

SHORELINE CHANGES:

CHANGE IN WATER BOUNDARIES OF LAKES IN CHENNAI

LAKES

Lakes are the best available freshwater source on the Earth's surface. Lakes are important for various reasons, like regulating the flow of river water, to maintaining the eco-system, and also the generation of hydroelectric power. It also stores water during the dry season. In this map, we have taken much concern in the change in boundaries of the lakes in Chennai in the month of April.

FEATURES CONSIDERED

To start with this, we have taken Chennai, the capital of Tamil Nadu which has various water bodies surrounding it. There were many lakes and rivers. In this, we have considered some lakes and the three main rivers namely Adayar river flowing to the south of Chennai, Kosasthalai river to the north and the Coovum river flowing between them across central Chennai.

DATA SOURCE

The data required for the map was collected from the source called **BHUVAN**. The steps involved in collecting data were as follows:-

Bhuvan home page -> Bhuvan store -> Bhuvan thematic services -> Land use land cover -> Theme selected – ‘Water bodies’

After moving through all these steps, we have selected the geospatial layers to further carry over with Bhuvan satellite data and with all the hydrological data available. Further we have selected and collected the data for the years we wanted.

TECHNIQUES

Finally, the data were taken from Bhuvan and imported to the trending software **QGIS**.

The techniques involved were XYZ tile importing with OpenStreetmaps, georeferencing the map with the bhuvan data, layer creation and finally creating the shape files. And eventually the map containing the changes in water boundaries was created.

YEARS TAKEN

The years taken were 2014, 2016, 2018, 2020 at the month of April. As the season of Summer falls in the later part of April, we have taken this month into consideration to see the drastic change in the water bodies of Chennai and to determine the water scarce in some regions in this month.

ISSUES FOUND

The data taken from Bhuvan didn't represent the water body covered by the algal bloom. Also the data were available only from the year 2012 and there is no data available for the years before 2012.

NOTE:- Only if the PDF was opened in Adobe Acrobat, the layerly format can be accessed as it is a georeference PDF file.