

CIESM Congress Session : Paleoceanography
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Moderator's Synthesis

Paleoceanography needs more interdisciplinarity. After global data and observations, we need to strengthen regional observations in order to better validate models and redefine models. Models are still too „rough“. Chemical paleoceanography will certainly improve our understanding, but still better proxies are needed, e.g. paleotemperature for ocean volume, or any proxy for paleo-alkalinity and paleo-salinity. The present tools are a rough approximation and leave room for much speculation. the calibration of existing and new proxy tools has a high priority.

New perspectives arise from the physics of the ocean, such as internal waves and cascading processes of dense water masses. How can we prove the existence of these processes in the paleo record?

Lead and lag problems. Globally we know such phenomena. A leading Arctic and a lagging Antarctic and vice versa. However, what is the leading process to form sapropels in the Med. Biology or chemistry or physics and what lags physics or biology. In other words what is driving the system.

Final point: What is a pristine state of the Mediterranean ? Is there a time in the paleo record, to which we can ascribe what would be a pristine state for the modern Mediterranean as an equivalent What is the natural state of the Mediterranean and when was that? After the LGM? Early Holocene? Mid Holocene?

