



## **The Bisri dam: a dam project on the seismogenic Roub fault, Lebanon**

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The Roub fault is a fault branch of the Dead Sea Transform Fault within the Lebanese Restraining Bend. It is an active seismogenic fault that was correlated with the January 1st, 1837 (Ms 7.1) earthquake, and whose extent has been the subject of great controversy within the restraining bend. In this research, the Roub fault is revisited after a dam project (the Bisri dam) has been planned in one of the fault's most critical locations, i.e. in the Bisri valley that hosted the epicenter of the March 16th, 1956 (Ms 5.1) earthquake. The fault and its associated structures in the proposed dam area are discussed, and highlights on the dam site are made as a geologically complex and tectonically active area. The future water body behind the planned Bisri dam can have direct effect on inducing seismicity on a delicate fault system that can potentially lead to the generation of a major earthquake that can affect the surrounding region. This requires special attention and in-depth considerations of the potential of reservoir-induced seismicity on the seismogenic Roub fault, and makes of the Bisri area an unfavorable site for the proposed Bisri dam in Lebanon.