



Changes in the variability of extreme climate events in Latvia

Zanita Avotniece (1), Lita Lizuma (2), Agrita Briede (2), and Maris Klavins (2)

(1) Latvian Environment, Geology and Meteorology Centre, Riga, Latvia (zanita.avotniece@lvgmc.lv), (2) University of Latvia, Faculty of Geography and Earth Sciences, Riga, Latvia (agrita.briede@lu.lv)

Recent changes in the mean values of surface air temperature and precipitation have led to significant local changes in hazardous and extreme events in many parts of the world, including the Northern Europe and Latvia. The observed trends in the changes of such extreme climate events indicate that extremes associated with high temperatures and precipitation are becoming more frequent in Latvia, however not much is known about the changes in variability of these extreme events. This study investigated the long-term trends and variability of extreme temperature and precipitation events as defined by the ECA&D in 10 meteorological observation stations in Latvia over the period 1925-2012. In order to detect and study the changes in variability and anomalies of extreme events, a comparison of three different time scales was performed: 1931-1960, 1961-1990, 1981-2010. The results of the analysis revealed steady changes in some extremes while others have experienced a significant change in variability in the most recent 30-year period. Due to the specifics in the spatial distribution of extreme events, the results show differences in the behaviour of extreme events over the country.