

# VU Research Portal

## Accounting for rivalry in the local provision of ecosystem services in urban areas

Ma, Yujing; Koomen, Eric; Broitman, Dani

2022

[Link to publication in VU Research Portal](#)

### ***citation for published version (APA)***

Ma, Y., Koomen, E., & Broitman, D. (2022). *Accounting for rivalry in the local provision of ecosystem services in urban areas*. 83-83. Abstract from 8th Central European Conference in Regional Science "Resilience of cities and regions in an uncertain time".

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

### **E-mail address:**

[vuresearchportal.ub@vu.nl](mailto:vuresearchportal.ub@vu.nl)

# 8<sup>th</sup> Central European Conference in Regional Science „Resilience of cities and regions in an uncertain time”

21-23 November 2022

Online Event

[www.cers.amu.edu.pl](http://www.cers.amu.edu.pl)



## Book of abstracts Program

Adam Mickiewicz University, Poznań, Poland  
European Regional Science Association – Polish Section  
European Regional Science Association – Slovak Section  
European Regional Science Association – Hungarian Section



## Accounting for rivalry in the local provision of ecosystem services in urban areas

Yujing Ma<sup>1\*</sup>, Eric Koomen<sup>1</sup> and Dani Broitman<sup>2</sup>

<sup>1</sup>*Department of Spatial Economics, School of Business and Economics, Vrije Universiteit Amsterdam  
De Boelelaan 1105, 1081 HV, Amsterdam, the Netherland*

<sup>2</sup>*Faculty of Architecture and Town Planning, Technion – Israel Institute of Technology  
Ya'akov Dori 60, Haifa 32000, Israel*

Keywords: urban ecosystem, ecosystem service, supply and demand, urban-rural gradient

\*e-mail: [yujing.ma@vu.nl](mailto:yujing.ma@vu.nl)

Citizens benefit from ecosystem services at a wide range of scales. These services originate from different types of green spaces within urban areas and the degree to which their provision meets local demand is strongly dependent on the spatial configuration of green spaces in relation to population distribution. Conventional approaches for the quantification of locally provided ecosystem services in urban areas typically focus on supply only, ignoring local demand for these services. This is especially relevant for congestible services for which the level of utility depends on the number of simultaneous users.

In this paper we assess the supply-demand mismatch of a congestible and non-congestible ecosystem service along an urban-rural gradient: recreation and cooling services. Using data with high spatial resolution available for a 15-year period we quantify the spatial supply, demand, and (mis)match between them of recreation and cooling services. The analysis indicates an increasing mismatch between supply and demand, demonstrating the need for place-based policies to attain more sustainable and resilient urban development.

**Acknowledgments:** This work was supported by China Scholarship Council.