Sustainable and ‘smart’ restructuring around the making of mega and world-class cities in India: a critical review

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Accepted: 22 March 2022 / Published online: 16 April 2022
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Abstract COVID-19 has posed newer questions on urban vulnerabilities in India and showcased the importance of acting effectively towards a vision of sustainable urbanization. Several studies during the pandemic explored the need to make cities socially inclusive and ecologically resilient. The Indian Smart Cities Mission is the flagship urban project that envisions economic growth and ensures technology-induced quality of life in tune with global city-making projects like eco-city, world-class city, green city, etc. Here, we critically examine a range of such neoliberal urban projects and explore the extent to which these cities in their ‘smart’ restructuring embrace a holistic vision of sustainability. We analyse three urban renewal projects: the Lavasa eco-city, the Rajarhat green-city, and the Dholera smart city, arguing why a case-study based approach is significant to study the connection between policy promises and actual socio-environmental realities. Our empirical explorations reveal that processes and practices involved in the making of these projects are ‘utopian’; in reality, they tend to uproot the existing urban ecological buffers, critically impacting the quality of urban life across classes. Beyond the capitalist logic of ‘accumulation by dispossession’, we finally lay out the need to imagine urban commons as scripted with memories, desires, plurality of use, users, and ways of living, and thus to situate the urban planning in practical visions of sustainability and environmental resilience.

Keywords Smart city · Sustainability · Urbanization · Dispossession · Environment · India

Introduction

Huge billboards are seen around Delhi, informing us about upcoming spectacular neighborhood spaces and the arrival of world-class infrastructures. We see social media posts tagged ‘Smart City Allahabad’, ‘Smart City Bikaner’, and such likes. These billboards are not just endorsements of ambitious city development projects, but are also a testimony of the fact that the ‘age of city-making’ has come; these are thus projected portals to future urbanity. These advertisements have an intrinsic effect on the urban cognitive restructuring towards ‘smart city’ models, since they complement the ongoing fetish of the emerging public sphere, rooted in larger questions on legitimacy and civic rights (Baviskar 2011). In countries like India, the age of city-making ostensibly manifests in a sudden enlightenment
for harmonizing nature with modern developments for a sustainable future. Assuming this spirit, it is distinctly identified by discourses on urban overhaul through the agency of various city models, like green city, eco-city, world-class city, smart city, and such likes. In this class of city models, the most recent addition is—‘the smart city’. What does ‘smart’ imply within a vision of sustainable urbanization? Is it only about physical smartness in terms of technology and built infrastructures? Is it possible to create a sustainable city, especially in a country like India, which is splintered along multiple lines of caste, class, gender, religion, region? This paper is an attempt to answer such questions by expanding the connection between ‘smart’ and sustainable cities—it suggests a broader spectrum of concepts and social issues, that has to be understood in spirit if cities are to come up with innovative urbanization models. By sustainable cities, we refer to models of urbanization which successfully integrate social, environmental and economic initiatives as roadmaps to tackle intertwined issues of resilience and social justice. We also highlight the need for research to identify tangible action plans in integrating models of sustainability with equity, liveability and environmental justice. This article provides an ontological framework to critically analyze a few of the world-class city-making projects in India, namely Lavasa lake city, Rajarhat green city, and Dholera smart city. The reason to study simultaneously, these apparently different models is rooted in their overwhelmingly collective objective towards planning cities as ‘modern’, ‘well-ordered’, ‘high-tech’, ‘aesthetically pleasing’ (van Dijk, 2017) and to provide a sustainable model of urbanization (Mukherjee, 2018, 2020). Despite their different names, all these future city models are expected to boost the economy in tandem with environmental and social sustainability (Parikh, 2015, p. 42; PricewaterhouseCoopers, 2015). ICT-enabled solutions, ‘state-of-art facilities’, etc. are rehashed in smart city models which pragmatically ties our three case studies by the same thread (Datta, 2012, 2015a, 2015b). Through the case of Lavasa, Rajarhat, and Dholera, this article explores if ‘smart’ solutions make them socially and ecologically sustainable, ultimately deducing how ‘smart’ the forthcoming 100 Indian smart cities will be. Our purpose is “not to study the product (the new city), but the production, the process, the practice, with all the hazards of contemporariness” (Dey et al., 2013, p. 17).

Following the introduction, the article is divided into five sections. The second section delves into a conceptual framing on the smart restructuring discourse in urban India. The subsequent sections present the case studies on Lavasa eco-city, Rajarhat green city, and Dholera Smart city, relying upon a systematic literature review of secondary sources. Finally, we seek to analyze the extent to which the recent spatial and social transformations of the cities towards becoming ‘smart’ can impact visions of sustainable urbanization.

Towards a ‘Smart’ restructuring: a conceptual framing

The valorization of smart city urges us to trace the urban restructuring in India. In order to trace the motif, essence, and course of actions that modern cities adopt in ‘smart’ restructuring that they are committed to, it is important to unsettle this faulty assumption going through the ruptures exposed in urban planning. This leads us to know how the national government has defined smart cities since they were initiated—what does smart city really mean for India? Although the mission guideline itself says that there is no universally agreed definition of a ‘smart city’ and that the meaning of ‘smart city’ differs from person to person, yet the mission demonstrates a strong commitment to creating something which is not clearly definable. Regardless of this ambiguity, the guideline mentions.

“…its aim is to comprehensively develop the urban eco-system comprising of institutional, physical, social and economic infrastructure… and provide clean and sustainable environment… with a focus on sustainable and inclusive development” (Government of India, 2015).

Analysis of the smart city proposals, done by Prasad and Alizadeh (2020a, b) brings out governance, citizens, and infrastructure as the key dimensions followed by economy, technology, and sustainability. In a recent study, Silva et al. (2018) define smart cities as “an urban environment that utilizes ICT and
other related technologies to enhance performance efficiency of regular city operations and quality of services (QoS) provided to urban citizens” (p. 697). The smart city model is just one of the many kinds of city models, yet utterly trending (Caprotti, 2020; Joss et al., 2019), in the phantasm of sustainable urbanity envisioned by those living in ‘not-so-smart’ cities of today. The degree of seductiveness of the smart city idea can be estimated by the fact that Lavasa and Rajarhat which were working for decades to be India’s first eco-city and green city respectively, are now aspiring to become smart cities¹ (Chakraborti, 2021; MyCity Technology Ltd, 2013). Similarly, Dholera was not displayed as a smart city from the start, it switched labels from ‘knowledge city’ to ‘global city’, ‘eco-city’ and more recently ‘smart city’ (Datta, 2015a, b). This twist in the story of Lavasa, Rajarhat, and Dholera points towards an indubitable acceptance of smart city models among the policy-makers, planners, and the general public, and simultaneously the complexity in comprehending the exact meaning of terms—‘smart’, ‘green’ and ‘eco’. The concept of each of these city models demands a fair amount of exploration in itself, but adhering to the scope of this article, we will focus mainly on understanding how sustainability plays out to be in these different city models.

It was the desire to modernize the newly independent nation that India progressed towards urban transformation. The then Prime Minister Jawahar Lal Nehru nailed a zealous socio-urban experiment by envisioning the cities of Chandigarh, Bhubaneswar, and Gandhinagar (Kalia, 2006; Shaw, 2009). For Nehru, urbanization was synonymous with modernization (Prakash, 2002), and urbanization was an important tool for socio-economic growth (Kalia, 2006). The idea of making modern urban centers was not only to overshadow nation’s colonial past but also to showcase its modernist impression and to put it on a road of progress (Mukherjee, 2020; Shaw, 2009). His uncritical belief in modernization and industrialization as a means to progress and development granted greater precedence to technocratic solutions (Kalia, 2006, p. 150) and hence cared less to comprehensively ponder upon “the complex realities of a predominantly poor, newly independent, post-colonial nation” (Batra, 2009, p. 9). Poverty, slums, housing, mobility, civic amenities remained glaring concerns for the coming decades. The plans mostly idealized “leisurely housing, low density and spread wide cities” which large sections of working-class could hardly afford to live in (Batra, 2009, p. 9).

Currently, in response to state rescaling and upholding the spirit of entrepreneurialism in governance (Harvey, 1989) the state has opened doors for global capital inflows by adopting policy strategies such as ‘ease of doing business’. Over this configuration, a speculative form of governance finds its roots in the name of world-class development (Goldman, 2011). Undermining the decentralization and democratization, dominating local city actors/agencies are often chiselled by influential IFIs (International Financial Institutions) and consultancy agencies supervising the funds and overall development (Goldman, 2011, p. 562). Economic growth following from large-scale planning and developmental projects is a double-edged sword as it redounds to equally large-scale dispossession of lives, livelihoods, and nature. Set in ‘regimes of dispossession/glocalising economy’, such capital-intensive projects, operate through political and institutional arrangements of state and different forms of governance orchestrating land market, ownership, and capital flow (Swyngedouw, 2004, p. 32). Glocalisation suggests that though existing political-economic and cultural-ecological conditions cease to exist, rescaling makes space for new ones, through which people mediate and negotiate their everyday life (Swyngedouw, 2004, p. 35; Eswar & Santha, 2020, p. 4), which explains for simultaneous production of informality alongside planned developments (Roy, 2005). The state-capitalist kinship camouflaged in the idiom of “public good” and “national development” turns state merely as a facilitator of ‘land speculation and active dispossession’ (Goldman, 2011). Ultimately, feeding to, what Ananya Roy calls the informal character of India’s planning regime—land is increasingly capitalized and commodified. A significant part of glocalization process is ‘rescaling’; rescaling of state and governance, inducing reshuffling of social power relationships (ibid.). Scalar rearrangements, as these can be referred to,

¹ From 2013 Lavasa entered the race of smart city betraying its eco-city agenda (MyCity Technology Ltd, 2013) whereas Rajarhat still beholds its vision to become a green city as Green Smart City (Chakraborti, 2021).
typically alter regulatory orders\textsuperscript{2} and networks of economic activities (Swyngedouw, 2004), whereby states often restructure institutional infrastructure and developmental policies in pursuit of economic growth. In this view, Brenner (2004) argues that urban regions are the crucial sites concentrating all state activities and urban governance acts as a key vehicle of state rescaling process towards capitalist urbanization. Unlike rescaling in both above and below nation-state (nationally, regionally, and locally), in India, rescaling has empowered states governments in relation to local bodies/agencies (Kennedy & Sood, 2016) reversing democratization and decentralization. Further, rescaling of state space is systematically exercised through ad hoc institutions (Kennedy & Sood, 2016, p. 43), often parastatal agencies, associating regional scale to the global scale.

However, a restructuration of urban planning in India has also systemically been ignorant towards the locally context-specific needs, aspirations and constraints. Khan (2017) informs us that, deepening the lack of basic services and urban poverty, much of the funds and assistance was diverted towards the big cities instead of the small towns. On the flip side, small towns become sites of development largely in relation to the big city, that is the locus of infrastructural development and planning remains metropolitan city. In the subsequent sections, this paper will elaborate on three sustainable city models in India—Lavasa Eco-city, Rajarhat Green city, and Dholera Smart city—to point that how these city models are utopian in their form and content and stand at problematic disjuncture from lived reality. The three cases will investigate unfolding of the city-making projects on the grounds of governance, equity, and social and environmental sustainability. Conforming with the previous scholarship in this area, we argue that these future city models appear more as an anti-planning endeavour rather than planning cities as they fail to situate sustainability reflecting not only in terms of eco-friendly measures but also justice, equity, and inclusivity of the disempowered and disadvantaged sections of the society. We argue that sustainability in urban cities will be achieved in the true sense only when environment and equity, and not just technology, is situated at the centre of urban planning regimes.

### Lavasa eco-city

Lavasa is one of the first eco-cities built, on western coastline of Maharashtra, acknowledging the indispensable role of nature in improving quality of life (Datta, 2012; Parikh, 2015). Besides facilitating intimacy with nature, it coveted to de-densify highly populated nearby urban centres—Mumbai and Pune. In making this musing possible, Mumbai-Pune Expressway played a crucial role as it opened up opportunities to reach those regions which were once far-off isolated. Stimulated by high-speed corridor network, the ecologically rich western ghat twinkled as a lucrative real-estate site (facilitating national and international investors to capitalize natural assets of Western Ghats) and thereby precipitated Lavasa as a foremost privately owned city (Balakrishnan, 2019). Lavasa is developed and managed by Lavasa Corporation Limited (LCL), a subsidiary of Hindustan Construction Company (HCC). The leading visionary of Lavasa is Ajit Gulabchand, an influential construction giant and CEO of HCC (Miklian & Hoelscher, 2014). Gulabchand’s vision was to build a city with “world-class facilities” much like European-style townships, delivering clean air, smart living and recreational comforts to middle- and high-income groups. With this intention, the first city of Lavasa-Davse—was built as a replica of Portofino, a harbour village and holiday spot in Italy.

It is worth noting that, Lavasa which appears to be a single city, is actually a cluster of five planned cities standing over 12,000 acres of land. This elephantine city has gulped 18 villages—home to marginalized community of landowners, landless labourers and tribals—in order to provide a green residential and recreational site for urban dwellers. In precise, developers of Lavasa aspired to build an eco-city that is, an environmentally friendly city furnished with state-of-art planning (on codes of New Urbanism), facilities (like Oxford university, Manchester City Football Club, Swiss Hospitality etc.) and technologies (such as biomimicry, hydroseeding etc.); making it a global attraction for capital and recreation (Parikh, 2015).

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Therefore, environment, nature and balanced life remained its prime selling points. Regardless of its “perfect” intentions to appreciate nature, the dream of Lavasa became a nightmare for regional ecosystem and communities. The western ghats of Maharashtra includes a major watershed, massive areas of agricultural waste land and a dense evergreen forest (Balakrishnan, 2019, p. 22). Lavasa is built on this stretch of spectacular forest lands. Standing over a biodiversity hotspot, Lavasa, on one hand, promises to improve quality of life of its inhabitants by providing clean and green natural environment; and on the other hand, explicitly shoves down the hills and forest (Shrivastava & Dutta, 2011). Emerging out of this self-contradictory state of affairs, Lavasa stirred up controversies around environment, politics, and irregularities in following rules and regulations (Datta, 2012; Parikh, 2015). Seemingly ecologically sound city plan was blown off on the grounds of being at odds with democratic ideals, planning regulations, and environment counters. The contentious issue came into light in 2005 when the National Alliance of People’s Movement (NAPM)3 stood against LCL accusing it of using fraudulent means to acquire protected land, flouting planning regulations, and dumping the disposed masses. Following the opposition from NAPM central agencies, such as the Ministry of Environment and Forest (MoEF) and Controller and Audit General (CAG), intervened to oppose Lavasa and charged it for not fulfilling adequate environmental clearances (Datta, 2012). Alongside, in response to Public Interest Litigation (PIL) moved by NAPM, the High Court of Mumbai passed a stay order on further development and constituted Expert Appraisal Committee (EAC) for close scrutiny. The EAC report validated allegations of disrespecting environmental laws (not taking clearance from Centre for the project) and ecologically damaging activities on part of LCL (Shrivastava & Dutta, 2011). The EAC pointed that the LCL applied for taking permission from the Centre on the basis of EIA (Environment Impact Assessment) 1994 notification merely for tourism-related projects between 200 and 500 m and for construction on elevation of more than 1,000 m from sea level (ibid.). However, on close inspection it was found that the application was duped by the state government; MoEF’s letter to Maharashtra Pollution Control Board was disregarded (ibid.). Likewise, LCL and Maharashtra state government hardly paid heed to subsequent EIA notifications of 2004 and 2006, assuming exemption owing to its status of new township development (Datta, 2012; Shrivastava & Dutta, 2011). In defence LCL argued that it has obtained necessary clearances from the state government, therefore pointing that the project does not come under Centre’s regulations (ibid.).

Besides all, EAC report indicates that LCL not only failed to abide Centre’s regulations but also flouted state’s regulations. Shrivastava and Dutta (2011) report that LCL, not keeping with Maharashtra Regional and Town Planning Act (1966), refrained from inviting public objections—a crucial criterion for developmental projects. Later in 2008 LCL was granted Special Planning Authority (SPA) status by the state which bestowed LCL powers to approve its own plans and projects (Datta, 2012), buffing out teeths of democratic checks and balance. On the strength of SPA, LCL manipulated the initial city master plan which was committed to develop 580 ha only and built beyond (presently LCL has constructed developmental projects on almost 700 ha of land). This clearly torches on blind-sightedness of state towards the private capitalist/developers, in turn granting them absolute powers to capitalize land.

Adding to the poor governance, Parikh (2015) in her dissertation informs us about a significant Act passed by the state of Maharashtra—the Hill Station Regulation of 1996, which moderated the making of Lavasa eco-city. As the name suggests, the Act was geared towards planning and development of Western Ghats region for promoting tourism. The author points out that, the Act was bare in it details, simplifying many important rules and regulations (regarding planning and construction) in favour of developers and private companies. In turn, permitting them to purchase and build on agricultural land as well as tribal land which were once protected by the state. Though this legislation was packed in a wrap of “public interest”, it gravely slashed down the fundamental

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3 NAPM is an alliance of activists, non-profit organisations, and concerned people struggling to bring justice, peace, and equity. It challenges dominating processes of development that discriminate rights and justice of marginalized and minority groups. It strives for a just, sustainable, and self-reliant society as a true symbol of development. https://napm-india.org/ideology/ (Last accessed 22 October 2021).
rights protecting the indigenous dwellers of the land. In addition, the legislation crafted legal conditions conducive for building a private hill station avoiding the possibilities of any major resistance. Such an act limelight the active role of state in facilitating land mobilization and land use; as state embodies the private ethos of capital accumulation in the garb of prioritizing environment and public interest. Such subscribing to public interest—scripted with discrimination towards large populations of poor inhabitants—indeed leads to carving out “luxotopias” which are by design exclusive and exclusionary (Kul dova & Varghese, 2017, p. 4). Worth noting is that, though developed in response to unregulated urbanization and primarily for Indian public the city hardly had anything Indian in its character. Rather than taking inspiration from local ways of life and ecosystem, the developers of Lavasa were motivated to transport inspiration from a region which is night and day apart from India.

In a similar fashion, ironical to LCL’s greening and environment-friendly visions, MoEF exposes ecologically damaging activities in making the eco-city. LCL cleared land by culling numerous deep-rooted tresses and cutting hills (Shrivastava & Dutta, 2011) disrupting the fragile ecosystem of Sahyadri hills. This, as a result, increased exposure to landslides, soil erosion and risk of water siltation in the region. Boasting their understanding of environment conservation and sustainability, LCL extracts construction material for roads and buildings from the hills itself since, according to the company, it is more environment-friendly than transporting from somewhere else (ibid.). However, local inhabitants blame LCL activities behind drying up of natural water bodies due to blasting off of hills (Shrivastava, 2011). Further, promoters of LCL endorse the scenic lake side view, nevertheless, buildings and roads touching lake invites threat to flora and fauna of the lake due to vehicular emissions.

Apart from irreversible environmental damages, LCL has been accused for dupped land acquisition from marginalized local communities. Indigenous inhabitants of land complain of unfair means employed by LCL agents to acquire land. Cases have come up where LCL has used muscle power and vexing actions such as dumping of construction waste on farmers’ fields, sometimes abusing family members of farmers (Shrivastava, 2011) and depriving them of basic facilities so that they give up land (Aggarwal, 2019). The justice comes under acute risk in case of Lavasa where in the name of “public good” the fertile land has been filched from indigenous dwellers, who hardly have alternate livelihood, and then offered to LCL on lease. Moreover, company showed reluctance in giving proper compensation and resettlement in accordance to Right to Fair Compensation and Transparency in Land Acquisition, Resettlement and Rehabilitation Act (LARRA). Advertisements and speculations have raised prices of housing, and thus could only be afforded by high-income urbanites. In consequence crafting Lavasa as an exclusive and elitist township, systematically excluding the old and lower-income inhabitants. Promises of including villagers in the new township by imparting education, health, and other necessary skills never took off the ground, leaving large sections of people dispossessed of their land and livelihoods. In addition to this, Lavasa due to its elitist identity engenders over-priced services which are simply out of pocket for disadvantaged groups (Shrivastava, 2011). Instead of including underprivileged groups into the urban fabric, Lavas has enlarged the social disparities and pushed them further towards vulnerable conditions of survival and ecological damages. Peoples’ dissatisfaction and rage represented by NAPM protest against LCL revealed Lavasa eco-city’s failure in achieving not only environmental sustainability but also social sustainability.

Irrespective of howls of protest—including people from the affected areas and big cities as well—Lavasa insisted on obtaining post-facto clearances from MoEF. Primary reason forwarded by LCL for seeking post-facto clearances is that it has already spent exorbitant amounts (Rs. 3000 Crore) and 700 ha of land has already developed. Viewed this way, though villagers’ resistance successfully brought stay-order on construction of Lavasa but this relief did not last for long. Once again, state’s action appears as humbling down towards the private developers—as it authorizes structures that are indeed illegal because they were erected by manipulations of rules and regulations. Whereas structures of deprived and marginalized groups, which grow under the same logic of illegality, hardly receive such compassion and deliberation from the state before demolition orders (Shantha, 2018). Labelling them as encroachers state neglects their helpless dependency on common land for basic services of housing. However, encroachment
by private developers on villagers’ lands barely qualifies for demolition on grounds of illegality. This lop-sidedness in treatment by the state tends to overlook justice and equity as fundamental elements of sustainability.

Undeniably, Lavasa in its zet for world-class eco-city diverted from the underlying idea of its inception. The idea behind development of Lavasa was to provide a planned and regulated city, which is “inclusive, well-governed and environmentally sustainable with a vibrant economy” (Parikh, 2015, p. 122). Today Lavasa stands as a failed project on all three aspects—inclusivity, environment, and economy. Failure of Lavasa reminds us about the consequences of uncritical obsession to fit into world-class logics. The aspiration of handful of elite developers and promoters triggered their hedonism for capital accumulation, neglecting the regional ecology, indigenous inhabitants, their livelihood practices, and their survival in the process. In the dearth of robust environmental policies, eco-cities like Lavasa are more likely to “co-opt the state developmental goals for capital accumulation instead of prioritizing the environment” (Datta, 2012, p. 988). As a result of controversial status of Lavasa, the city has turned into a ghost city, with abandoned and unfinished buildings, missing its most important ingredient-people. While Lavasa has gained a new lease of life facilitated by post-facto clearances for the already built structure, but one should remember, it has come at the cost of ecological and social diversity.

Rajarhat green city

The process of rapid urbanization has profoundly affected almost all the mega-cities of India. High population density in already infrastructurally crippled urban centres has triggered several redevelopment projects not only in the city’s core but also reaching its peripheries. In this sense, Kolkata’s story is not very different from Mumbai, where small towns at the periphery of big cities are treated as experimental grounds to de-densify the metro region. The inception of Rajarhat New Town (RNT), at the eastern fringe of Kolkata, narrates a similar plight.

Rajarhat, which is approximately 17 km apart from Kolkata, is described with vast water bodies, salty marshes, and extensive areas of wasteland. A considerable part of Rajarhat falls into the eastern wetlands of Kolkata. Just like other census towns, Rajarhat which is located in 24 Parganas, consists of a significantly high population density in municipal areas as compared to its villages (Dey et al., 2013). Though being at urban edge, Rajarhat has a peculiar combination of high literacy rate (74.83%) and low labour participation rate (30.33%) (ibid.). These numbers should not be looked at in isolation rather should be considered in relation to the environment and work opportunities prevailing in that region. Along with minor employment generating activities such as waste recycling and vegetable growing on wetlands, agriculture and fishing were the major sources of subsistence. The extensive data provided by the authors of Beyond Kolkata (2013) informs us that Rajarhat was a self-reliant developed area with a substantially vibrant economy working fairly in its fragile environment (Dey et al., 2013; Sawyer et al., 2021). However, the increasing population stress in Kolkata with overall reformation in the Indian economy (economic liberalization in 1991) propelled the idea of building a new urban residential and commercial settlement—The New Town—at Rajahart (Kundu, 2016; Sawyer et al., 2021).

Until the 1990s, before the Left Front government in West Bengal inclines toward neoliberal ethos to overcome poor economy (Sawyer et al., 2021), Rajarhat was identified with its nature reserves. To harness economic growth the government invited leading IT sector players (like Wipro, Tata Consultancy Services, Cognizant and suchlike) to the eastern periphery of Kolkata (Pal, 2016). Eventually, the underdeveloped region of Salt Lake turned into a significant IT hub. With this internal restructuring inside the ruling government and concurrent coming up of the IT industry, generated considerable demand for quality housing (Pal, 2016). It was precisely to accommodate this growing population operating service sector that Rajarhat New Town was developed at the surrounding agricultural land.

Originally, the proposed plan (in the 1990s) for New Town was not designed to uplift the economy rather the idea was to build a planned residential area, where people from all walks of life could dwell, de-densifying the habitation in Kolkata. Apart from providing habitation, the aim of the project was to build an environment-friendly city with green industries, open green land, water bodies, a network of bicycle
lanes, advanced solid waste management system. In a word, Rajarhat was on its way to becoming India’s first-zero-energy-town (Dey et al., 2013). Therefore, the plan was not just to build a planned township but also to develop it in an eco-friendly way. Not to mention there were also provisions for commercial spaces (like new business region, cultural regions, educational and health facilities) but the primary use of land was decided to be developed for “greening” and residential purposes. The same gets illuminated in the original plan which kept 47.6% area for open spaces and 30.5% for residential, allocating a major portion of land for large open spaces and housing (ibid.). However, this urban plan, which was committed to developing a green town, radically sacrificed its portion of open green spaces in subsequent revisions, turning it down to merely 24%, whereas housing went up to 38% (ibid.). It is also worth noting that, the total land space from the time of its original proposal jumped from 2750 to 3779 ha. Against this huge increase in the total area, the shrinking of open spaces is lamentable for any green city. Moreover, IT which was excluded in the original plan (because initially, the objective was to build a residential township more than to expand economy) got a room of 4% in the final allocation. Clearly, in the neoliberal race of urban development, the eco-friendly ambitions lagged behind the rationale of housing.

Initially, the original design endorsed the use of mixed land use for enhancing inclusivity, in order to develop an urban settlement where people from diverse sections can co-exist-live together and work together. In spite of all grand features, CAG (Controller and Auditor General) report overwhelmed that the West Bengal HIDCO (Housing Infrastructure Development Corporation) the primary body responsible for the development of the New Town set off to implement the project without disclosing any concrete plan of how it is going to achieve the proposed objective (Dey et al., 2013). The effects of this drawback are reflected in the delay in creation of supportive infrastructure of road networks, drainage, power, and other essential services. This gap in infrastructure formed a breeding ground for informal infrastructures as an alternative for missing services and facilities. For instance, Kundu (2016) mentions erstwhile farmers have become rickshaw drivers in order to provide public transport facilities to the inhabitants living in high-rise residential complexes. At the same time, these gaps are sites of confrontation of the privileged urban dwellers with the underprivileged villagers as it distorts their lived experience of modern luxury living in a planned township. The fallouts in planning and implementation have simply resulted in a chaotic, disorderly and insecure living experience for the new urban inhabitants. Furthermore, the township lacks the infrastructure to accommodate the old inhabitants as well. The opponents of the project witnessed lop-sidedness in the construction of dwelling units where only a small portion counts for LIGs (Lower Income Group) housing (Dey et al., 2013); thus, leading to their exclusion by preventing the disposessed from buying a place in the newly planned township. Rajarhat New Town instead of raising an inclusive township, in essence, has reinforced the socio-economic disparities and spatial segregation. Evidently, the New Town akin to Lavasa aspired for high- and middle-income groups excluding the old inhabitants who mostly belong to low-income groups (Huque et al., 2020). In doing so the new township highlights nothing less than the state’s shallow devotion to accommodating low-income groups and those who lost their lands.

An array of fractures got exposed when the project was opposed by Rajarhat Jomi Bachao Committee and it was only after the Singur land acquisition incident that Rajarhat came into political limelight. There were also objections on the basis of how the government has mentioned the character of Rajarhart’s land, livelihood structure, eviction, and ecology. First, as contended by Dey et al. (2013), the government claimed that no force was used to acquire land; the original dwellers of land wilfully surrender their lands. Second, it was claimed by the state that a significant portion of land was not fit for agriculture as it was low-lying and low-yielding. Thence flatly airing that agriculture was hardly a significant source of subsistence. Whereas the opponents of the Rajarhat New Town project, as well the literature on Rajarhat related to this issue, inform us that agriculture, fisheries, pisciculture, and farm-laborers were some of the major sources of occupation in the region (Dey et al., 2013; Huque et al., 2020; Karmakar, 2013). Also, paddy was widely cultivated. Next, keeping ecological preservation in mind, the government maintained that no wetlands had been included in the project. Plus, the existing water bodies will be filled up along
with the creation of new ones. Regrettably, all these claims turned out to be untrue.

The opposition from activists revealed that the project is prone to produce grave ecological damages, causing destruction of large tracts of land, wetlands, fisheries, and disrupting the natural drainage system (case of Dhupir bheel see *Beyond Kolkata*, 2013, p. 47). East Kolkata Wetlands (EKW) are not only lush in natural reserves but also have a rich biodiversity. It is identified as the largest Ramsar wetland site (Government of India, 2021a, b) in India comprising of a complex and unique ecosystem. Besides, EKW is extremely crucial for healthy running of Kolkata cityscape as it performs as a natural kidney, converting sewage into nourishment for pisciculture and agriculture (Karmakar, 2013). Also, it is home to the iconic golden jackal. However, ignoring the Ramsar Convention rules and other environmental regulations concretisation and urbanisation has increased in this fragile zone (Karmakar, 2013), as a result the region jackal population is facing a hard time surviving (Bag, 2015; Singh, 2020). Dissenters also indicated deceptive tactics used by HIDCO to gain environmental clearances. As mentioned by Dey et al. (2013), EIA was obtained only for the 622 ha (area specified under the initial plan) and not for 3,075 ha (area specified under the final plan). Though HIDCO planned the project for an area exceeding 622 ha, the EIA for rest of the portions was obtained in phases. This state-of-affairs plainly points to nothing less than dishonestly of the state in the implementation of the project. From Lavasa and Rajarhat’s case, we can make sense of city-making projects in India; that in the name of creating an ecologically sustainable city, the promoters (i.e., state and developers) of such developmental projects are typically engaged in capitalizing on the natural environment.

Furthermore, despite government’s hefty claims on land acquisition, the process unquestionably entailed dispossession of people and uprooted their livelihood. Activists opposing the project claimed that a considerably large population (approx. 131,000) of indigenous inhabitants has been displaced (Dey et al., 2013). HIDCO’s claim about voluntary surrendering of land by farms, and thereby no forceful eviction, calls for critical questioning. It is important to know how this consent has been gained by the state. The presence of notable resistance in Rajarhat—under Rajarhat Jomi Bachao Committee—indicates that to a great depth this consent was manufactured-farmers were browbeaten and cajoled to hand over their lands. Street vendors and hawkers are invariably forcefully pushed out of public spaces as they hardly fit well with the promoter’s idea of a planned city (Sawyer et al., 2021). Marginalized sections of the village population (mostly belonging to Muslims, Dalits, and tribal communities) have undertaken menial jobs such as rag-picking, recycling of waste, and similar activities. To resonate with its vision of social sustainability, HIDCO promised to rehabilitate (jobs as well as housing) those from whom land has been acquired. However, just like its ecological ambitions, New Town falls short on this promise as well. As a result of leaving the dispossessed on their own fate; petty occupations such as providing domestic services to the new inhabitants, setting up tea stalls, rickshaw plying, and so forth, have remained as the only viable option for the displaced.

Though some of the villagers who were landowners have received compensation for the acquired land, but the compensatory amount remains meagre. Out of the little compensatory amount they received many have repaired their huts, nevertheless, survival without decent livelihood remains a struggle. To mitigate the precarious living some of the villagers rent a portion of their house to migrant workers (Kundu, 2016). The scholarship concerning this issue reveals that the development of modern high-status township amidst village have brought consistent struggles to subsist in the lives of old inhabitants.

While the old inhabitants are undergoing their part of struggle in finding place in unfamiliar transformation of their place, the new inhabitants too have their share. The unfinished township, Kundu (2016) notes, has involuntarily increased dependency on the villagers. Dwellers of residential complexes though often loath the presence of villages around the modern planned city, undoubtedly understand the role of villagers in making their living easier in a peri-urban region. On the top, since most of the new residents’ work in immediate IT industries, they either rent the apartment or buy only for investment purposes. As a result, they have meagre attachment with the place and experience a dearth of meaningful social relationships and emotional attachment with the neighbourhood (Kundu, 2016).

In effect, most of the utopian objectives/features envisioned by Rajarhat New Towns collapsed at the
time when it was practiced on the ground. So instead of becoming a prototype of an environment-friendly township, it became an ecological disaster. In place of providing a city-for-all, it developed into a more exclusionary society favoring high-income consumerist inhabitants. The bold idea to develop an eco-friendly, inclusive township with minimal dispossession turns into a nightmare for fairly developed self-reliant villages of Rajarhat. The very reason for developing a green city—housing and environment—is turned on its head as the state failed to realize regionally contextualized needs and demands. On top of that, the state turned its back upon the uprooted masses, throwing them away to perpetually struggle in search of decent subsistence. The story of Rajarhat is a case in point, not only in regards to state’s failure but also its hollow commitments, dishonesty, and blind sightedness towards environment and deprived classes.

Dholera smart city

The latest addition in the making of Indian urban-scapes towards world-class cities is of the Smart City vision. Just like its contemporaries—lake city and eco-city—this is another hegemonic utopian vision for cities in India. Smart cities intend to resolve urban challenges—such as housing, resource and waste management, pollution, etc.—using information & communication technologies (ICTs). That is, for the promoters of smart cities information technology infused in infrastructure, architecture, environment, and everyday lives will undeniably relieve citizens from the teething troubles of urbanization. The same gets mirrored in the exuberant scheme—Smart City Mission—launched by the ruling government in 2015. The aim of the mission is to build 100 smart cities across the nation by 2023, for the purpose of economic growth and to improve the quality of life (Government of India, 2021) in the cities. Moreover, these cities will be built as replica models following which other cities will be developed. The smart city mission includes not only brownfield projects (retrofitting of the existing cities) but also greenfield projects (making of a fresh city from scratch) and Dholera is one such greenfield project. Dholera smart city is being constructed on the lines of new urbanism as well as eco-city (Datta, 2015a, b), to be precise it seems like a smart blend of Lavasa and Rajarhat. Oddly enough, despite Dholera’s claim of India’s first smart city, it is not the part of Smart city mission. Irrespective of this fact, Dholera serves as a guiding light for the succeeding 100 smart cities in line.

Leading in this race of smart city-making Dholera is esteemed as the role model for the cities aspiring to become smart. To speak about its geographic description, Dholera is just one village located in Gulf of Khambhat in the state of Gujarat. The Gulf of Khambhat is a low-lying area and, therefore, a flood-prone region. For building Dholera smart city, the government of Gujarat combined the 22 villages along the Gulf of Khambhat and converted them into Dholera Special Investment Region (DSIR) (Jazeel, 2015; Sampat, 2016). These 22 villages encompass a rich ecosystem in harmony with Velavadar National Park, which is home to Indian blackbuck. The economic structure of this region embraces agriculture as the major occupation along with other occupations such as cattle rearing, diamond polishing, farm labourer, etc. The region sustains well on dry-land farming (livelihood for 79% of population) and the main crops grown here are cotton, cumin, jowar, and bhaliya ghaun (ibid.). In spite of being a vibrant local economy in itself, Dholera has been put on the road of becoming a smart city without realizing the willingness of the original inhabitants.

Dholera smart city, which is coming up along the Delhi-Mumbai Industrial Corridor, is planned by UK based company. Under the PPP model, the state of Gujarat along with Japanese corporation is developing the smart city (Datta, 2015a, b). The project came into existence with the support of a special Act—Gujarat Town Planning and Urban Development Act of 1976 (GTPUDA). The town planning law is conventionally confined for the purpose of expansion of existing cities, that is it is generally invoked for the brownfield projects in order to facilitate inclusion of rural-agrarian land into urban. However, under the aegis of SIR, this law has been exploited to widen its scope for greenfield cities (Sampat, 2016). GTPUDA allowed the state to consolidate land without falling into the disputable provisions of fair compensation and consultation with the local self-government—under the Right to Fair Compensation and Transparency in Land Acquisition and Resettlement Act (RTFCTLARRA) (Sampat & Sunny, 2016). This move of Gujarat state is a
manifestation of what Ranganathan and Doshi (2019, p. 93) call “flexible governance regimes”, which gave unprecedented power to the Gujarat state to divorce the existing dwellers from their land. Dholera smart city by invoking GTPUDA appears to consolidate land through the land pooling mechanism but indeed it makes way for the state to bypass the contestations on grounds of Right to land, resources, resettlement, and compensation (Sampat & Sunny, 2016). And in so doing it facilitates an easy transfer of land from petty farmers to the big private capitalists. In this manner, the proponents of the project “smartly” save themselves from the depreciatory undertone of forcibly land acquisition.

Further, the pooling mechanism not only undervalues the need for consent, instead it makes disadvantageous provisions for the evicted people. It allows the state to take 50% of land from every owner and return the rest of the land as a developed plot in the redesignated zone (Sampat, 2016). It is worth noting that development of the city takes a considerable time period so it is concerning as for that period farmers are hardly left with any other income option. Moreover, while the developed plot is given back to the farmers the new build environment is likely to thwart the original inhabitants to sustain their living. All this will invariably lead to displacement of the original inhabitants in search of new livelihood options. Next, the provision only takes into account those who have land and not those who do not possess land but are engaged in other occupations in the region, such as farm labourers, cattle rearers, fishermen. Landless are kept at bay. These inhabitants, who are an equally important part of the socio-economic structure, are neither eligible for compensation nor can maintain their livelihood and thus are doomed to make a new living out of void. Viewed in this way, the project barely seems to be in conversation with social sustainability in terms of inclusivity.

Datta (2015a, b) informs us more about the slippages in the making of Dholera smart city. In her writings on Dholera, she challenges the claims of sustainability made by smart cities from the vantage point of local-level politics. The prompt policies of DSIR 2009 for quicker and easier land grabs in the name of public purpose, mostly without any substantial compensation, compelled farmers and marginalized citizens to organize under the guidance of JAAG (Jameen Adhikar Andolan Gujarat). In Dholera JAAG emerges as a representative of actual Dholera and resists against the active dispossession and. Through their public protest, marches, and other social actions the group has been successful in slowing down the progress in land consolidation and construction of Dholera smart city. As an effect of JAAG’s resistance, the state was pressurized to withdraw 36 out of 44 villages from SIR notification. Through their protests, JAAG not only limelight reluctance of the state to compensate the peasants fairly but also unmasked their deceitfulness towards the public when they reported that the compensation offered by the state was based on outdated maps and records.

It turns out, JAAG public mobilisation exposed several leaky aspects embedded in the inception of Dholera project. Public hearings on EIA noted that the development of Dholera smart city will cause irreparable damage to environment and biodiversity as it lies in ecologically sensitive region (build on flood-prone area and close to blackbuck habitat). The EIA assessment also was based on out-dated maps and records and thus was not suitable for planning. Considering these allegations many of the investors have retracted from the project and many of the crucial plans (such as building of an international airport, Kalpasar dam project) are now left in cold. Public activism has not only entangled the Dholera smart city project in political limbo, delaying the project, but also left a significant dent—reflecting the unethical and undemocratic undertone of the smart city-making vision. To sum up, whether Dholera will hail as India’s first smart city or not is something to be judged in future, but by looking closely at its present one could guess that Dholera smart city is less likely to deliver a sustainable city life. The process of development in Dholera is barely different from Lavasa and Rajarhat, thus its fate is likely to be similar too. Dholera smart city is nothing less than an urban delusion, premised on technological modernism, which is less tuned to the needs of those people to absorb whom the city is being made. The vision is more harmonized to the aspirations of neo-liberal state, instead of the regional population and environment, merely to magnetize capital from the global market and produce economies of scale through construction of new cities.
Conclusions

The ongoing COVID-19 crisis has exposed urban vulnerabilities and showed the importance of ecosystem in determining future sustainability in the cities. It has come upon us as an opportunity to reconsider contemporary city planning such that it reminds us of the need to prioritize sustainability for enduring resilience in urban cities (Mukherjee & Sen, 2020). Several pathways, from eco-city to smart city, adopted by India to achieve the same are more like a technological fix powered by market-driven sentiments of state and private capitalist/developers. However, no denying the potential of technology in mitigating ecological stress, to rightfully fit sustainability into the urban fabric we need to think of sustainability as a twofold concept, comprising of environmental as well social sustainability in terms of justice, equity, and inclusivity. Besides, it is equally important to pay regard to non-technological elements of urban fabric such as governance and scales of cities (Mundoli et al., 2017). In this regard, Mundoli et al. (2017) argue that failure in realizing the dependency of disadvantaged groups on urban commons (in terms of ecosystem and provisioning services) will be counterproductive to bring ecological and social sustainability.

Touching upon the case of three cities mentioned in this paper makes us aware of how urban common resources (land, forest, lakes, etc.) are swiftly converted into a product of upper and middle-class consumption. The process deeply involves large-scale dispossession of the disempowered and disadvantaged inhabitants of the region. The land where the city-making is proposed is either inhabited by or a crucial part of livelihood of indigenous dwellers of the region. However, the dominating city-making projects see land, and other common resources, merely as a real-estate project needing to be managed and restructured by the logic of urban planning determined by planners and private developers. As a consequence, urban commons are stripped of their inevitable functions, values, and memories, and reduced to merely an economic product waiting to be consumed by affluent sections of the city. Under the glamour of contemporary restructuring lies the nexus of state and private capitalist masked in PPP models for city-making projects. This modus operandi of city-making projects makes them a suitable site to attract national and international investments, and for capitalizing on the rich pool of natural resources of the region, at the cost of life and livelihood of deprived communities and biodiversity. The three case studies provide enough evidence to argue that the utopian city visions lack the comprehensive conceptualization of sustainability and thus stand counterproductive to their agenda. Instead of blindly valorizing economic growth or technological advancement, we need to situate sustainability within the rubrics of urban planning by anchoring down justice, equity, and inclusivity at the heart of city-making projects.

Authors Contribution All authors have contributed equally to this work.

Funding The research is not supported by any external funding.

Data availability statement Not applicable; This article is based on existing scholarship/secondary literature complemented with qualitative critique of the ‘smart city’ discourse using three case studies.

Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

Informed Consent Not applicable.

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