



Climate change and variability in Slovenia from 1961 to 2011

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Climate in Slovenia is dominated by diverse topography, which greatly influences climate. Slovenian Environment Agency launched in 2008 a project Climate variability in Slovenia to study climate change in the period 1961–2011. Time series of air temperature, precipitation sum, snow depth and sunshine duration were homogenised and analysed. The magnitude of long-term linear trends was estimated by least-squares and Theil-Sen methods. Air temperature shows significantly positive trend at 5 % significance level in all seasons, except in autumn. On annual level the trend is around 0,33 °C/decade. Precipitation sum trend varies seasonally and is mostly insignificant, the trend of annual sum is negative and partly significant in western Slovenia. Both new and total snow depth decreased, however the trend is only partly significant. Sunshine duration increased significantly in spring and summer. Variability of monthly values was calculated on residuals from LOWESS-smoothed line. The seasonal high and low of variability for air temperature is in February and July, respectively. Variability of other variables shows different pattern and depends also on the use of absolute or normalised values.