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Editorial

Coastal Geomorphological Changes from Past to Present

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1. Introduction

The Special Issue titled "Coastal Geomorphological Changes from Past to Present" aims to provide an in-depth study of coastal landforms and their dynamics. Different factors determine changes in coastal areas, and these changes can be reflected in coastal landforms. Among its main factors, this Special Issue focuses on tectonic evolution, surface processes, sea-level oscillations, sea-weather regime, and anthropogenic factors.

In general, geomorphic responses to environmental changes can occur over a short or a long time span along coastal areas. Low coastal areas, such as sandy coasts, dune systems, spit, and barrier islands, respond to changes in physical factors on a time scale of decades or a few centuries

On the other hand, rocky coasts often change very slowly on a time scale of hundreds of thousands of years, even if abrupt changes are possible. Despite this, sea-level changes are of great interest to coastal communities. Long-term changes in sea levels due to glaciations and tectonics comprise the background to which hazards are connected to anthropogenic pressure and extreme marine events, such as hurricanes, storms, and tsunamis. Short-term measurements from instrumental and historical records must be placed within the long-term context that only geological records provide.

Today, innovative methodologies and data are available for coastal studies, such as geochronological data, topographic analysis, geophysical surveys, sedimentology, and remote sensing techniques. A combined use of different methodologies and data can allow an exhaustive framework of coastal geomorphological changes to be obtained occurring from the past to the present.

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2. Overview of This Special Issue

As part of this Special Issue, different coastal environments have been studied using various techniques. A sedimentological approach is reported by De Giorgio et al. (contribution 1) for gravelly beach deposits in the hinterland of the Taranto Gulf (Italy). Here, sedimentary facies, textural variations, and the architecture of gravel deposits reflect relative sea-level variations in the past. In other studies, remote sensing techniques have been applied, as reported by Billet et al. (contribution 2), in order to assess the shoreline changes of the Mar del Plata (Argentina). Other kinds of remote sensing data are considered by Poulos et al. (contribution 3), where reanalysis products have proven useful in describing the hydrodynamics connected to the beach zone in front of the coastal cliff at Evia Island in the Aegean Sea. Techniques based on GIS-interpolation have been used by Zhang et al. (contribution 4) to build a Digital Terrain Model of offshore areas such as the Shandong Peninsula (China), where some evidence of siltation changes and scouring has been detected on the sea bottom. Finally, anthropogenic pressure has shown an influence

on the coastal environment, as reported in the study case of Estuarine Bay of the Pearl River Estuary (South China) by Han et al. (contribution 5).

3. Conclusions

The papers of this Special Issue represent a step forward for the knowledge of coastal changes related to landforms, and the innovative method of surveys with remote sensing can be useful for authorities and end-users working in coastal areas.

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List of Contributions

1. De Giorgio, V.; Sabato, L.; Tropeano, M. Gravelly Beach Deposits as a Proxy for Relative Sea-Level Changes in Microtidal Wave-Dominated Shoreline Systems: Examples from the Hinterland of the Taranto Gulf (Middle Pleistocene, Basilicata, Southern Italy). *Water* **2023**, *15*, 3631. https://doi.org/10.3390/w15203631.
2. Billet, C.; Bacino, G.; Alonso, G.; Dragani, W. Shoreline Temporal Variability Inferred from Satellite Images at Mar Del Plata, Argentina. *Water* **2023**, *15*, 1299. https://doi.org/10.3390/w15071299.
3. Poulos, S.; Lesioti, S.; Karditsa, A.; Angelopoulos, C. Factors Controlling the Formation and Evolution of a Beach Zone in Front of a Coastal Cliff: The Case of the East Coast of Evia Island in the Aegean Sea, Eastern Mediterranean. *Water* **2024**, *16*, 1622. https://doi.org/10.3390/w16111622.
4. Zhang, Z.; Gao, W.; Li, P.; Liu, J.; Xu, Y.; Wei, X.; Li, A. Influencing Factors of Submarine Scouring and Siltation Changes in Offshore Area of Shandong Peninsula. *Water* **2023**, *15*, 435. https://doi.org/10.3390/w15030435.
5. Han, Z.; Wang, H.; Xie, H.; Li, H.; Li, W. How Does Human Activity Shape the Largest Estuarine Bay of the Pearl River Estuary, South China (1964–2019). *Water* **2023**, *15*, 4143. https://doi.org/10.3390/w15234143.

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