

# AN OVERVIEW AND ASSESMENT OF GEO-TOURISM POTENTIALITY IN THE NORTHERN PART OF ALIPURDUAR DISTRICT (SINCHULA RANGE) WEST BENGAL, INDIA

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## ABSTRACT

The concept of tourism development is very recent and is in its infancy. At present tourism has been seriously considered as way of livelihood for the people of tourism site of developing country like India. In northern part of West Bengal have tremendous and unique tourism potentials which can be tapped mainly through the concept of Geotourism. Geotourism is geological tourism. Geotourism is an important tool for human development including employment generation, environmental and biodiversity development. The objectives of this research to bring up the exemplary potentiality for perfect establishment as geosites of Sinchula Range of Alipurduar district, West Bengal,, India. Focusing to sustainable development of those geosites. This research had also done to fulfill the gap and start investigation for potentiality of geotourism development at Northern hilly region of Alipurduar district. We also addressed challenges related to development of geotourism sites and highlight some recommendation for development of this site.

**KEYWORDS** Geotourism, Geosites, Sustainable development, Infrastructural development

## INTRODUCTION

India is a country with diverse physical attributes like snowcapped peaks, valleys, gorge, waterfalls, caves, mountain pass, and geological structure etc. Tourism plays a major role in showcasing this great country to the rest of the world. In this perspective Geotourism can play prime role.

“ A form of natural area tourism that specially focuses on landscape and geology. It promotes tourism to geosites and conservation of geo-diversity and the understanding the earth science through appreciation and learning. This is achieved through independent visits to geographical features, use of geo-trails and view points, guide tours, geo-activities and patronage of geosites visitor centers.”(Newsome, D. and Dowling, R.K. 2010.) Geographical Sustainable Tourism (G.S.T.) is a tourism that sustains or enhances the geographical character of a place , its environment, culture, heritage and the wellbeing of its residents. The concepts of Geographical Sustainable Development with coining of the word geotourism, was introduced publicly in the USA in 2002 reported by The Travel Industry Association o America (Newsome, D. 2010). National Geographic’s Geotourism program incorporates sustainability principles, but in addition to the do-not harm ethic focuses on the place as a whole. The idea of enhancement allows for development based on character of place, rather than standardized international branding and generic architecture, food and so on.

Geotourism plays a great or important role in displaying the geological features. “Dooars” the sweetest part of West Bengal with spectacular hill station or hill tourist point in lap of nature. The people of Dooars have rich cultural heritage with great human being. Geotourism in Dooars has a huge potential of being tourist destination. The aim of this paper is to describe the geological significances for the promotion of geotourism as well as to develop the financial and infrastructural aspects of this region, specially focusing on the economic and sustainable development of Dooars.

## OBJECTIVES

The study has been carried out within the Sinchula Range of Alipurduar district and the objectives are stated as follows

- (i) To identify and map properly the geosites in the study area.
- (ii) To study the scope of geotourism and significance of geodiversity and geology of study area.
- (iii) To establish a link among the tourism industry, geologist and anthropologist.
- (iv) To promote geotourism and enhance the economic status.
- (v) Generate employment opportunities involving community and make a focus on sustainable development with proper conservation and management of natural resources.

## METHODOLOGY

This article formulates a simple methodology to quantify Geotourism potential for a region where details data is not readily available. This research article purely based on primary and secondary database. For primary data we gathered information on geosites by conducting a short field survey. During this time we carried out in depth interview with the local administrator of different field like forest, tourism, Panchayat Pradhan, Travel agencies Police and Researchers. We also carried out 2 focus group discussion with local people to borrowed all the experiences from local people and collect the significant information. For secondary data we go through different types of articles, Govt. reports, books, Gazetteers, Annual reports widely in this field. With all the information we compared, contrasted, analyzed and synthesized all the points of views developed new insights.

## SELECTION OF STUDY AREA

Geographically this area is not such potential for heavy industry, but lot of opportunity has been provided by the nature to develop the Geo-tourism. The central government and state government both are unaware about its geological heritage and its economic potentiality. The poor economic condition may be resolved by Geotourism. It is very unfortunate being high potentiality of economic growth the area is under developed. This part of West Bengal is always neglected from beginning. Though the government has taken a very few steps to develop the infrastructure for geotourism. Geotourism has a significant role in rising of economic status producing enormous job opportunity, in the form of transportation, hotels, restaurant, local ethnic handicraft shop, travel guide, self employment, business etc. and also opportunity for government to collect huge revenue through geotourism. Now in a days government has taken few initiatives, but these are less than its requirements. Till now there are no adequate hotels, lodges, transportation facilities, proper security, rescue facilities, etc. in Buxa Hill region.

Buxa hill: - is situated in Sinchula Range and is a vantage point in the mountains. The journey through the entire range is full of adventure and excitement of unexpected occurrence. The view of entire region is really breathtaking. Till today most of the places of this canopy forest region is unexplored. The rare animal species, butterflies, birds and colorful orchids always give you beckon. It's an ideal place for wildlife lovers. This place offers a best opportunity to explore itself. Just because of inaccessible terrain and geological structure, some parts are still virgin.

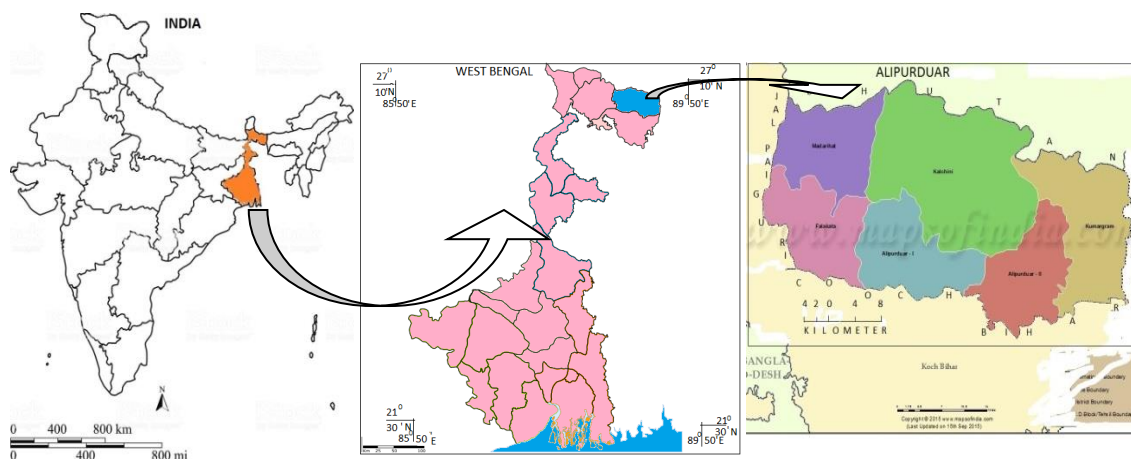


Fig no: 1 - Location map of study area

## DISCUSSION

### CONCEPTUAL FRAMEWORK OF GEOTOURISM

Geotourism is a form of natural area tourism that specially focuses on geology and landscapes. It promotes tourism to geosites and the conservation of geo diversity and an understanding of earth sciences through appreciation and learning. This is achieved through independent visits to geological features, geo-activities and patronage of geosites visitor centers. ( Newsome and Dowling 2010.) Geotourism is one of the newest concepts within tourism studies today. The popularity of geotourism has likewise grown rapidly over the past few years.

One type of tourism which is growing around the world is Geological Tourism or Geotourism (Dowling: 2013). Travel to areas of outstanding natural landscapes or unique landforms is not new, however, the concept of geotourism has only occurred in relatively recent times. It has been described as a form of tourism that specially focus on geology and landscapes, and can occur in either natural or human modified environments (Newsome &Dowling, 2010).it is viewed in promoting tourism to geological sites (geosites) , the conservation of geological diversity (Geodiversity), and providing an understanding of earth sciences through appreciation and learning. This is achieved through independent visits to geological features, use of geological trails (Geotrails) and view points, guided tours, geo-activities and patronage of geosites visitor centers (Newsome, Dowling,, & Leung, 2012). Essential to the development and geotourism is the understanding of the identity or character of a region or territory. To achieve this, geotourism is viewed as being based on the idea that the environment is made up to abiotic, and cultural components(Dowling, 2013).

Due to a new form of tourism, Geotourism has not been studied much. It's obvious that Geotourism has only introduced as a commercial tourism product in some countries. A very few studies have been done in West Bengal, India specially in the northern hill of region (Sinchula Range) of West Bengal. In recent decades, the scope of Geotourism has increased worldwide. Different stakeholders such as Government, NGOs, Geological Organizations and local community groups which to enhance conservation and sustain the geological heritage of such groups (Newsome and Dowling,2010). Gray(2014) indicates that there has been an emergent market for geotourism activities either independently or s a part of eco-tourism activities and this new geotourism growth can be illustrated by this four perceptions. First, there has been a high tendency toward an appreciation of the value of wildness and natural scenery. Thus a large number of tourists seek holidays in rural and natural landscapes. Second, many popular geological sites have a high esthetic value which has attracted international and domestic tourists. Third, there has been many types of geological activities which appeal to tourists, such as geological trails, fossil hunting, museum and visitors centers. Fourth, geotourism can include many attractive recreational activities, such as caving, climbing and glacial hiking.

Geotourism is basically 'geographical tourism'. The main concentration of the geological element is geology and landscape and comprise both 'form', such as landforms rock outcrops, rock types, sediments, soils and crystal, and 'process', such as volcanism, erosion, glaciations (Dowling,2011 p1). Hose(2005, p 28) contends that geotourism has "some overlap with ecotourism, sustainable tourism and alternative tourism and potentially much overlap with educational travel, and environmental, nature based and heritage tourism." Therefore although geotourism has a connection with ecotourism, cultural tourism and adventure tourism it is distinctive form of tourism. That is not synonymous with any other tourism forms (Dowling,2011).

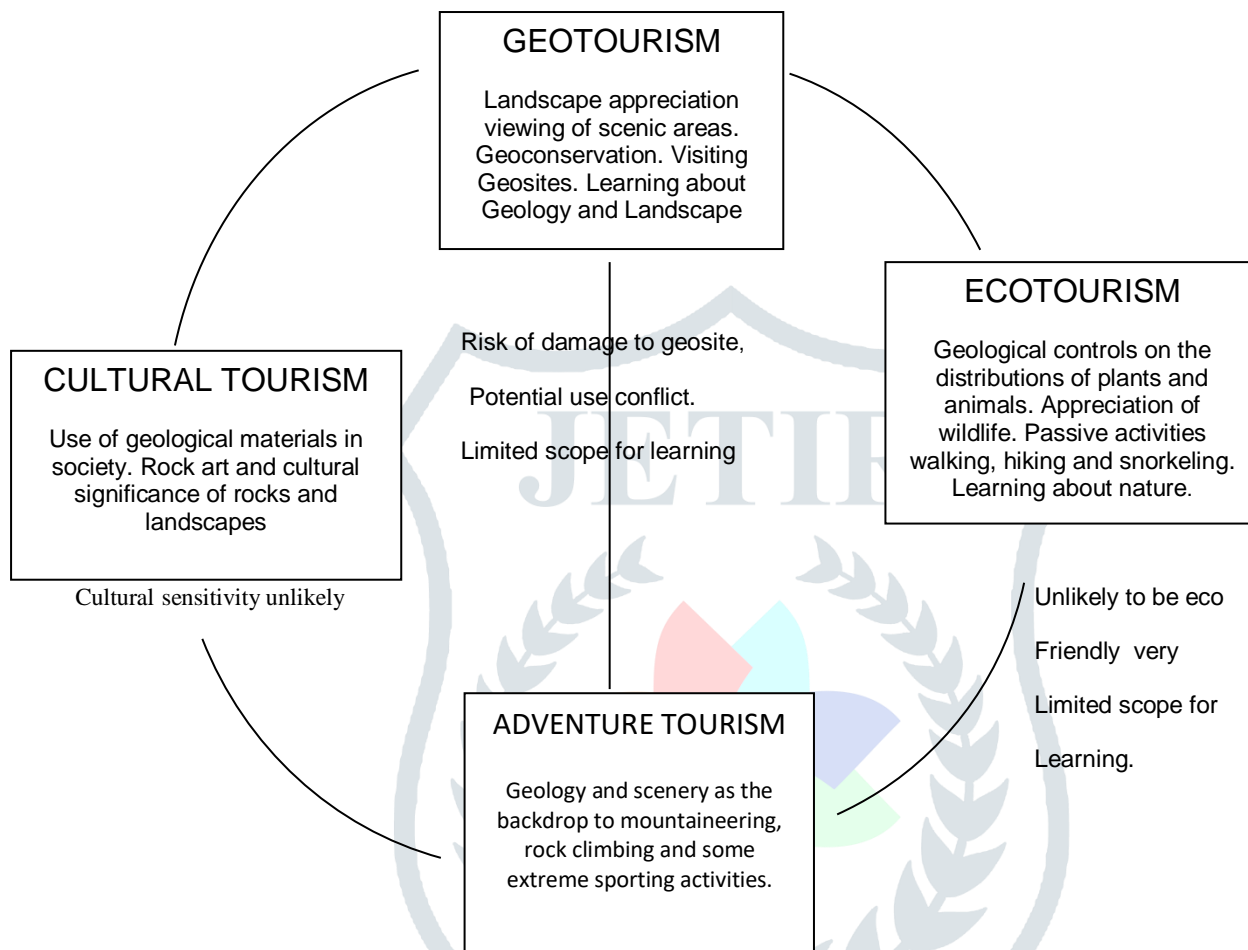


Fig No. 2 The relationship between geotourism with other types of tourism (Dowling, 2011, p.2).

Geotourism has a distinctive feature that likes the act of viewing the beauty of the geological and geomorphic features with the appreciation of these features and gaining knowledge such features. This view was further supported by who argued that the geotourism experience combines the enjoyment of a site's beauty, which arouses a sense of wonder whilst gaining knowledge about the intrinsic value of the geosites (Allen, 2012).

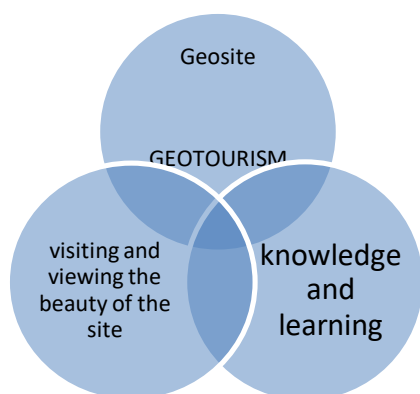


Fig No. 3 Geosites viewing and learning( Allen,2012,p.32).

Therefore, a geotourist can have a holistic experience, which distinguishes and recognizes the quality of a geotourism experience from other tourism(Allen,2012).

### **Geotourism attractions at Sinchula Range(northern part of Alipurduar district, West Bengal, India)**

Eastern part of Dooars specially The Buxa region and Sinchula range is the combination of phenomenal nature with history, heritage and culture. Every part of this region has a magical wave. It attracts the tourists just like a magnetic field to listen the melodious music of river flow, songs of birds' drops of water from leaves, different types of sound of wild animal etc. The tourists are attracted by the geological structure of this region. There are few special attractive geosites like-

#### 1) MAHAKAL CAVE OR STALACTITE CAVE:-

This is an ancient stalactite cave made of dolomite, is especially popular in this region. It is a popular pilgrim site. This is situated close to Bhutan border. The cave is dedicated to Lord Shiva as a temple. These stalactites and stalagmites formed a Shiva Linga in the Cave. Too much tourists and pilgrims has destroyed maximum portion of this cave due to lake of conservation and surveillance.



Fig No: 4 Limestone caves with Stalactite & Stalagmite at Mahakal

#### 2)JAYANTI:-

Jayanti is a small forest village in Buxa Tiger reserve in Alipurduar district of West Bengal, India. It's located along the Jayanti River,, forming a natural border with the Bhutan hills. It is popular with hikers for its views of the surrounded landscapes and wild fountains. There is a 13 km long trek way from Buxaduar to Jayanti passes through dense forest and undulating hill way. Jayanti offers the flavors of wild opted vast landscape of river bed widened in flood every year from Bhutan hills. There are ruins of British made structure of bridge which connected northern India during pre-independence. The wide vast landscape, the forest under the sheltering sky is a paradise for natural lovers. The beautiful Sinchula hills coloring the backdrop. The place is a picturesque location at the Buxa Tiger Reserve.



Fig No:5 Truncated spur & V shaped Valley formed by Jayanti river

### 3 ) BUXA NATIONAL PARK AND BUXA TIGER RESERVE FOREST:-

A 760 sq. km. tiger reserve located inside the Buxa national Park in West Bengal, India , in the Buxa hills of the southern hilly area of Bhutan. This area has been declared ' National Geological Monument' by The Geological Survey of India(GIS), for their protection, maintenance, promotion and enhancement of geotourism( " Geoheritage sites"- pib.nic.in, Press information Bureau. 9 mar,2016. Retrieved 15, Sep. 22018)(Geological Survey of India website)( National Geoheritage of India, NTACH)



Fig No: 6 Buxa national park at Buxa hills

### 4) RAJABHATKHAWA:-

Rajabhatkhawa is a small town situated just outside the Buxa Tiger Reserve. It is well known for its natural environment, which surrounded by mixed jungle at the foothills of The Himalaya. All permits for entering to Buxa Tiger Reserve can be taken from here. The folklore is that the kings of princely state Koochbehar and Bhutan used to come here for having picnic in the forest.



Fig No: 7 Panoramic serial profile of Sinchula range at Rajabhatkhawa

5) BUXA FORT:-

Besides the beauty of geographical location it has a vibrant historical background. It is located at an altitude 8867 m. in Buxa Tiger Reserve. The Bhutan king used this fort to protect the Silk Route from Tibet to India via Bhutan. Before the occupation of The British Raj this point was connecting point between King of Bhutan and kooch Kings. After that, British intervened and captured the fort which was formally handed over to the British on Nov.11, 1865 as a part of Sinchula treaty. After that legal possession The British Empire reconstructed this with stone and cement from its bamboo, wooden structure. The fort was later to be used as a high security prison and detention camp for Indian Revolutionaries. It was the most notorious and unreachable prison in India after the Cellular jail in Andaman. There are many routes for trekking around Buxa fort. Following routes are popular and safe for tourists and natural lovers. This are

- i) Form SANTALABARI to BUXA FORT, 5km.
- ii) From BUXA FORT to ROVERS POINT, 3km.
- iii) Form SANTALABARI to ROOPANG VALLEY, 14km.
- iv) From BUXA FORT to LEPCHAKHA, 5km.
- v) From BUXA FORT to CHUNAVATI. 4km.



Fig No: 8 Trekkers or Hikers paradise The Buxa frot

6) LEPCHAKHA :-

It is a hilltop village nestled at the altitude of almost 3500 ft. the beauty of the nature mesmerize anybody definitely. Sudden the floating clouds cover up the whole sunshine valley, allover it's a heavenly scenic beauty for nature lover and geotourist. This Drukpa village is close to Indo- Bhutan border and situated in Buxa Tiger Reserve.



Fig no: 9 cloud covered mountain at Lepchakha

This geosites has been endowed by the surreal natural beauty. The proximity of Chunavati adding up as a one more jewel I this offbeat tourist destination in the Sinchula Range.

### 7 ) CHUNAVATI:-

Chunavati is cool and calm place at the lap of the Sinchula Range. It is a Drukpa village with incredible beauty of Buxa hill forest. The name of this village literally means, from Chuna means calcium carbonate. Geologically this area is made of  $\text{CaCo}_3$ , dolomite.



Fig No: 10 Area of different Karst solution landforms at Chunabhati

### 8 ) RAIMATANG:-

Carding in the lap of Mother Nature where the is at its pristine form, the sight of meandering river streams and dense forest always accompanying the bystander, scenically blessed and rich in flora and fauna. Raimatang with its serene, ambience and astounding trekking routes has ensnared the heart of traveler visiting Raimatang. It's a safe haven for the tourists who are in search of solitude far from maddening crowd amidst the nurturing soul of nature.



Fig No:11 Lush green Mountain range



### 9 ) SIKIAJHORA:-

It is nestled amidst the lush green forest of the foothills of The Himalaya. The term 'Jhora' locally means 'water body' or 'lake'. In the past few years this geosites has gaining its prominence in the field of tourism at Dooars for being a scenically blessed water body with lots of migratory birds. The unique location of Sikiajhora in the lap of jungle made it favored offbeat



destination of Dooars.

Fig No:12 Lake formed by hilly jhora

### 10 ) SINCHULA:-

The Sinchula hill range lies all along the northern side of Buxa Tiger Reserve and eastern boundary touches Assam state. The average range of elevation is from 4000-6200ft. the highest peak, Renigango being 6222ft. These hills run generally in long even ridges. Near the hills, in the foreground, are dense sal and other forests being intersected by numerous rivers and streams. The Sinchula Range can nearly everywhere be ascended by men and beasts but not by wheeled vehicles.



Fig No:13 Snow covered mountains

11 ) SANTALABARI:-

A small beautiful forest village in the deep of Buxa Tiger Reserve core area. This is one of the most popular area and considered as the best inside the reserve forest especially for the nature lovers. A breathtaking trek starts from Santalabari. This whole area is full of different types of flora and faunas. There are huge biodiversity.



Fig No:14 Foothills of Himalaya

12 ) RAIDAK:-

It is a trans- boundary river, flows through Bhutan(Wong Chhu), a tributary of Brahmaputra. The main river is a rapid stream running over a large boldered bed. The unique location of south Raidak can make itself a favored tourist destination in Doars especially in Sinchula range. Tourists can observed and catch the glimpse of the unique culture and tradition of Rabha Tribes.



Fig No:15 Mountainous stream with meandrous bend

### 13 ) BHUTANGHAT:-

Strategically located near the border with Bhutan, the region is blessed by scenic beauty of Calcium Carbonate rock and swift flowing Raidak River. It is located in a mountainous terrain, flanked by hills covered with luxurious green forests. It has an elephant corridor and also an attractive destination for wild lovers. This site is located on the bank of spiraling river Raidak with a picturesque nature. Bhutanghat has gained its prominence in the tourism field for being a scenically blessed hamlet. Many tourists have been bewitched by the mesmerizing scenic beauty making Bhutanghat a must visit destination. The proximity of tri-junction of Bhutan-Bengal-Assam offers great avenues for nature and adventure geo-tourism.



Fig No:16 Weathering by Solution process

Bhutannghat is full of pictorial a sight which gives a visual treat to the tourists. Strolling in the forested area while immersing into the serene ambiance of Bhutanghat which is only broken by chirping of exotic migratory birds many tourists have been attracted towards this area to get this experience. There is a sublime beauty of Pipingkhola.

### CONCLUTION:-

Tourism sector is totally depends on natural heritage, cultural heritage, geological structure, ecology and manmade architects. To develop the tourism we have to improve the values of local people. Community participation is the only way to accelerate the economic status of an area. This will require every staff related with this sector should be concern, skilled, empathetic and honest. Only the attitude of both local people and government can make a difference. Only overall growth can generate the employment and revenue collection.

Till now these geosites offer only the basic amenities to tourists to spend the night with very low security and rescue options, so till date having all the potentialities because of apathetic attitude of government these geosites are neglected and not much tourists visit here. Most of these geosites, there are no place to stay at night. So the travelers must come back before night and can't enjoy the livelihood of jungle and that place at night. It is a big drawback to flourish this geosites as a must explorable place.

### Suggestions:-

- A master plan is needed to develop this sector which will show the overall development plan about economy, culture, infrastructure, social wellbeing etc.
- Proper development programmers should be taken of tourist facilities, communication and transportations etc.
- We have to realize and respect the value of resources gifted by nature, like flora, fauna, ecosystem, biodiversity, geology of this region.
- All the informations about tourism should be available on websites and in the offices of tourism department.

- Human resource development organizations should take proper care to improve the skill and proficiency of local people to enhance the entire sector with sustainable development of resources.
- The quality of the services and facilities provided by the hotels, transports, tour guides, tour operator companies must be supervised thoroughly. Though this area is far from township area, so special security should be provided for tourists.

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