



Palaeoenvironmental reconstructions on the Mozambique coast as a tool to understand human evolution: from modern analogues to borehole interpretation

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In the framework of the project "Stone Age Vilankulos: Modern Human Origins Research South of the Rio Save, Mozambique" a geoarchaeological survey was conducted in 2016 aiming to better understand the environmental history and landscape evolution of the study area including the environmental context of human occupation. During the survey, 23 sediment surface samples were collected across a variety of environments, namely: freshwater environment - Elephant River basin in Southwestern Mozambique - and brackish and marine tidal environments - Inhambane coastal area, Southeastern Mozambique. These samples will be used as modern analogues to interpret the sedimentological and paleontological record of 4 cores collected in a mangrove area of the Inhambane estuary and then reconstruct its palaeoenvironmental evolution. All the sampling points were georeferenced and the study area was overflown with a drone to collect photogrammetric data. Both surface and core samples were used for diatom, texture and geochemical analysis. Diatoms will be used as the main palaeontological proxy, because they are unicellular algae with a short-live cycle and largely sensible to environmental variables such as salinity, sediment texture and duration of the tidal inundation. Preliminary data on the modern diatoms analysis showed that diatom diversity is high and the equitability is low in all environments. Cores sedimentological description and dating are also presented. The work was supported by the project PTDC/EPHARQ/4168/2014, funded by the Portuguese Foundation for Science and Technology.