Humboldt Kolleg
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Global Challenges of the 21st Century
1) Technological development and human health/ quality of life
2) Climate change and environmental sustainability
3) Democracy and cohesion in Europe

The Influence of Urban Climate on Bioclimatic Conditions in the City of Iasi, Romania

This study was carried out in order to outline the human bioclimatic stress/comfort conditions within the area of Iași city, Romania. Meteorological data were obtained over a 7-year period (December 2012 to November 2019) from an observation network relying on 8 fixed observation points located in relevant spots for the urban climate conditions in the region. The results demonstrate firstly that throughout the entire analyzed period, while using Thermo-hygrometric Index (THI), ”very cold” conditions characterize 4% of the entire year in the inner parts of the city and 6% in the rural area, while the ”hot” THI conditions varies from 18% in the middle of the urban heat island to 15% in the rural area. Overall, the rural areas are generally more comfortable than the inner city, especially in the summer, when the urban heat island (UHI) core is starting to develop from the evening and persists during the night. On the contrary, UHI transforms the level of overheating discomfort into a more comfortable area than rural areas from April to October. Also, similar bioclimatic conditions are shown for the summer by the Relative strain index (RSI), which exceeds the stress threshold value mostly during heat waves, when a significant contrast between urban and rural areas is felt. In brief, it has been determined that the most suitable area for human comfort in the conditions of Iași is inside the urban area during the winter and in the rural areas during the summer.

Pavel Ichim graduated the Faculty of Geography and Geology of the Alexandru Ioan Cuza University of Iaşi in 2009 and obtained a M.Sc. degree in 2011 at the same institution. He obtained his Ph.D. degree in 2014, with a thesis entitled „*Study of thermal inversions between the Prut and Siret rivers”.* Since March 2017, he works as assistant professor at the Faculty of Geography and Geology in Iași. He has been lately working to develop two networks of experimental observations on air temperature and humidity. He also worked as a climatologist and studied the antropogenic impact within the project “*Elaborarea Planurilor de management pentru ariile protejate ROSCI0310*

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