Special Issue on “Resilience of Cities to External Shocks: Analysis, Modeling and Economic Impacts”

Environment and Planning B: Urban Analytics and City Science

The increasing frequency and intensity of natural disasters has made resilient and sustainable urban systems a primary goal for cities around the world. According to the United Nations Office for Disaster Risk Reduction, climate-related and geophysical disasters have caused $2.9 trillion in direct economic losses over the past 20 years, a 151% rise from the previous 20-year period. Such catastrophes also push 26 million people into poverty annually.

The rapid expansion and structural and functional complexity of urban areas, projected to account for 68% of the world’s population by 2050, could affect disaster vulnerability in unforeseen ways and poses significant local and global challenges. While some cities and countries have taken action to address disaster risks, considerable investment will be needed in the short to medium-term to improve the resilience of cities to external shocks. Multilateral development banks such as the Asian Development Bank, Asian Infrastructure Investment Bank, and World Bank are actively working to finance infrastructure projects to improve urban resilience. However, the impacts of such projects on social dynamics, including human migration, economic productivity, and poverty and inequality, are not quantitatively well understood.

Against this backdrop, ADBI, Purdue University, and the University of Tokyo are seeking original research papers on the analysis, modeling, and economic impacts of urban resilience development worldwide for inclusion in a special journal issue of Global Environmental Change. Papers should feature sound theoretical backgrounds and quantitative analysis.

**Topics include (but are not limited to):**

- Measuring economic impacts of urban resilience projects
- New theories of socio-technical resilience
- Empirical analysis of recovery and resilience using big data sources
- Modeling the recovery of socio-physical systems after shocks
- Multiplier effect of positive shocks
- Big data analytics for resilience to environmental and financial shocks
- Macroscopic displacement and migration modeling after shocks
- Financial challenges for development of urban resilience projects
- Case studies of socio-technical resilience
Important Dates

- **January 31, 2020, February 20, 2020**, deadline for submission of full papers. Contributors should clearly indicate that the paper is submitted to Special Issue on “Resilience of Cities to External Shocks: Analysis, Modeling and Economic Impacts.” All papers should adhere to the “Guidelines for Authors” of *Environment and Planning B*.

- **May 2020**, authors of selected papers will be invited to the paper development workshop to be held at ADBI in Tokyo. ADBI will provide travel support to one author per paper.

Special Issue Publications

Selected papers will receive full consideration of a special issue in *Environment and Planning B: Urban Analytics and City Science* journal (IF = 2.825, expected in 2020), subject to the journal’s peer-review process. The special issue is listed on the Environment and Planning B website available at: https://journals.sagepub.com/page/epb/collections/special-issues

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