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RESEARCH ARTICLE

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A STUDY ON GEO-TOURISM PERSPECTIVE OF MUDHALIYAR KUPPAM BACKWATER IN CHEYYUR TALUK OF CHENGALPATTU DISTRICT IN TAMIL NADU- A GEOSPATIAL APPROACH

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ABSTRACT

The present study aims to identify the factors encourages tourist to visit backwater regions of Mudhaliyar Kuppam in Cheyyur Taluk of Chengalpattu District in Tamil Nadu. Geotourism is a set of principles that foster the enhancement of sustainable destinations and enhances the geographical character of a place. Geographical factors are the major reason for the development of tourism in the study area. Mudaliarkuppam backwaters are adjacent to the Bay of Bengal on the East Coast Road. This is yet another heaven for wading birds and migratory ducks. It is brackish backwater with a lot of aquatic vegetation like water hyacinth, green algae etc. Most of the travelers are enchanted by the backwaters. To accomplish the study objectives, a survey questionnaire was developed for this research. The questionnaire included questions regarding tourists' perception, about backwater tourism, as well as consumer preference and the factors influencing demand for backwater tourism. The study has made use of high-resolution IRS LISS IV pan merged satellite imagery to identify the physiographic setup. ERDAS image processing software used for demarcating the study area and ArcGIS software used for mapping the various physiographic setup.

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INTRODUCTION

The word Sustainability has become an important nomenclature in the field of the tourism industry because it is directly related to the available resources. It throws light on how this existing resource is used presently and how it will be utilized in the future. It creates awareness among the people to conserve the environment, as sustainable tourism is booming in many parts of the world. As the number of visitors to a destination increases, so does the curiosity and interest in visiting and experiencing new places and a new culture. Mudaliarkuppam attracts tourist from all the parts of the country. Mudaliarkuppam backwater is adjacent to the Bay of Bengal on the East Coast Road. Mudaliarkuppam is an incredible tourist destination. It was developed by the Tamil Nadu Tourism Development Corporation on the Odiyur lake backwater and preserves the boating house located in the study area. Mudaliarkuppam Boat House is also known by Raindrop Boat House. Mudaliarkuppam next to Mamallapuram on ECR (East Coast Road), is an excellent place with backwaters from the Bay of Bengal which extends to about 10 km and has a beach which can be reached after a 15-20 minute boat ride. Tourist visits this place alike, to while away their time on the

choicest array of rowboats, pedal boat and motorboats. It has water sports like rowing, cruising, speed boating, water scooting and kayaking facilities. The geographical factors enhanced the development of tourism in the study area.

Study Area: Mudhaliyar Kuppam is located in the Cheyyur Taluk of Chengalpattu District in Tamil Nadu. The district headquarters is located at Chengalpattu. On 18 July 2019, the Kancheepuram district bifurcation was announced and it came into existence on 29 November 2019, and it was bifurcated into Kancheepuram and Chengalpattu district. Chengalpattu district bounded by Bay of Bengal in the east, Chennai district in the north, Kanchipuram and Tiruvannamalai district in the west and Villupuram district in the south. The southern part of Chengalpattu district is more rural while the northern part of the Chengalpattu district is suburbs/extended suburbs of the Chennai city. The district lies between 12° 10' and 13° 15' northern latitude and 79° 15' and 80° 20' of the eastern longitude. The Mudhaliyar Kuppam lies in the Cheyyur Taluk and it lies between 12° 15' to 12° 32' northern latitude and 79° 48' to 80° 10' east longitude (Fig.1). Chunambedu and Kottaikadu villages of Cheyyur, Chengalpet are situated on the southern side of this taluk. A narrow strip of land on the south of these villages is connected to the sea about 3 Km from the

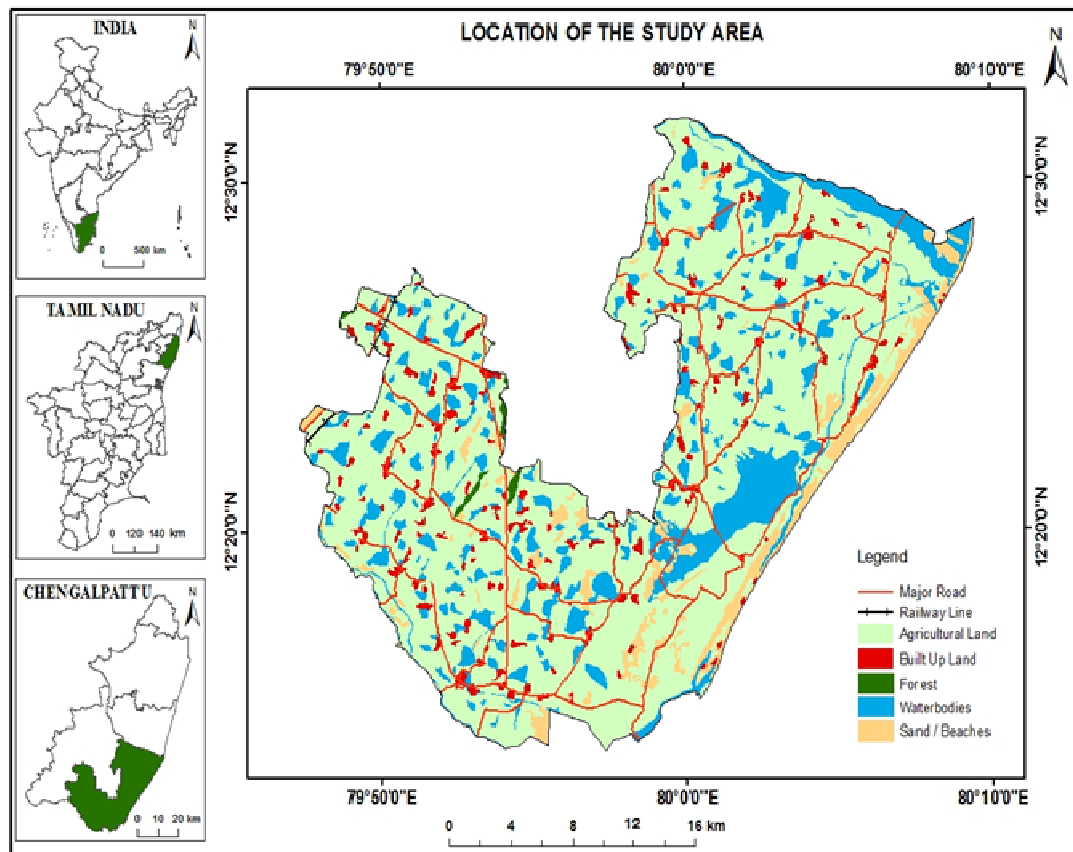


Fig. 1. Mudhaliyar Kuppam lies in the Cheyur Taluk and it lies between 12° 15' to 12° 32' northern latitude and 79° 48' to 80° 10' east longitude

site. Using the high saline water from the nearby backwater uses this land for salt production. The coastal villages of this taluk are Alambarai, Vembanur, Panaiyur, Mudaliarkuppam, Parmankenni, Mugaiyur, Vadapattinam, Kanathur and Kadalur. The coastal land up to a distance of half a kilometre to one kilometre is covered with sand. These areas are owned by the public and planted with casuarina trees. Buckingham Canal passes through these villages. This canal joins the sea along the Marakkanam backwater in Alambarai village. The Palar River passes through and joins the sea in Kadalur village, the northernmost coastal village of this taluk. Cheyyur village is not a coastal village but a major area of this village is covered with the Cheyyur backwater, that joins the Buckingham canal at Mudaliarkuppam about 2 Km away from the mouth. Another two villages that are, Pakkur and Kodur adjoining to this backwater. There exists a large patch of 1554.7 ha. Saline affected land surrounding the Cheyyur backwater on the western side of the Buckingham canal. Some patches of this land are composed of poor quality soil. The quantity of brackish water is much less except in the rainy season, for undertaking shrimp farming. One crop can be cultured during the rainy season utilizing the rainwater.

MATERIALS AND METHODS

As this is a topic of interest and a study on the geo-tourism perspective of mudhaliyarkuppam backwater, with particular reference to the physiographic set up which supports tourism. Regarding the study area various data collected from various sources. The base map for the study area was prepared using the Survey of India topographic sheets of 1:50,000 scale covering the toposheet number 57/P/14, 57/P/15, 66/D/01, 66/D/02 and 66/D/03. The toposheet collected from Survey of

India, Chennai. The satellite data products are used to generate recent land use and land cover maps. Hundred random sample points are collected for field check to finalize the maps. Hence, the second part of the research involved in carrying out a literature review. The third part of the research has been carried out through the analysis of primary and secondary data available in this context. This was followed by selecting a neighbourhood to analyze the physiographic setup which encourages the backwater tourism in the study area. The fourth part of the research is directed towards the geographical factors which supports tourism in the study area. The final stage, which leads to integrating and analyzing the physiographic setup and tourism in the backwaters. By applying Geographical Information System and Remote Sensing techniques interrelation between Geography and Tourism are analysed and interpreted with the support of mapping techniques.

RESULTS AND DISCUSSION

Geotourism Perspectives

Geomorphology: Identification and the study of landforms could be useful for the evaluation of natural resources and environmental planning. Various landform features like beach ridge (young coastal plain), beach (young coastal plain), coastal plain deep, inselberg, moderately weathered/buried pediplain, older coastal plain deep, pediment/valley floor, shallow weathered/buried pediplain are identified in the study area (Fig. No.2). The geographical factors of natural resources supported tourism development in the study area.

Beach ridge: It has been observed that the beach ridge present in the study area has a diverse nature due to varying lithology.

The beach ridge is observed in the eastern part of the study area. It is a wave-deposited ridge running parallel to a shoreline. It is composed of sand and sediment worked from underlying beach material. Sand dunes are associated with a beach ridge.

Beach: It is observed in the eastern part of the study area. It is a shore or a narrow strip of land along seashore consisting of unconsolidated materials like sand and silt. Sometimes cobbles or shingles are also present on the beach. Along the coast beaches occur where wave or current action deposits and reworks sediments.

Coastal plain: Coastal plain observed in the eastern part of the study area. Coastal plains are regional features of low relief bounded seaward by shore/continental slope and landward by nearest elevated land/highlands, and sloping very gently seaward, which is mainly formed by the continuing coastal processes of erosion and accretion. They include landforms of continental and marine origin which comprised of sand, silt and clay.

Inselberg: It is observed in the southwestern part of the study area. It is an isolated knob or ridge that rises abruptly from a gentle sloping or virtual level surrounding plain. They are steep-sided residual hills of extremity resistant rocks surrounded by the extensive flat surface of the pediplain from where the rocks have been cut and removed by large scale weathering, erosion and deflation by the wind.

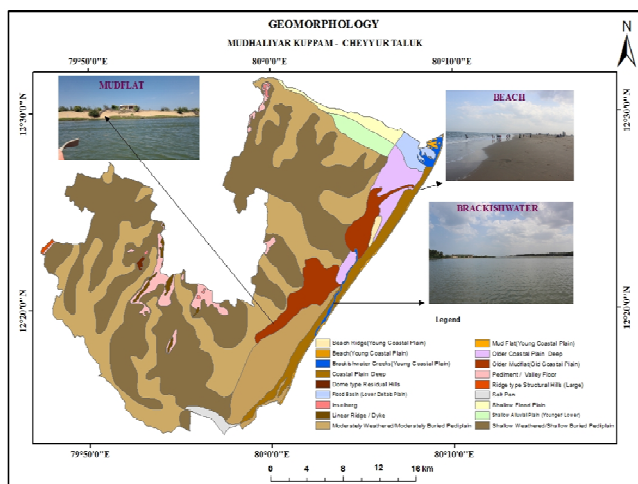


Fig. 2. Geomorphology

Moderately weathered/Buried pediplain: Moderately buried pediplain is observed in almost all the areas in the study area. Generally, it is a flat and smooth surface of weathered pediplain. Depending upon the thickness of the weathering/accumulated material and its composition these landforms are very good in recharge and storage zones. Faults/fracture zones passing through this unit act as conduits for movement and occurrence of groundwater.

Older coastal plain: It is observed in the northeastern part of the study area. The older coastal plain is a flat/gently undulating surface formed by river action. Older coastal plains are the earlier cycle of erosion and it consists of gravel, sand, silt and clay of varying lithology.

Pediment: Pediments are observed in the northwestern and southwestern part of the study area. Pediments are gentle slope

smooth surface of erosional bedrock. The plains are essentially to be of erosional bedrock features. Pediments are considered as moderate zones for groundwater potential. Based on underlying folded structures, fracture systems and degree of weathering the groundwater condition in pediments is expected to vary.

Shallow weathered/Buried pediplain: The shallow weathered/buried pediplain is observed almost in all the areas. It is a gently sloping flat and smooth surface. Poor to moderate yields are expected in this unit and moderate yields are expected along fracture/lineament. Coalescence of buried pediments with a thick cover of weathered materials forms the buried pediplains. These are either bare or thinly vegetated with accumulations of partly limonitised clayey sand and gravel. Groundwater condition is poor to moderate.

Drainage: The water bodies include both natural and manmade water features namely rivers/streams/lakes/tanks and backwater. Drainage is another important geographical factor plays a major role in the development of backwater tourism in the study area.

Odaiyur Lake: The Odaiyur Lake is one of the biggest lakes in East Coast road. The size of the Odaiyur Lake is much larger than muthukaddu backwater. Odaiyur lake backwater is a brackish water lagoon adjacent to the Bay of Bengal on the East Coast Road. Odaiyur Lake is more serene and it is a major source of freshwater to in and around places. The lake is 10km long and 5Km wide. The lake has a number of the small freshwater canal flowing into it from the irrigation tank, agricultural lands and catchment area. As it also comes under one among the wetland ecosystem. The habitat consists of mudflat, sandbanks, salt pan and coastal water.

Buckingham Canal: The Buckingham Canal runs from Kakinada City in the East Godavari district of Andhra Pradesh via Tiruvallur, Chennai, Chengalpattu and finally to Viluppuram districts in Tamil Nadu and it is 796 kilometres long freshwater navigation canal. Most of the natural backwaters are connected by the Buckingham canal. It was an important waterway during the late nineteenth and early twentieth centuries and it was constructed during British rule. Buckingham Canal runs parallel in between Old Mahabalipuram Road (OMR) and East Coast Road (ECR). The Buckingham canal divides longitudinally the low-lying area existing in between the new and old Mahabalipuram. The low-lying area is affected by the saline water of the canal. This long stretched Buckingham canal connects the Mudaliarkuppam backwater.

Backwater: This is heaven for wading birds and migratory ducks. The habitat consists of salt pans, coastal water mudflats and sandbanks. It is brackish backwater with a lot of aquatic vegetation like water hyacinth, green algae etc. Though the lagoon stretch for a very long distance, the real waterway opened for tourists is 3-4 km only. At times there might be some dryness and black water at a few places which may be an eyesore but in general, it is a serene waterway that can be enjoyed. Mudaliarkuppam backwater originated from the Odaiyur Lake.

Geo – Tourism

Water Sports Activities: Mudaliarkuppam boat house is the most popular water sports facility developed by Tamil Nadu

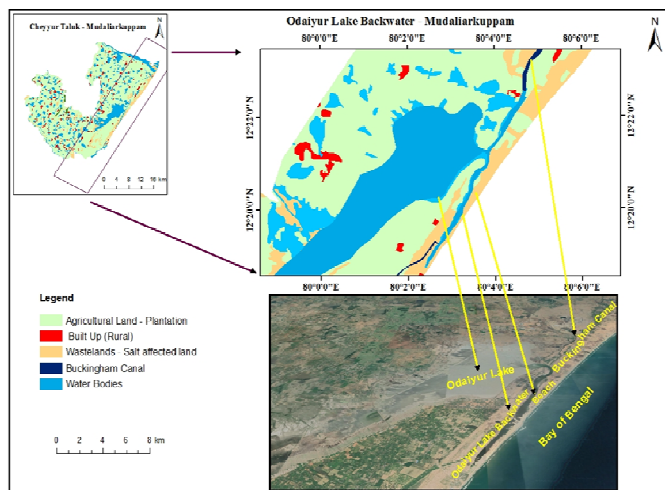


Fig. 3. Odaiyur lake backwater- Mudaliarkuppam



Fig. 4. Odaiyur lake

Tourism Development Corporation (TTDC). Mudaliarkuppam is fast developing as a place of tourist attraction. Tamil Nadu Tourism Development Corporation has taken the lead in creating facilities for people to enjoy. In 2001, Mudaliarkuppam Boat House became the first of the eight boat houses of Tamil Nadu Tourism Development Corporation to offer water scooters. The boathouse organizes motorboat trips to the beach located in the backwater of Odaiyur Lake. Another pleasant ride could be kayaking and single-seater kayaks. Every year within this vast spread of backwater special boat races are organized. Mudaliarkuppam Boat House provides one-seater kayaks (self-rowing), two/four-seater pedalling boats, speedboats, two/four-seater rowing boats and motorboats. There is a beach approximately 4 Km from the raindrop boathouse. The beach looks like a beach island which is surrounded by the Bay of Bengal in the eastern side and western side by the backwater of the Odaiyur Lake and the Buckingham canal connects the backwater of Odaiyur Lake so, thus it looks like a beach island (Fig.No.3). Tourists are allowed to spend some time on the beach and tents are available for this purpose. To enjoy the framed boating bonanza, tourists need to pay a specific amount of money, depending on the type of boat and duration of time. Two new six seaters Banana Boats are expected to be put for tourists use. The boathouse stands out by offering Jet Ski and kayaking in additional to row boats, banana rides and speed boats with complimentary banana ride (Fig.No.4).

Plants, Animals and Birds: There are also jackal, Indian hare, Bengal monitor, sea fans, turtle and Russel's viper. This is yet another heaven for wading birds and migratory ducks. This is a very good birding area. The birds found here are white-bellied sea eagle, osprey, Indian skimmer, slender-billed gull, brahminy kite, brown-headed gull, painted stroke and stone curlew. During winter months thousands of migratory ducks, terns and waders can also be spotted. In spite of its hot and humid climate, Chennai acts as a home for more than 200 species of birds. One can see birds while boating along the backwater. This backwater area is recognised as an "important bird area" of India. This gives a good eye capturing for the bird lover and to the common people

Conclusion

Mudaliarkuppam is a wonderful tourist spot where one can spend some time with family members, relatives and friends. It

is one of a good place for the student excursion where they can easily understand the geographical location and the environment which supports or enhances the development of tourism. The 20 minutes ride in the backwater shows the interrelation between geography and tourism. Mudaliarkuppam is an incredible tourist destination. It was developed by the Tamil Nadu Tourism Development Corporation on the Odaiyur lake backwater and preserves the boating house located in the study area. The physiographic setups like beach ridge, beach, coastal plain, inselberg, moderately weathered/buried pediplain, older coastal plain, pediment, shallow weathered/buried pediplain, Buckingham Canal, backwater etc. are the major geographical factors responsible for the development of backwater tourism in the study area. So, thus Geography and Tourism are interrelated which develops the geotourism.

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