

TIMON McPHEARSON

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Education:

PhD, Ecology, Evolution, and Natural Resources, Rutgers University, 2004

B.S., Environmental Biology, Taylor University, 1997

Professional Positions:

Professor of Environmental Studies, *Department of Environmental Studies, New York University*, 2025 - present

Faculty Affiliate, *Beijer Institute of Ecological Economics, Royal Swedish Academy of Sciences*, 2021-present

Senior Research Fellow, *Cary Institute of Ecosystem Studies*, 2017-present

Associate Research Fellow, *Stockholm Resilience Center, Stockholm University*, 2017-present

Visiting Research Fellow, *Humboldt University*, Berlin, Germany, 2017

Professor of Urban Ecology (w/tenure), *Environmental Studies, The New School*, 2016-present

Founder and Director, *Urban Systems Lab, The New School*, 2015-present

Chair, *Environmental Studies Program, The New School*, 2015-2017

Research Faculty, *Tishman Environment and Design Center, The New School*, 2008-present

Assistant Professor of Urban Ecology, *Environmental Studies, The New School*, 2008-2016

Visiting Assistant Professor of Ecology, *Earth Institute, Columbia University*,
2008-2009

Columbia Science Fellow (Post-doctoral), Ecology, Evolution, and Environmental Biology (E3B), *Earth Institute, Columbia University*, 2005-2008

Selected Professional Honors:

2024 *Geo for Good Impact Award*, *ClimateIQ*, Google

2023 *Sustainability Science Award*, The Ecological Society of America (ESA)

2022 *Gulbenkian Prize for Humanity*. Sixth Assessment Report (AR6), “Climate Change 2022: Impacts, Adaptation and Vulnerability”

2021 *BiodivERsA Prize*, “Enabling Green and Blue Infrastructure Potential in Complex Social-Ecological Regions” (ENABLE Project)

2020 *NYC Climate Heroes Award*, NYC Department of Transportation and Human Impacts Institute

2019-2021 *University Fellowship*, The New School

2019 *Sustainability Science Award*, Ecological Society of America

2019 *Innovation in Sustainability Science Award*, Ecological Society of America

2018 *BiodivERsA Prize*, “Urban Biodiversity and Ecosystem Services” (URBES Project)

2017 *Distinguished University Teaching Award*, The New School, New York

2017 *Civic Liberal Arts Sustaining Partnerships Residency*, Eugene Lang College, The New School

2014 *Visiting Research Fellow*, *Stockholm Resilience Center*, Stockholm University, Sweden

2005-07 *Columbia Science Fellowship*, The Importance of Cooperation in Ecological Communities, Columbia University

2006 *Young Scientist Award*, World Knowledge Dialogues, Crans-Montana, Switzerland

2006 Official Selection, SCINEMA Festival of Science Film, *Lemurs of Madagascar: Surviving on an Island of Change*, American Museum of Natural History

Research Interests and Activities:

My interdisciplinary scholarship, teaching, and community engagement addresses the interacting social-ecological-technological processes that drive urban system dynamics and impact human wellbeing in order to plan and design more equitable, resilient, and sustainable cities. My research utilizes both empirical (e.g. data science, AI, modeling, experiments) and theoretical approaches (complex systems and resilience theory) to advance research to support development of an urban systems science for improved urban planning, policy, design, and management at local, regional and global scales. See UrbanSystemsLab.com for more information.

My research focuses on advancing knowledge and impact in five overlapping areas:

1. Social vulnerability, equity and urban climate risk
2. Social-ecological-technological systems and urban resilience
3. Nature-based solutions for climate change adaptation
4. Data visualization and science communication
5. Modeling, data science, and spatial analytics

Selected Publications:

McPhearson, T., Frantzeskaki, N., et al. A global review of urban nature-based solutions: Identifying knowledge gaps and opportunities at the research frontier. *PNAS*, 122 (29), <https://doi.org/10.1073/pnas.2315910121>

Diep, L., and McPhearson T. Enabling Environments for Nature-based Solutions to Close the Urban Climate Adaptation Gap. *PNAS*, 122 (29), <https://doi.org/10.1073/pnas.2315912121>

Frantzeskaki, N., Wijsman, K., Kabisch, N., & McPhearson, T. Inter- and transdisciplinary knowledge base needed for nature-based solutions to contribute to just urban transformations. *PNAS*, 122 (29), <https://doi.org/10.1073/pnas.2315911121>

Cook, E., Y. Kim, N.B. Grimm, T. McPhearson, P. Anderson, H. Bulkeley, M.J. Collier, L. Diep, J. Morató, and W. Zhou (2025). Nature-based Solutions for Urban Sustainability. *PNAS*, 122 (29), <https://doi.org/10.1073/pnas.2315909122>

Sarabi, S., McPhearson, T., Tunçer, B., and Frantzeskaki, N. (2025) eXtended Reality for promoting people-nature relationships in cities: a scoping review. *npj Urban Sustainability* 5(1), 1-9.

Ruiz de Gopegui, M., Olazabal, M., Castán Broto, V., & McPhearson, T. (2025). Climate justice in urban public space adaptation: Developing and testing a collective assessment tool in hunters point, New York City. *Urban Climate*, 62, 102505. <https://doi.org/10.1016/j.uclim.2025.102505>

Wang, J., Zhou, W., McPhearson, T., Cook, E. M., Herreros-Cantis, P., & Liu, J. (2025). Socio-Ecological Impacts of the Investment of Urban Nature in Heat Mitigation for Two Megacities. *Earth's Future*, 13(6), e2025EF005976. <https://doi.org/10.1029/2025EF005976>

Wang, J., Zhou, W., & McPhearson, T. (2025). General power law function suggests optimal size thresholds for adaptive cooling by green space in cities. *npj Urban Sustainability*, 5(1), 1–8. <https://doi.org/10.1038/s42949-025-00223-x>

Herreros-Cantis, P., Khromova, S., Olazabal, M., McPhearson, T., Langemeyer, J., & Neumann, M. B. (2025). Knowledge diversity for climate change adaptation: A social-ecological-technological systems (SETS) approach to mental models. *International Journal of Disaster Risk Reduction*, 124, 105550. <https://doi.org/10.1016/j.ijdr.2025.105550>

Esperon-Rodriguez, M., Gallagher, R. V., Lenoir, J., Barradas, V. L., Beaumont, L. J., Calfapietra, C., Cariñanos, P., Livesley, S. J., Iungma, T., Manoli, G., Marchin, R. M., McPhearson, T., Messier, C., Nieuwenhuijsen, M., Power, S. A., Rymer, P. D., & Tjoelker, M. G. (2025). Urban heat in global cities and the role of nature-based solutions in mitigating future climate risks. *Environmental Research: Climate*, 4(2), 023001. <https://doi.org/10.1088/2752-5295/adcb61>

Hoff, R., Sparks, R., Chester, M., Mustafa, A., Johnson, N., Birchfield, A., McPhearson, T., Li, R., Ahmad, N., & Searles, I. (2025). Cascading Failure Propagation and Perfect Storms in Interdependent Infrastructures. *ASCE OPEN: Multidisciplinary Journal of Civil Engineering*, 3(1), 04025001. <https://doi.org/10.1061/AOMJAH.AOENG-0045>

Creutzig, F., McPhearson, T., Bardhan, R., Belmin, C., Chow, W. T. L., Garschagen, M., Hsu, A., Kılıç, Ş., Islam, S. T., Milojevic-Dupont, N., Pathak, M., Pereira, R. H. M., Salehi, P., & Ürge-Vorsatz, D. (2025). Bridging the scale between the local particular and the global universal in climate change assessments of cities. *Nature Cities*, 1–10. <https://doi.org/10.1038/s44284-025-00226-w>

Grilo, F., McPhearson, T., Aleixo, C., Santos-Reis, M., & Branquinho, C. (2025). Urban trees through a functional traits' lens: Exploring the interplay between tree functional groups and social-ecological factors. *Urban Forestry & Urban Greening*, 107, 128749. <https://doi.org/10.1016/j.ufug.2025.128749>

Galaz, V., Metzler, H., Schill, C., Lindahl, T., Daume, S., Marklund, A., Castro, A. J., Bard, J., McPhearson, T., Galafassi, D., & Peters, H. (2025). Artificial intelligence, digital social networks, and climate emotions. *npj Climate Action*, 4(1), 1–9. <https://doi.org/10.1038/s44168-025-00225-6>

Esperon-Rodriguez, M., Gallagher, R., Calfapietra, C., Cariñanos, P., Dobbs, C., Eleuterio, A. A., Esperon Rodriguez, D., Jahani, A., Litvak, E., Livesley, S. J., Manoli, G., Marchin, R. M., McPhearson, T., Messier, C.,

Östberg, J., Roman, L. A., Russo, A., Saffariha, M., Shackleton, C., ... Tjoelker, M. G. (2025). Barriers and opportunities for resilient and sustainable urban forests. *Nature Cities*, 1–9. <https://doi.org/10.1038/s44284-025-00212-2>

Räth, Y. M., Grêt-Regamey, A., Xia, X., Hurni, L., McPhearson, T., & van Strien, M. J. (2025). Archetypes of settlement development on the Swiss Plateau: Identification, description and prediction. *Cities*, 159, 105791. <https://doi.org/10.1016/j.cities.2025.105791>

Branny, A., Andersson, E., & McPhearson, T. (2025). Micro-climate of nature-based solutions in stockholm royal seaport. *Nature-Based Solutions*, 7, 100206. <https://doi.org/10.1016/j.nbsj.2024.100206>

Dutta, M., Herreros-Cantis, P., McPhearson, T., Mustafa, A., Palmer, M. I., Tosca, M., Ventrella, J., & Cook, E. M. (2025). New York City 2100: Environmental justice implications of future scenarios for addressing extreme heat. *Landscape and Urban Planning*, 254, 105249. <https://doi.org/10.1016/j.landurbplan.2024.105249>

Olivotto, V., Wijsman, K., & McPhearson, T. (2024). Senses of Justice After Managed Retreat in New York City. *Frontiers in Climate*, 6. <https://doi.org/10.3389/fclim.2024.1481919>