Adriatic or Southalpine plate motion (30-15 Ma) resolved in SW-NE compressive stresses and NW-SE tension. This released initial sinistral shear along the Oligocene Periadriatic lineament, which is in concordance to kinematic studies, and sinistral shear along the Inntal fault. Simultaneously Oligocene plutons, that are exclusively found to the west of the Pöls-Lavanttal fault system, intruded along the Periadriatic fault. From Mid-Miocene times onwards stresses released by the Adriatic plate became N-S compressive leading to shear reversal along the Periadriatic fault system that now became dextral. Direction of compressive stresses during this period was fairly orthogonal to the Periadriatic fault. Thus we suggest that dextral displacement is to a lesser extend stress induced but much more controlled by eastward motion (extrusion) of Austroalpine units that experienced enhanced extension between 15 and 12 Ma. During this phase the Periadriatic fault may therefore be visualized as a southern boundary fault (i.e., stretching fault) of the extruding East Alpine wedge that accommodated extrusion. Interestingly, deposition of intramontaneous basins commenced at this time (*ca.* 15 Ma) suggesting onset of enhanced extrusion induced exhumation within eastern sectors of the central Austroalpine realm. By contrast, the domain to the east of the Adriatic – Pannonic plate boundary (east of the Pöls-Lavanttal system) remained under extension throughout time.

Geoecology of the Black Sea Coast of Georgia

Kvinikadze M., Kuparadze D., Pataridze D., Khundadze N. and Kirakosyan V.

Department of Geoecology and Applied Geochemistry, Alexander Tvalchrelidze Caucasian Institute of Mineral Resources; # 85, Paliashvili str., 0162 Tbilisi, Georgia, d.kuparadze@gmail.com, d.pataridze@internet.ge.

The combined geoecological works, carried out within the bounds of Black Sea coastline (Georgian Section) in 2008, gave the following results: contamination of sea water surface with oil products does not exceed the regulatory values; Hydrochemical parameters of sea and the rivers discharging into the sea were determined. High concentrations of magnesium and arsenic were observed in the bottom sediments of sea and Rioni River in Poti water area; the composition of copper, lead, zinc, magnesium and arsenic highly exceed the Dutch Norms (Fomin, Fomin, 2001) in some samples of toposoils taken along the agricultural terrain and motor road. As a result of radiation measurements carried out in the Black Sea coastline, the sites are allotted where radiation is higher than the accepted norms; the concentration of magnesium in the biosamples (tea and eucalyptus) highly exceeds the maximum permissible concentration.

East Taygetos Fault Zone (Peloponnesus, Southern Greece): Dormant fault zone bordering awake neotectonic structure

Lalechos S.[1], Metaxas Ch.[1], Karvela V.[2] and Stefouli M.[3]

[1]*Earthquake Planning & Protection Organization / Dpt of Seismotectonics, GR-15451 Neo Psychiko, Athens, Greece, slalexos@oasp.gr, xmetaxas@oasp.gr*
[2]*Kharokopeio University of Athens / Dpt of Geography, Eleftheriou Venizelou 70, GR-17671 Kallithea, Greece*
[3]*Institute of Geology & Mineral Exploration, Entrance C', 1, Sp. Louis St., Olympic Village, Acharnae, P.C. 13677, Greece*

The eastern flank of Taÿgetos Mountain (southern Peloponnesus) is bordered by a normal fault zone striking NNW-SSW from Megalopolis basin to Lakonikos gulf near Gythio town, with a total length of about 80 km. A segment of this fault zone forms an impressive morphotectonic feature that is known as Sparta fault and it is located between Sparta town and Potamia village. The total length of this segment is about 20 km. Though this fault zone seems to be active since Pliocene, its present seismicity appears to be very low and sparse.

In order to assess the geometrical parameters of this fault zone, a morpho-structural analysis was carried out using combinations of Landsat ETM+ panchromatic and multi-spectral images (bands 1, 3, 4, 5 & 7) filtered with edge enhancement 3x3, the geological