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Morphodynamic changes as an impact of human intervention at the Ras El-Bar-Damietta Harbor coast, NW Damietta Promontory, Nile Delta, Egypt

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ue to the absence of national strategic plan for coastal management, the Nile Delta coast is no longer described as a fully dissipative, divergent, low gradient beach face, and composed of fine to very fine sand. Instead, new patterns emerged depending on the nature of the coast, direction of shoreline in relation to waves and current, and the implemented defence measures. The present study is an attempt to record the morphodynamic changes due to human intervention. The study of coastal strip between the Ras El-Bar and Damietta Harbor reveals two beach segments; one to the east protected with detached breakers. It shows average shoreline accretion of +4.73 myr-1, +5.0 myr-1 and +0.89myr-1 during the periods of 1984-1998, 1998-2003, 2003-2015 respectively. This segment still has the geomorphologic imprints of the dissipative beach, wave divergence, and low gradient beach face, fine grained and spilling breakers. The second is to the west, between the detached breakers and the eastern jetty of the Damietta Harbor. It is an erosional segment with averages shoreline retreat of -7.43 myr-1, -10.90 myr-1, and -3.11 myr-1 for the same periods. This segment shows intermediate "d" beach or intermediate-reflective, wave convergence, and steep slopped beach face, cuspate, cliffy, reworked sediments of coarse grained, mud clasts, discoidal gravels, shelly beach, and plunging breakers. The presence of convergence waves along this segment confirms the concept of emergence of a new wave pattern of reversed eddy which enhanced the steepness of the beach face, shoreward movement of the plunge step with shell accumulations at the beach, accelerates erosion and increases the possibility of drowning of swimmer at Ras El-Bar resort. To secure the coastal strip against erosion and sea level changes the detached breakers should be extended to reach the eastern jetty of the Damietta Harbor. The protection of this segment is a matter of interest for investment projects related to industries and trading along the Damietta Harbor as well as the touristic investments at Ras El-Bar, as one of the most interesting tourist destination in Egypt. Billions of pounds spent by beach visitors and investment annually provide significant input to local and regional economies. Hazards associated with morphodynamics effect on recreational beach can influence the suitably of any given stretch of coast as a recreational resource, and thus impact tourist money spent in addition to the safety and well-being of beach visitors.

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Failure of continental drift theory

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Wegener's theory of Continental Drift was formulated in the early 20th Century, and accepted worldwide by many scientists and philosophers. Tectonic plate theory followed the same approach. However, these theories have great shortcomings and raise a lot of unanswered questions. No one denies the geometrical fit of some continental boundaries, but it is hard to accept the mechanism of drifting the Pangaea and the presence of that Pangaea surrounded by huge ocean. The main problem in these theories is the limitation in the two-dimensional view, while reality is three dimensional one. However, Earth's continents were once connected forming the earth hard surface, but without any oceans or seas. This paper is devoted to prove that these theories are unrealistic ones. It also shows that there is no plate movement, neither convergent nor divergent. This paper handles the subject from the civil engineering point of view within the continuum mechanics framework.

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