



ADDRESSING ISSUES OF GEOENVIRONMENTAL RISKS IN DOBRUJA, ROMANIA/BULGARIA

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Abstract

Dobruja is a historical region shared by Romania and Bulgaria; it is located on the western Black Sea coast, around the Danube River. The main geological, seismic and geotechnical features, as well as natural hazards are presented in this review. A comparative analysis is made between the northern and southern parts of Dobruja. The region has witnessed various kinds of natural hazard over the past decades, and this paper describes the geotechnical characteristics and chronology of two of the more frequently occurring events, namely earthquakes and soil liquefaction. The structural relationships between the different rock formations in Romania and Bulgaria are analyzed, to show the extent to which they influence the dynamics of these events. The stability of foundations on liquefacted sand, silty clay and karsts on which installations such as wind generators, the nuclear power station and breakwaters are built have been examined in the light of the geoenvironmental risks. The similarity in structural, geotechnical and environmental relationships between Romania and Bulgaria engender common risks that could be properly addressed only through collaboration between scientists from both countries.

Key words: earthquake, erosion, karsts, landslide, shore protection, waste storage, wind farm

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