



SDI Review Form 1.6

Journal Name:	<a href="#">Journal of Geography, Environment and Earth Science International</a>
Manuscript Number:	Ms_JGEESI_49100
Title of the Manuscript:	Protracted induced seismicity in Polyphyto dam area (N. Greece) 1974-2010
Type of the Article	Original Research Article

**General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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**PART 1: Review Comments**

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Compulsory</b> REVISION comments	<ol style="list-style-type: none"> <li><b>Title:</b> The Title should mention to an objective/purpose from this work. Like: (relationship between seismic activities and lakes' water level)</li> <li><b>Abstract:</b> What are the reservoirs you examined their water levels?</li> <li><b>Introduction:</b> the two marked earthquakes in figure1 are near to the E-W Rymnio fault, Is there any reported seismic events related to the other NE-SW faults?</li> <li><b>Discussion:</b> from fig.2 &amp; 4, the plotted seismicity events show the higher frequencies western of the Polyphyto lake whereas the traced faults were located eastern of the lake. So, I think the seismic activities western to the lake may be due to the fractured limestones rather than the marked faults (Please check). In addition, you need to add the faults layer in both figures to highlight your analysis.</li> <li><b>On the other hand, did you analyse all the reported seismic activities? How many events happened throughout the analysed period?</b></li> <li><b>In this section, you discuss the water level fluctuation rates through 10-11 Sep. 1994 to the end of Jan. 1995 and referred the happened quakes in May 1995 to the pore pressures and the water seepage as well.</b> Could you support these findings with a previous reference?</li> <li><b>The most reason of such seismic-induced activities in similar areas either due to the big load of the reservoir with imperious bottom or due to the water seepage from the high porous bottom that makes chemical weathering of the fractured limestone bedrocks especially which caped igneous or metamorphic rocks. The question is: which reason, from the above or other, was the main driver forcing the activities in the study area? It will be better if you refer to a reference to justify your expectation.</b></li> <li><b>Finally, the research idea, methodology and the results were appreciated and all the above comments are not effect on the research value.</b></li> </ol>	<ol style="list-style-type: none"> <li>The Title was modified according to reviewer, with the new Title 'Relationship between observed seismicity and water level fluctuations in Polyphyto dam area (North Greece)'.</li> <li>The word reservoir was modified with the exactly word <b>artificial lake</b> or <b>artificial lakes</b>.</li> <li>During the period up to 1900, only five major events occurred close Kozani, Edessa and and Preveza (East of Lakes). General the region was characterized as a low seismicity area. Please, see lines 68-71 in the manuscript. There isn't any reported seismic events related to the NE-SW faults yet.</li> <li>The fractured limestones were mentioned in the manuscript. The correction in both figures is done according to the reviewer's suggestion.</li> <li>The seismological data from National Observatory of Athens catalogues (NOA) were used for this study (See details for seismological data on Mc, RMS, etc. in Chouliaras G. 2009). For period 1987-2010, 1616 events were recorded.</li> <li>The present seismicity has characteristics similar to the second type induced seismicity according to Simpson et al. 1988 [37]. The Kozani earthquake seems to be accelerated, according to seismic history of area. This acceleration may be due to the high water level rates which lead to pore pressure changes.....</li> <li>So far, this approach can't give something more. Of course, it would be usefull, a probabilistic approach or RTRW theory to be used for further investigation.</li> <li>All changes were added in the revised manuscript. I would like to thank the reviewer for his precious time.</li> </ol>
<b>Minor</b> REVISION comments	<ol style="list-style-type: none"> <li>It will be useful if you mark the dams' locations on the map (fig.1.).</li> <li>If possible, could you generate a statistics table of the analysed seismicity's classified by numbers per years and magnitudes?</li> </ol>	<ol style="list-style-type: none"> <li>The correction is done according to the reviewer's suggestion</li> </ol>
<b>Optional/General</b> comments	Regarding to the symbols of the maps, for example, the shallower earthquakes are hazardous than the deeper. So, the hazardous should be in red color and the deeper marked in light red/orange or yellow. The color gradient in mapping is important for interpretation purposes and simple presentation.	



**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<b>Are there ethical issues in this manuscript?</b>	<u><i>(If yes, Kindly please write down the ethical issues here in details)</i></u>	