

Evaluation of mudflow processes common in some regions of Georgia

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The mountainous relief of Georgia and present-day trends of the climate change contribute to more frequent catastrophic events. In recent years, these processes have been made particularly active almost in all mountainous regions of Georgia. Those regions, with their risk of hazard of erosive-mudflow processes, belong to a high category meaning that during the intense downpours, the passages of turbulent and sometimes, structural mudflow currents and significant bed deformations occur. The situation is particularly severe when several natural processes and anthropogenic factors occur at the same time. Consequently, the study of processes ongoing in the basins of the rivers, quantitative forecasting of their design values and consideration of the peculiarities of their motion on transit and accumulation sites are a very significant objective.

In recent years, the construction of various types of hydraulic facilities, including HPPs in the mountainous regions of the country has become very intense. The mudflow processes occurring in their basins have much obstructed their operation. The paper considers the mudflow processes common in some regions of Georgia and gives the calculations of their design parameters.