



Seismo-tectonic Information System in the SE-Carpathians

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The southeast Carpathian Bends is one of the most interesting part of the Eurasian plate. The seismicity of the Vrancea area and the post volcanic activity of the Ciomadul volcano, youngest in the Carpathian Basin, have caught the attention of several geoscientists.

There are publications on GNSS observations and attempts to use archive SAR images to investigate the recent surface deformations of this area. Contrary to archive SAR images, the Sentinel-1A/B SAR satellites with their 6 day return periods may open a new possibility to study the slow surface deformations.

Supporting these activities we have decided to create a seismo-tectonic information system. We have started the collection of available thematic maps (land cover, tectonic maps, geological maps, digital elevation model). The inclusion of relevant seismic data, the focal mechanism solutions, stress data derived from focal mechanism inversion together with displacement derived by GNSS and/or Persistent Scatterer Interferometry is in progress.

We present the digitalization and geo-referencing of the necessary maps and illustrate the estimated SAR-velocities and seismic test data in Quantum GIS environment.

We hope that this system can contribute to the understanding of surface-mantle coupling and the morphologic and tectonic variations in the SE-Carpathians more comprehensively.