



## **Causes of Holocene palaeofloods in the Caucasus area – a question of landscape stability**

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Flooding constitutes a serious hazard for human civilisations. To be able to predict future flooding it is necessary to understand the former dynamics of fluvial systems, i.e. causes and triggers for changes of their dynamics. To achieve this, it is necessary to study the flooding activity of rivers during different time scales of the past under different environmental and climatic conditions. Generally, fluvial sediments are good archives for studying flood events at centennial and millennial time scales, although due to their discontinuous and complex character these studies have to be comprehensive and to be compared with other palaeoenvironmental archives.

In the Caucasus area, different climatic and ecologic conditions are found very close to each other. Here, floodplains and bed rock river valleys are generally densely populated and regularly hit by strong inundations. Thus, there is an urgent need to understand the flood dynamics of rivers by studying their fluvial behaviour during the past. Accordingly, during the last years we studied Holocene fluvial sediments along several rivers in eastern Georgia by means of geomorphologic, sedimentologic and chronologic methods. The results of our investigations show that during most of the Holocene the flood dynamics of the rivers followed partly contrasting patterns, determined by regional climatic and environmental conditions. In difference, the flood dynamics of the last millenia was dominated by anthropogenic activity. Taken as a whole the critical factor that controlled the flood dynamics in the Caucasus area was landscape stability, either influenced by natural or human factors.