Commons vs Commodity: Urban Environmentalisms and the Transforming Tale of the East Kolkata Wetlands[1]

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The increase in urban ecology research in the social sciences since the 1980s can be explained as an outcome of contemporary urbanization. From an understanding of the commons as a rural artefact, this concept has expanded to include urban spaces and practices. This is significant for countries like India, which are supposed to experience huge urban growth in the coming decades. The emergence of peri-urban interface, where rural and urban features tend to coexist, will be one crucial aspect related to this pattern of urbanization. While striving to reinvent themselves as utopias for investors, entrepreneurs and consumers, like their counterparts in the 'global South', Indian cities are consuming peri-urban ecological commons that are not only critical to urban economic production and cultural vibrancy but also crucial for ecological sustainability of cities and their surroundings. Applying temporal trajectories and political ecology framework, this article looks at transformations of wetlands at the eastern periphery of Kolkata, a process which not only recycles the city's waste, but also produces vegetables, crops and fishes, providing livelihood to poor communities. We explore a core-periphery metabolism that determines socio-economic and ecological sustainability and engages into complex interactions among varieties of environmentalism that shape the city's urban transition.
Key words: Kolkata, East Kolkata Wetlands, environmentalisms, political ecology, commons

Introduction

Historically, when viewed through the lens of market mechanisms, capital has had a tendency of appropriating resources that seem to be vague in terms of ownership. So, appropriating resources that do not have a defined individuated right acquires legitimacy under capitalist property regimes. There is a Lockean logic in appropriating the commons; what is produced from one acre of enclosed land is ten times more than what is produced by an acre of land of equal richness lying waste in common. This logic marks the annals of statehood from the post-Reformation era (Whitehead 2010). There are many historical examples of appropriation and destruction of commons in various forms, including in the developing world particularly during colonialism. The use of the Weberian concepts based on empirical-positivistic notions of *res nullius* (meaning, that which is not assigned by the sovereign belong to the sovereign) and *terra nullius* (meaning no man's land) provided the colonial state with the legal justification to appropriate community resources, including commons, and mark them as 'waste', to be then used to generate revenue for the Crown (Chakraborty 2012). Since time immemorial, commons thrived and survived by dancing in and out of the state's gaze, by escaping its notice, because notice invariably brings with it the desire to transform commons into state property in the contemporary era (Gidwani and Baviskar 2011). As neo-liberal globalization colonizes space at a rapid scale, the accumulation spree of capital makes the situation grimmer, with massive effects on ecosystem resources and marginal ecosystem-dependent communities.

With rapid urbanization and growth of urban areas in recent times, especially across developing countries, the concept of 'commons' is expanding from being overtly perceived and understood as a rural artefact to include urban spaces and practices (Gidwani and Baviskar 2011, Marotta 2014). Moreover, one of the crucial aspects of contemporary urbanization in developing world is the emergence of the 'peri-urban' interface, where rural and urban features tend increasingly to coexist within cities and beyond their limits (Allen 2003, 2009; Shaw 2005). While striving to reinvent themselves as utopias for investors, entrepreneurs and consumers — like their counterparts in the 'global South' — Indian cities are consuming peri-urban ecological commons that are critical not only to urban economic production and cultural vibrancy but also to the ecological sustainability of the entire region. Protests and resistances are taking place in different ways and with different implications across different Indian cities, in the process making commons evolve as complex sites of politics, negotiations and contestations (Baviskar 2003, 2011; D'Souza and Nagendra 2011; Bose 2013; Marotta 2014).

Within this context, we discuss transforming tales of emergence, evolution, cooperativism, privatization and commodification of wetlands — named and designated as the East Kolkata Wetlands (henceforth, EKW) — on the eastern fringes of Kolkata. Then we also explore the complex saga of the urban environmentalisms related to the preservation and management of this ecological site.

Methodology and Methods

Using political ecology framework that argues for the analysis of environmental degradation in its historical, political, economic and ecological contexts (Blaikie and Brookfield 1987), we trace transformations of peri-urban wetlands across long temporal trajectories including colonial, immediate post-independence and contemporary neoliberal times.

Aware of key issues in urban anthropology (Prato and Pardo 2013), in order to trace the historical trajectory, we have used archival research methods and oral narratives alongside other qualitative methods, including key informant interviews and formal and informal group interviews with members of cooperatives, fishery department, government of West Bengal, NGOs such as People United for Better Living in Calcutta (PUBLIC) and Centre for Environment and Development (CED).

Transforming Tales of the East Kolkata Wetlands

The sustenance of Kolkata heavily depends upon its interaction with its peri-urban interface. This 'interface', mostly accounted for by wetlands in the eastern part of the city, acts as a transitional zone, an urban–rural continuum for a rapidly urbanizing space (see Map 1). The EKW and Dhapa landfill area absorb approximately 750 million litres of waste water and 2,500 metric tonnes of waste generated by the city per day. It is the world's largest recycling ecosystem, fully managed by the local inhabitants through inter-generational knowledge. Low-cost, traditional and indigenous recycling practices undertaken by fishermen and farmers residing in the area have paved the way for three major eco-environmental practices:

wastewater fisheries, effluence-irrigated paddy cultivation, and vegetable farming on garbage substrates. The EKW not only treats the waste water and waste at minimum cost (almost no cost) but also generates employment opportunities and provides livelihood to around 1,000,000 people living in the core and buffer zones and flocking to Dhapa as daily labourers.
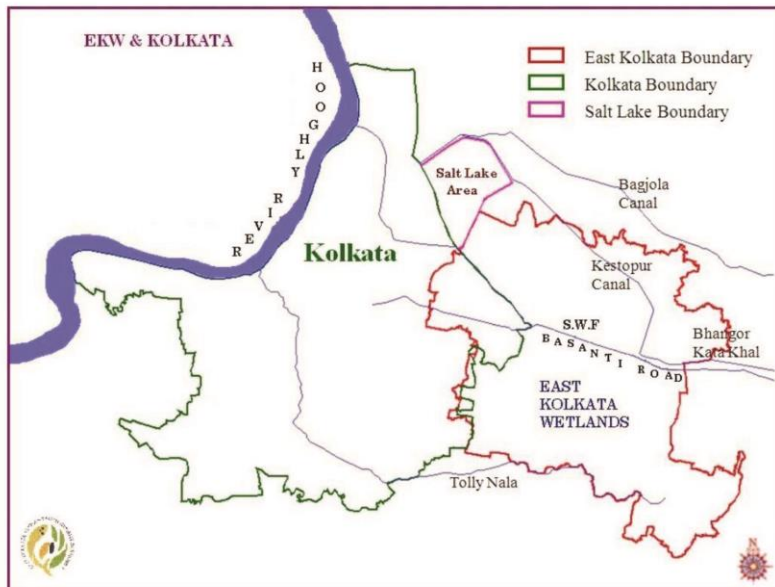
Map 1: *Kolkata and the EKW*－http://www.ekwma.com, accessed 10 March 2010
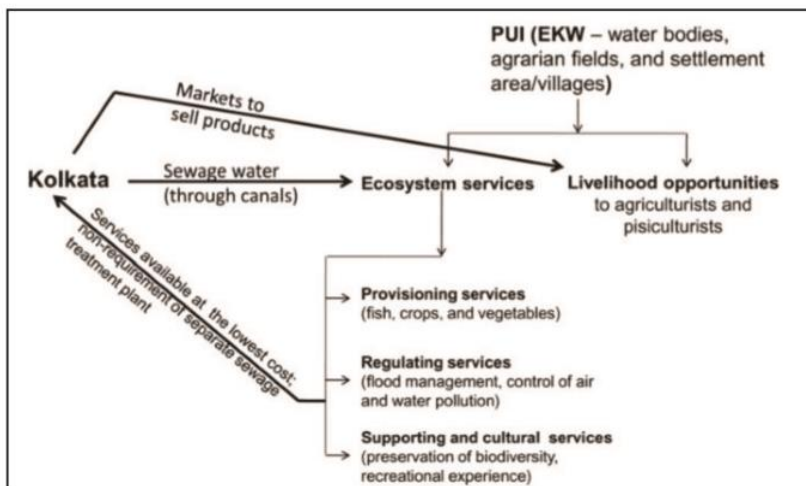

Fig. 1: *Sustainable flows between Kolkata and its PUI*－Mukherjee 2015a

The Colonial Victory of Site over Situation
The history of the region makes us aware that the mutual interdependence and sustainable flows between urban Kolkata and the peri-urban wetlands (a contemporary connotation) on the east (see Fig. 1) evolved as part of the colonial project of urbanization (Mukherjee 2015b). Kolkata's natural ecology, with the Hooghly River on the west, the saltwater marshes on the east, and the Ganges and her numerous tributaries and distributaries intersecting the whole area, played a key role in the selection of the city as the seat of the imperial capital

(Mukherjee 2009-2010). When the British arrived in the region, the settlement site was a narrow strip of land on the bank of the Hooghly River, surrounded on all sides by swampy jungles and brackish lagoons. It was a place of mists, alligators and wild boars. From several colonial reports, letters and other secondary sources it is evident that when the British settled here the environment was unhealthy and deleterious. Sterndale's historical account of the Calcutta collectorate (1885) narrates that *pargana Kalikata* was full of jungles infested with wild beasts and snakes and even dacoits, and Job Charnock and the British who succeeded him hunted wild boar in the area adjoining the Chowringhee (Mukherjee 2009-2010). The situation of the entire stretch was so deplorable that when in 1690 the colonizers issued a proclamation permitting people to erect houses in any portion of the wasteland that was under the possession of colonial companies, even that kind of an inducement was a sine qua non for attracting a population.

'The Salt Water Lake on the east left masses of dead, putrid fish as water receded in the dry season, while a dense jungle ran up to where Government House now stands. The new settlement was situated about 160 miles from the sea. The south wind — the only mitigation of the fierce tropical heat which prevails from the end of March to October – blows over salt marshes and steaming rice lands on its way to the city. Its most uniform dead level, with depressions lying below the level of high water in spring tides, renders it difficult to drain properly, while the soil on which the town is built possesses every quality which the site of human habitation ought not to possess' (O'Malley 1914: 42-43).

But why, in spite of such disadvantages, did the British stick to their decision of selecting this place as the imperial capital? The selection of Sutanuti, the modern embryo of Calcutta was the result of a deliberate judgement on the part of the British and Job Charnock, who saw the many advantages that the place offered. The Ganges and its tributaries gave the foreign merchants an opportunity to extend their trading operations inland over a wide area. No other place outside Bengal covered such a vast area of influence. The economic logic of commercial development of the Ganges valley gathered momentum (Ghosh et al. 1972). The Hooghly River tapped the trade of the Ganges valley and the site was situated at the highest point where the river was navigable for sea-going vessels. On the eastern side, it was protected from invasion by the presence of an extensive salt lake, the swamps and marshes of which made it invulnerable to the enemy (see Map 2). The cost of land acquisition was cheaper due to the vast swamps and, most importantly, the Ganges and the numerous creeks and channels offered immense potential for trade between Kolkata and her eastern counterparts, including Khulna, Faridpur, Backhergunj, Barishal and so on. The colonial understanding of the significance of this site in terms of both defensibility and serviceability led them to intervene and tame the natural ecology of channels and marshes into 'waterscapes'[2] that constituted the best means of inter-communication between rivers and

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[2] This involved the use of labour and capital in the adaptation of the natural environment.

estuaries; at the same time, solutions of drainage and sewerage were found for the emerging urban site with the core purpose of generating revenue (Mukherjee 2009-2010).[3]
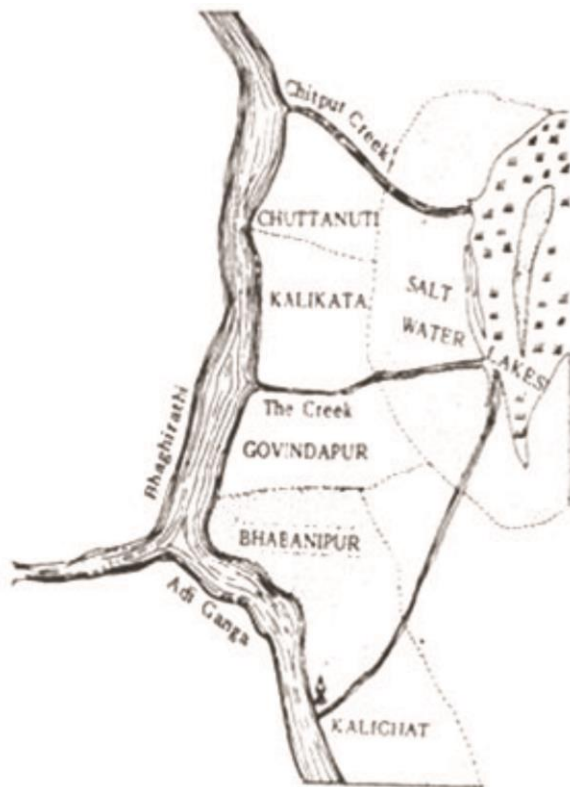

Map 2: *Conjectural Map of Kolkata in the Period of Tradition* ‒ Chattopadhyay 1990

Excavation of Canals and Reclamation of Marshes

Urbanization occurred in parallel with canal construction and marsh reclamation. The colonial history of excavation of canals (which finally evolved into the city's Eastern Canal System; Ienglis 1909) and reclamation of marshes offers a unique insight into the growth of an expanding city. While the system emerged to make space for the colonial motive of interconnecting Kolkata with her hinterland, ensuring an unobstructed flow of raw materials and commodities to the city and the port, exploitation of economic opportunities was the most important factor behind Kolkata's expansion as one of India's largest urban centres. Inevitably, how to deal with the drainage and sewerage problem for the gradually expanding city became a major challenge. The Eastern Canal System (see Table 1), along with some additional excavations which were then integrated into it, was built to drain the sewage into the existing saltwater marshes (Chattopadhyay 1990, Mukherjee 2009-2010). An underground drainage system for the disposal of sewage and storm water through a combined drainage

[3] The denomination, 'Kolkata' is a reflection of its hydraulic topography. Kolkata lies 'in the middle', with Sutanuti to the north and Govindapur to the south. The middle portion was marked by indentation in the coastline because of creeks and inlets. To denote this, a Bengali word was used – 'kol-kata', 'kol' = shore, coast and 'kata' = cut open. Taken together, the two words mean: coast or shore cut open by creeks and inlets (Biswas 1992).

system of storm water flow (SWF) and dry weather flow (DWF) canals into the saltwater swamps, which were then finally connected to the Bay of Bengal through the Bidyadhari River was designed by sanitary engineer William Clark, and completed by 1884. The Bidyadhari River dried up (due to natural reasons and also constant excavation and re-excavation of canals that speeded up the process of silt deposition on the river bed) and was officially declared dead in 1928 for both drainage and navigation. The Kulti Outfall Scheme was executed and commissioned in 1943 (see Map 3). This led to a gradual transformation in the aquatic environment of the area from saline to non-saline; from saltwater marshes to sewage-fed freshwater wetlands. The eastern marshes were saline in nature as the Bidyadhari River carried saline water from the Bay of Bengal and spilled over the low-lying area. The silting-up of the Bidyadhari River caused a decrease in the inflow of saline water. Moreover, with the decay of the river, sewage and storm water came to be diverted into the saltwater lakes through canals, turning them into freshwater lakes. When the Kulti Outfall Scheme was implemented, an adequate water-head was raised for supplying sewage to most of these fishponds by gravity, which resulted in the extension of wastewater fishponds further east and south-east for about 8,000 hectares. The EKW lies between the levee of the River Hooghly on the west and the Kulti River on the east, and is distributed nearly equally between the two sides of the DWF channel that reaches the river (Ghosh 2005). The EKW evolved as an output and input produced and required by the city and in parallel evolved as the space of informal, 'untamed' practices by marginal peri-urban fishing and farming communities (Mukherjee 2015b) (Map 1).
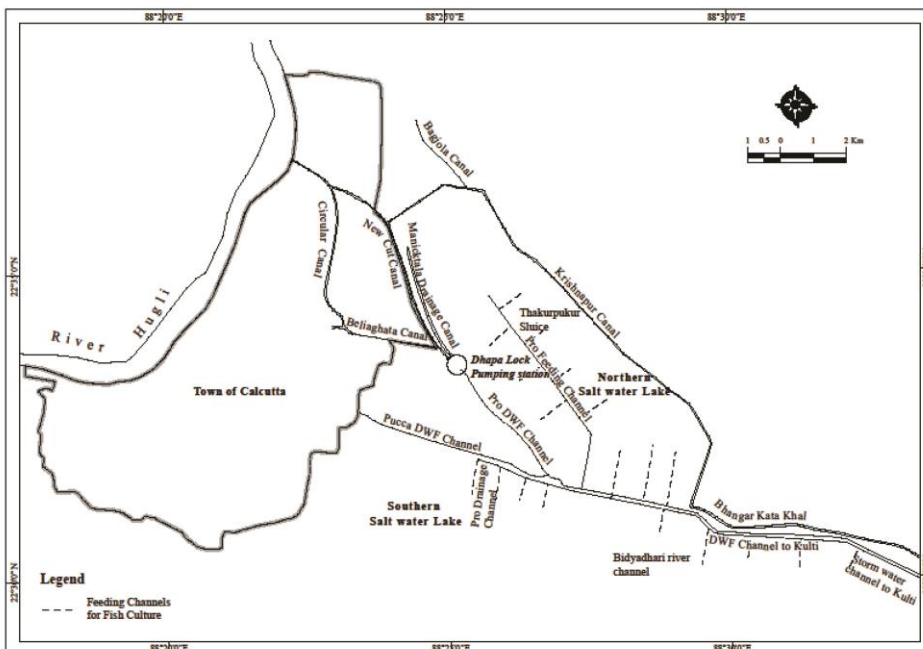
Map 3*: General layout of the drainage channels ─ Bose 1944*

Name of the excavated canal	Year of execution
Beleghata Canal	1810
Circular Canal	1831
New Cut Canal	1859
Bhangar Canal (canalized)	1897
Krishnapur Canal	1910

Table 1: *Eastern Canal System* ─ Inglis 1909

Within the ambit of the colonial state, reclamation plans for eastern marshes were designed in order to generate revenue. Dhapa was leased to individual holders (Table 2) and sewage farming experiments were conducted to generate profit from waste recovery activities (Chattopadhyay 1990).

The Post-colonial Transformation of Wetlands into Estate

Major conversions have taken place since the post-independence period, transforming wetlands into estate that include construction of the Salt Lake Township and number of other small townships and big projects in the contemporary neoliberal times, affecting the age-old urban and peri-urban flows and interlinks with disastrous socio-ecological implications in the near future. In the 1950s, the Salt Lake Township sprung up. In the 1960s, when 3.75 sq. miles of North Salt Lake was acquired (including the 58 fisheries of that area), 44 hectares were sacrificed to meet the needs of the expanding city (Master Plan for Fisheries Development 1975). By 1970, 2000 hectares had been encroached upon. In the north Salt Lake Area, 26 fisheries were taken over by the Salt Lake City housing complex alone (CMDA 1976). In the 1970s and 1980s, the East Kolkata Township and Baishnabghata-Patuli Township were constructed on the eastern periphery of Kolkata. When a series of plans since 1970s focused on a poly-centric (east-west) direction of development violating the earlier plan of development across the bimodal (north-south) axis, huge acres of wetlands were converted to make space for real estate speculation. The polemics of Kolkata's urban planning and development in the post-independence period can be explained across changing politico-economic imperatives during the period between 1947 and the recent times (Mukherjee 2015b). 'It is clear from the planning reports that the actual purpose of this pattern of urban expansion is to capitalize on the enormous development potential in the vast stretch of undeveloped land on the city's eastern fringes' (Mukherjee 2015b: 45). The outcome was 'development along the Eastern Metropolitan Bypass — the highway that skirts the eastern edges of the city along the wetlands — with townships, amusement parks, hotels, hospitals, and country clubs dotted around the existing landscape' (Bose 2015: 97; see Fig. 2). Finally,

another big township called the Rajarhat sprung up on the easternmost periphery of the city, converting acres of agrarian lands inside and outside the wetlands (Dey et al. 2013).

Year	Amount (in rupees)	Year	Amount (in rupees)
1908-09	250	1919-20	4,750
1909-10	500	1920-21	5,250
1910-11	750	1921-22	5,750
1911-12	1,000	1922-23	6,250
1912-13	1,250	1923-24	6,750
1913-14	1,750	1924-25	7,250
1914-15	2,250	1925-26	7,750
1915-16	2,750	1926-27	8,250
1916-17	3,250	1927-28	8,750
1917-18	3,750	1928-29	9,250
1918-19	4,250	1929-30	9,750
Total: 1,01,500			

Table 2: *Annual rent payable by the lease* ─ Chattopadhyaya 1990: 38

Fig. 2: *Some projects along the EM Bypass*

The Successes and Failures of Urban Environmentalism(s)

Urban environmentalism is an important emerging concept in anthropology (Prato and Pardo 2013), involving the incorporation of the 'environment' in urban planning. This concept has flourished even in the face of the kind of global environmental despondency that marks the neoliberal context (Brand 2005). Drawing on new attitudes and expectations with regard to urban space, the idea of urban environmentalism appears to be part of a legitimation strategy of city governments (Pardo and Prato 2010) that is being realized through neoliberal institutional reforms (Brand 2005). Emphasizing important aspects in the current analysis of gentrification and displacement (DeSena and Krase 2015), this state-led authoritarian environmentalism is often cherished by a middle-class bourgeois ethos and attitude that includes capital-intensive beautification schemes and other projects securing resources for capitalist restructuring within the neoliberal regime, but clashes with the poor who inhabit the area and are ecologically-dependent for their sustenance and survival (Baviskar 2003, Bose 2015). The resulting catastrophic environmental change is explained not only by the wider pattern of 'accumulation by dispossession' in an age of new imperialism in contemporary India, but also by long-standing aesthetic values associated with modernity (Harvey 2009).

The environmentalism(s) surrounding the EKW manifest complex and plural configurations among multiple stakeholders, including state, civil society organizations and the people who are affected (often mobilized by NGOs) and invites us to move beyond the opposition between state-led and bourgeoisie-supported environmentalism, on the one hand, and environmentalism of the poor, on the other had. The protection of the EKW from private real-estate speculation against the interests of the marginal peri-urban communities was brought to light by the environmental activism of leading environmental groups and NGOs involving the poor, as well as farmers, fishermen and some bureaucrats who supported the cause. In 1991, a city-based NGOs embraced the cause of wetland protection and conservation together with like-minded bureaucrats who wanted to protect the environment. This was the beginning of a movement that had an explicitly environmental goal in the metropolitan area. Bringing to mind a key issue in the citizenship and governance debate (Pardo and Prato 2010), for the very first time it forced the West Bengal government to take into account public opinion on urban planning (Dembowski 2001). In 1992, a writ petition was filed in the Calcutta High Court by the movement called 'People United for Better Living in Calcutta' (PUBLIC) and by a leading NGO (joined by four other city-based NGOs). The petition demanded that the State of West Bengal and its officers should be legally responsible for protecting the wetlands in accordance with the West Bengal Town and Country Planning Act of 1979, section 46(1), Article 51A of the Indian Constitution, which states that protection of the environment is a vital duty of the citizens of the country, and Article 21 of the Constitution, which implies the right to live in environmentally safe and pollution-free conditions. The High Court verdict stated that, 'There can't be any matter of doubt that the Calcutta Wetlands present a unique ecosystem apart from the materialistic benefit to the society at large' (Kundu et al. 2008: 879) and that no government or non-governmental body could reclaim any more wetlands. The Land Reforms Department and the Department of

Environment, Government of West Bengal, identified around 32 *mouzas* (local unit of land measurement) to be preserved as part of the waste recycling region of Kolkata. Following this, the land schedule and the report were sent to the Ramsar Convention, which then, on 19 August 2002, declared the EKW a *Ramsar* site (No. 1208). A statutory authority, called the East Kolkata Wetlands Management Authority (EKWMA), was set up under the East Kolkata Wetlands (Conservation and Management) Act in 2006 (Mukherjee 2015b). This new Authority would be responsible for the implementation of wise use-principles for the management of the EKW.

Unfortunately, the Ramsar-designated 12,500 hectares, including 37 *mouzas* (five *mouzas* were later added), are now facing severe threats of rampant, unplanned urbanization. The EKW still suffers from ambiguous boundary definition and ownership. There is an immediate need to redraw the map of the EKW since no such effort has been made since 1985, and it is important to remove areas that have been urbanized, as this land-use change is irreversible. 'Though the wetlands enjoy the protection of court orders, legislations and international conventions, there is no real shield on the ground. In the past 10 years, nearly 10 per cent of the EKW has been converted into concrete. Another quarter of the wetlands are under threat. Land sharks use an old but ruthlessly effective method of walling up a part of the wetland and dumping tons of fly ash, concrete and garbage in the dead of night. Within weeks what was once a thriving *bheri* (fish pond) turns into dry land and the site for the next multi-storey' (Niyogi and Ray 2013).

The most threatened *mouzas* are Paschim Chowbaga, Chowbagha, Chak Kolar Khal, Kharki, Bhagabanpur, Karimpur, Jagatipota, Ranabhutia, Atghara, Mukundapur and Thakdari. Moreover, numerous water bodies have also been converted into paddy cultivation. The availability of sewage is not governed by the demands of fishermen who are the primary users of it; it is, instead, but largely slanted in favour of the needs of the metropolis. During the monsoons, when there is significant waterlogging in the urban reaches of the city, the entire storm flows are flushed through the SWF to the Kulti River, leading to a drastic decline in sewage flows by 60–80 per cent (East Kolkata Wetlands Management Authority 2010: 21). Lack of supply of waste water is a major cause of concern for the fishermen. Another recent report published in *The Times of India* commented: 'The flow of sewage into the fish farms or *bheris* has been deliberately reduced in an attempt to snuff out fishery and farming and make way for conversion of the land into real estate' (Niyogi 2015). This mirrors wider trends of urban development in the city, impinging upon hard-fought rights for the ecological protection of the wetlands. While the KMDA and other government and development agencies, like the West Bengal Industrial Development Corporation and the West Bengal Housing Infrastructure Development Corporation (HIDCO), are interested in attracting private investments through urban and industrial development in this region, environmentalists, civil society groups (PUBLIC and Save the Wetlands, among others) and local residents are strictly against such ventures, pushing instead for the preservation of the wetlands (Mukherjee and Ghosh 2015).

Conclusion

The dominant literature on urbanization and its present challenges focuses on the 'hardware' of cities (built city infrastructure: transportation systems, housing, water works, sanitation, slums, and so on). Scholars (especially urban sociologists) seem to be concerned also about the 'software' of cities (as centres of creativity and lifestyle, involving culture and learning institutions, and so on). However, very little is written about the ecological infrastructure of cities, which involves their wider ecosystems (Sukhdev 2013). A focus on this aspect, reflecting more on the ecology 'of' cities rather than ecology 'in' cities (McDonnell 2011, Prato and Pardo 2013) can be important in addressing the global problematic of urbanization and sustainability (Mukherjee 2015a and 2015b).

Again, it is also important to study and examine complex layers within the dominant form of urban environmentalism propagated by the neo-liberal state and supported by the middle-class. The Kolkata case-study highlights this singular dominant variety of state propagated and middle-class-supported 'bourgeois environmentalism' and invites us to identify various strands or pluralities in urban environmentalism(s) and the complex dynamics of conflict, collaboration and negotiation among these that play a pivotal role in determining the urban environmental transitions in specific contexts. The Kolkata case also invites us to go beyond an analysis of who gains and who loses (which is nonetheless important in political ecology) among divergent groups and stakeholders and attempt to understand the impact of urban environmental trajectories of commodifying commons on the urban space and its wider periphery.

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