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Can Cities Become Sustainable?

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SYNOPSIS

With 54 percent of the global population of 7.3 billion people living in cities, and the urban population projected in the next 30 years to reach 65 percent of the estimated nine billion people, the question facing governments is whether cities can be sustainable.

COMMENTARY

CITIES ARE cultural creations. As Anne Spirn the prize-winning American landscape architect argues, current cities are "granite gardens", devoid of self-sustaining ecological life. Furthermore, the human specimen is the dominant species, which unfortunately, armed with economic desires, political ambitions, and cultural egoism, creates a lethal mix for ecological domination.

Given that Asia was the birth place of cities in the Middle East and Mohenjo Daro some 8,000 years ago, are there lessons one can learn from the proto-historic Asian urban experience?

Why Cities Are Not Sustainable

Cities are efficient spatial entities given that half the world's population resides on one percent of the earth's total land mass. But the other side of the story is that urban residents are liberal and wasteful users of resources. They consume 65 percent of the world's food and natural resources.

Unfortunately, cities are no more dependent on their immediate hinterlands. Affluence and technology have freed former space-bound societies. Global cities like Tokyo, Mumbai, Shanghai and Singapore have almost carte blanche access to global hinterlands.

In Asia, the focus of unsustainable cities reflects much broader issues. Firstly, it is not the size of population that is gobbling up natural resources, but the inequality of wealth. One has become used to the mantras that greed, conspicuous consumption, waste, affluence and capitalism are the source of many of Gaia's problems of environmental degradation.

The French economist, Thomas Picketty provides a sober prognosis on the serial inequality of wealth in capitalism. Capitalism results in the popular dictum that the rich get richer and the poor, poorer. Capitalism needs to be moderated, modified and better managed to ensure more sustainable living.

Whatever criticisms one levels at the Chinese authoritarian system of capitalism, objectively one cannot deny the country has produced spectacular results in lifting 80 percent of its peoples out of abject poverty.

Challenges of Weather Changes

Secondly, as recipients of massive labour migrants and environmental refugees are cruel signals that many states are failures in sustainability. Developing countries need to place more effort in developing non-urban areas. Where precipitation is lacking, large water systems need to be put in place to invigorate agriculture like in Israel and the Gobi desert in China.

Thirdly, cities, built in the past for smaller populations cannot cope with environmental refugees. Many of Asia's mega-cities (cities over 10 million population) have urban infrastructures (housing, public health, environmental issues) which are unable to handle its growing large populations.

Housing needs to be given priority attention in Asia's cities to thwart slum and squatter developments, enhance public hygiene, increase the quality of life, and diffuse potential political disturbances like the recent Hong Kong protests.

Fourthly, new intense rainfall levels resulting from La Nina and climate change need to be addressed periodically. Singapore's periodic flooding in Orchard Road and Bukit Timah in the 1990s demonstrated that weather changes are challenging former infrastructural developments.

The Singapore authorities finally admitted flooding resulted because the former infrastructure (drainage facilities) was not built for the intense, large surges of precipitation.

El Niño-La Niña: Impacts and Responses

Climate change is often touted as the catalyst for current environmental problems but in reality the cause is El Niño-La Niña. Tim Flannery, the Australian scientist, calls the impact of El Niño a form of "telekinesis", impacting environments far and wide. The historian, Victor Lieberman argued how the impact of El Niño created "strange parallels" in history across mainland Southeast Asia, East Asia, South Asia and Europe.

The uncontrollable fires in Australia currently are reminders we are living in an age of “mega fires” resulting from prolonged desiccation, the state of extreme dryness.

While many societies cannot mitigate climatic externalities, they can adapt. The cosmic cities of Pagan and Angkor Thom, and the numerous urban fiefdoms in Laos and Thailand knew the long periodic droughts caused by El Niño and the hardships they caused.

Cultural, religious and technological adaptations were the responses of mainland cosmic cities and mandala civilisations. Irrigated agriculture, large reservoirs, the production of huge domestic water jars, the collection of rain water, the ubiquitous water festival, the rocket festival, the worship of Naga, the underground water serpent were all means of adapting to the dry season and placating the spirits in control of rain.

These indigenous adaptations and spiritual invocations are reminders that past societies understood the life-threatening consequences of irregular rainfall and the simple adaptations to minimize the impacts of weather changes.

Enter Climate Change and the Anthropocene Age

Since 1958, the prestigious California-based Scripps Institute has been monitoring annually the alarming rise in global carbon dioxide: the cause of global warming and many negative environmental fallouts.

The human impact on the environmentalist James Lovelock’s Gaia has been so noticeable that scientists have accepted a new geologic period, the Anthropocene. The Anthropocene reflects the rise of urbanisation, the rampant use of fossil fuels, industrialisation, species extinction and the human role in changing the face of Gaia.

Besides being the “weather makers” and environmental shapers, human beings have to become ecologically-active good citizens if their chances of species survival are to be guaranteed.

Urban Responses

Certain broad steps to ensure a sustainable urban paradigm can be considered. These include:

First, designing cities must be predicated on recycling systems. All aspects of the urban system must thus reflect that wastage be kept to a minimum and recycling processes simulate the Yale ‘industrial ecology’ module. China’s Suzhou Industrial Park provides some tangible examples of industrial ecology.

Second, if the initial Asian urban revolution taught us anything, it is that there needs to be an almost symbiotic relationship between the urban population and their hinterlands. Cambridge University is experimenting with developing a better human-environment relationship with more ecologically sustainable hinterlands through farming and agriculture.

The divorce from nature resulting from the urban genesis needs to be repaired. Cities

should not be unsustainable entities, but its inhabitants have progressively made them so. The Japanese have shown us that living with civic responsibility is achievable even in their mega-cities.

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