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GEOMORPHOLOGICAL EVOLUTION ALONG THE COSTA VERDE COAST (SOUTH-WESTERN SARDINIA)

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The interaction between different natural processes operating at the interface between earth surface, sea and atmosphere, makes coastal areas a changing environment under dynamic equilibrium. This paper offers a preliminary assessment of the coastal evolution of a stretch of Costa Verde (south-western Sardinia), through geomorphological field survey together with interpretation of multi-temporal aerial photographs. Costa Verde has always been known for the beauty of its wide, sandy beaches surrounded by the largest and most spectacular dune fields of Sardinia (Piscinas, Scivu, Pistis). However, little is known about Costa Verde's geomorphology. In particular, the coastal landscape of Portu Maga, surrounded by green hills overlooking the sea, presents various morphologies that reflect the geological context of the area. In this area, field research has recorded golden, sandy beaches bordered by cliffs on Pleistocene aeolianites and metamorphic rocks, backshore dunes, aeolian-colluvial deposits on the steep slopes of the Palaeozoic reliefs that extend from inland to the coast. Sea cliffs, rocky coves, abrasion platforms on Palaeozoic metamorphic substratum, wave-cut platforms carved on sandstone indicate intense erosion by sea-waves. These processes are also responsible for rockfalls and topples along the cliffs on aeolianites, resulting in accumulation of blocks and boulders along the shoreline. Depositional landforms like conglomeratic and biocalcarenitic beach rocks, both emerged and submerged, indicate sea-level changes during the Quaternary. Moreover, rill and sheet erosion have developed badlands on the fine aeolian and slope deposits in the backshore areas. Shoreline retreat, due to wavy action, is evident along the cliffs on aeolianites, while the sandy beaches show long-term stability conditions.