ABSTRACT

Within this work, a literary research was performed on the topic of rock glaciers and their influence on river runoff. Rock glacier are features typical for high-mountain periglacial environment. Through the accumulation of part of the flowing glacial water, they significantly affect the timing and quantity of watershed discharge. In addition, stone glaciers preserve significant volumes of water in the form of buried ice, the gradual melting of which regulates river runoff, especially in the dry seasons. A physical-geographical characteristics of the Ala Archa river basin was performed and supplemented by a more detailed climatological characteristic of the study area based on the own processing of meteorological data from the Adygine meteorological station. The purpose of this work was to assess the impact of rock glaciers in the basin of eight selected rivers, which drain the Kyrgyz and Kungej Alatau, on their hydrological regime. It was found that the presence of rock glaciers in the monitored basins affects the runoff regime of these rivers, especially by reducing the differences between their June and July runoffs.

Key words: rock glacier, hydrological regime, Tien Shan