



## What is a Sustainable City?



**Sustain:** from Latin *sustinere* (sub “up from below” + *tenerere* “to hold”): “hold up, hold upright; furnish with means of support; bear, undergo, endure.

What is a “sustainable city” is not self-evident. It depends on what we want to sustain. Is it: green cover, biodiversity, air quality, drinking water resources, per capita production of waste, public transit, population density, level of employment, income equality, property tax revenues, rate of economic growth, or energy consumption? Even this simple list shows the challenges that lie in achieving a sustainable city. Whereas some goals are compatible and even correlated – for example, green cover and air quality, or public transit and air quality – others may be incompatible – for example, rate of economic growth and drinking water supply, or rate of economic growth and waste production. That is to say, while some dimensions of sustainability can be co-produced, others may require trade-offs and hard choices.

Which metrics of sustainability ought we to value? Not only is this an unavoidable normative question, it raises a further equally difficult question: who gets to decide which dimensions of sustainability should matter? For example, should all residents of the city have a say, or only those who have lived in a city for a certain number of years? Should residents of rural areas that surround a city have a say, since the economic and ecological footprint of a city far exceeds its boundaries and how cities draw on their hinterlands can have dramatic consequences for their wellbeing? Consider that food to feed cities, water to quench their thirst, electricity to power them, and labour to build, provision, and repair them – all draw on catchments that extend hundreds (and sometimes, thousands) of kilometres beyond city limits. In short, the conditions of possibility for sustaining urban conurbations bring to the forefront issues of spatial scale and interdependencies extends well beyond city jurisdictions. How a city operates reverberates regionally (for example, the water needs of a mega-city like Mumbai adversely impacts the irrigation prospects of farmers in Thane); by the same token what happens regionally impacts the city (thus, farmers burning crop residues in Haryana exacerbates air pollution in Delhi).

If unit of analysis is one conundrum in achieving sustainable cities, unit of measure is another. One ideal of a sustainable city might be a city that meets the material needs of its present population without compromising those of future generations. But how should those material needs be measured, in money units or energy units? An urban ecologist, for instance, may define sustainability as the capacity to balance energy inputs and outputs in processes that are necessary to sustain urban life (groundwater use should equal groundwater recharge, sewage volume should equal the capacity of urban wetlands and filtration systems to recycle it, and so on). An economist, by contrast, may ask whether a city’s budget can be sustainably managed in the provision of urban infrastructure such that revenues and expenditures balance out. However, economic sustainability may or may not translate into ecological sustainability.

The problem of sustainability is often framed in anthropocentric terms, but it need not be. Those who approach the city as an ecosystem in which humans are only one, albeit the most impactful, element may ask whether a city is sustainable from the viewpoint of non-human biota, for example its flora and fauna? The dimensions of sustainability that matter to a city’s human residents may or may not be identical to those that matter to its non-human residents.

The concept of resilience has recently entered discussions of urban sustainability as climate change causes cities to be more exposed to extreme natural events, such as heat, drought, rainfall, flooding, and so on. Resilience foregrounds the capacity of cities to withstand such events without permanent damage to their built and natural infrastructures, as well as their capacity to recover and rebound from extreme events.

Resilience debates have also re-kindled attention around issues of poverty, inequality, and sharing, because those most vulnerable to and least able to shelter and recover from extreme events tend to be the city's poorest residents. This raises the spectre that cities with high levels of inequality in wealth and income are likely to rank low on indices of sustainability.

In short, if we embrace sustainability as the capacity to reproduce the economic and ecological conditions of possibility of a city for its present and future residents, then ecological integrity, economic justice, and political equality are all critical and intertwined aspects of an enduring outcome.



## Vinay Gidwani

He is the Associate Professor of Geography and Global Studies, University of Minnesota, Twin Cities. He studies and has published widely on issues related to work, poverty, livelihoods, and agro ecological change in the Indian context