Climate of Slovenia on homogenized data

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Abstract
In the period from 2008 to 2014 we homogenized data from Slovenian meteorological stations. Time series of air temperature, precipitation, snow depth, sunshine duration, air pressure, reference evapotranspiration, wind speed and direction were homogenised and analysed. Trends of analysed meteorological variables differ in seasons of the year as well as in regions of Slovenia. Annual trends and variations of mean air temperature and precipitation sum are presented. Annual variations are expressed as deviation from the mean values of reference period 1981–2010. The most uniform trend is shown at mean air temperature; it is significantly positive at 5 % significance level in all seasons, except in autumn. On annual level the trend is around 0.33 °C/decade. The charts of annual deviation of mean air temperature show characteristic pattern: air temperature before 1991 was mostly colder while after 1992 was mainly warmer in comparison with the 1981–2010 mean value. Precipitation trend varies seasonally and is mostly insignificant; the trend of annual sum is negative and it is mostly from –4 to –2 %/decade, which is significant at 5 % significance level only in western Slovenia. The spatial pattern in charts of annual deviation is not uniform. In some years there has been precipitation deficiency on the other hand in the same year the other part of the county has experienced the surplus precipitation according to 1981–2010 mean values. However, the year 2014 was unique: it was the warmest and the wettest year of all years since 1961 on.
Most of the results are available also on the web: http://meteo.arso.gov.si/met/sl/climate/pss-project/