

## **Cretaceous to Tertiary paleogeographic reconstructions of the Alps-Pyrenees linking zone**

Gianluca Frasca (1), Armin Dielforder (1), Mary Ford (1), and Jaume Vergés (2)

(1) CRPG, CNRS, Nancy, France, (2) Institute of Earth Sciences Jaume Almera, CSIC, Barcelona, Spain

The northwestern Mediterranean subduction systems underwent an important phase of reorganization between Late Cretaceous and Eocene. The mode and timing of this reorganization are still under debate. Great uncertainties mainly derive from the poorly preserved record of the early phases of orogenic evolution in both the Alps and Pyrenees and the destruction of the orogenic system between the Pyrenees and Alps by the Oligo-Miocene opening of the Gulf of Lion due to backarc rifting. Vestiges are nevertheless preserved in the Pyreneo-Provençal fold-and-thrust belt and associated basins in southern France and Corsica-Sardinia.

In this work we first review published plate kinematic models for Iberia, Apulia and Europe from 83 Ma, focusing in particular on the restoration of the Corso-Sardinia block using the free software GPlates. Second, we characterize the Upper Cretaceous to Eocene depositional systems at the junction between the Alps, Pyrenees and Apennines, reviewing previous paleogeographic restorations for the Western Alpine and Eastern Pyrenean foreland basins. Last, we compare the kinematic models with reconstructed basin dynamics. We critically assess the implications of newly proposed paleogeographic reconstructions (at 83, 65, 50, 37 and 30 Ma) for the validity of various plate kinematic models. The information derived from the sedimentary basins help to define the mode and timing of the subduction reorganization that occurred between 83 and 30 Ma in the northwestern Mediterranean.

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