DEPARTMENT OF GEOGRAPHY

2017-2018 CLIMATE CHARGE SPEAKER SERIES

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Urban climate vulnerability analysis for Sustainability Science

This talk examines urban resilience to climate extremes by integrating the Vulnerability Science and Socio-Ecological-Technological Systems (SETS) frameworks. Vulnerability assessments, while invaluable in highlighting societal vulnerability to various climate/environmental stressors, are frequently partial, focus on configurations or outcomes rather than processes, and often lack attention to the politics of marginality and power relations. I review case studies of vulnerability analysis using a SETS approach, to build on the seminal framework proposed for 'vulnerability analysis in sustainability science' (Turner et al. 2003) and the three main dimensions of vulnerability: exposure, sensitivity and coping or adaptive capacity (Polsky et al. 2007). The aim is to sharpen the vulnerability framework for the particular complexities of urban systems, and to integrate social and ecological analysis with technological-infrastructure systems. An integrated approach to vulnerability analysis should (i) conceptualize vulnerability for urban systems in particular, (ii) integrate social, ecological and technological dimensions in an integrated, transdisciplinary approach, (iii) focus on both static and dynamic aspects of vulnerability, and (iv) be attentive to power dynamics in the production of vulnerability and climate resilience initiatives

