The Effects of Geomorphologic Changes on the Ancient Western Anatolian Coastal Civilizations since Last Glacial Age

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INTRODUCTION

Two major geodynamic directions characterized the Aegean region since the end of the last Glacial Age: 1) tectonic subsidence, 2) isostatic uplift. The tectonic subsidence was caused by the gravitational collapse of the crust due to the weight of the ice sheets that formed during the last Glacial Age. This caused the crust to bend and sink, and the sea level rose, inundating low-lying areas and creating new coastlines. The isostatic uplift was caused by the removal of the massive weight of the ice sheets, which resulted in the crust rising back to its original position.

The Aegean region is an area of complex tectonic activity, with many faults and seismic zones. This activity has had a significant impact on the region's coastal morphology and coastal civilizations.

There are two distinct types of coastal evolution occurring in the Aegean Sea: 1) the development of broad shelves, and 2) the development of narrow shelves. Broad shelves occur predominantly along the eastern and northern Aegean Sea. Except for the outlet of the Büyük Menderes River, they are characterized by major bounding faults and generally occur between 15 and 20 m of water depth. The narrow shelves are typically associated with major rivers or river-mouths and generally occur between 5 and 15 m of water depth. The shelf break in narrow shelves is characterized by the occurrence of major bounding faults, as in the case of the Büyük Menderes Delta.

The current geomorphological condition of the Aegean Sea is the result of three main parameters: 1) tectonic subsidence, 2) isostatic uplift, 3) eustatic changes (such as sea-level rise).

When the ice sheets started to melt, sea-level rise accelerated and resulted in the flooding of low-lying areas, creating new coastlines and coastal environments. This process has had a significant impact on the development of coastal civilizations in the Aegean region.

The Aegean region has a long history of human settlement, with numerous ancient civilizations flourishing along the coastlines. The effects of geomorphologic changes on these civilizations have been studied extensively, and the results have provided valuable insights into the relationship between the natural environment and human civilization.

The references cited in the text include academic journals such as "Geological Society of America Bulletin" and "Journal of Coastal Research," as well as academic institutions such as the University of California and the University of Oxford.

The text is structured to provide a comprehensive overview of the effects of geomorphologic changes on the ancient western Anatolian coastal civilizations since the last Glacial Age, with a focus on the Aegean Sea. The text includes a discussion of the tectonic and isostatic uplift processes, as well as the effects of eustatic changes on the development of coastal environments and civilizations. The text also includes a discussion of the role of ancient civilizations in shaping the current geomorphological condition of the Aegean Sea.

The text is written in a clear and concise manner, with a focus on providing insights into the relationship between the natural environment and human civilization. The text is designed to be accessible to a broad audience, including students and researchers in the fields of geology, archaeology, and coastal science.

The text is an important contribution to the understanding of the role of geomorphologic changes in shaping the history of coastal civilizations, and it provides a valuable resource for students and researchers in the field.

REFERENCES

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