

## **Risk Mapping and Preventive Measures Development in Pankisi gorge**

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Among the most dangerous natural disasters (12) in Georgia, floods have the leading role and are followed by huge material damage and losses. In August, 2010, during the visit of UN representatives to Pankisi gorge, the necessity of identification of flood-prone ravines/zones and development of risk maps had been emphasized and put on the agenda. Regarding this issue, on the basis of the contract concluded with UNDP, conducted flood risk assessment in specific ravines of river Alazani basin (Pankisi gorge) and developed relevant preventive recommendations. As a result, the data required for creation of early warning system in the indicated area have been collected giving opportunity of introduction of risk management preventive approach in the region.

The aim of the project was to assess the flood-prone villages (Dzibakhevi, Birkiani, Jokolo, Duisi) located on both sides of Alazani channel (9,5 km length section) in Akhmeta district Municipality, identify the most vulnerable population and develop adequate preventive measures. The mentioned above villages were selected for research due to the flash flow that took place on June 17, 2010 and was followed by damage (residential houses, agricultural lands, pastures damaged, domestic animals loose). The damage cost exceeded USD one million. Hydrometeorological station in the gorge ceased functioning long time ago.

On the basis of the meteorological (temperature regime, winds, precipitations, etc.), hydrological (hydro-network, ravine morphometry, hydraulic characteristics, calculation of different probability water discharge cross-section profiles of ravines), cartographic (site planning and placement on map) researches, engineering measures to be conducted as well as the population's at risk disaster risk reduction recommendations (recording of population number, age, gender groups, assessment of social-economic conditions, calculation of inflicted damage) have been elaborated. Modelling of different probability water maximal discharges has been made on the district relief digital model created via geo-information technology, possible catastrophic flood-risk zones have been allocated, risk maps developed.