



## **Seismic activity and water level fluctuations in the artificial lakes of Aliakmonas river (NW Greece)**

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The Public Power Corporation (PPC) of Greece has established four dammed reservoirs, downstream of each other on Aliakmonas River in North Western Greece (namely the artificial lakes of Ilarionas, Polyphyto, Sfikia and Asomata). In addition to the monitoring of the reservoir water levels the PPC has also installed a dense seismological network in the wider area. In this investigation the correlation between the local seismic activity and the water level fluctuations at the Ilarionas and Polyphyto reservoirs is studied.

On October 25th, 1984, during the Asomata reservoir initial filling, a  $M_s=5.4$  earthquake occurred in the region which was characterized by weak seismicity, until the strong earthquake of  $M_s=6.5$  that occurred on May 13th, 1995, at a distance of 18 km from the southern edge of the Polyphyto reservoir. More recently, on July 2nd and 3rd, 2013, two moderate earthquakes ( $M_l=4.7$  and  $M_l=4.6$ ) occurred, almost a year after the filling of the Ilarionas reservoir in 2012. In addition to these events, fourteen earthquakes with magnitudes equal or greater to  $M_l=4$  have also been detected in the wider area of the Aliakmonas reservoir.