

Characteristics of Tidal Zone in Kalubhar Island, Gulf of Kachchh, Gujarat and Its Geomorphological Implications

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Abstract

Tidal networks, tidal flats and mangroves are some of the important features of tidal areas in the Gulf of Kachchh. Insight on the patterns of tidal networks, vegetation and sedimentation is useful in understanding geomorphological processes active on the region. In the present study features of tidal zone of Kalubhar island, located in the south-central part of the Gulf have been studied with emphasis on tidal networks using Sentinel-2 Multispectral Imager (MSI) data having spatial resolution of 10m. Typology of tidal network is described for the first time. The typology of tidal network pattern, their density, presence of mangroves and beaches indicate low energy depositional setting in eastern, south-eastern and southern parts. This coupled with continued sedimentation and long sub-aerial exposure during low tides may not be ideal environment in future for live corals present in the intertidal zones.

Keywords: Tidal Network Pattern, Sentinel-2 MSI, Kalubhar Island, Gulf of Kachchh

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