



THE IMPACT OF URBANIZATION ON COASTAL ECO-TOURISM IN WEST BENGAL

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Abstract

Growing city urban land use is frequently associated with vertical and horizontal change in which various functional characteristics of the city are added. In most developing countries, changing urban features are characterised by an increase in urban population and development activities that magnify centripetal forces. In developing countries, both the urban area and the population are rapidly expanding, and this growth is not reflected in urban planning, which specifies urban activity locations and the spatial structure of cities, which impacts the spatial flow of humans and commodities on urban surfaces, as well as energy consumption for transportation between destinations, all of which have an impact on land quality. Eco-tourism is a type of nature-based travel to relatively undisturbed natural areas with the goal of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural aspect (both past and present) found in these areas. Eco-tourism plays an important role in the PurbaMedinipur district of West Bengal's long coastal tract. PurbaMedinipur, with its colonial legacy, presents an intriguing course of transformation of traditional rural society leading to urbanisation from 1901 to 2011, with urban percentage increasing from 12.2 percent to 35.5 percent and urban area increasing from 1.03 percent to 4.5 percent of the district's total area. This clearly implies the acceleration and sale of urban land use change and urbanisation. The current study investigates the causes of urban land use change and its impact on eco-tourism in coastal areas.

Keywords: *Urban land use; Eco-tourism; Coastal Tract*

1. Introduction

At the moment, both urbanisation and the indiscriminate expansion of the tourism industry as a result of urbanisation have resulted in a deterioration in environmental quality. West Bengal accounts for 28.03 0/0 of total population (80176179) concentrated in urban areas, which is slightly more than the national average (around 28 0/0). The level of urbanisation is a good indicator of development and also serves as a foundation for analysing the quality of life in a spatial context. Curie (1966) believes that urbanisation is critical for accelerating a country's socioeconomic development. On the other hand, as in developing countries, we have seen an inverse relationship between the rate of urbanisation and the degree of environmental degradation.

It is a degrading agent of the physical environment, as well as a degraded environmental quality or a negative impetus for the establishment of eco-tourism.

1. Concept of Eco Tourism

Now we attempt to clarify the concept of eco-tourism that, at tourist destinations, indiscriminate expansion of the tourism industry has resulted in some ecological and cultural damages to the host country; as a result, after the 1980s, the concept of eco-tourism has been popularised rapidly by the Hector Ceballos Lascurain in 1983 initially the term (ecotourism) used as - –" Traveling to relatively undistributed and uncontaminated natural areas with the specific objective of So eco-tourism is nature-based tourism, and it is an effective tool for enhancing methods of environmental conservation, many income-generating activities (through earning revenue, foreign exchange, hotel business, commodity selling, hotel boy service, guide, and so on) of the local population, economic benefits of the host communities of the state or country, and revitalization of the culture and tradition there, thereby facilitating overall development.

It also shows that eco-tourism is a positive source of fascination for man and one of the causes of his psychological peace, mental solace, and enjoyment, and it renews man's spirit to explore nature again and again, revives his vitality, and gives a boost to his energy after being churned out by the routine work of his monotonous life.

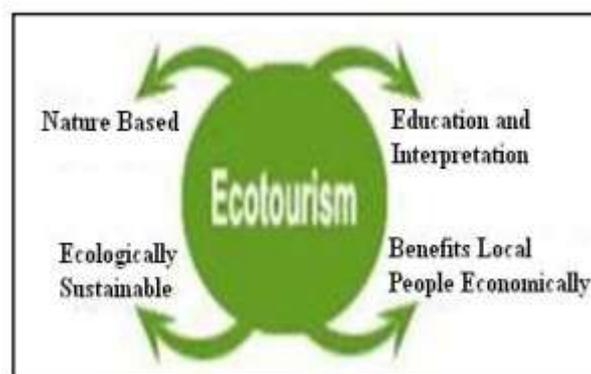


Figure 1: Concept of Eco Tourism

2. Location of Study Area

West Bengal is divided into 19 districts, one of which is Kolkata. It lies between 21055' N lat. to 26050' N lat. & 86030' E long. to 89058' E long. respectively with an area of about 88,752 sq km where the coastal stretch of West Bengal extends from the mouth of the river Subarnarekha on the west (bordering the state of Orissa) to the mouth of the river Hanribhanga on the east (bordering Bangladesh) between longitude 87030'E and latitude 21° 3 West Bengal's long coast line along the Bay of Bengal is dominated by the Ganga Delta, which occupies approximately 60 0/0 of this coast line.

Physiologically, the entire coastline can be divided into three major coastal zones, such as:

- a) From the mouth of the Harinbhanga river to the mouth of the Hugli river, known as the Sundarban Delta Zone" (Eastern sector);
- b) The Hugli river's saline tidal regime, stretching up to Kulpi Point and the Haldia Port (Central Sector);
- c) The Digha-Junput coastal plain along the sea (Western Sector).

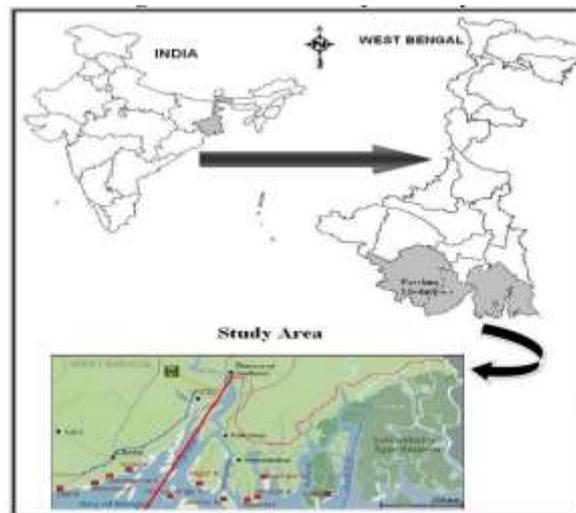


Figure 2: Location Map of Study Area

3. Basic Physical features of the study area

West Bengal has golden opportunities for the establishment of eco-tourism because it is characterised by the Royal Bengal Tiger, Mangrove Forest (Sundarban-the world's largest Zoogeographical region), wide and hard beaches (Bay of Bengal coastal tract in West Bengal like Digha, Sankarpur, Mandarmoni, Sagar Island, Bakkhali, etc) where sightseers play and enjoy romance with sun, sand, and sea in the sea beaches and different types of aquatic life, flora This region is a transitional zone between sea and land, where the mangrove forest whispers, the sea roars, the flora and fauna bloom, and visitors can rejuvenate themselves in the company of sand, sea, and sun in the pristine open air. Each part of West Bengal's coastal region is nothing short of spectacular. Covered in a green blanket, the coastal region appears to be an emerald of West Bengal. Among these diverse flora and fauna are important eco-tourism resources, which contribute to the glitz of the West Bengal coastal region's ecotourism industry. There are many different types of trees, shrubs, climbers, herbs, and medicinal plants in West Bengal's coastal region, creating a colourful spectrum of biodiversity. Apart from these, many endangered flora and faunas are also a major source of tourist attraction, and, while eco-tourism is nature-based tourism, it can be said that rich flora and fauna also contribute to the development of the eco-tourism industry in West Bengal's

coastal region. However, all West Bengal coastal zone environments provide a unique combination of resources and constraints (such as beaches, sand dunes, wetlands, barrier islands, reefs, and so on) that may be considered to explore opportunities for development of eco-tourism, which is one of the assuring effective management of the coast.

4. Levels of Urbanization in West Bengal

In general, urbanisation is defined as the percentage of the population living in urban areas or the increase in the number of urban areas. West Bengal's colonial legacy presents an intriguing security path leading to urbanisation. Between 1901 and 1981 and 2001, the number of towns increased from 74 to 385 and 446, respectively, urban dwellers increased from 2.16 million to 18.7 million, urban percent geared increased from 12.2 percent to 28.03 percent, and urban area increased from 1.03 percent to 4.5 percent of the state's total area.

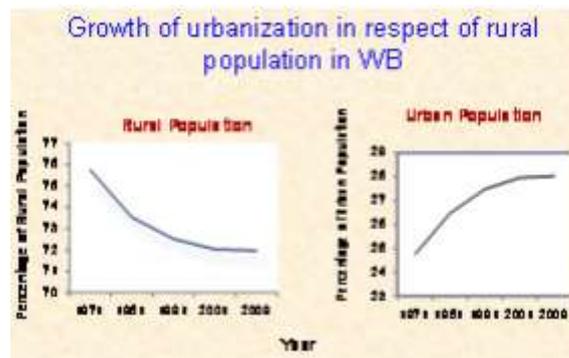


Figure 3: Growth of Urbanization in West Bengal

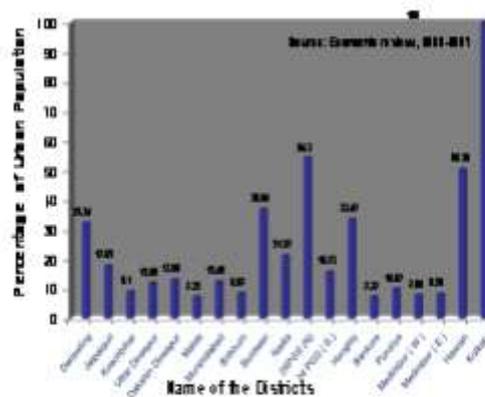


Figure 4: Level of Urbanization in West Bengal

Table 1: Level of urbanization respect of rural population in West Bengal

Population Size Class	1971		1981		1991		2001	
	Villages	Towns	Villages	Towns	Villages	Towns	Villages	Towns
<i>Below 500</i>	18561	-	15923	1	13474	-	11752	-
<i>500-999</i>	9085	-	9396	2	9227	-	8725	-
<i>1000-1999</i>	6622	-	7538	1	8065	2	8529	4
<i>2000-4999</i>	3342	9	4383	18	5819	18	6292	19
<i>5000-9999</i>	412	59	702	75	1117	126	1312	151
<i>10000-19999</i>	52	60	82	80	190	95	220	110
<i>20000-49999</i>	-	49	-	52	17	64	11	73
<i>50000-99999</i>	-	31	-	38	1	35	-	40
<i>100000-& above</i>	-	15	-	24	-	42	-	49
<i>Total</i>	38,074	223	38,024	291	37910	382	36841	446

Figure 4 depicts five districts in West Bengal that are classified as highly urbanised. Kolkata has the highest urbanisation (100 0/0), followed by North 24 PGS (54.30 0/0), Hawrah (50.36 0/0), Burdwan (36.94 0/0), and Hooghly (33.47 0/0). These districts are located in the state's southern region. This clearly implies the rate and scale of urbanisation and growth.

5.1. Environmental Impact

Such a development occurred in the absence of proper land use planning. In its report on the Digha coastal belt, the Geological Survey of India stated that several man-made interventions, such as the removal of sand dunes, have accelerated the active processes of erosion and accretion, resulting in a mushrooming of construction near the coastline. The exact impact of tourism on Digha's coastal belt cannot be quantified, but the continued dumping of solid waste and raw sewage in the coastal water bears witness to an alarming situation that worsens with each tourist season. The Digha-Junput coastal tract is being eroded by seawater, resulting in a lower beach and bank recession. At some points, the rate of erosion has been calculated to be around 17 metres per year. Aside from erosion, beach lowering (submergence) by 15 to 20 cm per year appears to be unabated (Bhattacharya S, 1992).



Aside from coastal erosion caused by wave action and storms, removal of sand for road and hotel construction, and exploitation of Casuarina trees on dune-tops for fuel wood and building materials all contribute to the destruction of sand dunes and beach erosion. Artificial beach protection methods in some places also accelerate coastal erosion in other places. Shankarpur is experiencing coastal accumulation. Human activities' increasing pressure on the Hugli unstable coastal zone has been assessed by IIT, CSME, and GSI over the last 15 years, but no effective action plan for controlling the phenomenon is yet visible.

5. Conclusion

As a result, many problematic issues have arisen in West Bengal's coastal plain, resulting in conflicts between various resource users and interest groups, such as developers and ecologists/environmentalists, engineers and geoscientists, and land owners and economists. West Bengal coastal zone management has been proposed under both regulatory and non-regulatory systems. It is recommended under the regulatory system that critical ecosystems such as the Sundarbans mangrove forest and the Digha sand dunes be protected from any changes. Aquaculture should also be regulated, with a total ban on mangrove conversion, controlled groundwater abstraction, and appropriate effluent treatment before discharge into the surface water system. Similarly, regulatory measures should be implemented to control dredging activities, the discharge of burned oil, oil leakage due to poor vessel maintenance, limiting setback lines for coastal construction, and so on. It is also emphasised that any large coastal project should be required to conduct an EIA study.

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