



## **Arguments for climate change in Lithuania**

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Evidence of climate change in Lithuania during last decades first of all unfolds throughout the increase in frequency of the extreme weather events. Longer scale changes and trends are better seen in the analyses of the traditional variables e.g seasonal temperature, precipitation, wind speed, sea level, ice cover persistence, drought length and intensity, and etc. The study concentrates on the long-term change in Baltic Sea level, river ice and snow cover parameters versus change in frequency of cold outbreaks, winter storms, hot, dry and wet spells. Trends analysis outcome is coherent with the global and regional climatic tendencies well documented in recent research papers: sea level and surface temperature rise, increase frequency and seasonal shift of winter storms, warm season dry and hot spells accompanied by intense droughts, decrease in mean wind speed, permanent snow cover and the river ice duration. On the other hand, the temporal distribution of cold outbreaks in winter became unperiodic but very contrasting to mean winter conditions. The North Atlantic Oscillation (NAO) index has been selected as the regional climate indicator. Temperature and precipitation correlations with NAO index show slightly different results on the monthly and daily timescales. Moreover, results also depend on the index calculation procedure. Intraseasonal variation of correlations reveals the fact that temperature and even precipitation dependence to NAO is obvious only in its active phase.