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Holocene evolution and sedimentation rate of Alikes Lagoon, Zakynthos island, Western Greece – preliminary results

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Abstract. In the present study we present preliminary results of Zakynthos Alikes lagoon, which is one of the most seismically active regions of Greece. In order to estimate – interpret the Holocene evolution of the area and to reconstruct the palaeoenvironmental changes, we based on the data of a 21 m sediment core. Sediment types, structure, colour, as well as contact depths and bed characteristics, were recorded in the field. Standardised sedimentological analysis were carried out, on 46 samples including grain size analysis, calculation of moment measures, and micro- and molluscan fossils of 17 selected samples. Moreover, radiocarbon age determinations have been made on individual Cardium shells from two horizons and whole – core Magnetic Susceptibility (MS) measurements were taken. The interpretation of depositional environments suggests a coastal environment (restricted-shallow) with reduced salinity such as a lagoon margin and in a tidal flat and/or marsh particularly. The maximum age of the study sediments is about 8500 BP. The rate of sedimentation between 8280 BP and 5590 BP was 5.3 mm/yr and between 5590 BP and modern times 1.03 mm/yr. The rate of sedimentation was higher until mid-Holocene while decrease after to 1.03 mm/yr, results which are similar to other coastal areas of western Greece.

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