HUMAN HEALTH

Future prediction of heat wave periods with Markov chain analysis

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The impact of global climate change is also felt in Hungary. An undesirable effect of climate change (associated with rising temperatures) is mainly the increase in the frequency, intensity, and length of summer heat waves. In this respect, the region of the Southern Great Plain and the Danube-Tisza Region are particularly endangered, but the number of heat wave days has increased throughout the country in recent decades. This study takes the climatic data sets of Baja into account, and on this basis, it gives the probability that a particular day falls into a heat wave period. Based on this information we draw a general conclusion about the long-term change of this climatic characteristic of the Southern Great Plain. The mathematical model used in the research applies the theory of Markov chains, which is relatively new in statistical analysis.