

Future Earth Urban Knowledge-Action Network (Urban KAN)



Kensuke Fukushi
Co-chair

- **Urban KAN** aims to contribute to the transition toward sustainable urban futures where cities are more livable, equitable and resilient through transdisciplinary collaboration and solutions-oriented research.
- **Co-chairs:**
 - **Prof. Şiir Kılıkış**, The Scientific and Technological Research Council of Turkey (TÜBİTAK)
 - **Prof. Kensuke Fukushi**, Institute for Future Initiatives, The University of Tokyo

Steering Committee



Sir Kilkis
THE SCIENTIFIC AND
TECHNOLOGICAL RESEARCH...



Kensuke Fukushi
INSTITUTE FOR FUTURE
INITIATIVES, THE UNIVERSITY...



Xuemei Bai
DISTINGUISHED PROFESSOR,
FENNER SCHOOL OF...



Timon McPhearson
THE NEW SCHOOL



Xiangzheng Deng
INSTITUTE OF GEOGRAPHIC
SCIENCES AND NATURAL...



Jago Dodson
RMIT UNIVERSITY



Tisha Munoz-Erickson
USDA FOREST SERVICE



Alice Reil
ICLEI LOCAL GOVERNMENTS
FOR SUSTAINABILITY...



Seth Schultz
URBAN BREAKTHROUGHS



Noboru Zama
UNITED NATIONS INDUSTRIAL
DEVELOPMENT...



Ursula Eicker
CANADA EXCELLENCE
RESEARCH CHAIR IN SMART...



Talbat Lawanson
URBAN MANAGEMENT AND
GOVERNANCE UNIVERSITY...



Zeenat Niazi
DEVELOPMENT
ALTERNATIVES GROUP



Wan-Yu Shih
DISASTER RISK REDUCTION
AND RESILIENCE...



Burak Güneralp
TEXAS A&M UNIVERSITY



Jorn Verbeeck
KPMG'S GLOBAL
DECARBONISATION...

The background image shows a modern building with a large, lush vertical garden on its facade. The greenery is dense and covers most of the building's exterior. In the foreground, there are street lamps and a tram track. A semi-transparent text box is overlaid on the left side of the image.

Special Report on Climate Change and Cities

REPORT

The Urban Knowledge Action Network (Urban KAN) brings together a dynamic community advancing cutting-edge research and shaping global climate and urban sustainability agendas.

In 2024, several members of the Scientific and Engagement Committee, including Xuemei Bai, Şiir Kılış, and Seth Schultz, were selected to participate in the IPCC Cities Special Report Scoping Meeting in Riga, Latvia.

Bai and Kılış were later appointed as authors of the forthcoming IPCC Special Report on Climate Change and Cities, highlighting the³ Urban KAN's significant contributions to global sciencepolicy processes.

Recent Activities - 2

The Urban KAN planned a series of webinars in 2024 to address a broad range of themes, including urban transitions and urban heat-related challenges.

In October 2025, in collaboration with Future Earth Taipei and the Center for Sustainability Science at Academia Sinica, the Urban KAN successfully organized the first webinar in this series. The event featured speakers from both within and beyond the Urban KAN network, who shared insights and perspectives on knowledge and action in the context of the IPCC's Special Report.

The webinar attracted over 60 participants and concluded with a highly engaging and constructive discussion.



futureearth

Research, Innovation, Sustainability

urban

Center for Sustainability Science, Academia Sinica

Insights for Knowledge and Action
in the Context of IPCC's Special Report

Cities and Low
Carbon Transition

Tuesday

Oct 21, 2025

4:00pm - 6:30pm UTC+8

Speaker /



Siir Kiklis

Lead Author, AR6 Working Group III
Senior Researcher,
The Scientific and Technological
Research Council of Turkey



Xuemei Bai

Lead Author, IPCC Special Report on
Climate Change and Cities
Distinguished Professor,
Fenner School of
Environment & Society,
Australian National University



Pourya Salehi

Head of Urban Research,
Innovation, and Development Team,
ICLEI - Local Governments
for Sustainability

Organizers /

- Future Earth Urban Knowledge-
Action Network (KAN)

- Urban Working Group,
Future Earth Taipei

- Future Earth Global Secretariat Hub
(GSH) Taipei

- Center for Sustainability Science,
Academia Sinica

Host /



Wan-Yu Shih

Associate Professor,
Disaster Risk Reduction and Resilience,
National Taiwan University



Kensuke Fukushi

Professor,
Institute for Future Initiatives,
The University of Tokyo

Register Here



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Recent Activities - 3

In October 2025, the Urban KAN Joint research paper "Reimagining Urban Science: A Global Research Agenda for Sustainable and Just Cities" was published in *Global Sustainability Journal*.

This ambitious research agenda is the result of a comprehensive horizon-scanning process led by the Urban KAN Steering Committee. It brought together a diverse range of views from researchers, practitioners, and policymakers from various disciplines and geographies.

Since its inception, Urban KAN has grown to more than 460 members worldwide, connecting researchers and innovators across Future Earth's global networks. This new research agenda represents a significant milestone, effectively aligning urban science with the most urgent sustainability challenges of our time and setting the stage for transformative collaborations in the years to come.

Global Sustainability

cambridge.org/sus

Review Article

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Reimagining urban science for global sustainability: Five strategic research areas

Xuemei Bai^{1,2}, Giles B. Sioen^{3,4}, Siir Kilikis⁵, Timon McPhearson^{6,7,8,9}, Zeenat Niaz^{10,11}, Jago Dodson¹², Tri Atmaja^{13,14}, Kensuke Fukushi¹⁵, Niki Frantzesaki¹⁶, Harini Nagendra¹⁷, Wanyu Shih¹⁸, Thomas Elmqvist^{1,9}, Tischa Muñoz-Erickson¹⁹, Xiangzheng Deng²⁰, Burak Güneralp²¹, Shuaib Lwasa²² and Noboru Zama²³

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Abstract

Non technical summary. Cities, as complex systems, are faced with increasingly diverse and connected challenges across social, economic, environmental, and health domains. To help cities address these challenges, the Future Earth Urban Knowledge-Action Network developed a cross-disciplinary urban research agenda through expert elicitations and extensive consultation. Five research themes to guide urban sustainability research were identified including: (1) advancing urban sustainability transformations, (2) ensuring equity, (3) boosting innovation in low to lower-middle income countries, (4) managing complexity and systemic risks, and (5) navigating environmental change. Advancing this agenda will require collaboration across disciplines and geographies, transdisciplinary coproduction, and enhanced support to urban science.

Technical Abstract. Cities and urban regions are at the forefront of transformations toward global sustainability. As urbanization accelerates, there is increasing demand for cities to play multiple, complex and synthetic roles across social and environmental domains within and beyond their boundaries, for example driving economic development while mitigating and adapting to global environmental changes. To help cities in meeting this challenge, urban science, a rapidly growing field that includes inter- and transdisciplinary research, needs to expand and evolve, with clear priorities. Combining expert elicitation and community consultation, the Future Earth Urban Knowledge-Action Network developed a strategic research agenda for urban science for the next decade. The urban science research agenda describes five critical research themes for scientific advances: (1) accelerate urban sustainability transformations, (2) ensure equity and inclusivity, (3) amplify innovation from the low to lower-middle income countries, (4) negotiate complexity and systemic risks, and (5) navigate environmental change. Under each research theme, we review the state of the art, identify remaining gaps, and outline key research questions needing to be addressed to advance science toward urban transformations. Interconnections across, and enabling conditions to advance, these priority research themes are discussed.

Social media summary. Globally co-designed urban research agenda reveals pressing priorities for sustainability and resilience.

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During the past year of 2024, members of Urban KAN have contributed to the 10 New Insights in Climate Science, which is a research program gathering leading scholars from around the world to review the most pressing findings in climate change research.

For the year 2024, a peer-reviewed scientific article was published recently in One Earth, highlighting ten major climate science developments during 2023 that carry urgent implications for global policy.

Urban KAN Steering Committee and Advisory Group members have specifically contributed to Insight 7: Critical infrastructure: vulnerability of interconnected systems and Insight 8: Climate-resilient development in cities of the report paper.

A graphic with a light blue background and a dark blue vertical bar on the left. It features the text '10 | NEW INSIGHTS IN CLIMATE SCIENCE' and '2024/2025' in a bold, sans-serif font. The number '10' is large and positioned to the left of a vertical line, which is followed by the text 'NEW INSIGHTS IN CLIMATE SCIENCE'. Below this, the years '2024/2025' are displayed in a larger font.

**10 | NEW INSIGHTS IN
CLIMATE SCIENCE**

2024/2025

Throughout 2025, the Urban KAN has also supported and endorsed several research groups in taking part in the application for the ESA-Future Earth Joint Program. The program funding supports links by bringing Future Earth scientists to meetings and trainings organised by ESA, to promote the potential of Earth observation data to new communities and develop links with the GRPs and KANs.

Urban KAN has helped researchers around the world such as Dr. Beyan Ahmed from Ethiopia and Dr. Anabella Ferral from Argentina in acquiring the support they need while keeping track of the latest research progress with the teams.



**European Space Agency – Future Earth Joint Programme
Open call for Global Research Networks 2025:
Case Studies on Climate Change & Cities in
Low & Middle-Income Countries**



THANK YOU



Join Our Network:

<https://members.futureearth.org/>

Visit our webpage:



Contact: urban@futureearth.org

