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TEMPORAL ASSESSMENT OF SHORELINE CHANGES IN DHANUSHKODI, RAMESWARAM ISLAND, INDIA, USING REMOTE SENSING AND GIS

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Abstract

This study examines the changes in the shoreline of Dhanushkodi, Tamil Nadu, India, during a span of 23 years (2001–2024). Satellite imagery and geographical information system (GIS) techniques were employed to assess erosion and land accumulation. The digital shoreline analysis system (DSAS) facilitated the calculation of changes through methodologies such as end point rate (EPR) and linear regression rate (LRR). The results indicated substantial alterations, with peak erosion measured at 44.1 m/year and peak accumulation at 42.9 m/year. These findings underscore the necessity for improved strategies to safeguard the coastline and address erosion management.

Key words: coastal erosion, digital analysis, satellite imagery, shoreline changes

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