

Section Sciences et Ingénierie de l'environnement Design Project 2024 (semestre de printemps)

Proposition n°7

Developing metrological tools to measure the impact of green spaces on the urban environment

Partenaire externe ou laboratoire IIE

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Taille de l'entreprise (nbre de collaborateurs) : Unisanté : 1000 ; DSTE : 100

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Descriptif du projet

Access to green spaces is associated with positive impacts on physical and mental health, and reduced mortality from non-communicable diseases. In terms of the physical environment, the presence of green spaces brings a number of benefits (cooling due to shading and evaporation, protection against solar UV, reduction in the presence of certain atmospheric pollutants), even if their impact on health is currently not very clear.

The health argument is often put forward in urban greening projects, where progress is often measured in terms of the number of trees planted, or the urban area planted. In the absence of a metric closer to the expected beneficial effect (e.g. heat stress reduction), the link with the expected health benefit remains difficult to establish and limits further research.

In this project, students will be asked to evaluate different techniques for objective measurement of the physical environment, to propose suitable tools or methods for application in urban environments, and to field-test them in the context of the Lausanne Canopy extension project.

Objectif et buts

Help develop and test new measurement methods to assess the impact of vegetation on the physical environment of local residents.

Descriptif tâches

- conduct a brief literature review of existing measurement techniques
- Select and develop an appropriate measurement protocol or measurement techniques (lab work)
- Propose a campaign to test and validate the method in the field (office work, networking)
- Carry out field measurements.(field work)

Divers

Unisanté is located in Lausanne Center (close the University Hospital and the Biopole)