66%) In terms of gender male (77.33%) outnumber females (22.66%). Although, the study area represents rural villages having less scope for income and education, still there are good representation of above matric (42%) respondents and non matric (58%). It is of the note that the majority of the respondents (48.66%) had monthly household income less than Rs. 10,000/- while only about 20% had monthly income more than Rs.25,000/-. The survey included a question about the resident's involvement in tourism, wherein the largest number of residents (approx. 44%) reported to have indirect involvement as against 36% directly and 19% not involved in Tourism.

Further efforts were made to conduct the reliability test (Cronbach Alpha) for the responses of local residents (questionnaire) on tourism impacts by SPSS windows programs tool. Score for environmental factor is- 0.779, economic factor is- 0.805 and socio-cultural factor is- 0.817.

Table II: Attitude towards tourism impact

N=150

Strongly disagree= 1, Disagree= 2, Undecided= 3, Agree= 4, Strongly agree=5 Source- self survey

A Environmental		Mean (X)	SD
En1	Tourism development leads to increase waste and noise in the area	3.41	1.42
En2	Because of tourism roads and surroundings are well maintained	3.34	1.5
En3	Tourism results in urbanization and congestion/overcrowdedness	3.54	1.42
En4	Tourism leads to pollution of water resources.	3.45	1.44
En5	The creation of tourism infrastructure leads to problems like deforestation, land sliding, etc	3.62	1.40
B. Economic			
Ec1	Tourism generates more business for local entrepreneurs	3.47	1.33
Ec2	Tourism results in increased purchasing power of locals	3.45	1.26
Ec3	The most of the jobs in the tourism in my area pay low wages.	3.42	1.28
Ec4	Creation of tourism facilities is a costly affair	3.41	1.29
Ec5	Tourism leads to increased cost of living for hosts	3.56	1.26
Socio-Cultural			
SC1	Tourism improves image of the community	3.10	1.45
SC2	Meeting tourists from different cultures and areas is a valuable experience	2.90	1.39
SC3	Tourism results in conflicts between residents and tourists.	3.01	1.41
SC4	The access to various facilities by the host is limited due to presence of visitors	3.16	1.46
SC5	Tourism creates more pressure on local services like Police, Fire Protection and Public Utilities	3.40	1.39
Overall Attitude			
OA	Overall Impact : Tourism Development Impacts Local Community	4.02	1.02

Table 2 presents the attitudinal measurement of the rural residents towards the Tourism impacts in terms of 16 items broadly grouped under the three categories of the Environment, economic and socio-cultural impacts with five statements within each subhead. The last statement measures the overall attitude towards the impact of the tourism development on the local community. Of the total 16 variables 15 statements have recorded mean value more than mid value (3) on five point scale, along with the overall attitude having mean value above 4, results to the acceptance of the first hypothesis that tourism development impacts local community in some extent.

Further, multiple regression techniques have been applied to study the joint influence of selected group variable on overall attitude. All the identified variables were grouped into four major categories on the basis of similarities i.e. Environment(En1-5), Economic (Ec1-5), and Socio-cultural(SC1-5) and Overall Attitude(OA). Regression

coefficients have been tested with the help of most powerful “t” test.

Table 3 shows the strength of relationship between the dependent variable OA and all the independent variables taken together. When Environment Impacts is increased by one unit, OA increases by 0.2384. For one unit increase in Economic impacts, OA attitude increases by 0.7743. When Socio-cultural is increased by one unit, OA decreases by 0.4460, which all are significant at 1 percent & 5 percent level. Multiple correlation co-efficient between dependent variable OA and independent variable (R=0.40) indicates that OA is influenced by independent variables. It is also evident from the value of R²=0.16 of variation in OA accounted by joint variables of En, Ec, and SC. The lower values of R² indicates that although there exists a positive relationship between tourism impacts and OA but overall attitude toward tourism impacts is a function of a number of variables other than the selected group variables taken in the study.

Table III
Regression Equation of Overall Attitude (OA) on environment, Economic and Socio-cultural

Variable constant	Regression Coefficients	T value	Multiple correlation
Environmental	0.2384	2.00*	R= 0.828
Economic	0.7743	6.45***	(R ²) =0.330
Socio-Cultural	0.4460	-3.88***	Adjusted R ² =-0.317

*** p ≤ 0.001, * p ≤ 0.05, 1= Strongly Disagree, 2= Disagree, 3=Undecided, 4= Agree,5= Strongly Agree

Table IV shows the mean values for the 3 variables of sustainable tourism development as response mechanism variables to respond to the challenge of the impacts caused by the tourism development.

In view of the resulted research findings the following conclusion is drawn on the basis of the responses of surveyed sample.

Table IV
Sustainable Tourism Development as Response Mechanism

Response Mechanism	Description	Mean
ST D1	Residents’ participation and cooperation in necessary to make development more sustainable that finally cultivates harmonized guest-host relationships.	4.26
ST D2	STD is a long-term approach that requires strategic partnership among all the stakeholders.	3.67
ST D3	STD can prove to minimise negative impacts maximising positives that resolves the current problems addressing futuristic needs.	4.11

It is clear from the above table that for STD1 and STD 2 have accorded mean value above the mid value on 5 point scale, which implies that Residents' participation and cooperation in necessary to make development more sustainable and co-operation from all stakeholders also required for sustainable coastal tourism development in Digha, West Bengal. STD3 accorded mean value above 4 on 5 point scale, which suggests sustainable tourism development in the study area can prove to minimize negative impacts and maximize positives that resolves the current problems and addressing futuristic needs, also proves the second hypothesis.

IV. CONCLUSION

The present research work reveal that tourism development in Digha, West Bengal has an impact on local community to some extent based on the above findings. As per the impact analysis economic issues will be the top priority in the model, Socio-cultural issues will be dwelt next and environmental issues need to be considered at last in the model for sustainable coastal tourism development in Digha, W.B. (Integrated development model for sustainable tourism development like Prakobsiri Pakdeepinit, 2007). Again, residents' participation & co-operation in sustainable tourism development where the residents will get benefit from tourism should be given top priority and also need to ensure stakeholders participation and co-operation for sustainable tourism development in the region. To ensure whole hearted participation and co-operation from local community it is necessary to try and eliminate all the negative impacts caused due to tourism development like environmental degradation, economic uncertainty and low wages due to seasonality and lack of hospitality skills and socio-cultural problems due to insufficient infrastructural development and proper planning. Locals are getting economic benefits from tourism development in the area as it was discussed with some local residents involved with different tourism related professions, like one van (Tourist transport) driver is earning Rs. 750/ per day in pick tourist season and one coconut seller is earning Rs. 650/ per day in pick tourist season, one steward is earning Rs. 400/ per day as tips, one barber is earning Rs. 1100/per day during pick tourist season. A well maintained park (Amarabati Park) which is situated in New Digha was recorded a tourist flow of about 48,000 on 25th December-2013 (As per the information received from ticket counter) also requires casual staffs from local community to give proper service. Sustainable tourism development could lead a better economic prosperity to locals. Economic impact on local community due to tourism development is more significant and careful planning is much needed from different stakeholders (Govt. & private) on infrastructure development, tourism promotion, facilities for foreign tourists, skill development for locals and should ensure overall economic development in the region. It is also very significant to get the honest view about the environmental deteriorations in the region although the result of environmental degradation experienced little late. Aged people are more concern about environmental deteriorations.

Tourism development ensures better cleanliness and maintenance which in turn makes the people (Both host and guest) happy. The major area of concern is the sewage and garbage in the Old Digha area which causes pollution and mosquito born diseases in this area. Soil erosion in this area is a big problem. Proper land use plan should be developed for the local entrepreneurs as they are not getting enough opportunity to do the business and not in a position to compete with big businessman who all are coming from outside to doing business in Digha. Local authorities should ensure CRZ guidelines for all and right awareness building on environment protection will help to get a sustainable future. On socio-cultural head, it is very important to develop the lifestyle of locals for right participation in tourism in the region. There are some confusion amongst the local residents about the role of local panchayat and Digha-Shankarpur Development Authority regarding the development of local communities in the area. Although the DSDA was established initially to look after tourism development but at the same time the authority should ensure the facilities, infrastructures and the overall environment for all the entrepreneurs including locals. It had been observed that the standard of living is increasing for the locals but at the same time the locals are facing problems in the field of electricity and fresh water during pick tourist season. West Bengal suffers by many problematic issues which have created conflicts between different stakeholders. This coastal resort of West Bengal has unique ecological features that provide significant but under-utilized tourism potential, including coastal areas (except old Digha), recreational parks, fish landing harbor, temples, marine aquarium, science centre, flora & fauna, water sports and scenic beauty. A proper, planned sustainable development of these resources is required which could enhance community livelihoods throughout this area. Apart from this there are different issues those may often overlooked must be addressed in the research like the role of tourism demand, the nature of tourism resources, intra-generational equity, socio-cultural progress, co-ordination between different stakeholders and finally the long term sustainability. There should be wholehearted participation and positive awareness from local community for sustainable tourism development. Finally we could conclude that residents' participation and cooperation in necessary to make development more sustainable that cultivates harmonized guest-host relationships which could be strengthened by equitable distribution of benefits and costs to residents, leading a favorable attitude towards tourism.

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