ENCONTROS SCIENTIA

Unraveling links between urban ecosystem services and socioeconomic patterns in Porto, Portugal

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Urban ecosystems are receiving more attention from researchers and practitioners, as they can provide various local ecosystem services essential to sustain the quality of life in cities. Many of these benefits, like rainwater drainage, microclimate and air quality regulation or recreation rely on the properties of the urban green infrastructure to contribute to human wellbeing. Urban forests, particularly, can play a major role in promoting UES, as trees have larger biomass and usually constitute the most visible green feature in the urban landscape. As such, acknowledging how urban forests affect urban ecosystem services (UES) is a key need to outline evidence-based urban planning policies and strategies. However, a better understanding is required about how local processes and dynamics are mediated by social and natural-science variables, and how this affects human wellbeing. This presentation will focus my research exploring links between socioeconomic patterns and UES provision in Porto city (Portugal). The first objective of this investigation was to identify relationships between socioeconomic indicators and structural characteristics of the green spaces (e.g. green space type, species composition, tree size and density), and their influence in UES provision across the city. The second goal was to identify key perceptions from urban dwellers regarding certain features of green spaces, which may affect UES provision. A modelling tool (i-Tree Eco) was used to quantify UES, combined with statistical modelling to explore associations between socioeconomic and ecological indicators, and surveys to investigate human perceptions. The results of this research contribute to unravel relationships between social dynamics and ecological processes in urban settings, and promote the implementation of research in urban planning to tackle issues such as urban resilience and socioecological inequity.

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