

# Ecologists warn against potential health risks of poorly planned green infrastructures

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The development of green infrastructures and spaces in urban settings has been rising rapidly in recent years as society recognizes their many benefits to quality of life and public health.

But in a paper published in the journal *Infection Ecology and Epidemiology*, two researchers in Sweden and the US are sending a warning of potentially negative side effects if proper planning is not employed.

"There seems to be a prevailing assumption among the general public that everything that is in nature – that is part of wilderness – is good and safe; little thought is given to what can go wrong," said Mare Lohmus, an associate professor at the Centre of Occupational and Environmental Medicine, Karolinska Institutet. Lohmus authored the paper with John Balbus, a senior advisor for public health at the National Institutes of Environmental Health Sciences in the US.

In the papers, Lohmus and Balbus point to [infectious pathogens](#) carried via rodents, ticks and mosquitoes, as well as increased pollen allergens, as potential concerns for poorly planned [green](#) and blue infrastructures.

"I love that we are seeing more green spaces in urban settings," said Lohmus, "but we need to be aware of the potential negatives and plan accordingly."

"There seems to be a gap in the thinking when it comes to green

infrastructure," adds Lohmus, "and too little cooperation between biologist/ecologist working with green areas in cities and municipalities, and [public health](#) experts. While increased biodiversity and more natural milieus are welcome features of the cities of the future, it is important to think about the potential disease vectors and pest organisms that may thrive if these features are created without careful planning."

The creation of wetlands in cities is also cited in the paper as an example of potential concern. "This has become popular in parts of Asia and South America," said Lohmus, "where there is already a risk for mosquito-borne diseases like dengue fever."

While many architects are aware of these considerations – others are not.

Prior to researching this paper, Lohmus, who has studied rodent populations and their role in transmitting pathogens in urban settings, said that she would overhear conversations about cases of unintended repercussions resulting from green structures while attending conferences and meetings on ecology; yet, no research had been published on the topic.

She and Balbus hope the paper will raise awareness among architects and urban planners. "While many are aware and involve ecologists and other specialists in these projects, this clearly isn't happening in all instances," adds Lohmus.

**More information:** Mare Lõhmus et al. Making green infrastructure healthier infrastructure, *Infection Ecology & Epidemiology* (2015). [DOI: 10.3402/iee.v5.30082](https://doi.org/10.3402/iee.v5.30082)

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