



Science and the Future of Cities

EXECUTIVE SUMMARY

Main messages from the Expert Panel's report on the global state of the urban science-policy interface

International Expert Panel on
'Science and the Future of Cities'
endorsed by *Nature Sustainability*

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SCIENCE AND THE FUTURE OF CITIES

Cities are central to life on our planet. Urban areas generate more than 75% of global GDP, contribute to about 75% of carbon emissions from global final energy use, and are home to the majority of the world population, including over 863 million urban dwellers living in slums and informal settlements. Understanding the opportunities and challenges of an urbanizing society is central to sustainability. Knowledge about our planet from an urban perspective is central to the integrity of present and future living conditions. Responding effectively to contemporary city challenges requires a step change in both scientific capacity and science-policy collaboration.

THE EXPERT PANEL

This ethos was at the heart of the establishment, in April 2017, of an independent and international Expert Panel on “Science and the future of cities” endorsed by *Nature Sustainability*. The Panel gathered twenty-nine experts* in contemporary urban scholarship from across disciplines and perspectives. Panellists were tasked to survey the challenge of science-policy interactions, and the issue of developing a ‘global urban science’ that has reach across academia and enables more effective science-policy interfaces.

The Expert Panel provided a set of five key recommendations, each including a series of practical actions that could be taken both in academia and policy circles to encourage a more effective role for science in the future of cities.

KEY MESSAGE 1:

A NEW GLOBAL SCIENCE IS NEEDED FOR THE URBAN ERA.

There is a need to develop an ‘urban science’, not as a single science, but as a cross-cutting field of engagement across multiple disciplines.

We have limited and partial information about cities and urbanisation: this means that global urban analyses remain limited in scope and rarely comparative or comprehensive in reach. However, more data points do not necessarily lead to better decision making: the ‘global’ in global urban science needs to be articulated in an aggregate sense, identifying common patterns, trends and dynamics - and their future directions.

KEY MESSAGE 2:

URBAN SCIENCE NEEDS A BROAD RANGE OF EXPERTS AND INFORMATION.

The urban science community will need to include a wide range of experts, including non-academic actors such as NGOs, residents, consultancies, industry, international organizations, and city networks.

There are mounting data asymmetries between the private sector and the scholarly edifice of academic research. The expansion of private sector, consultancy and philanthropy activity in charting a ‘global’ cities agenda is shifting the locus of urban knowledge and underscores the imperative for partnerships and ethical and accountable knowledge generation processes.

KEY MESSAGE 3:

AN URBANIZING PLANET CALLS UPON THE SCIENCES AND POLICYMAKING TO RETHINK AND ENHANCE THEIR RELATIONSHIP ACROSS COMPLEX SYSTEMS.

The pathways to reform and improvement of the role of science in the future of cities goes, inevitably, through multiple sectors and scales of governance.

***PANEL CO-CHAIRS:** Michele Acuto (University of Melbourne); Susan Parnell (University of Bristol); Karen C. Seto (Yale University).

NATURE RESEARCH: Monica Contestabile (*Nature Sustainability*).

PANEL MEMBERS: Adriana Allen (University College London), Sahar Attia (Cairo University), Xuemei Bai (Australian National University), Michael Batty (UCL), Luis M A. Bettencourt (University of Chicago), Eugenie Birch (University of Pennsylvania), Harriet Bulkeley (Durham University), Maruxa

Cardama (SLoCaT Partnership), Charles Ebikeme (International Council for Science), Thomas Elmqvist (Stockholm University), Yasser Elsheshtawy (Columbia University), Ilona Kickbusch (Graduate Institute Geneva), Shuaib Lwasa (Makerere University), Julie McCann (Imperial College London), Patricia McCarney (University of Toronto), Timon McPhearson (New School), Sheila Patel (SPARC), Mark Pelling (King’s College London), Edgar A. Pieterse (University of Cape Town), Carlo Ratti (MIT), Aromar Revi (IIHS), Robert J. Sampson (Harvard University), David Satterthwaite (IIED), Richard Sennett (LSE), Nick Tyler (UCL), Yongguan Zhu (Chinese Academy of Sciences).

PANEL RECOMMENDATIONS

1 Contemporary urban challenges need a global urban science that reaches out across disciplines, is geared towards impact, and is accountable to its role in shaping cities. Suggested practical actions include:

- » Disagreement and divergence of opinions on urban issues should be encouraged and cultivated.
- » The management of science at national, regional, international and private scales should allow for more open interdisciplinary peer reviewing and adjudication of funding schemes, whilst also encouraging foresight and long-term thinking.
- » A global assessment of urbanization needs to be sanctioned at the UN level and given the capacity to act in bringing together what we currently know of urban trends, dynamics and key challenges beyond selective studies, comparative rankings and national datasets.

2 Reviews and reforms of the role of cities within the multilateral system are long overdue, and need to go hand-in-hand with the implementation of the 2030 Agenda. Suggested practical actions include:

- » Relevant elements of the UN system need to be rapidly reformed to consider the pivotal role of cities in advocating, exchanging information and acting on today's most pressing global challenges.
- » Following the Secretary General's 2017 High-Level Panel on UN-Habitat and the New Urban Agenda, a working group on the future of 'global urban governance' should be established.
- » The global assessment of urbanization for the UN can be undertaken by a purpose-built international panel of experts, gathering academia and other key sources of urban research, with a clear intent at community building.

3 The role of the private sector needs to be rebalanced towards capacity building and accountable input focused on where the most pressing challenges are. Suggested practical actions include:

- » Akin to the Good Humanitarian Donorship in aid, major urban philanthropies can sign up and implement a 'Good Urban Donorship' code of conduct geared towards ethical developmental practices and against unnecessary earmarking.

- » A systematic review of the publishing sector's role in charting how and which sciences influence urban processes is urgently needed: a cross-company working group on urban data with the major academic outlets should be established in parallel with scholarly and policy efforts detailed in this report.

A global task force on the role of consultants in urban agenda-setting and implementation of major international frameworks is needed. The influence of these entities need to be considered carefully as part of the bigger picture of global urban governance.

4 National governments and regional actors need to become pro-active advocates of urban innovation for sustainability. Suggested practical actions include:

- » Develop national-level exercises to understand the trends, pressures and futures of a country's cities, with the explicit intent of considering national-level tactical areas of investment but also mobilizing domestic expertise in universities and research institutes into national conversations.
- » Establish a cross-regional advisory panels that link major regional bodies (e.g. ASEAN, Caricom, African Union, EU etc.) on urban issues and encourages the cross-fertilization of urban action.
- » Encourage the adjustment of national science advisory schemes towards a more explicit urban capacity, linking local reforms to national efforts.

5 Experiments in science-policy collaboration at the local level are fundamental. Academia and local governments should take tangible steps towards joint investments for science-policy collaboration. This includes suggested practical actions such as:

- » City-regional and metropolitan science-policy mechanisms, such as 'urban observatories', need to be taken seriously by both universities and local governments, but with the support of national governments and the UN system.
- » Appoint academically-grounded 'chief scientific advisors' to local government to advise on evidence use in city policymaking.
- » Include peer review processes within the production of major private sector and city network datasets, engaging in scholarly outputs as much as reports from these analyses, including clear outlines of methodologies.

