

New kinematic reconstructions of the Adriatic Plate as a key to understanding subduction processes in the Western Mediterranean (KAPMED)

The aim of the KAPMED project is to generate new kinematic reconstructions of the Western Mediterranean region, focusing on the independent motion of the Adriatic microplate for key time slices in the evolution of the Alpine mountain chains. This involves reconstructing the motion path of the Adriatic microplate by combining geological and geophysical information from the Alps, Apennines and Dinarides (see Figure below). We will then use these reconstructions to map changes in the location of subduction zones onto existing tomographic images of slabs in the mantle transitional zone. This will enable us to compare the amount and age of lithosphere subducted in the plate kinematic model with the observed areal extent of slab anomalies in the mantle. This new model will be of central importance to understand the forces driving subduction in mobile and complex tectonic systems.

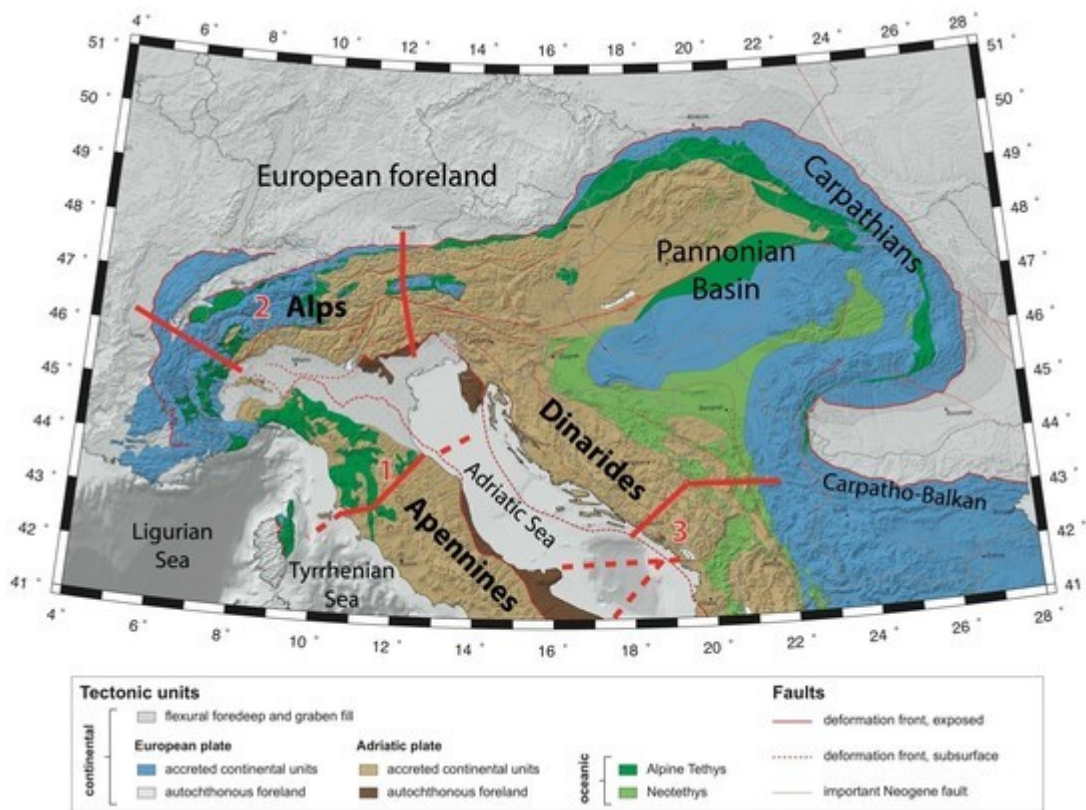


Figure. Map of the Adriatic Sea and surrounding mountain belts. Thick red lines indicate location of the selected geophysical-geological transects for this project, in the following three key areas: 1) Northern Apennines based on CROP03 seismic line; 2) Western Alps and Eastern Alps – western ECORS-CROP and TRANSALP seismic lines; 3) Dinarides. Dashed red lines indicate available seismic lines offshore – CROP project along transect 1 and Meteor M86-3 SW of transect 3.

Compilation from Schmid et al. (2004, 2008) and Horvath et al. (2006).

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