

# Urban green spaces and their biophonic soundscape component

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**Keywords:** soundscape ecology, urbanization, green space, indicators, soundscape

## **Abstract**

Sustainable urban environments with urban green spaces like city parks and urban gardens provide enduring benefits for individuals and society. Providing recreational spaces they encourage physical activity resulting in improved physical and mental health of citizens. As such, the density and the quality of these areas are of high importance in urban area planning.

In order to study urban green spaces as a landscape, the study of their soundscape as the holistic experience of their sounds has recently gained attention in soundscape ecological studies. Using *R*, the **soundecology** and **seewave** packages provide accessible processing tools appropriate to automate the calculation of soundecology indicators of long run sound recordings from permanent outdoor recorders. These indicators give information about the biophonic component in the present soundscape, and as such give a clear indication of the quality of the green space. Since bird vocalizations contribute strongly to the biophonic component, their spring singing activity is clearly reflected in the yearly pattern of these indicators.

A pilot study focussing on the annual variations of the soundscape of a typical urban green space has been conducted.

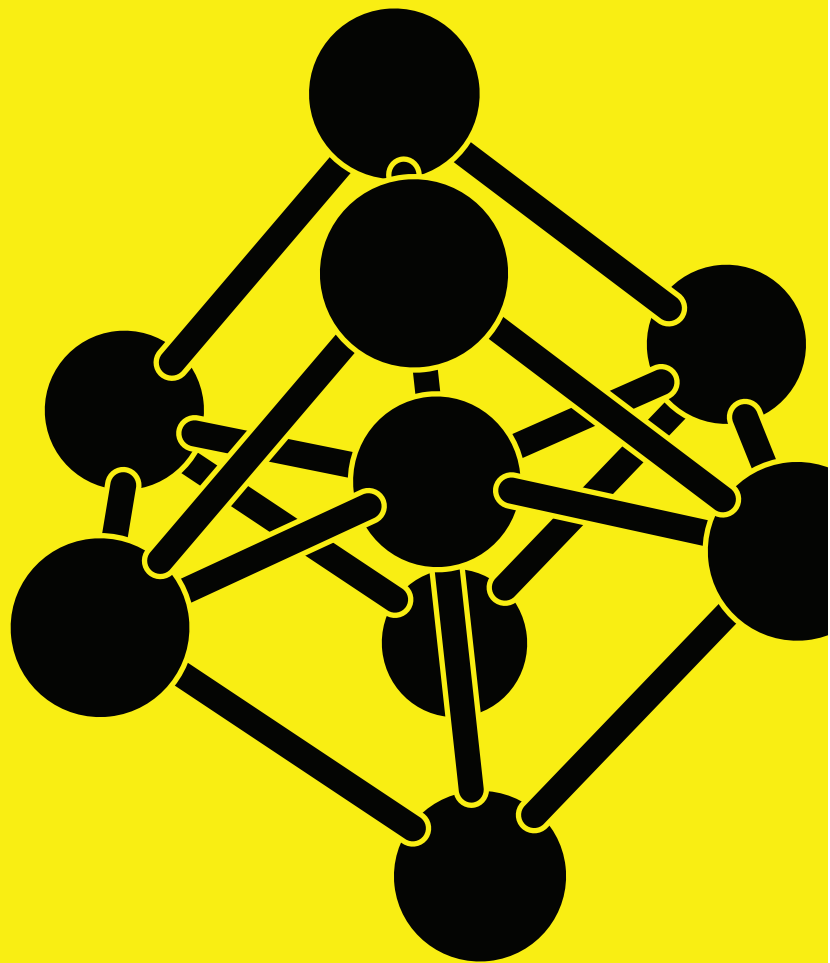
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04.07.2017 - 07.07.2017

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