

## Heat stress in cities is unevenly distributed

**People on lower incomes in cities suffer particularly from heatwaves. Researchers at the University of Vienna are calling for social inequalities to be given greater consideration in future when it comes to adaptation measures such as the greening of streets and squares.**

Too often, for example, central shopping streets are greened while lower-income neighborhoods lose out, explained scientists at an event held by the Environment and Climate Research Network of the University of Vienna in cooperation with the Natural History Museum (NHM) Vienna on Tuesday evening.

Ways to counteract the increasingly extreme heat in urban areas, such as less concrete or less private transport, often take a very long time as infrastructure projects in urban planning, according to environmental geoscientist and co-head of the research network, Thilo Hofmann. However, rapid action is necessary. In 2022 alone, heatwaves claimed 61,000 lives in Europe, said the researcher. And in Austria, more people are already dying from heat than from road traffic.

### Small measures with a big impact

Relatively small, immediate measures such as greenery, rest areas or water features that can be reached by residents in a maximum of five minutes can already have a strong impact. "It's not about making people feel better in an abstract sense, but about measurably improving their health. For example, illnesses, sick days or psychosomatic stress are reduced," Hofmann told APA.

In addition to individual greening measures, environmental psychologist Mathew White also believes that all measures need to be interlinked to ensure that cool air flows in particular reach lower-income urban areas. This is because wealthier city dwellers already tend to live in the greenest parts of the city and therefore benefit the most from well-placed interventions.

### Wealthy people live in the coolest parts of the city

A study recently published in the journal "Nature Cities" with the participation of the University of Natural Resources and Life Sciences, Vienna (Boku) also revealed a disparity in this area: In all 14 European urban areas studied by the international research team - including Vienna - relatively few cooling effects from urban green spaces are felt by low-income residents. The same applies to people who live in rented accommodation, are affected by unemployment or belong to the group of immigrants.

People with higher incomes, who own their homes and usually belong to the long-term residents, on the other hand, benefit more than average from the cooling effects of urban green spaces. The risk of death during extreme heatwaves is low in this group, but significantly higher in lower-income urban environments, this study shows.

## Better access to local recreation areas

According to White, there is also a correlation between the frequency with which local recreation areas are visited and individual well-being. “Both, rapid greening measures and better access to natural areas around the city, are needed,” he told APA.

Interventions that particularly help socially vulnerable people to access local recreational areas therefore offer great potential in terms of improving the health of the urban population. For Vienna, the researcher cited the Danube Island, which is connected to the subway network, as a positive example, while the city hiking trails in the Vienna Woods, for example, are often only accessible by long-distance buses.

## Tenancy law as a further lever

Another way to mitigate social inequalities in the context of global warming is through tenancy law, as legal scholar Stephanie Nitsch explained to APA. In this area, particular attention must be paid to the fact that inequalities could intensify if the law is designed in such a way that the costs of decarbonization measures can be passed on to tenants.