

Altınova Madra Creek Region Coastal Erosion Study

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Abstract

Long sandy beaches and a low wave and tidal energy regime characterize the Altınova portion of the Aegean coastline. Despite the low average energy of the Altınova shores it is highly dynamic, changeable and subject to erosion. The problem of coastal erosion, along the Madra Creek and Salta region of the coastline of Altınova has significantly intensified in recent years. The vibrant beauty of the Altınova coastline is attracting a growing population of homeowners and vacationers; however, the transient character of this coastline makes it hazardous for both people and for buildings and structures. An increase in developed land is creating a land disturbance that has increased erosion and sedimentation through hydrologic alteration, resulting in increased runoff. Ignorance and continued disregard for the geological processes that constantly reshape the Altınova coastline are tragically intensifying the collisions between man and nature.

The erosion of the shoreline is the most visible result of a complex system of sediment transportation and redistribution along the coast and in the coastal region. This system is driven by a variety of processes from across a range of environments, which over the last 15 years has resulted in a net loss of 3 million cubic meters of sand from the mouth of the Madra Creek and beach areas. It has also invoked the movement of sediment up to 6 kilometers across the entire continental shelf north of Madra Creek in the Altınova region.