

## Climate Change Impact on Water Resources above the Territory of Georgia

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**Abstract :** At present impact of global climate change on the territory of Georgia is evident at least on the background of the Caucasus glaciers melting which during the last century have decreased to half their size. Glaciers are early indicators of ongoing global and regional climate change. Knowledge of the Caucasus glaciers fluctuation (melting) is an extremely necessary tool for planning hydro-electric stations and water reservoir, for development tourism and agriculture, for provision of population with drinking water and for prediction of water supplies in more arid regions of Georgia. Otherwise, the activity of anthropogenic factors has resulted in decreasing of the mowing, arable, unused lands, water resources, shrubs and forests, owing to increasing the production and building. Transformation of one type structural unit into another one has resulted in local climate change and its directly or indirectly impacts on different components of water resources on the territory of Georgia. In the present paper, some hydrological specifications of Georgian water resources and its potential pollutants on the background of regional climate change are presented. Some results of Georgian's glaciers pollution and its melting process are given. The possibility of surface and subsurface water pollution owing to accidents at oil pipelines or railway routes are discussed. The specific properties of regional climate warming process in the eastern Georgia are studied by statistical methods. The effect of the eastern Georgian climate change upon water resources is investigated.

**Keywords :** climate, droughts, pollution, water resources

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