

Coastal Area Development Proposal for Surat City

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Abstract : Coastal area planning plays an important role in the city's land use development. Worldwide it is observed that the highest growing cities are established on water front like riverbank or seashore. This is responsible for sea level rise and coastal area erosion.

City of Surat, one of the fastest growing city situated on bank of river. Hazira area industrial development provides excellent support to city development. About 10.295 km length of coastline between Tapti and Mindhola is used to proposal of Recreational Activity. Gabions walls are most commonly used shore protection methods in India and same is proposed here.

The area selected for the development is Development Plan reservation in the city of Surat. There is not any development for recreation or tourism in Surat city. Also Ro-Ro Ferry Terminal, Delhi-Mumbai Dedicated Rail Freight Corridor and other future coastal projects by Gujarat Maritime Board, Gujarat Industrial Development Board, Rail Vikas Nigam Ltd., and Indian Railways have lead us to focus on the need about industrial and tourism development of coastal area. Healthy Industrial development at Hazira is already a part of Surat coastal area, and so it not given priority here. In order to support tourism and present industrial development, aim of this study is to propose multipurpose land use structure which can be used for tourism, recreational, and residential, purposes. Two distinct proposals are framed for selected coastal area considering the boundary conditions as delineated by various authorities SMC, SUDA and Gujarat Maritime Board considering CRZ boundaries and other regulations for macro level planning.

The development proposals are derived on concept of self-sustainable development and it has combination of residential, industrial, commercial, tourism and forest area land use pattern. Also preliminary cost estimates is prepared to get the approximate expenditure and feasibility aspects of proposal is also discussed.

ABBREVIATIONS AND ACRONYMS

SMC:-Surat Municipal Corporation
SUDA:-Surat Urban Development Authority
GoI:-Government of India
TPS:-Town Planning Scheme
CRZ:-COASTAL REGULATION ZONE
MoEF:-Ministry of Environment and Forests

1. INTRODUCTION.

Coastal resources has increasingly risen during the last two decades mainly because of the great pressure of human actions

1. Urban expansion,
2. Industry,
3. Tourism and recreation,
4. Fisheries and aquaculture,
5. Ports and marinas,
6. Energy production and transportation,
7. Infrastructure, etc.

But also due to ineffective policies, planning and management tools in control or regulate human actions and natural process (natural risks and hazards) in such environments as coastal zones. As a result of the uncontrolled human presence and extensive exploitation of the marine resources, destruction of historic and architectural heritage, loss of public access to the coast, pollution and congestion, a worldwide concern has developed regarding how to deal with conflicts over land use policies, how to apply the principles of sustainable development, and how to introduce an integrated coastal and marine areas planning and management. Current conditions within the coastal zone suggest a number of opportunities to affect positive change.

These opportunities directly relate to immediate concerns, including Real estate development pressures, environmental issues, the presence of deteriorating waterfront property and planned transportation improvements.

The coast is a dynamic place and its dynamism makes it susceptible to stresses and changes in a number of ways. Because the coast is where the land interacts with the sea, it is open to the action of wind, waves, tides, and currents that not only erode the shore but also can expand it with sedimentary deposits. Storm systems gather energy from the ocean and intensify natural coastal forces with wind, waves, and rain powerful enough to severely damage property and hasten erosive processes. Population growth, land development, and resort development are all particularly intense along the coast. Coastal areas are experiencing high growth rates, and the beach is a popular destination for vacations, second homes, and retirement. Because it is a valuable asset, people will go to extraordinary lengths to protect property near the shore. This behavior the need to

protect coastal property is responsible for what is probably the greatest threat to shoreline: the practices we use trying to stabilize it. Sea walls, jetties, groins, riprap, and sandbags all disrupt the natural processes of the coast and exacerbate erosion and habitat destruction

The present Study is carried out for coastal area of Surat city. The city of Surat is one of the fastest developing cities in India, situated on west coastline of the country. Surat is blessed with all natural resources and has well developed urban area at the center of city. The Hazira Area Industrial Development on west side of city provides important support in development of the region. The coastal area is observed with heavy erosion and looking to global warming impact it is become necessary to provide coastal protection at Surat coastal region. And then to give any proposal for that area.

2. Aim of the study

Coastal area land development proposal for a Surat city.

• Problem definition.

From ancient time we can see that development of any city is taken place near water or sea area. Any area can grow attractively near it. It can be developed to serve various purposes like tourism, recreational, industrial, transportation, etc. In present study land parcel of Surat city near coast is selected in south west zone. Basic aim of the study is to study existing condition of Surat coastal area and propose the planning proposal needs to have a plan with several land area development, Road layout, tourism based plan, and internal circulation along with its estimation of cost.

3. Objectives of the study

- To preserve of coastal area.
- To identify the extent of undeveloped urban land.
- To prepare Tourism development proposal for the study area.
- To check feasibility of planning proposal for coastal area development.
- To identify coastal-line and to propose technique for coastal protection work.

4. Surat city profile

The city of Surat is situated at latitude $21^{\circ} 12' N$ and $72^{\circ} 52' E$ on the bank of river Tapi having coastline of Arabian Sea is on its West at a distance of about 19.4km by boat along the Tapi stream about 16 km. and by road, along Dumas. It is 13m above the mean sea level.

4.1. Study Area Profile

Study area is situated at western part of surat city (Gujarat-state-India) which is connected to the Arabian sea. As per CRZ norms, Surat region is belong to 3rd. Total length of selected Coastal area is approximately 10.295 km. which one is part of Surat Municipal Corporation.

4.2. List of Proposal in selected study area.

1. Green belt.
2. Walk way
3. Cycle track
4. Tourism based planning including.
 - (i) Recreation
 - (ii) Gardening
 - (iii) Land scap
 - (iv) Resorts
 - (v) Sport club etc.



Figure-2 Proposal for sport club in study area.

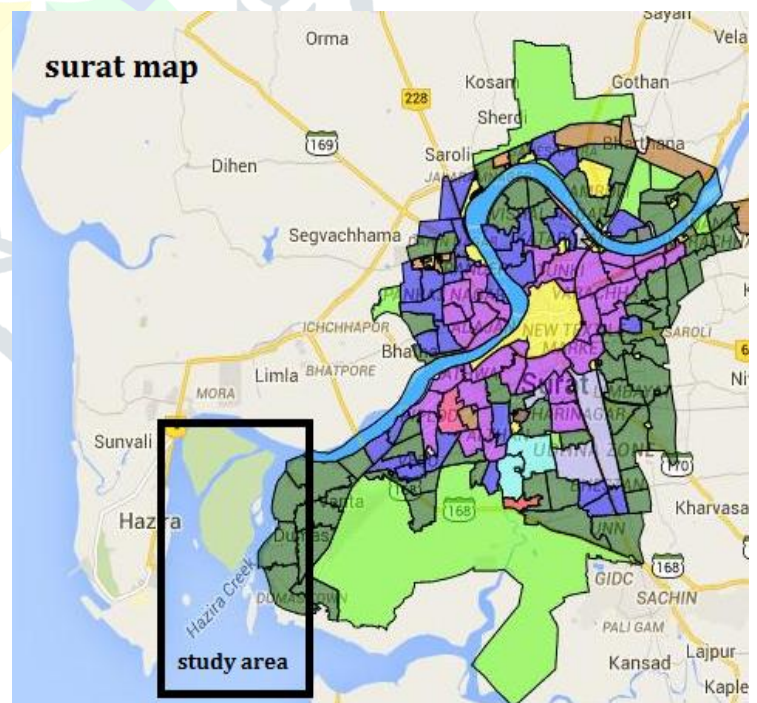


Figure-1 Study area image (SMC)

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