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Forecasting the weather
- ensemble techniques
in probabilistic weather prediction

Multi-model projection of temperature extremes in Poland in 2021-2050

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Changes in temperature extremes such as 2003 heat wave exert a great impact on the everyday life, human health and the economy system. The most sensitive areas of the economy to changes in the distribution and intensity of extreme temperatures are the agriculture, water resources and energy system. This paper provide an estimation of extreme temperature changes in Poland in 2021-2050 in relation to reference period and observation (1971-2000). The regional climate model data of daily minimum and maximum surface air temperature had been obtained from ENSEMBLES project (HadRM3, HIRHAM5, RegCM3, RCA3, RCA) and Max Planck Institute (CLM). Temperature extreme projection has been done on the basis of the relative and absolute threshold. The relative threshold include changes in 5th, 25th, 50th, 75th and 95th percentile and absolute threshold include 25°C (Tmax) and 0°C (Tmin). Results have showed that the number of the summer days will increase from the north to the south Poland. On the other hand the number of the frost days will decrease the most in north-eastern and the least in north-western Poland.