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## The formation of the North-Anatolian Fault and the rupture of the Bitlis slab

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We discuss the possibility that North Anatolian fault (NAF) and the plate tectonic scenario in the Middle East are related to deep deformation of the slab beneath the Bitlis collision zone. We described the tectonic evolution of the Anatolia-Aegean area in three main steps, before, during and after the formation of the NAF, showing the formation of the NAF was accompanied by the acceleration of the Aegean trench retreat, by the uplift of the Turkish-Iranian plateau and by a surge of volcanism in the collisional area. We show tomographic images from global P wave model of Piromallo and Morelli (2003). All these observations suggest that the plate tectonic re-organization in the region is possibly related to slab deformation beneath east-Anatolia. Analogue laboratory experiments explore the mechanism and the resulting kinematic of the process