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Comparations of urban and rural bioclimatological conditions in the city of Iasi, Romania

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This study was carried out to determine the human bioclimatic stress and bioclimatic comfort conditions in rural and urban areas in the climatic conditions of the city of Iasi. We used hourly data obtained over a 5-year period (2013-2017), by using an observation network with 8 observation points, which are located in urban and rural areas. The indexes analyzed are: thermohygrometric index (THI, which assesses air temperature and relative humidity), the relative strain index (RSI, which assesses air temperature and vapor pressure) and the number of “beergarden days” (define by air temperature at 2100 hours). Throughout the entire analyzed period in urban and rural areas ”very cold” THI conditions characterize 4% and 6% of the year, ”cold” THI conditions 48% and 49%, ”cool” conditions 7% and 8%, ”comfortable” THI conditions 21% and 20% and ”hot” THI conditions 18% and 15%. RSI exceeds the stress threshold value for strong heat waves. Beergarden days appears from April until September and the city has the most higher frequencies of pleasant evenings as the rural areas. Consequently, it has been determined that the most suitable area for the human comfort in the conditions of Iasi is in the urban area during the winter and in the rural areas during the summer.