

'Kolkata and Climate Crisis'

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ABSTRACT

The location of Kolkata stretching along the northern fringes of the Gangetic delta in eastern India - makes the capital city of the state of West Bengal vulnerable and prone to the shocks and stresses of climate change and natural disasters. The geographical setting of Kolkata in a flat terrain with inadequate natural drainage relief causes riverine flooding and overall poor drainage; close proximity to the coast, makes it more susceptible to sea level rise and storm surges. The riverine location on the one hand facilitates growth of economy and urban agglomeration, while on the other hand handicaps the city when coastal storms lash out with incessant rain showers and thunderstorms. Flat deltaic terrain, inadequate natural drainage, and tidal blockage of channels intensify flooding and water logging in the city, while runoff mixing with sewage raises the chances of health problems. The city is already at heightened risk of rapid sea level rise, periods of intense rainfall, cyclonic activity, and storm surges – adequate funds, infrastructure systems and capacity-building for disaster preparedness, management and mitigation to make urban spaces climate change resilient becomes imperative in such cases. Drying up of water-bodies (in parts the East Calcutta Wetland – a Ramsar site) and conversion into built-up space, loss of area under agriculture in peri-urban locales to construction, increased urban density, waterlogging and flash floods, shrinking water-bodies, damages inflicted by soil salinization post-cyclones, have been significant problems in the Kolkata Metropolitan Area (KMA). An analysis across three decades since 1970s to late 2000s suggests an intensification of cyclonic occurrences and spiralling damages on landfall. Patterns of urban settlement expansion, livelihood and consumption trend together with fuel burning and emission rates affect the magnitude of pollution and environmental disaster. Migration in the delta region often occurs as part of adaptation response to environmental threats like climate change. This research will attempt to analyse urban development along with the impacts of environmental hazards and climatic catastrophes from the year 2000 to 2022, in and around Kolkata and parts of the 24 Parganas districts. The study will look into the role of disaster management authority, law and governance in combating climate crises and urban issues in the region.