Hybrid life-cycle-assessment-urban-metabolism model as a framework for quantifying the contributions of urban agriculture to the sustainability of urban food systems

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I am interested in cities. I am also interested in the environment. Tellingly, my project sits at the interface of these two topics. This is not a coincidence. Cities now house the majority of humanity, act as the engines of the global economy, and are the drivers of much of the consumption that is wreaking havoc on the global environment.

I use quantitative sustainability assessment tools as frameworks with which to gauge the environmental impacts of cities. I do this in hopes of not only providing decision support in the form of performance benchmarking, but also as a way to suggest and test urban design interventions that leverage the strengths of cities (density, inventiveness, economic clout) to mitigate environmentally pernicious urban activities.

My cynosure is on urban food systems – their role in the metabolism of cities, the manifestation of urban food consumption as environmental pressures in their hinterlands and beyond, and the role of urban food production to combat these. I am currently assessing the environmental performance of urban farming systems to test their scalability to the urban level, and understand to what extent urban farming can improve upon conventional food supply chains and assimilate the copious food waste produced in modern cities.

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