Situating climate through soil: Urban landscape strategies for new carbon cultures

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In the hands of climate scientists and large government bureaucracies, the problem of global warming is largely mediated and managed as a technical matter. This approach, while useful in science and governance, can be incapacitating in the more intimate contexts of local action and everyday experience. What potential forms of climate response remain unexplored due to the framing of warming on global-scale technocratic terms? How might urban designers and landscape architects, in the words of Nicolas Beuret, “make climate change speak otherwise”? And what urban sites and systems can designers engage for this purpose?

In climatological terms, the earth’s terrains counterbalance the atmosphere. Soils are sites of carbon transfer: their conditions affect carbon sequestration and release, and therefore impact atmospheric carbon and warming. If climate is understood to be continuous and global, soils are inevitably particular and local. Material composition, minerality, depth, plants fungi and microorganisms, temperature range – all of these vary according to place, history, and treatment. This very particularity makes soils amenable to situated engagement. One way to think climate change differently is to think it through soil.

This presentation articulates strategies for engaging global warming by designing sites and systems with and for urban soils. Discussing work from recent master’s studios in
Ithaca, NY and Montreal, QC, I demonstrate potential directions for urban soil-based material research and carbon sequestration plans. I also elucidate how designers of the built environment can engage soils as cultural epicenters: living sites capable of catalyzing new perceptions, imaginaries, and ways of relating to climate within cities. These design strategies cultivate earthly cultures and increase carbon sequestration: in doing so, they exemplify strategies for enacting global warming as something immediate, graspable, and actionable at the local scale.

• Author(s) Biography (200 words each):

**Margot Lystra** is assistant professor of landscape architecture at University of Montreal. Operating at intersections of landscape theory, urban and environmental history, science and technology studies, and design practice, she investigates how designers envision large ecological systems and enact conceptions of cities, nature, technology, and power. As a historian, Lystra investigates connections between representational innovation and environmental activism in landscape architectural practice. As a designer and teacher, she investigates design methods and techniques that amplify reciprocity and communication at multiple scales. Her work has been published in *Studies in the History of Gardens and Designed Landscapes* and *Journal of Design History*.

Lystra has taught at University of Buffalo, Cornell University, California Polytechnic State University – San Luis Obispo, and University of Detroit Mercy. She holds a Ph.D. in History of Architecture and Urbanism from Cornell University, a Master of Landscape Architecture from the Harvard Graduate School of Design, and a Bachelor of Arts in Biology from Swarthmore College. As a designer she has worked for CMG Landscape Architecture and the Detroit Collaborative Design Center. Currently, Lystra is researching techniques for sensing very large landscapes and modifying her dissertation, “Envisioning Environments: Designs for U.S. Urban Freeways, 1958-1967,” for publication as a book.