

EGU2020-1108

<https://doi.org/10.5194/egusphere-egu2020-1108>

EGU General Assembly 2020

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## Changes of hydrological regime in the mountain catchments of the Crimean Peninsula

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Crimean water resources are unevenly distributed and mainly generated at the slopes of the Crimean Mountains affecting water supply of population and industry of the peninsula. The study of water resources has been limited for the last 30 years due to political situation and little quantitative information is available about climate change impact on hydrological regime of Crimean rivers. The aim of the study was the assessment of current flow characteristics for three rivers originating from the Crimean Mountains (the Derekoyka River at Yalta; 49.7 km<sup>2</sup>, the Demerdjy River at Alyshta, 53 km<sup>2</sup>; the Kokkozka River at Golybinka, 83.6 km<sup>2</sup>) and their comparison to the historical period (1960-1990) data. The study area is characterized by a Mediterranean climate and has a pronounced high-altitude zoning. Main vegetation type is the oak forests and shrubs. The highest elevation of the slopes reaches 1500 m.

Due to the lack of hydrological data for the last 30 years, the assessment of current flow characteristics was conducted based on hydrological modelling and observed meteorological data. The hydrological model Hydrograph was used in the study. The model was successfully used for the simulations of streamflow in similar climate for the basins of the Black Sea coast of Russia (Makarieva et al., 2018; 2019). The model was parametrized based on the data on typical landscapes of the studied area. The verification of streamflow and water balance simulation results was conducted for the historical period (1960-1990). The model was used to produce streamflow hydrographs for the period of 1991-2018 based on meteorological data. The changes of hydrological regime of Crimean rivers was assessed in comparison with historical period. The results of the study will be presented.