research of the UrbanL@b at a glance

[Ulab] Urban lab

virtual infrastructure in urban ecology

urbanlab.campus.ciencias.ulisboa.pt

cE3c centre for ecology, evolution and environmental changes

Ciências ULisboa Faculdade de Ciências da Universidade de Lisboa

the UrbanL@b is a virtual research infrastructure of cE3c in urban ecology

we promote and display the research of cE3c, exploring how cities biodiversity creates vibrant urban areas, fostering cities capacity to achieve sustainability over the long-term

for that we aim at:

evaluating vulnerabilities and risks, by monitoring socio-ecological indicators and people's perceptions;

disseminating and provide training on urban ecology, for capacity-building and awareness-raising among citizens;

informing public polices with science-based knowledge to improve management and planning of cities blue and green infrastructure

the actions & research topics

Biodiversity as the key to support ecosystem services

Adapt cities to the future

Stakeholders engagement and support

training in urban ecology

the goal of this course is to provide the current and practical knowledge on urban ecology, including ecological and social aspects

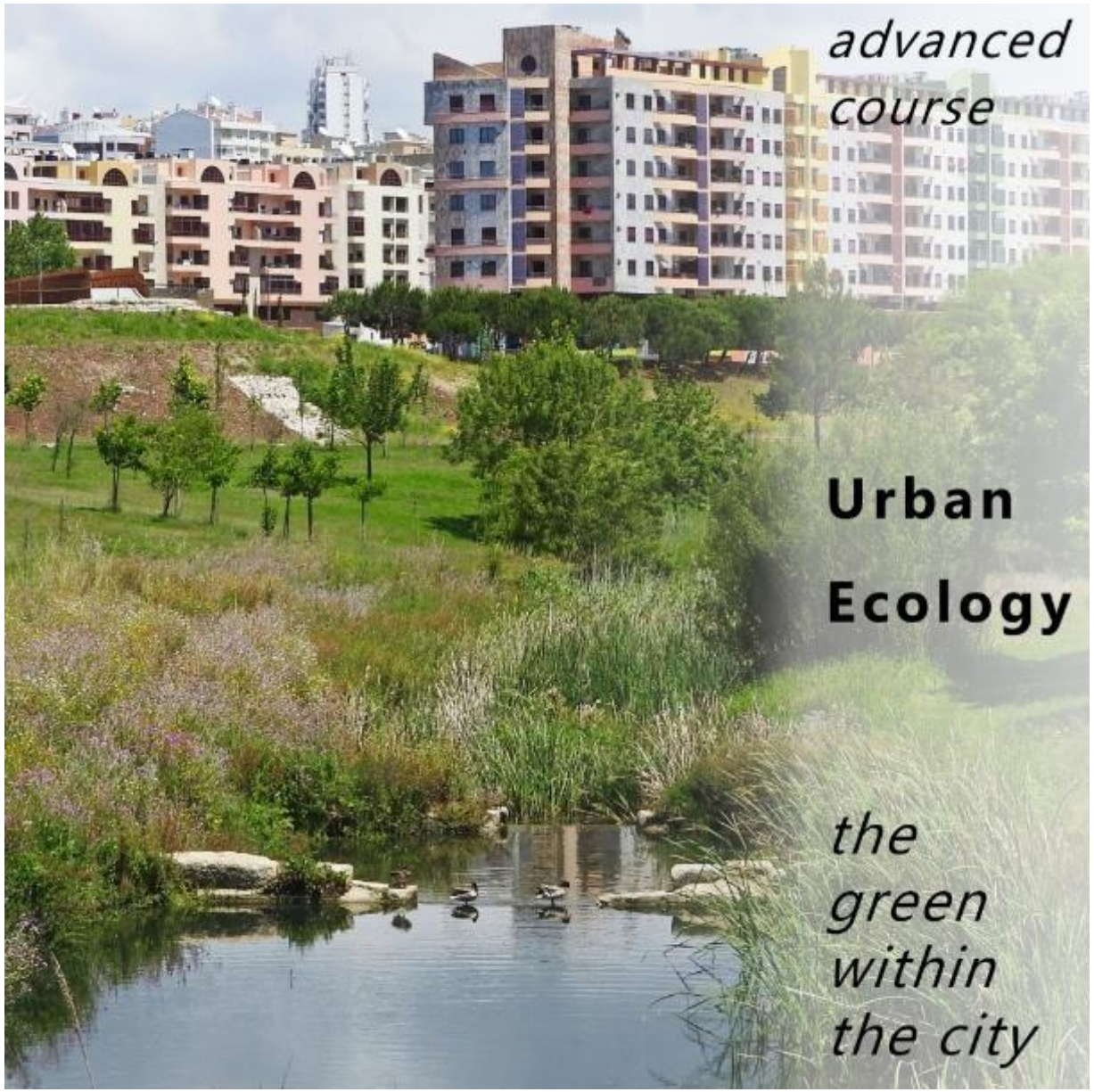
understand cities as a social-ecological system

understand the role of the urban green infrastructure and nature-based solution

learn how to assess ecosystem services and use ecological indicators to evaluate the status and trends of the environment

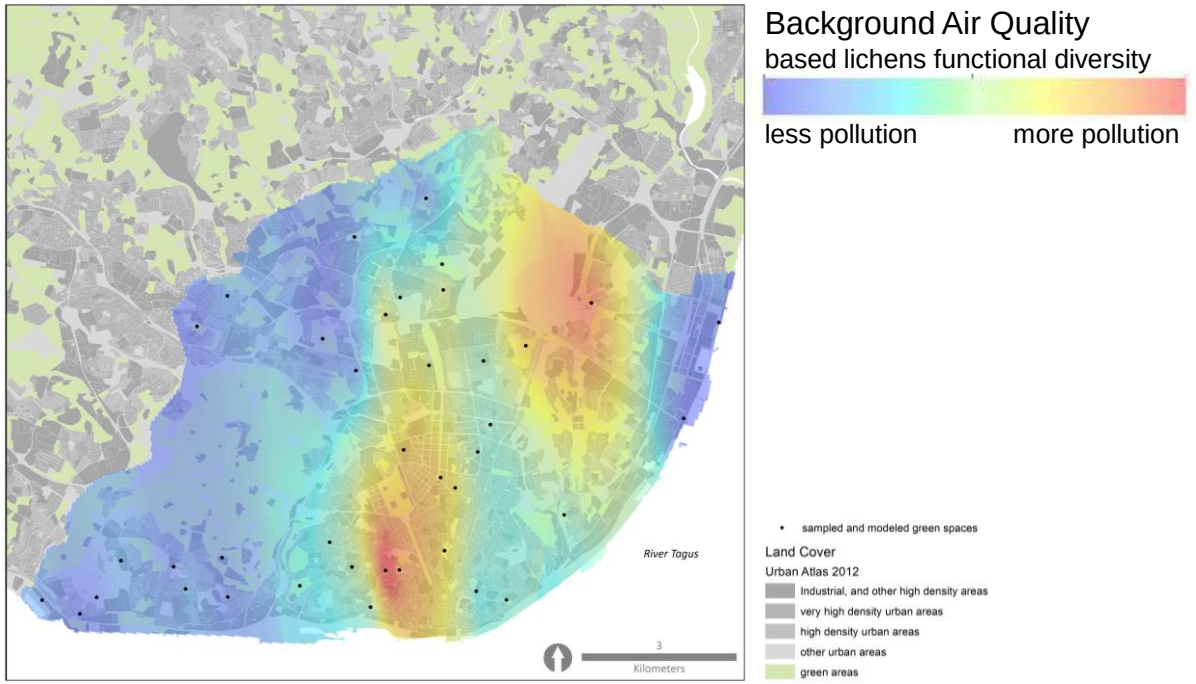
analyse people's perceptions and knowledge regarding biodiversity and ecosystem services

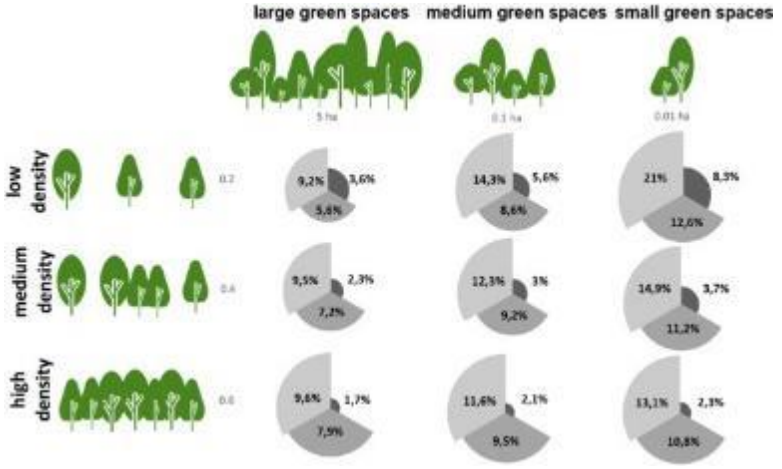
next course in June 2020



how trees can help us deal with air pollution in cities

since air pollution impacts on the health and well-being of urban dwellers we used lichen functional diversity to measure both air quality within parks and also the background air pollution in Lisbon; using the same indicators we suggested that the highest gains in air quality can come from focusing in the smallest and low-density vegetation parks: increasing the area and vegetation density in those parks will provide the highest benefits





Improving Air Quality

+ 50% green area

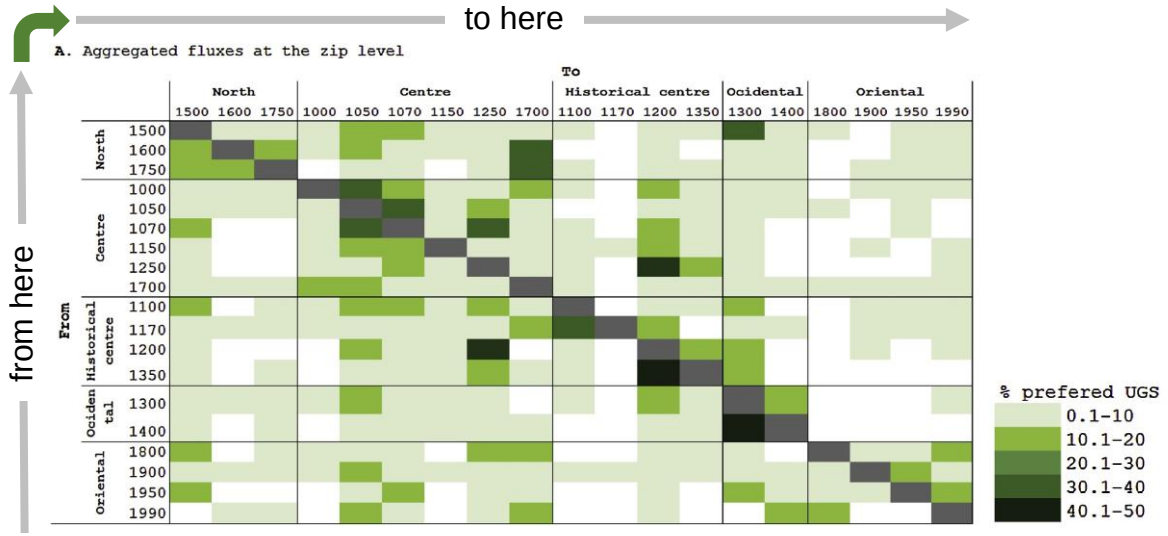
+10% veg. density

both

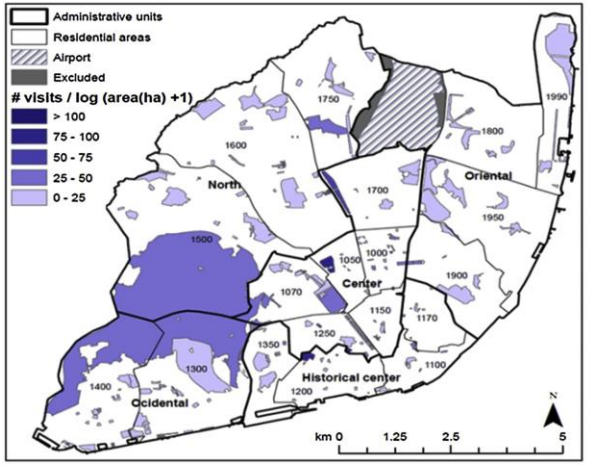
Matos P, et al., 2019. Modeling the provision of air-quality regulation ecosystem service provided by urban green spaces using lichens as ecological indicators. Science of the Total Environment link

evaluating citizens needs for cities green areas

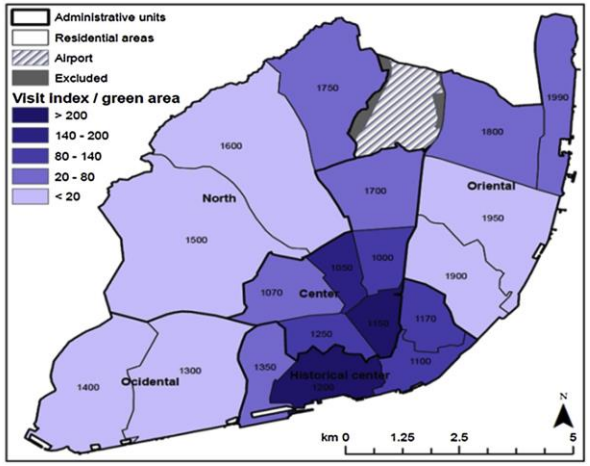
using a public participatory mapping in Lisbon, citizens were called to map their choices, allowing us to integrate people's preferences and local knowledge regarding the uses of greens spaces; using this we could communicate with local authorities the movements of peoples searching for parks, showing that people living in areas with less parks are more willing to travel searching for green areas; we also show each park saturation, which occurs mainly in the historical districts of the city;



saturation level per park



saturation level per administrative unit



Luz AC, et al. 2019., Should I stay or Should I go? Modelling the fluxes of urban residents to visit green spaces. Urban Forestry & Urban Greening link

European Local Climate Change Adaptation state of the art

Within the ClimAdaPT.Local project we supported 26 Portuguese Municipalities in the development of their Climate Change Adaptation Strategies.

This article updated the European society, focusing in scientists and policy and decision makers, about the situation on climate change adaptation strategies, producing a large database. It also triggered reflections about policy and funding schemes to design and implement climate actions.

Aguiar F, et al., 2019. Adaptation to Climate Change at Local Level in Europe: An Overview. Environmental Science & Policy link

to show-off the more striking publications of the UrbanL@b

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direct request to researchers