

## **The come-back of biodiversity to cities: why and how?**

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The concept of biodiversity often refers to species. However, biodiversity is not only a set of species – it is also (and above all?) a network of biotic interactions and interactions between living organisms and their physical environment, which partly control the productivity and the stability of our environment. The current loss of biodiversity at an unprecedented rate is causing changes in the climate, the water cycle, and in the dynamics of diseases on both a local and global scale, that are increasingly well identified, even if many uncertainties remain. The origin of the current biodiversity crisis is often a consequence of the decrease in the availability of habitats due to the expansion of crops and urban lands.

Cities can be seen as both problems and opportunities for living organisms: problems, as they are barriers to species mobility and lack of large area habitats; and opportunities because they offer a great diversity of habitats on a very small scale. An effective green urban infrastructure policy can even make cities biodiversity-friendly. Biodiversity is also a source of solutions for adapting cities to climate change. Numerous research results show the positive impact of biodiversity on the thermal environment of buildings, air temperature, water runoff, pollution, public health and... biodiversity itself! Biodiversity, and more generally nature-based solutions, are typically win-win solutions that make it possible to face multiple environmental challenges at the same time. However, biodiversity is generally not part of a systemic vision of the ecological transition of society: many universities, such as Sorbonne University, are developing research-action projects capable of including more innovative science in the ecological transition strategies of public authorities and private bodies.