Cities and Climate Change

Indian cities are ill-prepared to combat the wrath of nature, whether in terms of government action or societal initiative, argue Sriroop Chaudhuri and Mimi Roy

Sriroop Chaudhuri and Mimi Roy /sriroop chaudhuri and mimi.roy / 1 May 2018 8:55 PM
The cloudburst that claimed over 12 lives in Kolkata a few weeks back while wreaking havoc on infrastructure, may appear unusual to some. Fallen twigs, uprooted electric polls, severed lines, rotten sewage – city life was literally overturned within a few hours. We like to ascribe such extreme events to divine wrath or ill luck. But it is neither. In reality, it is only how it should absolutely be. What’s more, we can expect more of these extremes before the year runs out. It is precisely what the Intergovernmental Panel on Climate Change (IPCC) has been professing for a while now – extreme climate events (thundershowers, hailstorms, floods, droughts etc.) are becoming increasingly common in the coming years and many global cities, especially the ones closer to the tropics, will fall prey to the rising tides.

Read This - India finds a new friend (/opinion/india-finds-a-new-friend-308710)

Present day discussions around improving urban resilience to extreme weather events almost always focus on building climate-proof infrastructure and a well-equipped disaster response team – both of which most Indian cities gravely lack. An added need is to knowing, evaluating and anticipating risks in advance by building smart warning systems. Which again, the Indian cities lack. Incapacities of our meteorological department to predict extreme events well ahead of time have been widely criticised. However, some also say that the rapidity with which weather patterns are changing in most cities is actually complicating the task of keeping pace with technology demands. But here’s a question: why is the urban climate changing so rapidly?

Read This - Pitfalls of social media (/opinion/pitfalls-of-social-media-308709)

This is keyed to urban lifestyle, hallmarked by the rise of apathy among most urbanites. An under-provided warning system is just one half of the challenge. The other half rotates back to us. The rise of consumerism has added to the dereliction of the environment and climate. For example, with an increase in capital power and affordability, we have begun living in a ‘throw away’ era. Common to most
cities in the developing era. This includes lesser recycling of goods and more purchasing. Recent climate reports suggest that increasing waste loads lead to aberrant spikes in greenhouse gas emissions that trigger unusual changes in urban weather patterns.

In most Indian metros, development is occurring at the expense of the regions that are the most vulnerable to weather hazards – the peri-urban areas. Protection plans for these highly sensitive habitats only exist on papers, at best. Using these regions for building landfills and waste dumping sites are quite common across India. Moreover, peri-urban communities are challenged by basic amenity needs – safe water, clean energy, healthcare, improved sanitation facilities etc. So, most often, these communities are forced into adopting ‘coping’ strategies that degrade the environment. For example, burning fossil wood or cutting down bushes, over-exploiting and polluting water bodies, degrading the soil system etc. All these add up to the carbon footprint and affect climate parameters.

But then, why should peri-urban habitats concern the authorities when the city proper is of little value?

In most Indian metros, the air is saturated with aerosols of various sizes. The ground is bleached with vehicular leaks. Waterways are clogged with untreated sewage, plastic wastes and industrial effluents. Even fire break-outs are becoming pretty common. Most metros still run primarily on fossil fuel with practically no renewables in the energy mix. E-rickshaws are still on pilot-scale while a large fraction of automobiles far from using CNG. Solar panels are mostly on the papers, just like rainwater harvesting structures. Overall, transitioning to a low-carbon urban economy is only wishful thinking. Additionally, India is the fourth-largest carbon emitter in the world, following the US, China, and the EU.

Indian cities by design create a unique micro-climate that retains heat. In climate lingo, this is the "heat island" effect, where urban centres are warmer than their surrounding hinterlands due to the complex topography and congested assemblage of building structures. Emissions from million vehicles, buildings and other infrastructural operations further exacerbate the heat stress. For example, construction projects raise the warming potentials by adding dust particles to the atmosphere, turning it into one big oven with little natural escape route for heat.

What’s more, the concept of the urban wetland is almost history in most Indian metros. But these fragile ecosystems, if nurtured, can counteract pluvial flood. But we have increasingly replaced these natural ‘sponges’ with sealed surfaces that reduce the likelihood of infiltration. Result: we have created exquisite rain-deserts for our cities. The continued blasts through the past few weeks in Kolkata and the disruption of city life will attest to it, of course.

There is always discourse on the trends of urbanisation in global cities and their likely impacts on society and environment. Indian cities probably offer the best case example among all with population growth soaring at a lightning pace. The UN’s Population Division estimates that between 2014 and 2050, Indian urban population could rise by about 400 million. The implicit message therein is, urban communities will be increasingly forced to adopt livelihood practices that plunder natural resources beyond restoration limits. In addition, there is little room to strategise for adaptive measures. With the current vehicular density in Indian metros and a soaring level of unplanned (and unauthorised) build-ups, there is already an appalling dearth of space for any policy manoeuvring. In developed nations, there’s a growing concept called ‘urban forestry’. Meaning, planting deep-rooted species at strategic city locations and maintaining them for a clean and safe breathing space. For Indian cities, unfortunately, urban greenery is merely a tool to hike real estate prices. So what’s to be done?

Incorporating climate-proofing in urban infrastructural designing is quintessential. This should be met by making provisions for interdisciplinary research on climate science, likely environmental changes and how best we could align our future urban designs with the findings. The need is to devise the best solutions recognising the strengths and weaknesses of the existing socio-technical framework to comprehend the range of vulnerabilities and strategise adaptation responses thereof.

But, to get to that, there is a need to realise that it is not just the governmental actors, but also civil society and private actors that play critical roles in adding value to any climate action plan and build resilience over time. The latter may include the corporate sector, NGOs, regional and transnational networks and international organisations. A major demand is to ensure adequate horizontal and vertical diffusion of climate actions between the national, state, and urban actors. In this regard, a characteristic flaw is the lack of urban empowerment. The task of urban policy development still rests with state governments, which delegate responsibilities to the local bodies (for example, municipalities). The powers of town and city governments vary across states and the full-scale decentralisation of governance is still lacking. Therefore, urban institutional and financial capacities to build climate resilience is limited.

Ancillary needs include organising awareness drives against daily livelihood practices and capacity building to facilitate emission reduction. Unfortunately, climate planning is yet to be embedded in the core of urban developmental agenda for many cities in India, except for some vague mentions here and there.

http://www.millenniumpost.in/opinion/cities-and-climate-change-297344
Cities and Climate Change

(Dr. Siroop Chaudhuri and Dr. Mimi Roy are faculty of environmental studies and co-Director to the Center for Environment, Sustainability and Human Development (CESH) at the OP Jindal Global University Sonipat, Haryana. The views expressed are strictly personal)

Siroop Chaudhuri and Mimi Roy (/sroop.chaudhuri.and.mimi.roy)
Millennium Post Contributors help bring you the latest news around you.