

## Determination of minimum flow with a different probability to calculate environmental flow of mountain rivers

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The development of a methodology for determining the environmental flow of rivers is a challenge in the modern world. Recently, along with the activation of the construction of small and medium capacity hydropower plants on the mountain rivers, it has become particularly urgent. The current practice of setting environmental flow in Georgia is to leave at least 10% of the multi annual discharge in the river bed, which is an established approach rather than a normative one, leading to disagreement between designers, developers and permitting representatives.

Determination of environmental flow for different water users depends on many factors: hydrological, hydrobiological etc. Given the complexity and magnitude of the issue, although many considerations have raised regarding environmental flow determination, the issue is still not resolved to the desired level.

Given the complexity of the environmental flow, it had to take into account various hydrological features, including minimum river runoff. In this respect, we believe that the amount of water determined as an environmental flow should not be less than the minimum runoff in natural conditions. Accordingly, the report provides information on the 770 rivers of Georgia for different probability such as one-day, ten-day, and thirty-day minimum maintenance flow are determined and compared to the share of average annual runoff in the same basins.