Asian cities should be focal points for climate action

The global response to climate change has so far been focused entirely on nation states. Until the Paris Agreement and the recently concluded Kigali Agreement, the inability of nation states to broker any agreement resulted in inadequate positive action. This is amply borne out by the increase in both the duration and frequency of extreme climatic events. It is only now that the emphasis of the climate change debate is shifting to cities, particularly mega cities.

Cities and climate change: Cities cover less than 2% of the earth's surface, but consume 78% of its energy. According to the International Energy Agency's World Energy Outlook (2008), urban areas account for over 71% of energy-related global greenhouse gases (GHGs), particularly carbon dioxide (CO2) emissions, mainly through concentrated and increased energy consumption by transport and industry, and biomass use. This figure is expected to rise to 76% by 2030. Thus, there is large-scale urban contribution to global warming. As long as the present trend of urbanization continues, it is unlikely that the energy and fossil fuel consumption of cities, and the resultant GHGs emissions, will decrease.

An increase in sea levels and large storm surges due to global warming leave crucial infrastructure of mega cities (with a population of over 10 million) especially vulnerable as most of them are along coasts and/or river banks. Cities will have to bear the brunt of not only physical catastrophes in the form of stressed water resources and sewage systems, but also reduced availability of agricultural produce and consequent higher prices. The Intergovernmental Panel on Climate Change (2007) indicates a probability of 10-40% loss in crop production in India with increases in temperatures by 2080-2100. Hence, climate change will exacerbate urban pressures of rapid population growth and sprawl, poverty, and pollution.

Asia's mega cities: Of the world's 31 mega cities, as many as 18 are in Asia. China is home to six mega cities, and India has five. The combined population of these cities is a staggering 310 million (2016). By 2030, according to the UN World Cities Report (2016), the number of mega cities is projected to rise to 41, and added to the list would be six Asian cities.

Moreover, among the fastest-growing cities, 40 are located in Asia (20 in China alone), with an average growth rate of 6%. During the next decade, several of the biggest cities in South Asia, including Mumbai, Kolkata, Chennai in India, Dhaka in Bangladesh, and Karachi in Pakistan, will rank amongst the largest in the world. Therefore, not only is Asia home to the largest number of mega cities, the continent continues to urbanize fast and has the largest number of fastest-growing cities.

Power, transport, water and sanitation: The power and transport sectors are the major generators of GHG emissions, particularly CO2. In many South Asian cities, this is due to dependence on thermal power plants using coal with high ash and sulphur content, and use of private vehicles due to inadequate public transport. Integration of the transport sector with land-use planning and transit-oriented development needs to be discussed within municipal corporations and development authorities charged with this mandate. Enough examples from the developing world are available: Bogotá in Colombia, and Curitiba in Brazil.

The water and sanitation sectors also generate large amounts of non-CO2 GHG emissions like methane, which is classified as a short-lived climate pollutant. Empirical evidence shows that methane is 25 times more potent than CO2 as a GHG. Methane from sewage treatment plants and landfills is usually flared but has rarely been considered an energy resource.

South and South-East Asian cities which are being viewed as environmental hot spots, actually

offer huge possibilities and opportunities for efficiency improvements in power, transport, and water and sanitation infrastructure for the mitigation of GHG emissions responsible for global warming and climate change. Cities have enormous potential to be centres of innovation to deliver cost-effective solutions. The case for efficient public transport and sewage systems is, therefore, far more compelling for South and South-East Asian cities today than it was for East Asian cities half a century ago.

It is clear that unless each city begins to worry obsessively about climate change and improves efficiency in power, transport, and water and sanitation, it may not be able to save the very resources of its sustenance—water, air quality, and green cover. The biggest challenge in cities is also the biggest opportunity in forging links with global climate change. The immense opportunities for stabilization of GHG emissions can have an immediate impact on climate change. Climate change is, hence, a reason to promote a sustainable urbanization pattern and transform transport, power, and water and sanitation.

However, the entire focus on nation states rather than mega cities has resulted in misplaced responsibility wherein municipalities have not been involved in climate change mitigation. Mayors and municipal commissioners of mega cities have to become the torch-bearers of positive action in the fight against climate change. It is only by focusing on Asian cities that we can protect the cities and the people that are most vulnerable to climate change.

Naini Jayaseelan is a former Indian Administrative Service (IAS) officer.

Published with permission from Ideas for India, an economics and policy portal.

Comments are welcome at views@livemint.com

END