



Seismic activity monitoring in the Izvorul Muntelui dam region

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Earthquakes occurrences near the artificial water reservoirs are caused by stress variation due to the weight of water, weakness of fractures or faults and increasing of pore pressure in crustal rocks. In the present study we aim to investigate how Izvorul Muntelui dam, located in the Eastern Carpathians influences local seismicity. For this purpose we selected from the seismic bulletins computed within National Data Center of National Institute for Earth Physics, Romania, crustal events occurred between 1984 and 2015 in a range of 0.3 deg around the artificial lake. Subsequently to improve the seismic monitoring of the region we applied a cross-correlation detector on the continuous recordings of Bicaz (BIZ) seismic stations. Besides the tectonic events we detected sources within this region that periodically generate artificial events. We couldn't emphasize the existence of a direct correlation between the water level variations and natural seismicity of the investigated area.