



## **Flash floods in small mountainous basins of Northern-West Caucasus: data analysis and modelling**

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Black Sea coast of Northern-West Caucasus consists of the series of small mountainous watersheds. High population density, intensive land use, numerous infrastructure and recreation facilities amplify the risks of material losses and casualties due to extreme flash floods caused by heavy rainstorms.

The study aimed to 1) analyze historical runoff and precipitation data for the changes detection, 2) develop and test modelling approaches which would be able to cope with sparseness of hydrometeorological data, 3) assess design flood characteristics at several ungauged watersheds of the region.

Hydrological modelling was conducted for 12 mountainous basins with area from 14 to 839 km<sup>2</sup>.

Process-based model Hydrograph (Vinogradov et al., 2011) which describes runoff formation processes in different landscapes and altitudinal zones was applied and enhanced. The results of the study will be presented.

The study is partially supported by Russian Foundation for Basic Research, project No 16-05-00989.