Vienna Basin during Middle to Late Miocene times. D_{F2} and D_{F3}, identified in the Outer West Carpathians are therefore interpreted as to be linked to Miocene extrusion kinematics. ENE-striking strike-slip faulting (D_{F2}) may represent Early Miocene kinematics. NNE-directed out-of-sequence thrusting and (N)NE striking strike-slip faults (D_{F3}) are interpreted to be linked to the pull-apart stage of the Vienna Basin. Considering several blocks moving towards (N)NE at different velocities during Miocene lateral extrusion, structures of D_{F3} may depict a transfer of such (N)NE-directed movements to thrusts into the Outer West Carpathians.

Groundwater vulnerability assessment to contamination (Erzeni Basin, Albania)

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Groundwater quality has been recently deteriorating in different alluvial aquifers of Albania due to industrialization expansion, waste disposal, and agriculture activity. A preliminary assessment of vulnerability to groundwater contamination in Erzeni watershed area was undertaken because of enormous mining activities of river bed alluviums, the presence of the largest urban solid waste disposal site of Tirana and intensive agricultural and industrial activities at the plane part of the river course. The major geological and hydrogeological factors that affect and control groundwater contamination were incorporated into the DRASTIC model. Moreover, a Geographical Information System (Arc Gis 9.2 INFO) was used to create a groundwater vulnerability map of Erzeni river basin. Aquifer vulnerability assessment aims at predicting areas, which are more likely than others to become contaminated as a result of human activities at the land surface. As a result of the vulnerability assessment, 20% of the Erzeni basin was classified as being very highly vulnerable, 5% highly vulnerable, 15% vulnerable at moderate to low levels and, finally, around 60% of the basin has very low vulnerability.

Crust to upper mantle geophysical imprints of the West Black Sea opening

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Some inherited geophysical evidence in the lithosphere of the SE Carpathians, created by the geodynamic processes related to the W Black Sea opening are subject of the paper.

During the time, various models have been proposed for the Black Sea genesis. They are dominated by the idea of the basin opening within the back-arc extensional environment created behind Pontides by the northward subduction of the Neo-Tethys ocean floor.

Overall, the presence of the oceanic crust in the central part of W and E Black Sea basins is well revealed in the pattern of the geomagnetic anomaly.

But, the hypothesis of the Black Sea opening during a unique geodynamic event is less supported by the residual geomagnetic and gravity anomalies pattern, showing completely different strikes for western and eastern Black Sea. Besides, gravity high, typical for the presence of the oceanic crust correlates with a geomagnetic high (normal magnetization) within W Black Sea, while E Black Sea, the gravity high correlates with a geomagnetic low, advocating for a reverse magnetization of the crust. These aspects advocate for a distinct opening of the W and E Black Sea basins during two time-spans with normal and, respectively, reverse geomagnetic field.