

Policy Brief

Adi Ganga: Enmeshed Water Heritage of Kolkata

Debika Banerji and Shreyashi Bhattacharya

Water Seekers' Fellow 2021





A highly polluted stretch of the river

Policy Brief

Adi Ganga: Enmeshed Water Heritage of Kolkata

Debika Banerji and Shreyashi Bhattacharya

Water Seekers' Fellow 2021

Cover photograph by Debika Banerji and Shreyashi Bhattacharya

Today, rivers are perceived as amenities and objects “rather than as active agents in urban formation” (Way 2018). European and North American case studies on urban rivers confirm this trend (Neri Serneri 2005; Deligne 2012; Barles 2012; Stradling 2017). In the Indian context, Urban Political Ecology studies have shown how urban waters are used as dumping sites and have become residences for the emerging squatter population (Baviskar 2011; Coelho and Raman 2013; Mukherjee 2020; Singh, Parthasarathy, and Narayanan 2018).

This trend is evident in the case of Adi Ganga-Tolly Nullah, an old channel of the Ganges weaving through the dense localities of southern Kolkata to eventually join the Bay of Bengal. Between colonial excavations on the river's stretch by Major William Tolly to serve the dual purpose of navigation and sewerage and construction of modern-day Kolkata metro, this ancient river today resembles a sewer, reeking of foul odour and abandonment.

The question of the river's survival is vital to the ecological stability of the city. Chakrabarti (2017) reports that according to a 2017 study by SAFE-IWMI, Adi Ganga-Tolly's Nullah continues to be the only flood relief line for water-level resilience in the Kolkata municipal area. As noticed, recent monsoons have increased the city's flash floods and waterlogging problem. Residents of the area and Kolkata Municipal Corporation workers, responsible for the river's daily clean up, suggest a lack of awareness on waste segregation and disposal. They also suggest that the absence of intervention in the treatment of sewage is responsible for the river's current condition.

In 1985, as part of the Ganga Action Plan Phase II, the Tolly Nullah was provided with some renovation. This included preliminary works of dredging and evicting almost 800 'encroachers' from the river banks. The Kolkata High Court's 1998 order to clear over several thousand people from the banks of Adi Ganga reiterated the state's perception of the river's pollution as something that only resulted from the squatter settlements and drew protests from various grassroot organisations in the city. Beside this, the Metro railway construction between the Garia-Tollygunge drew heavy criticism from several environmentalist groups for the state's lack of ecological cognisance of the river's role in the city. In January 2017, the National Green Tribunal's eastern zone bench ordered the 75km-stretch of Adi Ganga to be included in projects undertaken by the National Mission for Clean Ganga, as opposed to the initial plan to fund the rejuvenation of only 15km of the original stretch.

The recent *Amphaan* and *Yaas* cyclones have also had a noticeable impact on the flooding of the vast area in Kolkata. These regions include the Kalighat and Kudghat stretches where the Adi Ganga had overflowed due to a lack of desiltation initiatives. The flooding of Adi Ganga has now become an annual monsoonal occurrence, with the sewage-laden river overflowing onto the streets and into the houses.

The cultural attachment to the river also plays a pivotal role in the river's need for conservation and awareness policy. The Kalighat temple, set on the banks of Adi Ganga is one of the holiest shrines in Hinduism and is visited by pilgrims all over the world, who partake in various ritualistic practises such as dips in the river or collecting the water from the river for performing rituals at home. In 2021, the Bengal government floated a global tender to clean River Hooghly along with Adi Ganga. Upon inspection, it has been noticed that from the 1980s, the sewage treatment plans under the Ganga Action Plan were hardly functional, making it clear that the devotees were using the toxic and untreated sewage water in Kalighat for their sacred rituals.

The field interactions with the KMC workers involved in the river clean-up shed light on another set of challenges. In case of infrastructural obstacles, workers in both the Kalighat and Kudghat stretch have highlighted the lack of enthusiasm from the upper-tier government officials in maintaining the river. Tenders are floated, contracts are handed, and orders are issued. Even then, according to the ground-level workers, none of the engineers sitting in offices try to understand the river's structure and problems on ground. For them, this is just another river, and a 'one for all' solution is the best strategy for maintaining the canal.

While Kolkata's heartland doesn't have a separate sewage treatment plan, East Kolkata's Wetlands act as an organic wastewater treatment resource for the city's sewage. Though the Adi Ganga acted as the sole flood relief line for the city's municipal area, the metro construction and the untreated waste dumping have lessened the efficiency of the river to draw off the storm water from the city. Engagement with the residents, state officials, and groundworkers provide an understanding of the current challenges of the waterbody.

This leads us to the following suggestions. It's critical to:

1. Facilitate multi-stakeholder engagement with the waterbody and its ecology, the development of river literacy and awareness programs among the residents (programmes in schools, regular community-KMC meetings, interactions with the settlers) of Adi Ganga's banks.
2. Put more emphasis on the sub-regional water governance that integrates local nature-based solutions with cost-effective and innovative water management strategies, facilitating river-resident interdependence.
3. Develop a decentralised sewage treatment plan for urban rivers and waters. This would include setting up more Sewage Treatment Plants across the river stretch. These Sewage Treatment Plants will help tackle the influx of increasing waste disposal in the context of changing urban demographics, stormwater management, and regular monitoring of the river water quality index.
4. Implement a Blue-Green Infrastructure policy that perceives land and water in urban planning as an integrated concept.

5. Recognise Adi Ganga as part of the city's environmental and cultural heritage through policy frameworks and interactive audio-visual workshops. To understand the historical context and transformation of the river and enable further urban river management schemes in flood-prone cities.

The existence and survival of Adi Ganga-Tolly Nullah permeates a larger context of its survival, one beyond a river holding centuries of history and heritage. Globally, the current climate change scenario has proven the risks run by a deltaic city in the past few decades¹. Despite being a water abundant city, Kolkata faces severe flood-risk challenges as a result of the multiple anthropocentric interventions² over time. Adi Ganga must survive through the above mentioned challenges while maintaining the flood balance of Kolkata's dense municipal areas. The fight for its survival offers a critical opportunity for the state to introspect the sustainability of present urban water governance and work towards the river's restoration and the integrated city-nature coexistence in the region.

¹ The climate change resulting rising sea/ocean levels pose a threat of complete submersion to cities close to water. Kolkata is about 5 meters above mean sea level, facing the severe threat of marine transgression.

² Anthropogenic interventions to the city, in many cases flouting natural norms of slope, rapid scale of urbanisation and inadequate infrastructure to deal with the fluvial and pluvial floods.

Bibliography

- Barles, Sabine. (2005). "A metabolic approach to the city: Nineteenth and twentieth century Paris". In *Resources of the city: Contributions to an environmental history of modern Europe*, edited by Dieter Schott, Bill Luckin, and Genevieve Masard-Guilbaud. London, United Kingdom: Routledge.
- Baviskar, Amita. (2011). "What the eye does not see: The Yamuna in the imagination of Delhi". *Economic and Political Weekly* 46(50): 45-53.
- Chakrabarti, Suman. (2017). "East Kolkata Wetlands only hope for flood-prone Kolkata: Study". *The Times of India*, 5 March 2017. Accessed on 14 September 2021, <https://timesofindia.indiatimes.com/city/kolkata/east-kolkata-wetlands-only-hope-for-flood-prone-kolkata-study/articleshow/57472932.cms>.
- Coelho, Karen and Nithya Raman. (2013). "From the frying-pan to the floodplain: Negotiating land, water and fire in Chennai's development". In *Ecologies of urbanism in India: Metropolitan civility and sustainability*, edited by Anne Rademacher and K. Sivaramakrishnan, 145-168. Hong Kong: Hong Kong University Press.
- Deligne, Chloe. (2012). "Brussels and its rivers, 1770-1880: Reshaping an urban landscape". In *Urban rivers: Remaking rivers, cities and space in Europe and North America*, edited by Stephane Castonguay and Matthew Evenden. Pittsburgh, USA: University of Pittsburgh Press.
- Mukherjee, Jenia. (2020). *Blue Infrastructures of Kolkata: Natural History, Political Ecology and Urban Development in Kolkata*. Singapore, Singapore: Springer Nature.
- Neri Seneri, Simone. (2005). "Resource management and environmental transformations: Water incorporation at the time of industrialisation: Milan". In *Resources of the city: Contributions to an environmental history of modern Europe*, edited by Dieter Schott, Bill Luckin, and Genevieve Masard-Guilbaud, 1880-1940. London, United Kingdom: Routledge.
- Singh, Neha., D. Parthasarathy and N. C. Narayanan. (2018). "Contested urban waterscape of Udaipur". In *Sustainable urbanization in India: Challenges and opportunities*, edited by Jenia Mukherjee. Singapore, Singapore: Springer.
- Stradling, David. (2017). "The new Cuyahoga: Straightening Cleveland's crooked river". In *Rivers lost, rivers gained: Rethinking city-river relations* edited by Martin Knoll, Uwe Lübken, and Dieter Schott. Pittsburgh, USA: University of Pittsburgh Press.
- Way, Thaisa. (ed.). (2018). *River cities and city rivers*. Washington, USA: Dumbarton Oaks.



**WATER
SEEKERS'**
FELLOWSHIP 2021

sprf.in | livingwatersmuseum.org

