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## Interpretation of Dune Genesis from Sedimentological Data and Ground Penetrating Radar (GPR) Signatures: A Case Study from Ashirmata Dune Field, Mandvi Beach, Gujarat, India

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### ABSTRACT

The coastal dunes located near the Ashirmata region, south of Mandvi beach lies near the straight coast have been studied by making use of sedimentological information and Ground Penetrating Radar (GPR) data. Sedimentological analysis reveals the NNW-SSE trending longitudinal dunes consists of well sorted fine sands with unimodal distribution possibly formed by constant wind gust and also the point out to the origin of sediments from single source; mostly the sediments derived from Indus delta transported to beach by long shore drift and tidal waves, carried inland by local on-shore winds. The radargram confirms, the homogenous sand layers with paleosols at shallow depth slip faces are probably formed due to extreme storm activity of Recent.

### KEYWORDS

Coastal Dune; Ashirmata Region; Sedimentological Analysis; Ground Penetrating Radar; Paleosol

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