



## **Environmental cartographic models for the region of Varna paleoseismic phenomena (Bulgaria) for hazards assessment**

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The Varna paleoseismic phenomena marked the epicentral part of the catastrophic earthquake. The time of its origin was probably during the great Chaudian transgression since all the changes in the sea level occurring before it had been preserved in the cliff. The documented historic earthquakes of the Ic B.C. and XVc provoked some important corrections in the type of the relief in the city of Varna, considerable destructions in the highway net in the littoral zone between the city of Varna and cap of Galata et al., also human casualties. The effects had a faults and landslide predestination. Later, the Shabla 1901 earthquakes with  $M=7.2$ ,  $I=IX-X$  mobilized faults, landslides and rock falls in the region. They were reactivated by the earthquakes in 1444, 1858, 1891, 1901, 1902, 1903. The strong and relatively deep earthquakes of the Vrancea, Black Sea, Crimea, Caucasus, Asia Minor and Mediterranean cause creating local and regional activity of the investigated area. The local and regional development of the abrasion, limans, marshes, landslides, rock falls and suffusion effects produces an important influence to the relief evolution of the littoral and sometimes the anthropogenic factors from other side, cause the reactivation and new formation of the fractures and faults. The present work shows also the geoecological assessment of the contemporary natural hazards. For the study purposes are prepared different types of maps (shown on the specific maps applied) of 25,000 scale, which served for the qualitative and assessment of natural and anthropogenic hazards.