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		THO 'CHU	RISM DEVELOPMENT AND TOURISM UGHTS & ITS' PROBLEMS AND PROSPECTS AT IPI - CHAR'- WETLAND (PURBASTHALI); BA BARDDHAMAN ; WEST BENGAL; INDIA	KEY WORDS: Tourism, Ecotourism, Meander scroll, Wetland, Modernization, Biodiversity, Sanctuary.
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ABSTRACT	Chupi-Char, a natural wetland is considered a biodiversity hotspot. This lake is important for migratory birds. The main focus of this study is general profile of economy, demography and potentiality of tourism development as well as thoughtful planning of ecotourism with infrastructure change.			

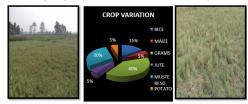
INTRODUCTION:

Wetlands are the most productive and biologically diverse ecosystem in the world which serves as an ideal habitat for different types of plants, animal and microorganism. Purbasthali oxbow lake, also known as Chupi-char, is created by river Ganga on its western bank in Burdwan district, West Bengal, India.

This lake is recognized as globally important, for migratory birds stop here to feed and rest every winter during their long-distance migration. Attraction of chupi-char increases during the migration of birds which also attract tourists to come here. Different recreational facilities as well as cultural diversity and nearby tourist attractions are important for growth of this tourist spot. Ecotourism concept are applicable for sustainable growth of chupi-char as a tourist spot. The present study was conducted for the growing problems and prospects of Chupi –char, Purbasthali in the near future, as an ecotourism region.

BACKGROUND:

Study area is situated on a monotonous flat riverine plain. Alluvium soil dominates this area. The climate is characteristically oppressive hot summer, high humidity and well distributed rainfall. Temperature in this region varies from 17-18 degree Celsius in Winter to 30-32 degree Celsius in Summer. Rainfall varies from 280-289 mm during august – September and 9-13 mm during December to January. The study area does not have many species of natural vegetation. The whole area is covered with greenery, fruit-gardens and agricultural fields producing a considerable amount of vegetables and fruits for exports. Present field study helps to identify major species and their distribution patterns.



(Different kinds of vegetables and crops at chupi-char)

This wetland is commonly known as, 'CHUPI KASTHASALI BIRD SANCTUARY". During 1995 "INSTITUTE OF WETLAND MANAGEMENT" adopted eight spots for wetland reclamation program in West Bengal; Chupi-char was one of them. Morphologically it was one of the important examples of Meander Scroll of river Bhagarathi. This channel was connected with the main course of Bhagirathi. This channel is popularly known as '**Chari Ganga River'**. This event happen during 1992. This wetland was 10 km in length and 3.15 sq.km in aerial extent. Sinuosity index of this course ranges from 1.27 to 3.32. During 2002 Nov "Barddhaman Zila Parishad" published a project work "Ecotourism Project Chupichar". Several programmes are taken for upliftment of tourism project like- plantation, formation of guest house, modernization programme of watchtower, park, Picnic spot etc. Most of the birds are come during winter period from December to February. The come from Andaman Nicobar, Srilanka, Mayanmar, Maldivas, Siberia, China, Nepal, Bhutan, Ladakh, Central Asia, East and South Europe. Local villagers celebrate "PAKSHI DIVAS" in this place every year since 1992.The common slogan is "SAVE BIRD; BE FRIEND OF THE ENVIRONMENT", according to organization "Kasthasali Banabithi". This habitat attracted migratory birds owing to diversified aquatic plants and a steady supply of planktons.

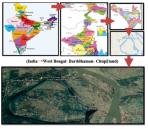


(Chupi char, Purbasthali, Burddhaman:"EXPERIENCE LIFE EVOLVES HERE")

The main occupation of this region is fishing. Around 45 million tons of fish are caught by local fisherman every year. The economic value of such fish is about 22.50 lakes. Wetland water is used for irrigation, flood control, boating etc. During winter months, the peak season of tourism, Rs 4000/monthes from Rickshaw or auto rickshaw, Rs 4000/month from boating, Rs 5000/month selling fruits and sweets etc. is earned by local needy villagers of the region.

STUDY AREA:

The study area is based on Chupi-char, a natural ox bow lake and their surroundings, Purbasthali, Purba Barddhaman. The geographical location is 88.19.04 E & 88.22E longitude and 23.26 N to 23.26.45 N latitude. It is created by river Ganga on its western bank. This area is only 8 km from the Nabadwip town. The lake was formed by the meandering cut-off of river Ganga, over last 40 years. The area has transformed into a closed loop, allowing emergence of the ox bow lake. This channel of water course that feeds the ox bow lake has connectivity with the main river. In the near future it will be separated from the main river. The area of oxbow-lake is 3.50km^2. The water depth varies between 1.0 m and 4.5 m.



Literature review:

- Chowdhuri S. (2017).-The main focus of his work was study of water quality and phytoplankton diversity of purbasthali, ox bow lake.
- Sen K & Mandal R.(2016) .- The main issue of their work was variation and diversity of birds species in purbasthali, chupichar, WB,India.
- Roy MB & chattergee D & etc (2016)- It focuses on the biodiversity of this wetland. specially the migratory bird diversity., the effect of water quality on migratory birds biodiversity.
- 4. Mondal M H. & Siddique G (2018)- The main findings are nature of waterbirds & also health of wetland ecosystem.
- 5. Kundu N, Pal M & Saha S (2007)- The main focus was a resource recovery system of East Kolkata wetland.
- Roy MB, Roy R , Roy PK & Majumder A (2015)- The main findings are livelihood pattern, ecological importance & growing threats regarding East Kolkata Wetland.

RESEARCH GAP:

From the literature review it is studied that the area was surveyed by different researchers based on concepts of biodiversity, status of birds species, morphological characteristics. But the area was not highlighted as a tourism perspective, specially from an ecotourism view point. So the main focus of this paper is based on potentiality of Chupi-char as an ecotourism region focused on bird sanctuary.

OBJECTIVES:

The main objectives are as follow:

- 1. To examine the influence of aesthetic nature of physical variables for the growth of tourism industry.
- 2. Evaluate the benefits of local economy due to growth of local tourism.
- 3. To examine the relationship between pull factor for the tourists.
- 4. Identify the facilities or infrastructure for the Tourism development of the region.
- 5. Special attention based on bird sanctuary and their habitat.
- 6. To assess the problem for identifying the local tourism and suggest some measures.

Hypothesis:

All the objectives are considered for formulating the hypothesis based on Null hypothesis (Ho). Negative relationship is considered for establishment of objectives.

Methodology:

About 97 samples are collected for household survey. 53 samples are also collected from different tourists mainly in the winter period. The method of investigation is based on survey procedure using random sampling method. Different variables are considered for such work.

Collection of data:

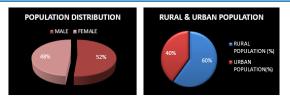
Primary and secondary data are collected for purpose of this work. Household survey, tourist survey, hotel survey are conducted phase by phase, for development of this work.



Analysis:

Demographic Characteristics: Population Distribution:

Total population of the region is 7159. Out of which male percentage is 52 and female percentage 48. It reveals balanced sex ratio of the region.



(Population distribution – male, female and rural & urban population)

Percentage of rural population is 60% and urban is 40%. Most of the people of this region are mainly rural in nature. Study area and its hinterland are rural in character.

• Literacy Rate:

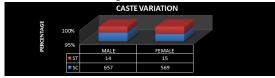
Literacy rate of the region is more or less prosperous. Male literacy rate is 76.39 and female literacy rate is 54.35%. It is significant that male literacy rate is much higher than female literacy. Therefore female population of this region is socially or economically much less developed than the male population.



(Chupi Akinchan Granthagar - Literacy rate - kasthasali F. P. School)

Caste Variation:

Most of the region is dominated by SC and ST population. Total SC and ST population of this study area is 657 persons and 14 persons. Total SC and ST Female population of study area is 569 persons and 15 persons. The area is dominated by SC population. OBC population is dominant within Idrakshpur Island. Backward populations are the main features of the area. This diagram reveals the social structure of the region.



(SC-ST caste variation & Male- Female distribution)

Workers & Marginal workers:

Male workers of this region are 2185 persons and 346 persons are female workers .So most of the workers of this region are mainly male. Female population is doing their work for domestic purpose. So this structure represents socio economic backwardness of female population.



(Male & Female Workers and Marginal workers variation)

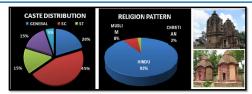
The region is significant in respect of marginal workers in occupational structure, Male Marginal workers is 315 persons and Female Marginal workers is 143 persons. It reveals poor socio-economic situation of the region.

2. Household characteristics:Caste & Religion pattern:

Considering cast pattern of this study region, most of the people of the Chupi-Char are SC(45%) and 20% people belong to the general caste, 15% people are of both OBC A & OBC B. Therefore, most of the people of the study region specially Chupi- Char is SC. So, socially this is considered as a backward region.

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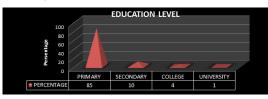
Volume-8 | Issue-5 | May-2019 | PRINT ISSN No. 2250 - 1991



Most of the population in this region is Hinduism (90%) and Muslim population is 8%. So, socially Hindu religion is dominant in this area. A good number of temples is the important indicator of Hindu religion prosperity.

Education Level:

The status of education level is significantly poor because 85% population is mainly educated up to primary level. 10% is a secondary level. So this situation is very much hopeless for any kind of development program-mainly social awareness, as well as all round development.



Income distribution and source of income:

Most of the population of the study region is economically poor because 80% population earns less than 10,000 annually. So, they are mainly located under BPL (Below Poverty Level). 10% populations earn 10,000-30,000 annually and exceptionally 2% population earns more than 50,000 annually.

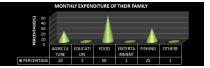


(Income distribution & Source of income in annual range)

Most of the population of this region is under primary activity. It is relevant to their income distribution. They are mainly engaged in agriculture and fishing (40% and 45%). Therefore, they are mainly depend on fishing based on Chupi wetland as well as Ganga river and 40% people are engaged in subsistence farming based on fertile alluvial soil and local irrigation based on perennial wetland.

Monthly Expenditure:

Their income is mainly used for their daily needs like food (50%), fishing (25%) and agriculture (20%). This situation is relevant because their poor standard of living reflect on monthly expenditure in food, agriculture and fishing.



3. Holistic Social Development:

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Most of the population of this region is very poor, under BPL level but their social development is significant. They are very much aware of their social life. It also reflects their social bonding as well as cultural tradition. At a glance, holistic social development of the population of Chupi village is high and social development is diversified.



It is a village with a police station and a rail station in Kalna subdivision of Purba-Barddhaman district. It is situated at 129 km north of Kolkata. Accessibility of this region is more or less developing but some proper attention will be needed for speedy connectivity of the Chupi-Char for the tourism purpose and local livelihood pattern. Krishnanagar, Nabadwip are important influence of tourist as well as local villagers for their requirements. Village level different service center like post office, panchyet, medical facility, solar power facility as well as local club are important for different social development or balanced regional development.



4. Tourism development and Tourism thoughts:

It is well known that, wet-lands are the best habitat of migratory birds Chupi Char wetland attracts many migratory birds at the time of winter (Dec - Feb). Attraction of Chupi char has increased during the winter period due to abundance of migratory birds. To develop tourism here the government has taken some steps like a small guest house, privet hotel; a watch tower for watching migratory birds, metal road, picnic spot etc was build.



Boating facilities are also made available here by local people for watching migratory birds. Krishnanagar, Mayapur, Kalna and Nabadwip are places of tourist interest and all are close to Chupi char. Mayapur is the head quarter of Iskon and there is a beautiful temple of Lord Krishna. Nabadwaip is famous for being the birth place of the Hindu saint, Sri Chaitanya Mahaprabhu. Kalna is popular for different types of temples. Many tourists come to Mayapur, Kalna and Nbadwip even from abroad and they also visit the Chupi-char wetland as a nearest tourist spot. It is also a popular place for recreation. It is also a comfortable habitat for migratory birds.



Generally during the winter season 108 to 110 bird species are observed. It totally depends on weather. Out of which 58% resident, 42 are winter migrants. The lake is resided by lots of local birds as well as residential bird species, like bronze winged jacana, common redshank, cotton pigmy goose, black winged stilt are found in Purbasthali, Chupi-lake. Local birds such as common myna, spot wild dove, sarker falcon, kingfisher, yellow-footed green pigeon, rose ringed parrot, Greater council, black drongo, asian koel, blue kingfisher, laughing dove, red ventedbulbul, babbler and black kites, common tailorbirds are observed in Chupi- char area. Resident bird species includes pheasant tailed jacana, purple moorhen, purple heron etc.



(Surrounding scenarios and solar power system)

There are many hotels, lodge, home, stay for tourism purpose. Some shops are there for snacks type food. This place is very much

significant for bird lovers. The tourist facilities have also increased because of construction of lake side cottages



(Different types of hotel, lodge and child park at surr ounding Chupi wetland)

Child- Park is a great attraction for kids. Watch Tower is significant for bird watching. Ox Bow Lake, morphological features is also significant for researcher and it increases the landscape beauty. Boating and guide facility are also significant and available. The rates are 150/hours for boats and 100/hours for guides. Bird watching in the lake is done in local country boats and boatmen help the guests to spot the birds. Apart from being a bird watcher paradise, the whole of Purbasthali region is steeped in history and religion, with town like Mayapur and Nabadwip , Kalna within 15 km and temples and ruins of history landmark events scattered throughout the region, Purbasthali is also favourite to history buffs. It site in the middle of through vast stretches of greenery and villages famous for their textile and handicrafts likes Samudragarh and Natangram.



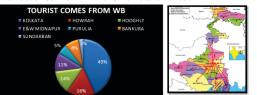
(WATCH TOWER) (GREENAR

(GREENARY WETLAND) (BOATING F

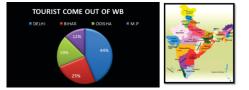
It will be very rewarding for weakened tour. It is famous for winter season picnic. Almost 1 lakes tourist visit this place during winter season every year. This is also very much important for fishing vacation from 23rd june to 23rd September. It is also beautiful for watching sunrise and sunset place. We Government has tride to develop this place is the "Mangla Jori Model" on chillika in Odisha. The village Chupi has old terracotta temples. Specially, it is noticed that there are so many popular and attractive area surroundings this lake and there is no problem for tourists to spend time and get entertained for long hours.

Tourist comes from WB and out of WB:

From the diagram it is observed that a major percentage tourists are coming from Kolkata (43%), Howrah (16%). 14% tourists are comes from Hooghly district and 11% from Midnapur district etc. Dominant tourist within WB are Kolkata oriented.



Apart from it, out of WB tourist coming from Delhi 44% and 25% from Bihar and 19% from Odisha and 12% from MP. Major tourists are coming from New Delhi and it mainly attracts national capital tourists.

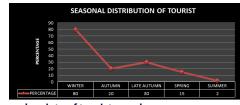


Seasonal variations of Tourist:

The diagram shows that most of the tourists are coming during www.worldwidejournals.com

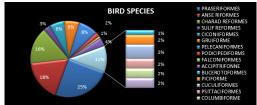
winter season (80%) and it is minimum during summer (2%). Winter season tourists are highly abundant due to attraction of migratory birds within wetlands, picnic purpose as well as surrounding. Pick tourism season, mainly in Mayapur and Nabadwip, is during winter period.

During rainy period tourism escalates significantly due to attractive greenery landscape, as well as fishing purpose.



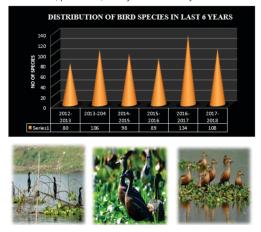
Seasonal variety of tourist peoples • Different species at Chupi-Char:

According the local guide the number of bird species is increasing. For example, purple swamp hen was found in maximum number in 2018. Brahmani (Tadorna ferruginea) was the least counted species in 2018. Brahmani and Chumduck are rare species. Bragmani birds are gradually decreasing and chumduck is a newly found species. After a long period of time Eurasian spoonbill (platalea leu) had been seen in 2018. In the respect of 2018 total number of purple hen is maximum (1600) whereas minimum number is 150 of Brahmani.



Coming different kinds of bird-species in last 6 years:

Generally bird species gradually increase with reference to time with slight variation. There is positive relationship between the year-wise increases in migratory birds. But it is also affected by some environmental degradation like poor water quality; human encroachment; pollution; heavy loud sound system etc.



(Different kinds of bird species at chupi-Char wetland)

The main attractions of migratory-birds are Purple swamp hen (porphyrio porphyrio), Common coot (Fulica atra), Garganey (Anas querquedula), Red crested pochard (Netta rufina), Black hooded oriole (oriolus xanthornus) and so on.

RESULT & FINDINGS:

Local beautiful physical landscape as well as morphological features have a positive role for the growth of tourism industries of Chupi-char, Purbasthali. Local greenery landscape, beautiful Ox Bow Lake, natural river, sunrise and sunset points as well as natural sustainable ecosystem help to grow tourism industries in this area. Local economy mainly depends on agriculture. Fishing is another

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important occupation of that region. The main functions at the wetland are bathing, washing, pisiculture, irrigation, wetland cultivation, recreation purpose. Most of the people are under BPL category, so their livelihood pattern is low. From tourism they win boost their economy through local shops, boating, hotel, lodge, home-stay, fishing, transport car for hire of tourism. So, local tourism development will help to grow local economy. Chupi char is very much attractive for migratory birds. Greenery fields, boating, picnic, recreation as well as historical hinterland and also attractive tourism area like Kalna; Nabadwip; Mayapur. So, several pull factors also attract tourist and have immense potentiality for growth of tourism. Inspite of some problems of infrastructure mainly modernization of tourism concept this area has some potentiality for growth of tourism based on traditional common infrastructure, specially weakened tourism and if infrastructure is slightly modernized the area will be popularly treated as an ecotourism region.

Growth of bird sanctuary and scenic beauty are significant and main factors of the development of tourism but habitat places are must be carefully maintained and some parameter or infrastructure must be developed for the full phase development of bird sanctuary. There are many problems for proper growth of tourism for the study area. So problems can be identified and some measures as well as suggestion will help to uplift of region.

Limitations and Threats:

Birds are often considered to be outstanding indicators of the health of the overall environment. But present day birds are threatened due to:

1. Climate change: climate change is one of the most publicized conservation issues of our time. Due to climate change migratory birds do not come in proper time in this area.

2. Area protection: The total area of Chupi char-lake is unprotected. This area is totally guard-less, no monitoring system is in place. This is suitable for bird catchers.

3. Hybridization: Hybridization may also endanger birds, damaging the gene stocks.

4. Pollution: Pollution has led to serious declines in some bird species. The pesticide DDT is responsible for thinning egg shells of nesting birds.

5. Other problems:

- 1. Problems of accessibility and connectivity.
- 2. Changing land-use pattern of that region.
- Lack of modernization program of this sanctuary 3 infrastructure.
- 4. Huge amount of garbage and waste.
- 5. Problem of manpower organization.
- Problems of regarding lodge-hotels etc. 6.
- 7. Problem of Mass awareness regarding wetland and its value to the local people.
- 8. Problem on administrative network.
- 9. Problem regarding proper advertisement.
- 10. Negative impact on incoming birds.
- 11. Increasing number of bird poachers.

Suggestion:

- Construction of metalled road or concrete road from chupi-1. hat-tola to
- Kasthoisali Banabithi and kasthasali primary school to picnic spot.
- 2. Another important metalled road from picnic spot to watch tower.
- Afforestation programme around wetland, wasteland area 3. should be properly utilized with intensive afforastation.
- 4. Modernization programme of park.
- 5. Reformation of watch tower.
- Speedy accessibility of water transport from Mayapur to 6. Chupichar.
- Needs of boats for watching birds.
- 8. Permanent management regarding drinking water.

- Formation of volantary organisation for caring of migratory 9. birds as well as wetland area.
- 10. Infrastructural change for ecotourism purpose of the area considering local resource as well as participation of local people by local administration with the help of tourism department, irrigation department as well as Purba Barddhaman Zilla Parishad etc .
- 11. Awareness programme of local people technical as well as economic support for bird sanctuary programme.
- 12. Conservation approach for ecological health of the chupi char.
- 13. Careful maintenance of biodiversity.
- 14. More government allowance for its development.
- 15. In picnic session high decibel sound should be banded.
- 16. It is very suitable place for bird catching. To stop it the local police has to be more active.
- 17. Conservation of drinking water.
- 18. Develop hotel condition and facilities.

CONCLUSION:

Chupi-char has important role to maintain the ecological and environmental balance. It is important habitat of birds; moreover, it is significant for irrigation , pisiculture, recreation etc. Considering to the natural resources, as well as assistant of villagers and government aid, Chupi-char wetland has immense potentiality for development of tourism. Not only chupi char, but also nearness of Kalna, Mayapur, Nabadwip, Guptipara, Sammudragarh, - vast stretches of hinterland have greater attention of tourist with proper management and development by state government.

But this place has been developed as an ecotourism area if proper care and attention should be given by "West Bengal Government of Tourism Department" to transform it into a thriving tourist attraction.

Acknowledgement:

- Special thanks to local villagers, tourist for supplying the 1. valuable informations regarding our paper.
- 2 Local environmentalist "Bird Lover" Sanjoy Singha and Achinta Singha- secretory of "Kasthasali Banabithi" for their valuable information regarding statistics of birds.
- Nabi Box Sekh , president of the organization of "Kasthasali 3. Banabithi" for continuous informations of the study area.
- 4 Thanks to manager and assistance of surrounding hotel and cottage, for sharing various informations about yearly participated tourist and local surrounding environment and problems.

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