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Editorial: Adapting cities for transformative climate resilience: lessons from the field

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Editorial on the Research Topic

[Adapting cities for transformative climate resilience: lessons from the field](#)

Introduction

The papers in this special issue recognize that cities play a pivotal role in global climate change adaptation, particularly the many urban centers facing serious climate change impacts, such as droughts, flooding, and extreme weather. They also hold significant potential for innovative responses to the climate crisis. There is a growing consensus, however, that it is not enough for the world's cities to simply “climate proof” by protecting existing infrastructures and development plans from climate impacts. This is because, as scholars argue, the current elite-driven urbanization processes both create runaway GHG emissions and make living conditions untenable for the urban poor and other marginalized groups, even in the absence of climate change. To adapt successfully to climatic changes, urban residents and leaders need to work together to address these underlying societal crises at the same time as they design and implement programs to protect people and places from extreme conditions. This demands rethinking resilience planning and policy to move beyond protecting the status quo and toward social transformation.

The scholars whose work is featured here responded to our request for studies on how different stakeholders and their networks can engage in transformational resilience at the urban scale. These include, but are not limited to:

- Experiments with adaptive and participatory governance;
- Pro-poor ‘nature-based solutions’;
- Efforts to enhance urban livelihoods in the formal and informal sectors;
- Equitable and resilient strategies for housing
- Citizen science;
- Disaster risk preparedness and responses and;
- Activism and advocacy.

Providing concrete and successful examples of such endeavors from around the world is key to scaling up efforts, given the speed at which climate change is occurring. Many cities in the Global South are already struggling due to a lack of adequate resources or capacity to implement important adaptation measures. The work highlighted here responds to the need to share important and practice-based lesson on inclusive, just urban approaches to ensuring resilient urban communities.

The 11 papers included in this issue can be divided into three main categories: those that outline tools and/or planning approaches for cities to use in their search for transformative resilience; those that focus on lived experiences and resilience; and those that highlight nature-based solutions to urban resilience.

Papers outlining tools/planning approaches

Integrative resilience in action: Stories from the frontlines of climate change and the Covid-19 pandemic.

Camponeschi links “integrative resilience,” which seeks to conceptualize resilience planning with notions of systemic risk and planetary health, to recent examples of community-based actions during the pandemic. Her focus is on front-line providers, and she argues that transformative resilience must include “infrastructures of care” to provide resources that enhance equity, both in times of emergency and ordinary circumstances. **Camponeschi** draws on examples from primary research in New York City and Copenhagen as well as from countries as diverse as Canada, Indonesia, and Brazil. Positive interventions are guided by local priorities, adopt an incremental approach to resilience that allows providers to act quickly to acute needs while drawing on a range of strategies included under the integrative resilience model.

Distributive justice and urban form adaptation to flooding risks: spatial analysis to identify Toronto’s priority neighborhoods.

In their remarkable project based in some of Toronto’s most marginalized neighborhoods, **Mohtat and Khirfan** provide persuasive evidence about how to implement an original multimodal criteria model to identify the communities within a large metropolitan region (the Greater Toronto Area) most in need of climate change adaptation. This approach can be replicated in cities throughout the globe. The authors focus on Green-Blue Infrastructure (GBI) in Toronto and demonstrate how decisions about the type and location of GBI can be improved through better designed inclusive practices.

Implementing just climate adaptation policy: an analysis of recognition, framing, and advocacy coalitions in Boston, U.S.A.

Malloy et al. apply their definition of just adaptation, “a process of systematically removing institutional barriers that disproportionately burden some groups of people more than others while simultaneously creating opportunity and reducing harm related to climate change,” to examples from Boston, a city where social justice is nominally a political priority. In practice, however, the authors found that reliance on technical approaches and formal frameworks prevented the actual engagement with community groups which is required to influence dynamic and transformational design and implementation of climate change efforts.

Building a vision for more effective equity indices and planning tools.

In their Perspective essay, **Rosan et al.** highlight their work on community-driven and locally based resilience processes designed around community needs. They echo the claims of the other scholars in this issue arguing that it is only through designing resilience initiatives with the goal of increasing equity that responding to climate change can be transformative. While their work is exploratory in nature, they have begun development of

data-based, multi-scalar tool for climate adaption in Philadelphia called Planning for Resilience and Equity through Accessible Community Technology (PREACT) that holds great promise, particularly for cities in North America.

Papers outlining lived experiences and how this contributes to resilience

Readiness at what cost? Trauma, displacement and opportunism in the Florida Keys.

Shtob’s original research paper delves into the trauma experienced by Hurricane Irma survivors and how it was further worsened by delays in bureaucracy relating to insurance and aid, combined with disaster-related regulation, such as revised building codes. In the longer term, residents end up more vulnerable to displacement through real estate pressures. Through interviews with residents, **Shtob** illustrates the challenges that households have faced and highlights reforms in disaster preparedness and planning that could mitigate the trauma of affected communities and reinforce their resilience.

People and politics: urban climate resilience in Phnom Penh, Cambodia.

The question of “resilience for whom and against what?” is considered in **Asif et al.’s** paper, which delves into the politics of resilience in a context of largely privatized urbanization in Phnom Penh. The three case studies considered in the paper highlight how local citizens can apply collective action to demonstrate their visions of urban resilience and challenge the current top-down resilience agenda. In this way, these communities are pushing for more inclusive cities that consider the rights of all residents.

Vulnerable spaces and unequal responses to flooding in Lagos.

Ekoh and Teron carried out in-depth interviews with 21 residents of Lagos, which demonstrate that people understand their flood vulnerabilities and how they are shaped by income, housing, tenure, and activities of landowners, and that when faced with flooding, they apply localized methods. Using rich quotes from the residents, the paper highlights how residents established Community Development Associations that address both structural and non-structural flood management, which could be scaled up with support.

Community adaptation strategies in Nairobi informal settlements: lessons from Korogocho, Nairobi-Kenya.

The community case study by **Muchiri and Opiyo** also highlights community-led strategies of resilience; in particular, creating climate literacy through citizen science approaches thus enabling adaptation approaches that better address specific community-level needs. These approaches can also be tailored to vulnerable populations, such as disaffected youth or victims of abuse. Sensitive local-led approaches need to be applied in conjunction with top-down climate approaches which currently prevail in Kenya.

Governance learning from collective actions for just climate adaptation in cities.

The nature of climate change requires responsive and adaptable governance, and **Yazar et al.** paper makes the case that “governance learning” should include learning from collective action by citizens about how to implement robust climate change action. Drawing on

two different cities, Bergen and Istanbul, the paper demonstrates that governance learning can happen through resisting, co-opting, or expanding, depending on the extent to which governance structures accept and work with vulnerable groups.

Papers embracing nature-based solutions

Implementing participatory nature-based solutions in the global South.

Wolff et al. Perspective focuses on the transformative potential of nature-based solutions (NbS), which is determined not just by the participatory approach used but how this approach can transform the project vision and ensure that NbS are integrated with local needs. Adapting a ladder of participation in community upgrading to the NbS context, the authors highlight the importance of engaging multiple stakeholders to develop integrated visions of NbS connected to local ways of understanding the environment for the process to be transformative.

Exploring the links between the use of NbS, mindshifts and transformative urban coalitions to promote climate resilience within an ongoing reurbanization process. The case of Villa 20, Buenos Aires.

Focusing on the case of the informal community of Villa 20, Hardoy et al. paper examines the implementation of an initiative to address decarbonisation alongside urban inequalities and injustice. Through a series of urban labs, participants have engaged in a process of learning-by-doing of collective planning. The implementation of NbS approaches allows for direct involvement of residents, not just in co-design but also implementation and maintenance, creating employment opportunities and building local capacities.

Conclusion

The articles in this special issue highlight that practice-based knowledge is essential to our understanding of how to achieve transformational resilience in urban settings. They offer insights into ways forward from both high income and low or middle-income settings, and common across all papers is the emphasis on participatory and inclusive approaches as central to the process.

The papers in this issue include many primarily by early-career scholars from around the world who have participated in or documented recent work in transformational climate change action. The co-editors thank the authors for their patience and their willingness to work with us to shape such a thought-provoking set of papers. And thank you to our hard-working and brilliant topic coordinators, Dr. Joanna Kocsis (Newcastle University) and Rebecca McMillan (University of Toronto) who helped pull this special issue together.

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