



Holocene Palaeogeographical reconstruction of the southeastern part of Samos island (Greece)

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The study area, Mesokambos, is located at the SE coast of Samos Island situated at the east-central part of the Aegean Sea. Mesokambos is an alluvial valley situated on the outskirts of Pythagorion, a town built on top of the ancient town of Samos which is believed to be inhabitant since at least the Late Neolithic period (4th millennium BC). Archaeological evidences indicate that the present morphology is associated with recent coastal subsidence which comes in contrast with the uplift of the North West coastal area of Samos Island.

For the purposes of this study detailed geomorphological mapping, paleontological, sedimentological and radiocarbon dating analyses of the Late Holocene coastal zone were conducted. The study of sea-land interactions during Upper Holocene, in relation to the eustatic sea level rise, as well as the geomorphologic observations and analyses on deposited sediments, aims to reveal the palaeogeographical evolution of the landscape.

To obtain information about the Holocene stratigraphy under the recent alluvial cover, eight boreholes followed the detailed geomorphological mapping. The paleontological analysis took place and ten samples of plants, shells, peat and charred material were also collected from several layers of the sedimentary sequence and were dated using AMS radiocarbon techniques providing temporal control of the sediments.

In this study the tracing of the diachronic palaeo-shoreline shift due to the sea level change and its effect to the palaeo-environment in the south-eastern part of Samos Island was attempted. Sea level changes along with local conditions have been studied and the palaeogeographical evolution of the last 6.500 has been verified.