



Eastern Mediterranean/Adriatic sediment response to climate change; surface samples calibration and comparison to sub-recent sediment

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At the crossing between low and mid-latitude, NAO and monsoonal influenced climate systems, the Mediterranean is a crucial site for paleoclimate studies. The Gulf of Taranto, southern Italy, offers a number of high sedimentation rate sites, ideal for the study of short time-scale paleoclimate variability in the marine environment. The MOCCHA project aims at unraveling the main mechanisms forcing the climate in this area by a multi-proxy approach of this sediment. The geochemical composition of the sediment and its components is one of the tools used as indicators of past climate variability. However, a calibration is necessary to improve the connection between geochemical changes and environmental variability, by comparing the present condition with the recently accumulated sediment chemistry. In 2006 a series of 47 surface samples were recovered, distributed over the Taranto region. Novel ICP-OES, organic C/N, and $\delta^{13}\text{C}$ analyses were done and allowed a geochemical mapping of the area. Comparison of the results with the data obtained by the project partners will permit us to generate a strong calibration data set for further studies in this area, and will give us a better understanding of the actual sediment/climate connection. In addition, the calibration results will be compared to results obtained from older sediments from the same region. This will permit a first assessment of eastern Mediterranean/Adriatic sediment response to sub-recent climate change.

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