



Human comfort research in the service of climate adaptation

Ágnes Gulyás¹; Márton Kiss¹

¹*Department of Climatology and Landscape Ecology, University of Szeged, Hungary*
**agulyas@geo.u-szeged.hu*

Climate change affects all aspects of our lives, having most prominent influence on thermal comfort and thus indirectly on our health. Our research group has been conducting basic- and applied human comfort research for years, which initially focused on mapping the thermal conditions of urban public areas and the factors that directly determine them. These studies clearly proved that during summer heat waves, the most effective way to improve human comfort conditions is to reduce solar radiation, thus reducing the mean radiant temperature. Our results highlighted the prominent role of green infrastructure, especially woody vegetation in this phenomenon.

Urban green infrastructure (UGI) – in addition to its many other positive effects – is one of the most versatile tools for increasing the resilience (adaptation potential) of cities to climate change (micro and local climate regulation, urban water balance), but its role in mitigation (carbon sequestration and storage) is also not negligible. However, for Hungarian urban planning practice and decision-making, there are not enough data and a suitable evaluation methods that can adequately support this potential. Therefore, our recent research is aimed at developing the evaluation of the climate regulation ecosystem services of urban (primarily woody) vegetation. Furthermore, as a member of an international team, we are investigating the impact of green infrastructure (hospital gardens) on the condition of patients in a questionnaire survey.