**[Climate-friendly city](https://www.dawn.com/news/1655670/climate-friendly-city)**

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WORLD leaders gather in Glasgow, Scotland, for the COP26 meet, discussing ways to tackle the climate change threat, a phenomenon respecting no territorial boundaries. A country like Pakistan, contributing little to the global greenhouse gas load, is amongst the worst affected by climate change impacts. Cities stand at the forefront in the battle against climate change. They house the mass of humanity, and critical human activities contributing to climate alteration happen in the urban space. Cities aiming to become more resilient and reducing their carbon footprint, invest in preparing a Climate Change Adaptation Strategy. Pakistan, though rapidly urbanising, has unfortunately made no such progress.

Karachi, our largest city, is exposed and vulnerable to impacts of all four possible climate change scenarios — flooding, drought, extreme heat events and sea level rise. The city needs a comprehensive Climate Change Adaptation Strategy, laying the groundwork for required action. Such a strategy accurately identifies the critical vulnerabilities of ‘people’ and ‘assets’ at possible risk and details the required action.

Presently, Karachi’s resiliency and capacity for adapting to climate change scenarios is severely compromised. If we consider ‘flooding’ then communi ties likely to be in the ﬂood hazard zone also fit the profile of enhanced vulnerability. These include residents of katchi abadis, hill settlements and low-lying localities. Critical assets such as industrial zones are at risk. Vulnerabilities can be accurately identified if probability is linked with establishing a flood risk zone.Vulnerability factors are combined to produce an index of ﬂood vulnerability and plotted using census data to map vulnerability. The absence of identified ﬂoodplains for either the Maliror Lyari river basin make it difficult to establish a viable ﬂood risk zone for Karachi. Green spaces acting as filtration basins for rainwater thus reducing the potential inundation threat are fast vanishing.

Karachi has faced serious droughts. From 1995 to 2003, water supply from the rain-fed Hub Dam was reduced to almost zero due to lack of rains. Droughts expose to risk our rural hinterland and the associated communities and livelihoods. Our water system is very stressed with a high supply and demand gap. The sole water provider, KWSB faces bankruptcy and has shown an inability for contingency planning by not initiating water conservancy measures or availing options such as waste-water recycling or recharging groundwater resources.

Karachi is exposed to all climate risks.

The city has witnessed heatwaves at a cost. The data is insufficient to indicate how pervasive ‘extreme heat’ has become. Factors including unplanned densification, increasing automobile load and lack of vegetation can indicate the prevalence of the urban heat island effect but regular surface temperature mapping needs to be done to identify trends. Extreme heat leads to increased use of water and power, two services already stressed, with severer implications for the urban poor.

Sea level rise and tidal flooding pose serious threats. Human settlements at high risk of exposure and vulnerability are fishing communities and the facilities sustaining their livelihoods. Critical installations of national importance are located along the coast. They include the Karachi harbour, fisheries, naval installations and Port Qasim Authority to name a few. Any disruption in their functions even for a day costs the nation billions of rupees.

A road map for a strategy document has to start with working on probabilities and trends and translating them into physical jurisdictions — climate change risk zones. This requires investing in continuous research. Actions can be a mix of policy, institutional stren­gthening, strategic projects and financial investments. We need flood-risk zoning, regulations preventing housing and commercial development in risk zones, an urban forestation programme, replenishing groundwater reservoirs, prioritising public and non-motorised transport, strategic compact development and conservation practices — these are just a few in many steps that need to be taken. However, there is a fundamental challenge facing Karachi and that is an existing dysfunctional governance framework with substantial capacity deficits. The entity best suited to lead this effort in any city is the office of the mayor that for Karachi is struggling to remain relevant in the overall scheme of urban governance. The government can take the lead but the process has to be inclusive, creating a shared vision and strategically merging resources and competencies.

The strategyis not an end in itself. This will be a living document, evolving as the science around it evolves, new technologies surface and governments and communities adapt to changing scenarios. We need to take the first step. We are already behind the clock.

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