

## LONGTERM AIR TEMPERATURE VARIATIONS IN THE LOW MOUNTAIN ZONE OF THE EASTERN CAUCASUS DURING FLOOD FORMATION SEASON

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*A stable change in the temperature regime in the mountainous regions of the North Caucasus is one of the climatic factors that can lead to a change in the activity of the hydrological nature hazards (mudflows, floods). In the paper the surface air temperature dynamics in the Eastern Caucasus low-mountain zone at various stages of river flow formation from the point of view of its possible impact on the frequency of hazardous hydrological events were investigated. Methods of mathematical and statistical modeling were used. A statistically significant increase in the average monthly values of air temperature in February and March was found, i.e. during the period of accumulation of snow reserves by the beginning of the flood period, high floods and mudflows. It was found that the most significant increase in surface air temperature takes place in the summer months, during the period of intense melting of glaciers in the highlands at the river headwaters, which is also accompanied by an increase in precipitation intensity in June and contributes to an increase in the frequency of hazardous hydrological events.*

**Keywords:** regional climate change, surface air temperature, hazardous hydrological events, floods, mathematical and statistical modeling, tendency stability, linear trend, ranking.

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