

Session 4: Regional Resilience: Normative Frames and Narratives

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A Social-Ecological approach for Building Resilience in Metropolitan landscapes

Abstract:

Current rates and levels of global urbanization are unprecedented in history. While it has been argued that the city responds to many of the challenges of sustainable development, rapid urbanization threatens also to put acute stress on planetary boundaries, as well as on the capacity of cities to deliver the necessary services for human wellbeing (Seto et al. 2012; UNEP 2012). For instance, urbanization processes shape global environmental changes that may increase frequencies of natural catastrophes. This highlights the need to put emphasis also on strategies of resilience building as a complement to environmental mitigation strategies of cities (Barthel et al. 2013).

This speech uses a social-ecological analytical lens, as complement to a socio-technical one, where resilience of social-ecological systems is defined as the capacity to absorb shocks, utilize them, reorganize, and continue to develop without losing fundamental functions (Carpenter and Folke, 2006). Ecosystem services are the processes and products provided to societies by living ecosystems; including provisioning, regulating, cultural and supporting ES (MEA, 2005; Daily and Matson, 2008; TEEB, 2010). When applying a social-ecological analytical lens on urban systems it seems clear that new ways of governance and spatial designs that include ecosystem services will increase resilience for urban people to an array of social impacts associated with cascading energy, financial, political crises and climate change (Barthel et al., 2013; Colding and Barthel, 2013).

I will argue that building urban resilience as the scale of cities and for individual cities in isolation---as if they were floating in an social-ecological vacuum---may accelerate detrimental environmental effects in distant landscapes, and re-enforce skewed power relationships inside cities as well as between urban centers and rural areas (Folke et al., 1997; Ruelli et al., 2012; Seitzinger et al., 2012). For instance, urban densification as strategy has been developed by scholars using mainly socio-technical systems lens, and such strategy have been proven successful in relation to mitigation of greenhouse gases while stimulating socio-economic performance. However, if not combined with a social-ecological approach, such strategy may unintentionally erode ecosystems in emerging metropolitan landscapes, with consequences for people both inside and outside of cities. It has been suggested that rapid urbanization will remove perceived and experienced links between people and nature as modern life-styles are adopted and people cease to depend on local ecosystems (Stokes, 2006). This may lead to 'extinction-of-experience' of nature in cities (Pyle, 1978), and a broad 'environmental generational amnesia' among urban populations, eroding popular understanding of our dependence on ecosystems both inside and outside urban settings (Miller, 2005; Samways, 2007). Does low spatial potential of nature experiences in urban areas

correlate with reduced affinity with natural environments? In the near future we will build urban landscapes for another staggering 2.7 billion people on this planet. Infrastructure and other urban investments are expensive and near impossible to reverse. We need to consider their long lasting impacts. The normative gravity of the issue, then, becomes whether 2/3 of the global population of 2050, will be willing to support something they no longer regard as directly relevant to their lives?

The aim of the talk is to increase understanding about different types of urban ecosystem services, and how such may increase adaptive capacity in urban societies to shocks, while also promoting learning arenas for cognitively re-connecting urban people with the Biosphere (Colding and Barthel, 2013; Andersson and Barthel et al., 2014). I intend to shed light on how the removal of green space in cities have reduced resilience for urban dwellers in relation to natural hazards and other shocks, and how long-lasting nature experiences, i.e. nature routines in the spatial urban form, relate to the development of affiliation with natural environments, to meaning-making, and to environmental learning. It will draw on both historical and current examples and from cities in both the Global South and the North. The speech will end with some novel designs that have included principles of social-ecological resilience and ecosystem services, which can be of interest for rapidly growing cities as well as for many cities in the global north that have not yet been able to adapt to the post-industrial transition, and hence are shrinking in terms of socio-economic performance and demography (Nilsson, 2011; Barthel et al., 2013b).

