



Upward trends in time series of basic characteristics of air temperature at selected meteorological stations in Slovakia

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Rise of the air temperature due to climate change in recent decades is very clear. When comparing the long-term average air temperature in the period 1951-1980 with the 1981-2010 period, the warming in the last thirty years was most noticeable in January, May and summer months, while adequately to this average temperatures of individual seasons increased as well as the values of average annual air temperature. The period from March to September in 2012, was the warmest seven-month period in Hurbanovo from the beginning of meteorological measurements at this meteorological station since 1871. This fact was also reflected in other characteristics of the air temperature in Slovakia. The average monthly air temperatures in the last 25 years now represent the warmest months from the mid-20th century. This is also reflected in the trends of the average monthly, seasonal and annual air temperatures, which are in the charts expressed by fourth degree polynomial. These tendencies weren't recorded just within the warmest regions of southwestern Slovakia (represented by station Hurbanovo), but throughout its entire territory, including the high mountain areas locations (represented by station Lomincký štít). The year 2012 was one of the warmest years in the history of meteorological measurements in Slovakia, however in addition to a period with several months with above-average air temperatures, there was one particularly frosty short period during the end of January and in the first half of February 2012. This trend may indicate an increased risk of higher fluctuations of the air temperature in the future.