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## **Geoarcheological reconstruction of lagoon development in the Algarve Region (South Portugal)**

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Silted lagoons in the Algarve region of South Portugal are used for reconstruction of anthropogenic and climatic influences on coast evolution since the Neolithic time. The sediments of these archives allow high resolution analyses of geochemical and palynological signals. Drillings in four lagoons of the Algarve region contain the whole sequences from the fluvial sediments during the early Holocene, marine transgression facies during the middle Holocene and the marine/fluvial sediment deposits until present. Geophysical measurements give an impression of the sediment composition and succession. By comparing the development of different lagoonal systems it should be possible to evaluate the effect of regional influences (climate, sea level changes) and local factors (land use).

The current focus of data interpretation is aimed at two neighbouring estuaries 19 and respectively 14 km west of Faro. Palynological investigations in the lagoons of Vilamoura and Vale de Lobo show distinct anthropogenic influences since 3500 cal. BP by increasing values in maquis, cereals and open land communities.

Sedimentological results show that the siltation in both archives started earlier, but is varying in time. While the lagoon of Vale de Lobo documents a start of the siltation at least around 6200 cal. BP, the sediments of the Vilamoura lagoon indicate a silty/clayey infill since 4000 cal. BP. This could be an effect of the catchment setting as well as a result of the drilling location in the lagoon or the paleovalley structures in the underground.

In both lagoons the siltation process was nearly finished before the Roman Period (Hilbich et al., in press.; Teichner, 2005). During this time the estuaries were characterized by salt marsh vegetation and wet meadow communities.

#### References

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