

of Reservoir Induced Seismicity in Aswan, Egypt

The river Nile is the longest river in the world. Many dams are located along it. The high dam is largest one and the longest monitored in terms of seismicity, water levels and crustal deformation. Seismicity recorded in the Aswan area between 1986 and 2015 was deeply investigated by applying different statistical techniques. The study of the seismic catalogue allowed us to distinguish between two different depth clusters. The time dynamics and spatial distribution of the two earthquakes clusters in correlation with the loading/unloading process of Nasser Lake were furtherly examined. The study revealed strong correlation between the shallow earthquakes cluster and the water loading/unloading process, whereas deeper earthquakes can be attributed to tectonic process, which is in good agreement with the active faults identified from geological studies.

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