

Urban Sustainability

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Cities and especially the world's largest cities are the future. They house more than half the world's population and by the end of this century they will be the dominant form of living. The environmental health of these places is one of the planet's fundamental issues. Moving towards an urban sustainability is one of the best routes to improve the health of our planet.

In this brief discussion I want to consider four main points. First, the cities are at the eye of the storm. They are especially vulnerable to climate change. The concentrated populations and investment of cities means that climate change effects such as rising sea levels and more intense storms have their greatest impact on cities. The brute facts of climate change vulnerability are promoting a new and more pronounced environmental sensitivity. Two other forces also promote this shift. There is a bottom up movement from urban residents for a better quality of urban life. These quality of life issues can no longer be displaced by simplistic arguments about the primacy of economic growth at the expense of quality of life concerns. The division between promoting growth and ensuring urban environmental quality is increasingly seen as a false dichotomy. There is also growing competition between cities. As the world globalizes, cities are assessed by international standards in the competition for investment, skilled people and creative industries. Cities need to respond to the demands of an increasingly mobile and ecologically aware capital and global talent pool. Cities are now ranked, compared and assessed by the greenness of their environment, and their success in moving towards more sustainable policies.

The second point is that cities are an ideal stage for developing policies and practices of sustainability. They contain a majority of the world's population and the vast bulk of economic activity. While the nation state can be both too big to deal with urban issues and too small to affect global affairs, the city is small enough to connect with citizens and tailor specific policies, while large enough to effect a difference. China is essentially 3 large metropolitan regions, the bulk of Japan's population and economic activity is centered on Tokyo and 10 megapolitan regions in the USA are responsible for 80 percent of the USA GDP. Shaping sustainability policies for these metro areas has a profound global affect.

Third, cities are important hubs in an increasingly global network of cities. While the world is often described as separate national surfaces of nation states, it is increasingly visualized as a global urban network. Cities are nodes in a global network of flows of people, ideas and practices. Cities are learning from each other, as policies are tested in cities with the more successful ones diffused, adopted and adapted around the global network.

Fourth, we have much to learn from the marginal of the cities. In the past sixty years between 1 to 2 billion people have created self-build communities in cities all over the world. They have quite literally made their urban environments. This is not to romanticize the problems in slums. But our present environmental predicament is in large part due to an unthinking reliance on technology, the higher tech the better. The slums of the world provide an invaluable experience of creating cities with limited resources; they

are in fact a living experiment in doing more with less. There are many lessons we can learn for this 60-year experiment of informal urban living.

Finally, we are developing indices to measure the environmental impact of cities. The **ecological footprint** measures how much land and water area a city requires to produce the resources it consumes and to absorb its wastes. Another measure is a city's **carbon footprint**, which is the total amount of greenhouse gases it produces. The **water footprint** of a city is a measure of all the freshwater used to produce all the goods and services consumed in the city. This is a very difficult metric to compute because it includes the volume of freshwater consumed from surface water and ground water, the volume of rainwater consumed and the volume of freshwater used to dilute the pollutants created by the production of all goods and services for the city. These metrics are still in the early stages of development. There are lots of problems, including assessing the leakage of impacts from outside the city's boundaries; the quality of data, which is too often imprecise and collected at different times for other purposes; and the lack of comparability between studies. The work is more embryonic than definitive. For example, we have yet to agree upon standard protocols for the data used and methods employed. We need to refine these metrics, develop new ones and so create a standardized and easily understood index of city sustainability. Perhaps the protocols for developing a city sustainability index should be on the agenda at the United Nations Climate Change Conference to be held in Paris later this year. With better data and a standard index, policies can be evaluated, targets set and institutions held to account. By comparing these metrics, planners and citizens can see how sustainability-related factors

correlate to how livable cities are. And a robust city sustainability index would benchmark where we are now and provide a measure of progress in the future.

Focusing attention on urban sustainability is not only the right thing to do; it is the smart thing to do. And ultimately, the only thing to do.