

Assessment of spatial and temporal variability of bioclimate using UTCI

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One of principal features of climate is its temporal and spatial variability. Temporal fluctuations of weather are mostly observed in temperate climate zones. However, long distance travels are essential part of life in contemporary societies. In a short time we can move to the extremely different climate conditions and in this case, an organism is under great pressing of atmospheric stimuli which have totally diverse level and range of variability in comparison to home destination. Both, temporal and spatial differences in climate stimuli need various adaptation strategies. However, the general climate information seems to be insufficient for choosing optimal adaptation strategy to new conditions. The paper presents new complex index which bases on UTCI approach and is addressed for assessment of contrasts in bioclimatic conditions (BCI). It was applied to compare differences in bioclimatic conditions in four European cities represented various climate zones: Athens (Mediterranean climate), Dublin (oceanic climate), Warsaw (humid continental climate) and Helsinki (subarctic climate). BCI was used both, for interregional comparison and for assessment of day-to-day changes in particular locations.