Assessment of hydrometeorological disastrous events on the territory of Georgia through climatic indices

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The frequency and intensity of natural disasters have been actively increased on the territory of Georgia in recent decades. The provoking factor of these mentioned events can be named as a Climate change.

Using 27 key climate change indices developed by experts from the World Meteorological Organization (WMO) and the Intergovernmental Commission for Monitoring and Indexes, climate modeling was carried out in frames of Georgia's fourth National Communication to the UN Framework Convention on Climate Change (UNFCCC). Based on the modeling, for the period 2041-2070 and 2071-2099 was prepared general forecast of the extreme weather and climate events. Changes of climate parameters allows us to predict the frequency of natural hydrometeorological events.

For the assessment of Climate Change, data were used from the last 60 years of the former and existing 39 meteorological stations (on the territory of Georgia). The observation points were selected on the basis of optimal consideration of the climatic peculiarities of the territory of Georgia and the administrative-territorial division of the country.

The modeling results showed that the amount of atmospheric precipitation has increased in western Georgia, especially in the Black Sea coast. It is also expected that the amount of precipitation will increase in both western and eastern Georgia, which will increase the intensity and frequency of both meteorological and aquatic natural processes.