



MAPPLINGS' MAP

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Introduction:

Coastal areas are one of the most fragile and dynamic ecosystem having the interface of sea and land. Interactions between various natural processes and human activities are important factors in the coastal areas. This map represents shoreline change for the coast of Thane district in the state of Maharashtra for a period of 10 years (2005 to 2015).

Mapping methods:

Satellite data was collected from BHUVAN, ISRO geoportal service. The visualisation was done by making separate layers using QGIS interface.

Inference:

The shoreline of Thane district has increased from 2005 to 2015 significantly as seen from the map. The coast along Thane district comprises of tidal mudflats dissected by a number of creeks. In this time period deposition is observed at many places all along the Thane shoreline, erosion was observed only a few places that are comparatively

insignificant as compared to deposition.

Specific steps in GIS:

We took advantage of the layering in GIS to place the 05-06 map on top of the 15-16 map (both maps without colour) and observe the changes made to the coastline of the district over the last 10 years. To mark the urban areas/forest areas/water bodies, we created new layers containing the 50k LULC map, and only made specific regions visible on each layer and applied it on top of our existing map.

Use of map:

The map can be used to develop methods to investigate the shoreline changes and taking appropriate actions for protecting the coast.

Datasets used

Land Use Land Cover 50k, 2005-06, Thane District, from BHUVAN.

Land Use Land Cover 50k, 2015-16, Thane District, from BHUVAN.