Review of: "The role of urban trees in reducing land surface temperatures in European cities"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

This article extracted potential regulations from 293 European cities and revealed the role of trees in reducing land surface temperature. The cooling potential of trees under different climatic backgrounds and urban green space coverage was studied and compared among these cities. Trees mainly affect urban climate through shading, transpiration, and albedo. Moreover, shading effect, respiration and albedo are strongly affected by environmental conditions in addition to the characteristics of trees / tree species. For example, higher CO_2 concentration, higher nutrient utilization, higher temperature and higher irrigation level would greatly affect the cooling effect of trees. In fact, these laws are found to be more important to guide the most possible practical application of urban green space cooling effect. However, in the real urban environment, in addition to the influence of cloud on the remote sensing data, the spatial resolution of remote sensing data will also affect all analysis results. The accuracy of remote sensing image is not simply mentioned here, such as 30m * 30m. More importantly, we improvement of the classification accuracy for the ground objects based on remote sensing images. First, the cooling intensity and buffer distance of trees, grasslands, water bodies and other blue-green facilities can be completely affected by adjacent features. Therefore, the bandwidth of these analyses will determine the result output of the cooling effect. This reflects the most important scale effect in the first law of geography. Second, if the research can be considered from the perspective of local climate zone, the conclusion may have a more practical guiding role. Even for the same land use type, the difference of its internal structure will seriously affect the cooling efficiency. This reflects the spatial heterogeneity in the second law of geography.