



## Climate Analysis of Snow Parametars in Bulgarian Part of Rhodopa Mountains (1961-2018)

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Bulgaria has unusually various climate conditions due to the influence of the strongly different continental and Mediterranean climates and diverse landscape. The Rhodopa Mountains occupy one-seventh of the countries territory and is situated on the border between this two climate zones. For these reason the analysis of specific conditions in West and East part of the region are very important for better understanding of recent climate variations.

The aim of this study is to analyze climatic variations of snowfall and snow cover parameters such as maximum depth and persistence in the Bulgarian part of Rhodopa Mountains in the period 1961-2018. Monthly values about the number of days with snow cover and snow precipitation, maximum snow cover depth, air temperature, precipitation totals are calculated, using daily data from 36 climatological and raingauge stations with continuous measurements during the whole period of investigation. The results for the last 28 years (1991-2018) are compared with the referent 30-year period (1961-1990). Statistical analysis is performed in order to assess the long-term variability of snow parameters. In the most part of region, an increasing tendency in the number of days with snow cover is observed, while the maximum snow depth shows a decreasing trend. The relationship between air temperature variations and snow parameters is also commented.

This investigation is part of a larger project for estimation of the current variability of the snow cover in Bulgaria and is funded by the Bulgarian National Science Fund in the call for young and post-doctoral researchers under the contract DM14/1(2017). .