## Shoreline Changes Between Portonova to Mallipattinam, Central Tamil Nadu Coast, India

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The changes in shoreline configuration is observed to have been found to get accelerated due to global warming. Though, it is a world-wide phenomena, one has to take it serious in view of the damages it is causing to the coastal communities. Such changes affect not only the flora and fauna of that region but also the livelihood of the coastal population. Therefore, there is an urgent need to assess the shoreline changes taking place in a particular coastal region, in order to predict the long-term shoreline changes so as to enable the planners to think about the due protection to the inhabitants. The data generated through such study can be very much helpful in taking the policy decision in establishing the various coastal facilities warranted to a particular region.

In view of the above, an attempt has been made to understand the shoreline changes between Portonova and Mallipattinam, a 200 kilometer long coastline of Central Tamil Nadu Coast by utilizing 1970 Toposheets of Survey of India and the National Remote Sensing Agency (NRSA) India, Landsat, IRS P6 LIS 3 Imagery of the year 2000 and 2008. The study area provides the separate areas of erosion and sedimentation at different locations. The high erosion/sedimentation ratio to the extent of 73.24 in the sector of Thirumullaivasal to Topputurai is observed during 1970 to 2000. Further during that period, the study reveals the presence of a total of 19.99 km<sup>2</sup> areas of erosion and 10.56 km<sup>2</sup> areas of deposition. While comparing the landsat imageries of the year 2000 to 2008, it is noticed that a high order of sedimentation ratio (33.59) between Topputurai

to Kodiakkarai sector is maintained when compared to other sector of the study area. The present investigations emphasize the need to extend similar studies in the other parts of the coastal regions.