



## **Trends of selected snow cover characteristics in Slovakia during winter seasons 1921/1922 - 2016/2017**

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Observed trend could be generally expressed by stating that most area of Slovakia is gradually observing less precipitation in form of snowfall. It is expected, that in the contemporary warmer climate will the number of days with snow cover and its depth further decrease, especially in the lowlands, basins, valleys and in the middle mountain altitudes. Cumulative snow cover depth is characteristic capturing changing snowfall conditions even better than the number of snow cover days. At the same time are registered relatively large fluctuations between the different winter seasons, when scarce snowfall seasons are occasionally alternated with the winter season rich in snow. There is a relationship between snow cover characteristics, the air temperature and the amount of atmospheric precipitation. Due to higher air temperature less snow falls at altitudes below 1200 - 1500 meters above the sea level. At levels above this altitude, mainly in highest mountain areas, more snow falls due to increase in precipitation and still relatively low air temperature. Spatial values of snow cover days and values of cumulative snow cover depth were processed from nearly 100-year time series from selected precipitation stations located in several altitude levels. Decrease in number of days with snow cover is clear not only for the winter seasons (XII - II) but also for the most of the analyzed months and is especially highlighted in March. Snowfall and snow cover regime has already lost its original stability in the basins, valleys and even in middle mountain altitudes. In this climate conditions it is possible, that in the middle of October can from one precipitation event fall more snow, than it accumulates over the whole next winter season. All this happens in an environment with registered long-term decrease in snow cover intermitted with irregular episodes leading to calamity situation.