

Comparative Analysis of Hydro Meteorological Regimes in Svaneti and Guria Regions on the example of River Watersheds using NASA and ESA data.

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Methodology of calculation of hydrological characteristics of Georgian rivers is based on methodological approaches of the 60-70s of XX Century. The deficiencies prepared by the well-established runoff from the Soviet period and calculations prepared by the analogues of the river for the average annual discharge are mainly derived from data age as well as geographical diversity.

Due to the lack of resources and low level in development of technical equipment, was processed data and were written empirical formulas for large river watersheds which at present are used in the regional term. The sense of problems by theoretical calculations occurs in hydrological calculations for small rivers, there are cases when the coefficients of the river analogue or concrete hydrological region provide radically different results than the actual observation. This issue is a big problem in the process of implementation of small and medium-sized hydropower stations, roads, bridges, irrigation systems and other types of work.

Modern satellite data allow specifying and refining data that are accepted by theoretical calculations. The information provided daily by satellites which are obtained high resolution and various type aerial photos analysis is the key to modern hydrology. In this regard, we have reviewed comparative analysis of hydro meteorological parameters of Svaneti and Guria in two regions of Georgia in case of calculation of average annual norms. The merging of old and new data and their use in hydrological calculations is important in scientific also practical term of the study of rivers.