



Comparative spatial and statistical analysis of selected snow cover climatological characteristics and extremes in Slovakia within the 1950/1951-1979-1980 and 1980/1981-2009/2010 winters

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Snow cover and its characteristics are pretty sensitive to any kind of air temperature and precipitation changes. In association with long-term changes of the air temperature as well as precipitation through the last two or three decades (from the beginning of 80s) it would be very interesting to compare a regime of snow cover in the periods 1951-1980 and 1981-2010, respectively. In particular, we have recognized notable snow cover changes in different regions from the beginning of 90s. Slovakia situated in the western part of the Carpathians, has the complex geographical conditions and from this reason there has not been recorded similar snow cover trends even in the similar altitudes. Moreover, some mountainous regions with high altitude (the High and Low Tatras, and especially numerous mid-altitude localities, etc.) show the evidences of existing significantly negative trends of some selected characteristics of snow cover. It is well-known that snow cover and precipitation regime of selected region in Slovakia are substantially influenced by the circulation patterns in wider European space, and furthermore in the Carpathians, analogously to the situation in the Alps, windward as well as leeward effects have also relevant consequences in the mountainous regions. Moreover, climate differences between northern and southern, as well as western and eastern regions in Slovakia also play the crucial role. These factors markedly influence the long-term tendencies of snow cover characteristics in particular localities.