THE niti-samvaad JOURNAL

Exploring Pathways to Urban Sustainability

**Department of Public Policy,
St. Xavier's College (Autonomous), Mumbai**

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Message from the Department of Public Policy, St. Xavier's College, Mumbai

The Niti-Samvaad Journal continues to be student-driven. It must be so, in order to ensure that students learn to discern, decipher and dissect truth with little help but ample encouragement from teachers and mentors. The theme for the 2023 Journal, 'Exploring Pathways to Urban Sustainability' is simultaneously sagacious, appropriate and contemporary. Urban areas with their growing population, inadequate or failing infrastructure, as well as economic and environmental disruptions, pose a complex challenge to sustainability. Yet, given the rate of urbanisation, it is crucial to place cities at the heart of human adaptation and sustainability. The Niti-Samvaad Journal 2023 aims to understand the various facets of urban sustainability that are impacted by the structures of urban governance, ecology and the prevalent socio-cultural environment in cities.

By engaging with a diverse set of sub-national issues, Niti-Samvaad 2023, gives its contributors and readers a chance to unearth the truth while carrying a message for the policymakers to reinvigorate policies wherever necessary for holistic growth. The Public Policy Department of St Xavier's College (Autonomous), Mumbai, is thankful to those who have laboured to make the publication possible

.Dr. Agnelo Menezes
Head of the Department

The Department of Public Policy at St. Xavier's College (Autonomous), Mumbai is proud to inaugurate the fifth edition of our journal, Niti-Samvaad. The Department of Public Policy is the flagship research-oriented department of the college. Our students are not only skilled in carrying out independent research but are also driven by the Jesuit spirit that keeps the interest of the last person in the society first in our endeavours. I write this foreword to the fifth edition of Niti-Samvaad with great satisfaction. The department event and the journal are spaces for students to explore the world beyond the classroom and learn useful skills. It is indeed a matter of pride for us that the student team under the leadership of its convenor has managed to organise an enviable line up of speakers for the main event and have elicited a good response in terms of research papers for the journal.

Every word ever written has its purpose. However, one of the distinguishing aspects of policy-oriented research writing is that the author often writes on behalf of the society. This is the spirit of deliberation and opinion making that makes democracy possible. We hope that the students and our guest contributors keep the flame of debate alive!

Nandini Naik
Assistant Professor

Message from the Chairperson

Dear Readers,

It is my pleasure to address you all as the Chairperson of the annual policy conference - Niti-Samvad of the Department of Public Policy at St. Xavier's College, which was held on February 16-17 2023. The theme of this year's conference was *'Urban Sustainability in India:Rethinking Protocols, Politics, and Practices'*. This edition of Niti-Samvaad was a resounding success, thanks to the active participation and contribution of our esteemed speakers, panellists, researchers, and students. We had a diverse range of perspectives and insights that enriched our understanding of the complexities and nuances of sustainable urban development in India.

The conference included a presentation of a range of articles, research papers and art pieces that reflected the theme of the conference. These were carefully selected to offer a comprehensive view of the challenges and opportunities in achieving urban sustainability in India. The articles and research papers covered topics such as urban planning, waste management, transportation, energy, water, and sanitation, among others. The cartoon, on the other hand, provided a creative and engaging way to depict the issues and challenges in a lighthearted yet thought-provoking manner.

I encourage you to read the articles, research papers, and cartoons that were featured in the conference. They provide a rich source of ideas and inspiration for policymakers, researchers, and practitioners who are working towards creating more sustainable and livable cities in India.

The commitment, dedication, and enthusiasm of our participants, panellists and researchers for sustainable urban development is truly inspiring. I look forward to seeing the impact of our collective efforts in creating more sustainable and resilient cities in India.

Apoorva Singh

Chairperson

<u>Message from the Editorial Desk</u>

With half of the population estimated to be living in urban areas within the next three decades, the development of urban spaces becomes a crucial challenge for policymakers. While urban locales have the capability to provide better economic opportunities, they also need to ensure that development takes place in an ecologically safe manner where everyone benefits from the progress. Questions of equality, justice and sustainability are thus, necessary for policymakers and civil society to deal with.

The pandemic brought to the fore several challenges that cities are still grappling with. At the same time, in order to achieve the 2030 goals for sustainable development, policy mechanisms need to make headway at a quicker, just equitable pace.

Keeping this in mind, the theme of the Niti-Samvaad 2023 journal '**Exploring Pathways to Urban Sustainability**' is an attempt to understand the urgent questions around urban spaces and the opportunities that can be explored in reversing the trends. Interdisciplinary in nature, this theme offered a great starting point to examine the ways in which policy intersects with governance, law, environment, gender and justice.

We were overwhelmed by the responses we received and had the privilege of reviewing research from across the country. From innovative policy interventions to sustainability solutions, the papers and articles in this journal examine a range of challenges that pose a threat to urban ecosystems, lives and livelihoods. It also documents opportunities and ideas that have great potential to transform the changing idea of urban life.

We hope you enjoy reading it as much as we did while compiling it!

Warmly,
Sherina Poyyail & Radhika Sareen
The Editorial Team

Research Briefs

Rethinking Development - The Mumbai Coastal Road

Simran D'silva

Student of Public Policy at St. Xavier's College, Mumbai

Introduction

Mumbai, the city of seven islands has been plagued by reclamation plans and development schemes. Since its existence, it has been a 'work in progress'. One such project is the construction of the coastal road. The Mumbai Coastal Road Project (MCRP) is an under-construction 8-lane, 29.2 km expressway connecting the Princess Street Flyover in south Bombay with Kandivali in the north. With an estimated cost of 12,700 crore rupees, the coastal road will be the most expensive road per kilometre in India (Kadri, 2020).

The Coastal Regulation Zone (CRZ) notification of 1991 by the Ministry of Environment and Forest (MoEF) was a key landmark in Indian environmental policy and legislation (Chouhan & Parthasarathy, 2016). It aimed to protect the coastal environment and its resource dependent population by regulating the use of land along the coast. However, over subsequent years, the CRZ has undergone multiple amendments in the name of 'economic growth'. The 2015 amendment permits the construction of roads by reclaiming land anywhere along India's coastline without receiving any environmental clearance, albeit in "exceptional cases" the definition of which was left undefined (Kadri, 2020).

The CRZ amendments over the years have nullified several laws and regulations due to which it poses a threat to the environment and its resource dependent population.

A threat to livelihood and marine ecosystems

As Mumbai's development projects expand more and more into the sea, it threatens the livelihood of the local fishing community and economies dependent on it. Alibaug is a tidal influential coastal area situated towards the south of Mumbai.Tidal influential coastal areas are places where tidal water flows during high tide. The Mumbai coastal road construction has negatively impacted the Uran-Alibaug area. During construction, the water that gets pushed back ultimately flows to other low-lying areas. Pawar shared that thousands of hectares of paddy fields have been destroyed permanently due to the influence of tidal water into the fields. Farmers have abandoned these fields because they are no longer suitable for any plantation or rice cultivation. Construction of such mega projects like the Mumbai Coastal Road doesn't just impact the immediate vicinity. Its negative ramifications are far-reaching and unravel over a period of time.

The Mumbai coastal road project is just one among many such projects that are damaging our fragile coastal ecosystems and the economies dependent on them.

The Mumbai-Trans Harbour Link (MTHL) is a 22 km bridge that connects Sewri in central Mumbai to Chirle in Navi Mumbai. With a stretch of 16.5 km above the sea, the MTHL will be the longest sea bridge in the country. This bridge will also link the Mumbai Coastal Highway beginning from Marine Drive to the end of the Bandra-Worli sea link.

Pawar explained that hundreds of pillars have been constructed into the tidal water creek area. The sludge and waste material obtained from drilling and boring these pillars has not been disposed of scientifically. During the high tide, liquid mud and waste material gets deposited on fish spawning grounds due to which fishes are unable to lay eggs and multiply. Even their marine food chains have been disrupted due to the filtration being deposited in their homes.

 A few kilometres away from the MTHL bridge is a Jawaharlal Nehru Port Trust (JNPT) project that has been set up at the mouth of the Thane and Nava Sakhi Creek. The mouth of these creeks serves as an entrance through which the fishes enter into the Thane and Nava Sakhi creek. "The mouth of the creek which used to be 1500 metres wide and 10 metres deep has now been reduced to only 100 metres wide," Pawar emphasised. Due to the reduction of the mouth and the waste

deposited on it, the strength and quantum of water have drastically reduced. All the sludge has been deposited on the marine food and their habitat has completely been destroyed.

Such a top-down policy approach fails to consider the inputs of stakeholders who get affected by the decision-making. As stakeholders, the views and opinions of fishermen should be considered during the planning and decision-making process. The indigenous knowledge that they possess can aid in sustainable development. Pawar shared that most of the development projects in Mumbai are being constructed on fishing grounds. Whether it is the Mumbai Coastal Road project or the Bandra-Worli sea link or the Bullet train. The majority of these portions are intertidal fishing zones. "Our community is facing a huge challenge. We have lost our livelihood, we have lost our heritage and our culture. Our identity is under threat now," Pawar explained.

Coral Translocation

The Mumbai Coastal Road project not only affects fishing activity, but also poses a threat to the coral species. Corals are endangered marine species that are found across the rocky intertidal regions along the coastline of Mumbai. They preserve the quality of the coastal biosphere and act as 'wave breaks' between the sea and coastline and minimise the impact of sea erosion. Corals are protected under Schedule I of the Wildlife Protection Act (WLPA), 1972, and permissions are needed from the Principal Chief Conservator of Forest (PCCF-Wildlife) to translocate these species (Chatterjee, 2020).

During the Mumbai Coastal Road project, a survey by Marine Life of Mumbai identified 11 species of corals out of which nine were hard corals and two were soft corals. The study also found reef-building coral species at Haji Ali, where land is being reclaimed (Bavadam, 2020). Since these corals were falling in the project's way, they were shifted to a new location at the southern end of Mumbai Island. A large number of corals may have already been destroyed due to reclamation and excess sedimentation prior to the first biodiversity assessment (Chatterjee, 2020). Pawar explained that the survival rate of these translocated corals is very low because corals are accustomed to the local conditions of the area such as the temperature of the water. The fact that they have grown in Mumbai's coast implies that these corals are resilient to have survived the stresses of the city, but probably not enough to survive a move (Singh & Chandrashekhar, 2020).

Across the globe, coral restoration and transportation has been carried out with varied success. In India, pilot projects to study the survival rate, method and site of coral translocation have been undertaken in Lakshadweep and Andaman Islands and off the coast of Kutch (Bhalerao, 2020). This process is still at a nascent stage along the coastline of India.

The Comptroller and Auditor General (CAG) audit revealed that the BMC hired consultants to prepare an Environment Impact Assessment (EIA) report for the Mumbai Coastal Road project. that "lacked holistic ecological evaluation and failed to identify the key ecological risks and downplayed potential ecological impacts" (Desai, 2022). This reflects the lack of transparency through which development projects are sanctioned. Such projects prioritise economic development over sustainable development.

High Opportunity Cost

Along with economic, environment and social costs, the Coastal Road has high opportunity costs. Opportunity cost is the value of the next best alternative that is foregone in order to allocate resources to that single product. For instance, spending thousands of crores on the Mumbai Coastal Road Project means forgoing the benefits of, say, investing in improving the local railways, increasing the fleet of public buses or improving the pedestrian infrastructure. Imagine the outcomes achieved by spending on such alternative projects.

In the majority of Indian cities, private cars account for a low modal share in spite of their high vehicular share, with an overwhelming segment of the population using public vehicles as a means of transportation (Kadri, 2020). In order to reduce congestion and traffic in cities, the world is shifting towards public transport. Whereas, our solution to this issue is the opposite: constructing more roads.

Proponents of the project claim that the coastal road will decongest Mumbai's roads along with reducing commute time. However, research has observed correlations between increases in road capacity and traffic (Choudhury, 2022). When more roads are constructed, people are incentivised to use their personal vehicles more which ultimately leads to an increase in traffic and pollution.

Are the intended benefits of the coastal road worth the loss to livelihood and ecological damage? It's time that we rethink our approach towards development. People-centred development needs to be our focus where economic development and sustainable development go hand in hand.

Such lopsided development projects undertaken at the cost of the environment and marginalised communities seem to benefit only a small section of the population. At best, the Mumbai Coastal Road is a short-sighted project that poses a serious threat to our coastal ecosystems. It does not take into consideration the long-term impact that it is creating for future generations to face.

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Multiple Government Agencies And The Integrative Governance Model:

A Case-study on the Flood Risk in Navi Mumbai

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Introduction

More than half of the world's population now lives in urban areas as a consequence of modernisation and economic progress (World Bank, 2019). The modern engines of economic expansion are cities and towns. However, city authorities have faced numerous difficulties due to the rapid urban growth and extension into peri-urban areas. These cities had developed new vulnerabilities when poorly managed, increasing the risk of disasters.

Urban areas are also the focal points of a twofold danger — exposure due to rapid urbanisation and migration, even into hazard-prone areas, and institutional weaknesses and inadequacies. Contrary to natural disasters, man-made disasters, including chemical disasters, industrial disasters can be avoided by careful planning and implementing safety measures (Chakraborty, 2015). In this research paper, the focus will be on how the various institutional weaknesses and overlaps that exist in the prevailing governance setup influence the planning and implementation of safety measures.

Disaster Risk Governance

Disaster Risk is defined as – 'The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period, determined probabilistically as a function of hazard, exposure, vulnerability and capacity' (UNDRR, n.d.).

Along with natural disasters, social, economic, and political factors also have a role in determining the degree of risk and the reasons behind these vulnerabilities. As a result, disaster risk is a collection of all risks that impact a community and are determined mainly by the current system's power, economic, and governmental structures (Blaikie et al., 2003).

Therefore, when disaster risks are diverse, the approaches to disaster risk management should be multifaceted to address these risks. The risk management efforts can focus on the social aspects, economic aspects, or political aspects. The political aspects of disaster risk reduction delve into community and government power structures. The governance model is vital in exacerbating or mitigating prevailing disaster risks.

There needs to be more specific governance-related research in the realm of risks and disasters. In contrast to governance, research on disasters frequently focuses on governmental actions and governance. Governance is defined as 'the exercise of economic, political, and administrative authority to manage a country's affairs at all levels'. It comprises mechanisms, processes, and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations, and mediate their differences (The World Bank, n.d.).

The current idea of governance emerged from the realisation that many tasks previously performed by public institutions are now frequently divided among various groups of actors, also including private-sector and civil society organisations (Agranoff & Macguire, 2003). Large-scale social changes like the rise of contracting and outsourcing emergence of new forms of collaboration like public-private partnerships, public-public partnerships, and joint ventures all reflected the shift from government to governance (Tierney, 2012). Environmental, climate change, risk, and disaster-related complex social issues do not cleanly fall under the purview of any single specific agency or organisation. Because networks are adaptive, versatile, and capable of utilising a wide range of resources, they offer a way to address these issues through governance. Disaster governance is frequently a type of collaborative governance or activity that unites several organisations to address issues outside the purview of any organisation. To give the term a more precise definition, disaster governance refers to the interconnected systems of norms, organisational and institutional actors, and practices intended to lessen the effects and losses associated with disasters brought on by natural and technological factors, as by deliberate acts of terrorism.
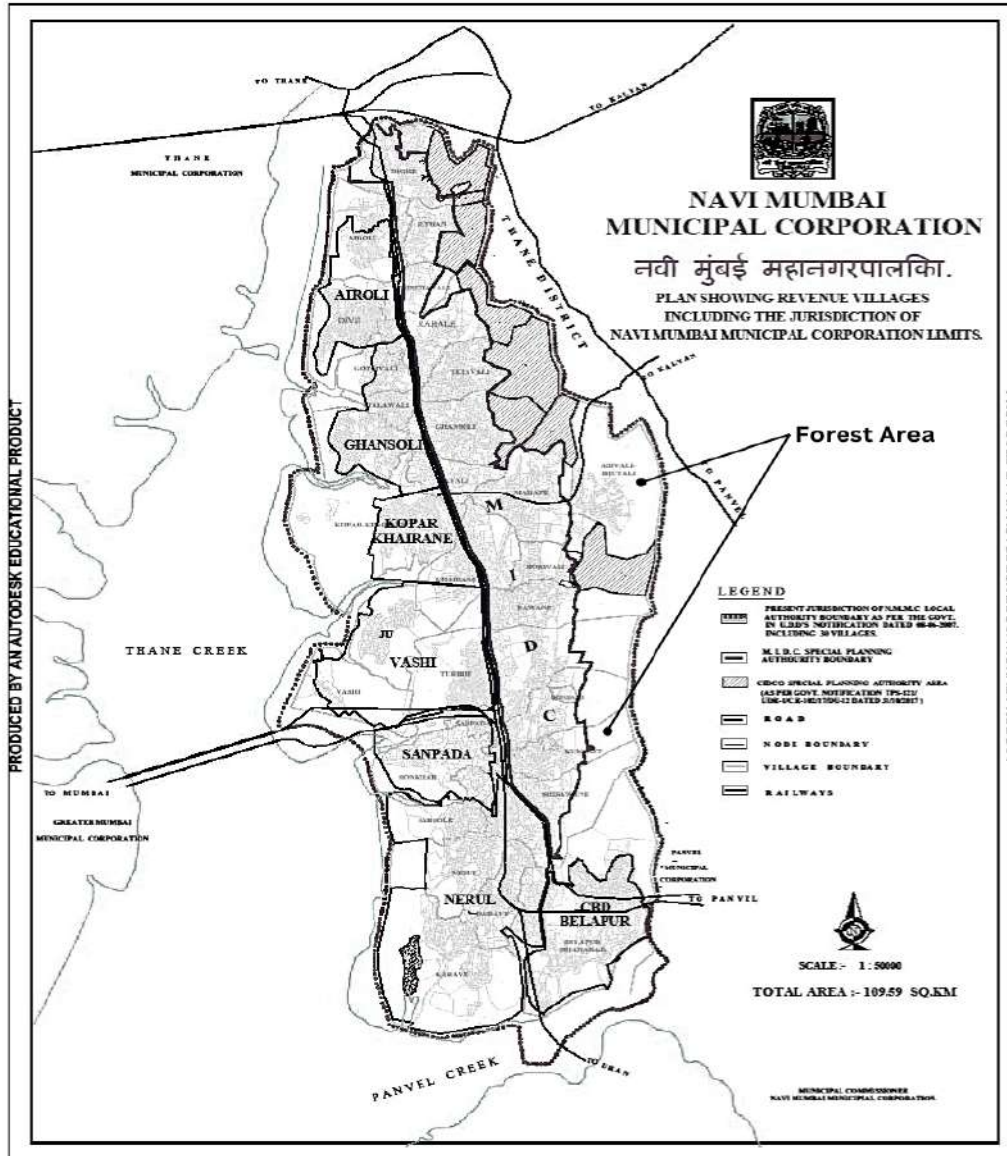
This paper focuses on understanding how Flood Risk Governance takes place in the city of Navi Mumbai, where multiple institutions are involved in the governance process. Each institution's work can influence the overall flood resilience of the city.

Navi Mumbai's History

Navi Mumbai– frequently referred to as Mumbai's twin city–comprises two districts of Maharashtra– Thane and Raigad. The city was founded in 1970 to accommodate Mumbai's expanding population (Edelman, 1997).

CIDCO (City and Industrial Development Corporation) developed fourteen nodes in Navi Mumbai: Airoli, Ghansoli, Kopar Khairane, Vashi, Sanpada, Nerul, CBD Belapur, Kharghar, Kalamboli, Kamothe, New Panvel, Ulwe, Pushpak, and Dronagiri. Out of the fourteen, only eight nodes are under the jurisdiction of Navi Mumbai Municipal Corporation (NMMC). Navi Mumbai's nodes can be classified into three categories:

1. Residential nodes are maintained by the NMMC (Navi Mumbai Municipal Corporation)
2. Industrial corridors under the jurisdiction of MIDC (Mumbai Industrial Development Corporation)
3. Residential-Industrial Mix nodes

(Figure-1: NMMC Region Map - Edited

Source: Draft Development Plan, Navi Mumbai

Municipal Corporation, 2018, p. 12)

Situated along the Konkan seashore, the geographical categorisation of the Navi Mumbai city is peculiar. The city is bordered on the east by hillocks– ranging from 50 to 200 metres– and on the west by the Thane Creek. 150 km out of the 720 km of the Konkan coast is a creek line. A

substantial part of the city has been built using the top land reclaimed from the sea. It is worth noting that the coastal land of Navi Mumbai is just 10-15m above mean sea level. Thus, Navi Mumbai was built with a pre-existing vulnerability to hydro-meteorological disasters and sea-level rise due to climate change (Karanth et al., 2014).

Navi Mumbai is also portrayed as a 'planned city' in India, developed from scratch without displacing any local inhabitants. None of the small fishing villages located in the erstwhile Navi Mumbai had been drastically displaced during the development of Navi Mumbai, as stated by CIDCO reports (Paul, 2022). The city is also projected as a symbol of 'sustainable urban development', with more than 45% of its land mass categorised as a 'green zone'.

Historically, almost every node of Navi Mumbai faced flooding during its development stage. In 1989 and 1990, Navi Mumbai's nodes flooded because of the excess rainfall in the Parsik hills and Matheran hills, which led to the excess runoff flow in the Gadhi and Taloja Rivers and ultimately in the Panvel creek. Post-1991 floods, there was a wide-scale people's protest against CIDCO in Panvel, as Panvel was severely affected by that year's floods, and the people believed that CIDCO's development was responsible for the severe flooding. As a response, the state's Chief Minister Sudhakarrao Naik called for a meeting with the people, the Public Works Department, and CIDCO. Unfortunately, the report they submitted to the public stated that upstream reservoirs were the only solution CIDCO couldn't undertake as the area was outside their jurisdiction (Deshpande, 2018, pp. 47-55).

In the past decade, certain localities of Navi Mumbai have been flooding yearly. The regions under MIDC, like Turbhe, Ghansoli, Rabale, and Mahape, are the same. The regions that are getting flooded indicate a correlation between flooding risk and the development changes/activities in those regions. For instance, the Gadhi and Ulwe rivers' natural drainage paths were altered to construct the Airport corridor. This plan was proposed almost a decade back. As the plan was implemented, in the past three years, the villages of Paragaon, Dungi etc., experienced regular floods during every rainy spell. These villages rarely witnessed water inundation issues earlier (Jeddy, 2018).

Pluralization and Balkanization of Urban Governance

In her critique of pluralization (i.e. the process of involving multiple institutions to perform similar or identical functions), Chandoke brings up complex questions of democratic accountability, public duties of the state, and deliberative decision-making that are pertinent to concerns of disaster governance, including disaster mitigation and post-disaster relief and recovery. While Chandhoke (2003) questions the greater devolution of 'government functions' to the civil society from the state, in this research, the focus is on how the involvement of multiple institutions and devolution of 'risk governance' functions to multiple departments within a single institution and multiple institutions influences the efficiency and accountability of the 'risk mitigation efforts'. But it's not just the mere involvement of multiple institutions in risk governance; urban and environmental governance, as a whole, has been characterised by the process of 'Balkanisation'. This phenomenon of *Balkanisation* indicates a distinct kind of urban splintering that results from the city's division into several fractions in terms of governance and planning roles for historical and neo-liberal urban transformation and infrastructure development-related reasons. The ongoing trend of the *Balkanisation* of urban planning in Mumbai has been outlined by Shirish Patel (2014). The same trend has continued in Navi Mumbai too. From the figure-1, it is evident that the whole city of Navi Mumbai can be categorised into three primary administrative regions. The forest department maintains the Parsik hills on the eastern end of the city, the MIDC acts as a special planning authority maintaining the industrial corridor on the foothills of the Parsik hills. Finally, NMMC administers the remaining municipal region of Navi Mumbai. Apart from these three, there are other government institutions like the MCZMA (Maharashtra Coastal Zone Management Authority), which administers the coastal marshlands and mangroves of Thane and Panvel creek.

The Maharashtra Regional and Town Planning Act of 1966 gave rise to the possibility of special planning authorities, giving rise to institutions having control over specific areas of Mumbai over which other agencies have little or no influence. The major zones that operate under special planning authorities and are outside the purview of local municipal and planning bodies include Special Economic Zones (SEZ), port trusts, nuclear and atomic energy facilities, land under the Defence department and Railway departments, and public sector industrial complexes. These locations could also have fragile ecosystems in their jurisdiction, which offer

ecosystem services that help mitigate disasters and have infrastructural constraints that increase the risk of disasters. The foothills of Parsik hills, which comes under MIDC, and the holding ponds built in the MCZMA's jurisdiction are examples of the jurisdictional overlap that influences the region's disaster risk.

Sectoral Siloization

Just 15% (n=338) of global environmental agreements, according to a recent review of the Health and Environment Interplay Database, include provisions for human health. Meanwhile, even the slightest environmental alteration such as that of air or water quality can significantly affect human health. This governance strategy of focusing on specific issues like environmental protection has validity. Still, it creates a "silo" problem in which various regimes with similar goals do not cooperate and occasionally go in opposite directions (Gallo-Cajiao et al., 2020). One such case was of the Holding Ponds built by CIDCO, maintained by NMMC, and falling under the jurisdiction of MCZMA.

Case of Holding Ponds: NMMC vs MCZM

Holding ponds are a part of the drainage system in the Navi Mumbai region. They can be considered to be a basic version of a dam. These holding ponds help to retain water during the heavy monsoon season, wherein the ponds act as retainers of overflowing water bodies so as not to cause excessive flooding and deluge in Navi Mumbai, as is the case with Mumbai. Unfortunately, these holding ponds have a conflict of interest in themselves. Mangrove forests surround the holding ponds and over the year, due to the settlement of sludge, mangroves have started to grow inside the holding ponds too. The mangroves fall under the forest department's jurisdiction (Indian Express, 2013; Sawant, 2021). The holding ponds tend to accumulate sludge and mud, which decreases the area's volume, thereby reducing the holding pond's water holding capacity.

Cleaning the holding pond not only maintains the quality of water content but also ensures that the water-holding capacity of the pond is increased substantially. This cleaning process has been an issue since 2011, as a jurisdiction battle holds a conflict of interest between CIDCO and MCZMA. CIDCO wants to clear out the mangroves– which are a cause for the

excess sludge in the area– whereas the forest department aims to protect the ecosystem as it is. This conflict of interests poses a serious concern, as the longer the ponds are left unmaintained, the higher the risk of floods and water logging in the Navi Mumbai region (Indian Express, 2013; Sawant, 2021). Even in 2022, there have been claims and appeals by CIDCO to clean the ponds, which continue to be an area of conflicting opinions (Shrivastava, 2022).

Solid Waste Management department and Storm Water Drainage Department

From the interactions with ward-level and city-level engineers of Navi Mumbai Municipal Corporation, it was understood that the pre-monsoon preparations, which starts as early as February and goes till May, act as an influencing factor in the overall preparedness for avoiding floods. In the preparedness procedure, many departments are involved, but one vital department that does not play an active role in pre-monsoon processes is the Storm Water Drain department. The Solid Waste Management (SWM) department manages the cleaning of stormwater drains. The reason the SWM department maintains the drains is that the contracts yearly allotted to the contracting agencies for each ward include cleaning drains and sewers too. The 'contracts' cover cleaning streets, waste collection, and pre-monsoon cleaning drain and sewers.

After the monsoon rainfall starts in June, if any water logging occurs due to blockages in the drains or sewages, the respective stormwater drains or sewage departments have to handle them. The SWM department has no role or accountability to address the blockages, which could have been actually caused by the inefficient cleaning of the stormwater drains.

The earlier mentioned case of 'holding ponds' and the aforementioned case of 'work distribution' between two departments of NMMC - each of these cases highlight the different kind of siloization that prevails in the governance of Navi Mumbai. Even though these cases show the gaps and overlaps in risk mitigation governance, similar gaps and overlaps also exist in other areas of urban governance.
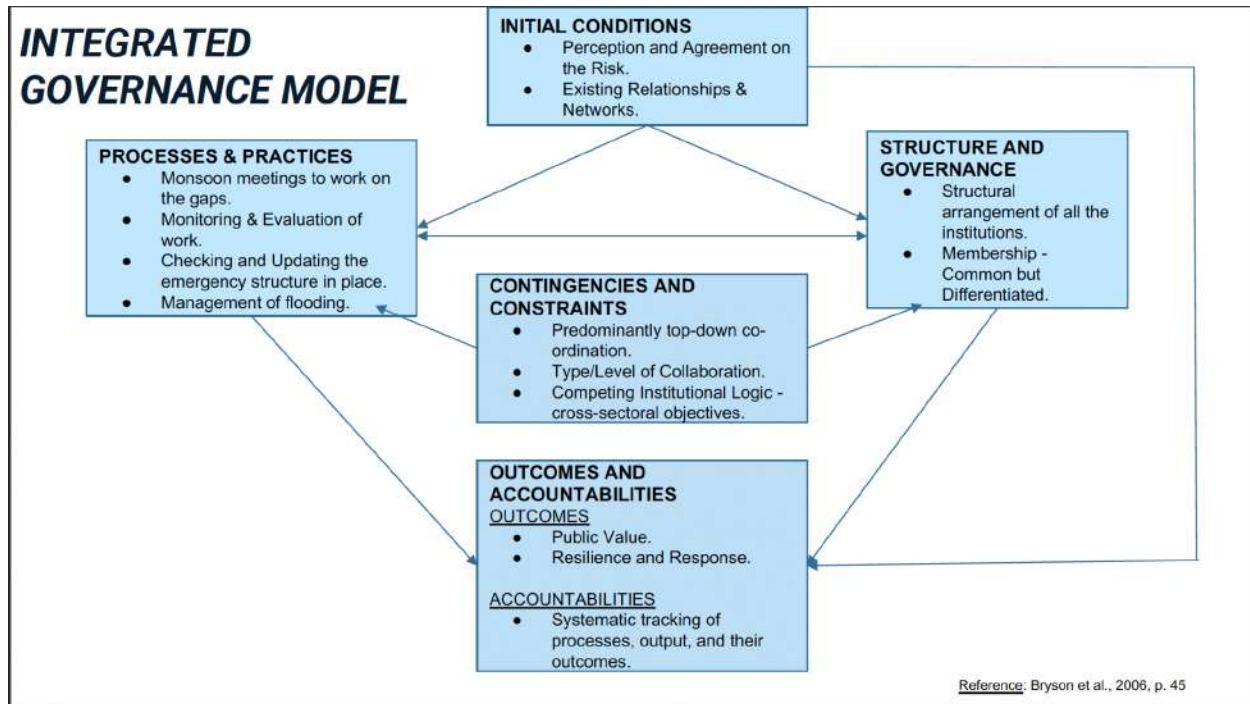
Risk Perception

The literature on the field of 'risk perception' does not clearly define risk perception. Slovic (1990) emphasised the importance of pointing out that the word "perception" in his writings refers to a 'variety of attitudes and judgements'. He also outlined how research on risk

perception looks at people's responses when given several options to describe and assess hazardous activities and technology (Slovic et al., 1990, p. 83). Risk has been socially defined, making it localised and context-specific even though it prevails in a more general global context. Similarly, even the way government institutions perceive risks is context-specific and localised (Heijmans, 2007, p. 127).

From the perspective of CIDCO, any big project (especially a city-development project) cannot be developed without altering the prevailing ecosystem. The land had to be reclaimed to make the topography suitable for 'urbanisation', and seasonal rivers had to be redirected using artificial drains to build big projects like airports. From the standpoint of NMMC, risks can be mitigated through adequate preparedness but cannot be nullified. If the hazards are of high intensity, like cloudbursts, no mitigation measures can help. Adding on, the engineers of NMMC always possess a comparative perception of risks that Navi Mumbai faces and are satisfied that their city is better prepared than Mumbai. Meanwhile, for an institution like MCZMA, their focus is only on the mangroves that have grown in the holding ponds as their mandate is strictly limited to protecting the coastal areas. The risks of mangrove extinction in the Thane creek outweighs the chance of failure of the holding ponds for MCZMA. But, the failure of holding ponds can lead to the flooding of Navi Mumbai – which is the priority for NMMC. Hence, the risk perception of almost every governing body differs based on various factors like the mandate of the respective institution. Even though all these government institutions have a common objective of contributing to the well-being of society, their modus operandi differs based on the mandate and rationale of the institution.

Integration of Channels of Communication and Action: Some Possible Solutions

Using the Integrated Governance Model, an attempt was made to look at the various factors that have had a significant impact on the flood risk governance process and how each factor is interconnected to the other influencing factor (see Figure 3).

(Figure-3: Integrated Governance Model utilised to analyse the Flood Risk Governance of Navi Mumbai)

From the chart, it is evident that the initial conditions of risk perception by each institution and historical networks and relationships between the different government institutions to the 'processes/practices' followed and 'governance structure' of the city - all of these factors impact the final outcome of flood-resilience and flood-response of the city. It is well-known that the governance structures and processes followed cannot be improvised immediately.

Meanwhile, the constraints to reaching the outcome can be addressed. Firstly, each department of NMMC and the other institutions involved in Navi Mumbai administration work in silos. The Municipal Commissioner's Office is the only one connecting all of their work in flood risk mitigation. A single coordinator is inadequate to manage the risks of a big city like Navi Mumbai. Secondly, apart from coordination, collaboration initiatives also need to be developed. When the need arises, the different departments of NMMC collaborate in their work, whereas the different institutions of governance, like MIDC, MCZMA etc., rarely do the same. More avenues of integration need to be developed for collaboration and coordination. All the government bodies meet only twice or thrice before the monsoons at the monsoon preparedness

meetings. More avenues for permanent interaction and regular meetings of all the stakeholder institutions throughout the monsoon can aid in overcoming the conflict of interests, gaps and overlaps in the 'integrated flood risk governance' processes.

Conclusion

Decentralised governance evolved around the world to bring governance as closer to people as possible. It also provided the required fillip to the growth of many illustrious cities. But, it is important to understand that no single-change in administrative style can act as a one-stop solution to all the governance issues. Decentralisation also led to the formation of multiple special purpose agencies like SEZ (Special Economic Zones), Industrial corridors etc., which had complete jurisdictional power over their regions. Further, institutions like MCZMA and National Green Tribunal also came into picture with focused agendas like environmental protection. With the rise of different institutions governing a single region, the mandate of the institutions also started to converge and overlap at times. One such area was disaster governance – which has a broad framework of action, hence it falling under the purview of multiple agencies is natural. In such an important area of governance, coordination and integration of administration is of utmost importance. This paper highlights the gaps in communication, lack of accountability between departments, conflict in perspectives, and lack of integration in the overall flood risk governance approach. All of these themes bring out how collaboration and coordination is vital for a successful governance system to work in a city level. To reach such an efficient disaster governance style, more avenues of communication is the first step which will take the system closer to better collaborative and coordinated efforts, leading to resilient administrative systems.

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Mumbai: Governance, Politics and the BMC

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Introduction

The estimated population of Mumbai is 22 million for the year 2023. According to a report in the Hindustan Times, Mumbai's population will reach 28 million by 2030. The city of Mumbai is home to people of varied religious, cultural, gender, ethnic and economic identities and an extreme - for instance almost 41% of population of Greater Mumbai being a slum area when some of the richest people globally reside in lavish apartments of Mumbai - of every such narrative dwells in Mumbai. It is the Brihanmumbai Municipal Corporation which governs this metropolitan city and caters to its development.

The annual budget of the Brihanmumbai Municipal Corporation for the year 2022-23 was Rs. 45,949.21 Cr making it the richest Municipal Corporation and civic governing body in India. Although the budget aims at catering to areas like Health, Education, Infrastructure, several issues with regards to ineffective governance persist in the urban city of Mumbai. The report on Urban Governance of the Praja Foundation highlights the issue of underutilization of the huge sum of money. The two underlying causes for this as pointed out in the report are outsourcing of work to contractors that do not succeed in delivering the necessary outcome and corruption. This essay aims at analysing the issue of underutilization of the budget of BMC while focusing on the causes and the city politics involved therein.

Governance: Reviewing BMC's Budget 2023-24

With a 14.52% hike in the budget of the Brihanmumbai Municipal Corporation for 2023-24 as compared to 2022-23, the question of assurance in terms of effective utility of the allotted sum still remains unanswered. The BMC presented a Rs. 52,619.07 crore budget on 4th February, 2023. It is for the first time in 134 years that the budget of BMC has crossed the 50 crore mark. This has also been the first ever budget presented under an administrator (municipal commissioner Iqbal Singh Chahal) after the last mayor Ms Kishori Pednekar completed her

tenure on 7th March, 2022. In the BMC budget 2023, Rs. 27,247 crore has been allotted to capital expenditure and revenue expenditure has been allotted Rs. 25,305.94 Crore marking another first for BMC as it is set to spend 52% and 48% of the budget estimates on the respective expenditures. The highly talked about coastal road project which is expected to be completed by the end of this year has been allotted Rs. 3,545 crore whereas the Goregaon-Mulund Link road which will reduce the travel distance between Thane city and western suburbs of Mumbai has been allotted Rs. 1060 crore. The budget allocation for Brihanmumbai Electric Supply and Transport (BEST) has dropped from Rs. 1382.28 crore in 2022-23 to Rs. 800 crore in the present budget while it has been mentioned that BEST will have 3400 electric buses by the end of the present year and the existing 3500 diesel BEST buses will be converted to CNG. One of the highlights of the budget has been the announcement of the BMC parking app to cater to Mumbai's traffic problems which will help people pre-book their parking slots. The Urban Greening Project has also been announced to tackle pollution which envisions the plantation of around one lakh trees through ecologically sustainable planting practices.

A door-to-door scheme called 'Arogya Kutumbam' has been launched in the budget in order to cater to adopting strategies like increasing awareness, community-based early screening, new treatment protocol, and promoting a healthy lifestyle. There has been a marginal reduction from Rs. 3,370 Crore to Rs. 3,347 Crore in the budget allocation for education with an announcement of a Digital Classroom Programme consisting of a systematic database of education through LED smartboards.

Politics: Underutilization of the budget of BMC

According to the survey of Praja Foundation, In Mumbai 44% participants highlighted that while the budget was adequate, there was an underutilization of funds.

Source: Praja Foundation, 2019, Retrieved - February 3, 2023

An analysis of the BMC's budgets and actual spend from 2006-07 to 2015-16 shows that the actual utility of the budget is 14 - 32% lesser than the shimmering figures claimed in the budget although the civic body projects higher budget estimates every passing year. Within this, a great share goes into paying the salaries of around 1.1 lakh employees, pensions, the interest on borrowings and loans and other administrative expenses, called the revenue expenditure and what actually goes into the creation, maintenance and operation of infrastructure is the capital expenditure. Although, the capital expenditure estimates large sums, a lot of the amount remains unused because the developmental plans do not fall in line with the ground-realities most of the times and problems like, environmental clearance, permissions to deal with underground lines when digging roads which remain unforeseen, etc takes up significant time and the proposed work either gets delayed or is simply left undone. The amount then is terribly insufficient, taking into consideration the number of assets and infrastructure that BMC has to foster and cater to like solid waste management and dumping grounds, disaster management, water supply networks, roads, etc. Another major reason that accounts for the underutilization of this budget is the outsourcing of work to contractors that do not succeed in delivering the necessary outcome and the other is corruption. Although the councillors have an opportunity to participate in the budget, the final drafting takes place at the hands of the commissioner and the budget that is finalised is driven by political will and has populist inclinations.. This often supersedes what the administration genuinely has in mind and the welfare agendas of the administration are compromised.

The Way Out: (B)(M)umbai(C)leverly Governing Mumbai

The solution to tackle the problem of underutilization of BMC's budget very clearly lies in effective planning and execution. The Corporation needs to have more control over its finances and the independence to decide how to spend their funds. Decisions - both trivial and vital need to be taken by the corporators, authorities and officials in positions and not by external pressure groups with political and/or other fiscal vendetta. Increasing transparency, reducing outsourcing of work to contractors and making developmental plans that align with the ground realities can only ensure effective urban governance which is devoid of filthy politics and thus bring about the best progress in the City.

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Navigating Sustainability: Urban Governance in India

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Introduction

In recent years, urban spaces in India have been rising steadily. It has been estimated through World Urbanization Prospects (2018) that the urban population in India would rise by 145 million between 2018 and 2030. Thus, with the increase in urban spaces, it becomes all the more crucial to discuss the prospects of urbanisation. Urban areas face numerous challenges on the way to their growth, and it is imperative to understand the role of Urban Local Bodies to mitigate such issues. With this context in mind, we aim to understand the constitutional mandate through the lens of the 74th CAA, characterising the role of ULBs.

Sustainable Development Goal 11 also plays a major role in promoting sustainable urbanisation . It focuses on achieving the twin objective of increasing the livability standards of people in urban spaces and addressing the environmental challenges. ULBs are key actors in implementing SDG 11 at the local level. To achieve SDG 11, ULBs can incorporate green areas, manage waste effectively, promote energy-efficient construction, encourage the use of renewable energy sources, and put policies in place to lessen the effects of climate change, such as the urban heat island effect and flooding. Thus, this paper discusses the broad aims enlisted under SDG 11 to create sustainable and inclusive cities which can only be achieved through the combined efforts of ULBs and the citizens.

Background on the 74th Constitutional Amendment

More than 25 years have passed since the 74th Constitutional Amendment Act was passed, and it is an opportune moment to revisit this Act, which has laid the groundwork for the establishment and functioning of Urban Local Bodies. Thus, it is important to unveil the context behind the need for such enactment.

Local bodies existed even before the coming up of the 74th CAA, however this aspect of governance lay explicitly within the purview of the states. There was a huge disparity between

the functioning of ULB across states. To aggravate this situation, they were grappling with issues of non-occurrence of elections, lack of citizen participation, scanty resources, problems with devolution of power and centralisation. With these pertinent issues in frame, the 74th CAA came into being to establish a strong, well-defined relationship between States and ULB. It also intends to empower ULBs to have a strong footing in the domain of administration and finances, which can further lead to effective dissemination of their functions.

The provisions of the Act are designed to institute a three-tier municipal structure, namely, corporations, municipalities and nagar panchayats. It also provides for reservations for women, SC's and ST's and intends to promote stability through a five-year tenure. To enable strengthening of ULBs, the setting up of a State Election Commission and State Finance Commission has also been brought forward as part of the provisions. The Act also proposed the devolution of eighteen powers and functions (stated in the Twelfth Schedule) to the ULBs, that were previously in the ambit of the States. These functions range from managing water supply, road development, poverty alleviation and the like.

Challenges of Sustainable Urban Governance

1. **Problems with the 74th CAA**

PRAJAS URBAN GOVERNANCE INDEX 2020

3.5. KEY INSIGHTS - DEVOLUTION OF 18 FUNCTIONS

1	Urban planning including town planning.
2	Regulation of land-use and construction of buildings.
3	Planning for economic and social development
4	Roads and bridges
5	Water supply for domestic, industrial and commercial purposes
6a	Public health, sanitation conservancy
6b	Solid waste management
7	Fire services
8	Urban forestry, protection of the environment and promotion of ecological aspects.
9	Safeguarding the interests of weaker sections of society, including the handicapped and mentally retarded
10	Slum improvement and upgradation

11	Urban poverty alleviation
12	Provision of urban amenities and facilities such as parks, gardens, playgrounds
13a	Promotion of cultural and aesthetic aspects.
13b	Promotion of Education
14	Burials and burial grounds; cremations, cremation grounds
15	Cattle pounds; prevention of cruelty to animals
16	Vital statistics including birth and death registration
17a	Public amenities including street lighting, parking lots and public conveniences.
17b	Bus stops.
18	Regulation of slaughter houses and tanneries.

Source: Praja Foundation Urban Governance Index (2020)

The main problem is non-percolation of decentralisation and devolution of powers to the local bodies. The transfer of the 18 functions has portrayed itself as an exceptional practice rather than a standardised practice. The financial circumstances are further impecunious in backward states. The implication of such conditions leads to impoverishment and lack of professionals that might escalate the process of urban development. There is a disparity in the provision of basic amenities that the urban population has access to, as ULBs bank on private entities. The states also do not provide technical assistance to ULBs to understand intricacies involved in urban development and sustainability.

2. **Resource Scarcity (Land and Water)**

One of the biggest problems faced by the metropolitan regions is the lack of resources, especially in the context of growing urbanisation. Urban population growth raises the need for resources like water, electricity, and land, increasing competition for scarce resources (MoHUA, 2018).

To solve the issues of resource scarcity in urban settings and encourage sustainable urban growth, effective resource management is crucial. This calls for a multidisciplinary strategy that takes the social, economic, and environmental aspects of resource utilisation into account.(Goyal, Agrawal, & Sergi, 2021).

3. **Transportation- Public and Private**

Urban areas' livability and sustainability are greatly influenced by the availability of both public and private transportation. However, the rapid urban population development combined with rising automobile traffic has created severe problems for India's urban transportation infrastructure (MoHUA, 2018).

The inadequate availability of public transit, which leads to an overdependence on private transportation and exacerbates traffic, air pollution, and greenhouse gas emissions, is one of the biggest problems facing urban transportation systems (Oswald Beiler, 2017). Additionally, due to lack of integrated transport network citizens experience longer travel times, and less accessibility (MoHUA, 2018).

These issues demand the creation of comprehensive public transportation networks that offer accessible and inexpensive mobility options as well as the promotion of environmentally friendly forms of transportation, including walking, bicycling, and taking public transportation (Oswald Beiler, 2017).

4. **Waste management and sanitation**

Urban waste management presents a serious challenge that has a significant impact on the economy, the environment, and public health. Based on the World Bank (2017), metropolitan areas produce over 70% of the globe's solid trash, and predictions show that this percentage will keep growing in the years to come. To minimise the adverse effects of trash and encourage sustainable urban development, effective waste management is crucial.

The absence of proper infrastructure and processes for garbage collection, transport, and disposal is one of the major problems with waste management in urban areas. This causes garbage to build up in metropolitan areas, which can lead to contamination of the environment, risks to public health, and the transmission of diseases (UN-Habitat, 2019)

Case studies on Sustainable Urban Planning and Development

Rwanda

Case study of Kigali

Source: Reporters@france24

In recent years, Kigali, Rwanda's urban area, has experienced substantial expansion and transformation. With a focus on enhancing infrastructure, housing, and economic possibilities, the city has experienced tremendous expansion. Sustainable housing, tourism growth, transportation, and green infrastructure are a few noteworthy developments.

The development of designated bus lanes and the encouragement of non-motorized modes of transportation like cycling and walking are just a few of the government's initiatives that have been put in place to improve transportation in the city. (Rwanda Transport Development Agency, 2018). The Kigali Housing Company was founded in 2013 with the intention of giving low- and middle-income locals access to affordable housing. The company has finished a number of substantial housing projects and has plans for further growth in the future. (Kigali Housing Company, n.d.)

In order to draw in international investment and promote economic growth, the Kigali Special Economic Zone was formed in 2016. For companies operating inside its borders, the zone provides tax breaks and simplified restrictions. (Nduwimana E., 2018).

The administration has pledged to support sustainable development and preserve green space. With a focus on enhancing citizens' access to open space, the Kigali City Master Plan incorporates a network of parks and green areas across the city. (City of Kigali, 2018).

With an increasing number of hotels, eateries, and cultural attractions, Kigali has grown to be a well-liked tourist destination. With a focus on sustainable development and cultural preservation, the government is actively promoting tourism as a vital driver of economic growth. (Baffoe, Ahmad, & Bhandari, 2020).

Singapore

Housing model of Singapore

It is a classic example of a welfare state where more than 85% of the population resides in the public houses. Mandatory saving schemes and central development funds had made it possible to subsidise housing; health and education. Housing and Development Board (HDB) is given with necessary power under land acquisition act, land was acquired below the market prices. Public houses are offered below the market price, these high rise buildings are designed in a well planned way, taking into account social inclusivity and financial inclusivity.

For people unable to own their own homes, the HDB also offers rental accommodation. Rental housing choices for social inclusion include studio apartments, one- and two-bedroom apartments, large units for families next to one another, as well as a quota system based on ethnicity in the building. (Chua, 2014).

The HDB has implemented a number of innovative design features in public housing, such as sky gardens, green roofs, and rooftop terraces, to improve the quality of life for residents and create a more sustainable living environment. (Housing and Development Board, n.d.). By including a variety of services, like schools, community centres, and commercial malls, within public housing estates, the HDB aims to create integrated and self-sufficient communities. This encourages social inclusion and helps build a sense of community. (Chua, 2014). At present, homelessness has dropped to 616 in 2021 from 1,050 in 2019.

Lessons from the Case Studies for India

Lessons for sustainable urban governance can be learned from the case studies of Singapore and Kigali. Both cities have significantly improved the standard of living for its citizens. These are some recommendations on how India might utilise these case studies to its advantage:

1. Dependable and efficient public transportation: Indian cities must invest significantly in these infrastructures. This will make it simpler for people to get around without cars and will help reduce traffic congestion, pollution, and carbon footprints per person.

2. Encourage environmental sustainability: Cities in India must take action to lessen their environmental effect. This includes putting money into renewable energy, enhancing garbage disposal, and preserving open space. Environmental Sustainability can also focus on providing options for green roofs and sky gardens as can be seen in the Singapore model.

3. Public-private partnerships: Public-private partnerships need to be promoted in Indian cities. This will aid in leveraging the limited public resources and in bringing in capital and technical and managerial expertise from the private sector.

Therefore, these steps will help in achieving and building sustainable urban governance in the long run.

5. **Monitoring and Evaluation of Sustainable Urban Governance**

A vital part of sustainable urban governance is monitoring and evaluation (M&E), which offers a way to judge how well urban policies and initiatives are working to advance sustainable urban growth. Decision-makers can use M&E to identify accomplishments and difficulties so they can allocate resources and create future projects in an educated manner. (Waghmare & Singhal, 2022).

Tracking progress towards sustainability objectives, such as lowering greenhouse gas emissions, enhancing air and water quality, and fostering livable and inclusive communities, is crucial in the context of sustainable urbanisation (MoHUA, 2018). This involves the creation of a comprehensive and integrated M&E framework that takes sustainability's social, economic, and environmental facets into account, which is a capital intensive but crucial investment. (Waghmare & Singhal, 2022). In order to assist the successful execution of M&E efforts, this entails developing performance metrics, data-gathering methods, and standards, as well as training programmes. (Waghmare & Singhal, 2022). Promoting accountability and openness in urban governance requires effective M&E systems as well.

As a way to gauge how well urban policies and programmes are working to advance sustainable urban development, monitoring and evaluation are crucial parts of sustainable urban governance. Effective M&E systems are critical in the framework of sustainable urbanisation for tracking performance towards sustainability goals, encouraging accountability and transparency, and assisting in well-informed decision-making.

To effectively implement Monitoring and Evaluation (M&E) in sustainable urban government, the following policy recommendations and practices can be adopted in India:

- Create a comprehensive M&E framework: Create a comprehensive and integrated M&E framework that takes into account sustainability's social, economic, and environmental facets and establishes precise objectives, measures, and benchmarks for sustainable urban development. (Waghmare & Singhal, 2022).
- To monitor progress toward sustainability goals, including lowering greenhouse gas emissions, enhancing air and water quality, and fostering livable and inclusive communities, it is essential to establish performance indicators (MoHUA, 2018).

- Invest in the creation of an information management system for data on urban sustainability as part of efforts to improve data collection and management systems. (Waghmare & Singhal, 2022).

- Training and capacity-building opportunities should be made available to urban stakeholders and decision-makers, including the creation of standards and best practices for M&E. (Waghmare & Singhal, 2022).

- Encourage stakeholder involvement: To improve accountability and openness in urban governance, promote the involvement of all stakeholders, including city citizens, in the M&E process (MoHUA, 2018).

- Establish frequent reporting procedures to communicate the outcomes of M&E efforts to urban inhabitants and other stakeholders. These procedures should also offer chances for review and improvements (MoHUA, 2018).

In conclusion, encouraging sustainable urban government in India requires effective M&E. It is crucial to create a comprehensive M&E framework, define performance indicators, enhance data collecting and management systems, offer chances for capacity building, promote stakeholder participation, and create frequent reporting mechanisms in order to do this.

Way Forward

Ban-Ki-Moon rightly stated, 'Cities are where the battle of sustainable development will be won or lost'. It is here that the role of the ULBs assumes greater importance and relevance. Implementing SDG 11 is essential to provide long-term benefits to the people by improving their quality of life. It is a crucial time to strengthen the Urban Local Body machinery by providing them with proper resources and funds. It is not difficult to foresee how low financing can impact the aspect of sustainability. There are numerous schemes in place by the government such as Smart Cities Mission, AMRUT, etc. to achieve SDG 11. However, not much progress has been made to benefit people as local bodies were not adequately equipped and trained.

The Budget Session of 2023 gave some amount of leverage to the idea of green growth, which can be utilised to create some sustainable options in the cities. However, awareness campaigns are an effective means to generate popularity regarding green policies. The participation of the

local people is tremendously important for any green policy to achieve its targets. In this regard, capacity building of local bodies is necessary and a priority.

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Domestic Workers of Kolkata: Pathways to Justice

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1. Introduction: Extra-Legality of Domestic Work

Domestic workers fall in the demographic of the extra-legal citizenry. Extra-legality is a condition which is not governed or regulated by law, and exists beyond its scope. In the typical sense, it primarily insinuates activities and groups of people which do not adhere to the legal tenets; and therefore, could potentially be in violation of the same, or engaged in parallel institutions which may never have the equivalent constitutional legitimacy (Fatovic and Kleinerman, 2013).

Another interpretation of extra-legality can be the institutional abandonment of communities which come under this realm. Since the socioeconomic status of domestic workers is excluded from the legal framework, they are not ensured policy protections. Not only are their livelihood conditions held beyond the scope of legal surveillance, but their presence as crucial stakeholders in the procedure of public service delivery and social security programmes is also marginalised.

More importantly, what is forsaken throughout this entire ordeal of perpetuating extra legality for this cohort is the ultimate objective that sustainable development aims to materialise via varying mechanisms of statecraft: human dignity. Caste-based prejudices against manual work interconnected with post-industrial capitalist disregard for sincere, hard labour derogatorily termed 'unskilled,' act as destructive feedback loops that intensify the pre-existent disempowerment domestic workers are subjected to. This process reproduces itself thoroughly since these intangible social systems not only correlate with the institutional abandonment facing women domestic workers, but they are fundamental in causing the same.

2. **Methodologies Employed**

This paper is grounded on extensive review of literature on the existent disenfranchisement, livelihood trajectories, and human security concerns affecting the domestic workers of Kolkata, and primarily utilises inductive techniques of secondary qualitative research. In addition to this, it seeks to utilise the sui generis framework of complex systems theory and insights from Community-Based Operational Research (CBOR) to articulate potential evidence-based policy solutions that are aimed to bridge the deficit in domestic workers' agency and institutional accessibility.

3. **Understanding the Cohort Patterns**

The most prominent characteristic of domestic work is its predominance of women. The near complete female presence, of around 90% (Kundu, 2008), is ensured not through female hegemony, but in fact via patriarchal normativity of gendered employment. Sen and Sengupta (2013) highlight the phenomenon known as feminisation of domestic work, wherein this domain is associated exclusively with women and their feminine capabilities; as a larger extension of gender roles prescribed for women which keep them restricted to work concerning the upkeep of a household. However, we observe that feminisation of domestic labour in Kolkata stems from additional disadvantages for the women in this cohort since it is correlated with the lowering of wages, poorer working conditions, and absence of skill and capacity building (Banerjee, 1997).

If domestic work were to be interpreted in a more holistic sense, then it would also include occupations such driving, gardening and security guarding services. A stark distinction observed here is that all the aforementioned activities are male-dominated, and are characterised by higher wages, greater bargaining power, and more formalised terms of employment (Neetha, 2015). The formal terms of livelihood, which render more favourable wage and working conditions outcomes for the employees, are assured through the existence of a contractual employment model through placement agencies. Unlike these professions, the existence of contractual domestic work through job centres is relatively less in Kolkata (Sen and Sengupta, 2013), as

opposed to domestic services in cities such as New Delhi and NOIDA where placement agencies coordinating migrant workers from states like West Bengal, Jharkhand are more prevalent (ILO, 2015).

However, in spite of having a contractual nature, studies have found the overall autonomy, working environment, wages, and interpersonal behaviour is often worse in cases where the domestic workers have attained employment through placement agencies in parts of Delhi and Noida (Tandon, 2012). This is because of the existence of skewed power dynamics between the worker, agency and the employer, wherein the intermediate agency structures the contract in such a way that it extracts as many working hours from the worker as possible, whilst assigning a proportionately lower hourly wage. In addition to this, the mobility of the worker is restricted due to rules imposed on her with respect to her communication with other workers and freedom of movement beyond the home, and her borrowing power is curtailed through the exceptionally delayed payment of wages.

This leads to a paradox, wherein it is observable that domestic workers who are engaged in contractual work through placement agencies are at a greater disadvantage as compared to those who independently seek employment without an intermediary; but at the same time showcases that those male-dominated professions which are organised through contract-adhering job centres are at an overall advantageous position than the non-contractual domestic workers.

4. **Contextualising Domestic Work in Kolkata: Problem Identification and Formulation**

Here, we navigate the gateway to understanding barriers faced by domestic workers in Kolkata by exploring the socio economic casualties which will aid us in implementing the CBOR approach of problem identification, formulation and solution implementation (Johnson, 2007).

4.1 Classifications of Domestic Work: Hours Worked and Residence

The workers in the city pursue their occupations either part-time, or full-time. The definitions of these terms have varied according to different criteria. Part-time work has either been understood as working in one or more than one houses every day, having a live-out arrangement (where the worker goes back to her home after working in various households the whole day) and spending

not more than two and a half hours per house (Kundu, 2008); or as working less than eight hours per day for five days a week over a span of six months (Ghatak and Sarkar, 2022).

Furthermore, a related classification of workers can be made in terms of their place of residence: live-out workers, who are both part-time and full-time, as well as live-in workers who are automatically full-time (Neetha, 2015).

It has been observed that the proportion of live-out domestic workers working full-time, that is at least eight or more than eight hours per day, has drastically increased from 16.66% in the year 2007 to 85.44% in 2019, based on the studies conducted by Kundu (2008) and Ghatak and Sarkar (2022).

A significant contributor to this change is the increase in the number of commuter workers (Wilks, 2022), who migrate from suburban and rural areas of South 24 Parganas to Kolkata city on a daily basis through the local train networks, which are dense in the southern part of the city. Due to an increased population of commuter workers, who face dire financial constraints, the phenomenon of wage undercutting is established (Ghatak and Sarkar, 2022) through the willingness of the commuting women to work for longer hours at a lower wage rate (Sen and Sengupta, 2013).

Verbal agreements acting as loose frameworks for employment are observed in the southern regions, potentially due to increased communication between the workers to fix an unofficial minimum rate, that has proven to be a successful mechanism utilised by domestic worker women in other parts of the country (Tandon, 2012).

4.1 **Undertaking Problem Identification and Formulation**

The methodology of problem identification will seek to answer questions which are concerned with 'what' the issue in actuality is and 'how' it emerges in the given scenario of complex causality, where the causes can be multiple and interrelated.

Socio-economic Vulnerability

The gradual increase of more full-time domestic workers who are engaged in work for over eight hours per day is foreground on exceptionally skewed indicators. Engel's Law states that the

proportion of income spent on food decreases with the increase in income and standard of living, and this is calculated using the Engel's ratio. This metric for domestic workers is starkly high, implying that 60-80% of their income is devoted to food consumption expenditure (Kundu, 2008). Dependency of livelihoods on the domain of domestic work for the most marginalised poverty-stricken families in West Bengal is in fact higher than not only the national average but also that of other states such as Gujarat, where the hourly wage is actually lower than that prevailing in Kolkata (Ghatak and Sarkar, 2022).

The skewed Engel's ratio provides us with inferences with respect to the standard of living of the target population. Majority of the domestic workers of Kolkata fall under the category of the poorest demography of the city, since domestic work is paid worse than other forms of male-dominated informal manual labour (Ghatak and Sarkar, 2022). Therefore, the first problem identified is the livelihood insecurity faced by the cohort.

Fragile Conditions of Livelihood Security

Due to meagre income, the propensity to avail healthcare is reduced since the out-of-pocket expenditures are higher, and exploitative work conditions prohibit them from harbouring any time resource to avail medical facilities; a situation that had become exacerbated in particular during the first wave of COVID-19 wherein lack of time was the most commonly cited reason for domestic workers not being able to visit healthcare providers (Gupta et al, 2022). Along with this, other aspects of livelihood security displayed by indicators such as standard of housing, access to clean water and sanitation, electricity and gas connections are also observed to be in a deficit since about 76.67% of live-out workers reside in either rented houses or temporary shanties, which constantly face the threat of eviction, with only 11.56% of the houses having concrete roofing (Kundu, 2008). It can be assumed that there might have been marginal improvements with respect to the gas connections due to ongoing government schemes, however governance deficit in assuring water supply, consistent electricity connections, sanitation and housing facilities is very much prevalent (Gupta, 2015)

Intra-Group Dynamics

The process of problem identification exhorts us to take into account the physical and social capital which emanate from the identities of workers in their surroundings (Johnson, 2007). Hierarchies within the working-class women need to be identified as they entail a differentiation: live-in domestic worker women often have greater livelihood security as compared to live-out part-time or full-time women. Their propensity to live with their employers increases if they have better access to housing, water supply and sanitation, greater contribution of household income from other members of the family, electricity, and gas connections (Kundu, 2008). Along with this, there exists a wage differentiation in the activities of cooking and cleaning the households, to a great extent due to the perceived difference in skill required to accomplish those tasks, but moreover because caste normativity, although getting gradually diluted, commands a subordinate, defiling and 'menial' position to cleaning, and would accord the role of preparation of food to upper-caste domestic worker women to avoid employment of Dalit women for this job (Sen and Sengupta, 2013).

Preclusion of Asset Creation

The second predicament to be identified is the inaccessibility to capital. The domestic worker women are often the sole bread-winners of their family (Kundu, 2008; Dar, 2014), and hence are often susceptible to availing informal borrowing sources from local moneylenders, who, as observable in every other context, charge them exorbitantly high interest rates (Neetha, 2015). Furthermore, requests to borrow interest-free loans from the employer are often equilibrated by the employer making the worker engage in extra hours or activities of work, thereby causing further violations of labour standards (Ghatak and Sarkar, 2022). Credit unavailability is heightened when correlated with wage rates of women workers in Kolkata, and substantial differences between the demanded wages and prevailing rates contribute to its inaccessibility. It is to be noted that domestic worker women in Gujarat have better economic conditions overall despite having lower hourly wages, primarily because they are engaged in other forms of self-employment generating small businesses such as knitting, tailoring and animal husbandry (Ghatak and Sarkar, 2022).

The Wicked Non-Ergodicity

Thirdly, we observe the existence of the overarching 'wicked' problem of non-ergodicity of the development trajectory. Ergodicity, in conventional economics terms, implies the deterministic outcome of a particular system to be equivalent to the outcomes of multiple systems over a span of time. Classical economists have propounded this view to understand the development trajectories of multiple countries, with an assumption that growth for different countries under will achieve economic equilibrium in the long-run which would be independent of initial conditions, and that there can be an epistemological certainty with which the future growth can be predicted (Alvarez and Ehnts, 2016). Renowned economists with alternate views expressed disagreement with this theory as they asserted that economic development across countries on a macro level often rests on the institutions that facilitate it (Davidson and Davidson, 1996).

Extrapolating this view onto the micro context of community development of women domestic workers of Kolkata, it can be asserted that unless the multiple social and related economic and political institutions are rendered favourable to facilitate holistic sustainable empowerment of the domestic worker groups, mere market interventions in the form of wage rate fixing and legislation of social security schemes will not prove successful in mitigating the predicaments faced by this cohort. Social institutions will primarily be constituted, in this context, by the normativity solidified by those availing the services of the domestic workers, or their employers (Ghosh and Godley, 2020), in conventional terms, as well as the soft governance mechanisms exerted by the Labour Department officials with respect to their social attitudes concerning women domestic workers (Neetha, 2015).

Upon applying complexity theory, we realise that the consideration of human emotions, ideations and personal opinions is significant to making governance democratic, since social attitudes are the base upon which social capital is consolidated. As specified earlier, domestic workers lack capital, whether it be physical, financial or even social, because the skewed power dynamics where the authority is sequestered by the employers and the government officials, aggravated by the dismissive, condescending attitude of indignity inflicted upon domestic workers with respect to how they are treated in the employers' homes, access to amenities in workspaces, their conditions and financial security of work, are all reflective of social institutions, having their roots in both caste-fixated pre-colonial sections of the Indian society, as well as the caste and

class-fixated colonial structures, which marginalise this cohort, and is the ultimate, micro causal factor of all related forms of disenfranchisement.

Archetypal Predicament of Wages

The wage rates for domestic workers in Kolkata is currently not only lower than the state prescribed minimum wages for workers, but unsurprisingly beyond the demanded wage as well. Very recently, the Paschim Banga Griha Paricharika Samiti which was recognised as the only trade union for domestic workers in the state, has demanded an hourly wage of Rs. 75 per hour, which is significantly higher than the hourly wage rate that currently prevails in the city of approximately Rs. 34, if we take into account Rs. 340 being the daily wage rate for an overtime ten-hour shift, reducing their monthly income by approximately Rs. 8000-9000. Despite the state government notification for wages for unorganised sector workers for eight hours being Rs. 334 for an eight-hour shift, bringing an hourly wage of Rs. 41.75, we observe that there is no stringent implementation of such labour laws, because domestic workers are not included under the law on minimum wages.

The unwillingness of the authorities to notify minimum wages for the domestic workers is due to the aforementioned adverse social attitudes towards the same (Neetha, 2015). Even though lobbying from domestic worker labour unions was successful in including them as crucial stakeholders for discussions on wage-fixing meetings with the Labour Department in Karnataka, other states such as Andhra Pradesh and Rajasthan did not take proactive methods of instituting committees for reaching out to domestic worker groups for legislative discussions. The notification for fixing minimum wages in West Bengal has been pending since November 2022.

5. **Problem Solution**

Gupta (2015) recommends a multistakeholder model to loop in NGOs, corporates, and government agencies such as the National Skill Development corporation in order to provide training and upskilling of domestic workers in order to increase their bargaining power with their

employers alongside providing them further scope of employment opportunities which may either be in addition to their existing employment of domestic work or as a better substitute of the same.

Despite certain legislative initiatives such as the Unorganised Workers' Social Security Act of 2008 being extended to include domestic workers into their provisions, we see that there still exists information asymmetry with respect to the awareness of the domestic workers cohort in being able to avail such policies. The Social Security Act goes a step further and enables the state governments to formulate policies which would be appropriate for their given contexts for translating the human security assurances of domestic workers into a reality, particularly in the aspects of pension provision, health, maternity benefits, loans for housing upgradation and financial assistance for children (MoL & J, 2020). However, prior to this, the West Bengal Government had legislated its own Social Security Act in 2007, incorporating domestic workers into the realm, and sought to even set up a State Social Security Board. Therefore, educational assistance schemes such as Kanyashree and health insurance programmes of Swasthya Sathi are applicable for domestic workers as well.

Although such policy recommendations are considerably effective, the situation needs us to explore other options which are not just feasible with respect to their implementation but also require the primary stakeholders to initiate proactiveness from their end in order to make solutions, as well as their outcomes, as participatory as possible. Keeping expectations with only the state and independent private entities to take up the initiative to resolve dire socioeconomic complexities will delay and distort the problem even further.

Therefore, the policy solution to the aforementioned problems identified and formulated is that of community-mobilisation of domestic worker women into **worker cooperatives**. Cooperatives and self-help groups are evidence-based practices which improve the financial security of their members, enhance borrowing capacity, enable sustainable, durable livelihoods, and consolidate their overall agency (Banerjee and Ghosh, 2012). West Bengal is very much the home-ground for the operation of a considerable network of rural women's self-help groups.

It was found that cooperatives have a direct correlation in improving the overall standard of living, otherwise expressed through Engel's ratio, and ensuring better access to formal

healthcare, housing, water and sanitation and even electricity and LPG connections (Mistry et al., 2017). In this case, the study was that of Alo Cooperative in Dakshin Dinajpur, a recognisable name in the realm of successful cooperative models which have been implemented in West Bengal.

Along with this, cooperatives have proven to not only increase rates of adult literacy, but also legal awareness amongst the members, political participation and empowerment along for the marginalised low-income women (Biswas et al., 2018). Successful models of women's networking models in Kerala are examples of best practices wherein the state government cooperation with the primary stakeholders- women's self-help groups- has been able to transform the cooperative societies of the state into the world's largest network of self-employed women network, now heralded as Kudumbashree (Kudumbashree, 2023).

The general operations of SHGs and cooperatives are in the rural areas, but that must not deter us from exploring the options of the same model in urban centres too, taking into account the myriad complexities that cities bring along with them. Association for Promoting Social Action (APSA) is one such civil society organisation which has been successful in forming a network of domestic worker women as part of its self-help group community in advanced metropolises such as Bengaluru and Hyderabad. This resulted in increased women's agencies to negotiate with the local authorities for fulfilment of their civic amenities, improved their managerial control within the family and strengthened their leadership agency by creating cross-sectoral linkages with education centres, and skill training facilitators.

5.1   **The Model**

A cooperative in the form of a business model, which can start out a self-help group, can be established as a collective of all the domestic workers of that particular locality of the city of Kolkata. The workers can engage in the production of goods as part of an additional micro business, but should primarily focus on marketing their own service of domestic work as their business model.

Tandon (2012) points out that similar business concepts already exist in the Northern India, particularly in Delhi, NOIDA and Gurgaon, where an entrepreneurship known as 'The Maid's

Company' engages in provision of domestic worker services to customers, building on the capacities of the local domestic workers by not only providing them livelihood which is significantly above the minimum wage, but also giving them a 20% share of the company's equity. The services provided by the domestic workers in the company are via registration of the employee as well as the employers, while utilising contract-based payments, thereby increasing the bargaining power of the domestic workers considerably, since there is no scope of either undercutting or underpayment from the employer's side.

Therefore, in the model proposed here, the workers can prioritise the starting of a cooperative enterprise, wherein they can engage in directly negotiating with the employers collectively in order to attain a certain wage rate that satisfies minimum wage conditions, does not violate labour standards of duration of hours, and reduces dependency on external actors such as corporates and private entrepreneurs to start any initiative for them. This will build resilience for the domestic workers to strengthen their own capacities and take agency over the terms of employment by setting fixed rates over different services and activities provided by them.

However, the model needs to be constituted in a multistakeholder fashion, wherein it can encourage cross-sectoral linkages in its operations. Due to its composition as a cooperative, the members will be able to collectively use their deposits as collateral to take loans from the bank, in order to finance any formal technicalities required during the registration of the company as a micro or small business. A deficit in the attainment of better livelihoods for the domestic workers has been identified as lack of training for household activities and for more technical market-oriented professions such as childcare and nursing (Gupta, 2015). Therefore, the role of skill training organisations such as NSDC and even domestic worker NGOs such as the National Movement for Domestic Workers which also provides entrepreneurship training is necessitated here (WEIGO, 2021).

The cooperative model is feasible in implementation because it does not entail any significant infrastructural cost associated with its operations as the primary specialisation of the company would be the provision of domestic work services, which mostly does not require any major fixed or variable capital cost apart from the handful of tools to be procured for conducting the cleaning activities as part of the service provided. Moreover, the non-reliance on fixed capital

makes the business affordable to be operated from a domestic environment as well. Once the women collectively organise into a cooperative, they form the adequate social capital to constructively engage with the local and state authorities as well, thereby establishing themselves politically, as Kudumbashree did with the Panchayati Raj institutions in Kerala.

It has been observed that the incorporation of women's cooperatives and self-help groups in the procedure of effective delivery of public services, such as land rights (Choudhury and Mohapatra, 2021) and construction of sanitation and irrigation facilities (Ramesh, 2021) and even for disseminating banking and financial services in underdeveloped areas (Arora and Krishnaswamy, 2015) is a successful mechanism of statecraft. Over 2.2 lakh women were trained under SHGs by the land-rights organisation, Landesa, and the West Bengal Government for spreading the expanse of land rights for women in the state (Choudhury and Mohapatra, 2021).

The non-ergodicity of institutions will become constructive as the Labour Departments and State authorities will now be encouraged to pay heed to the concerns of the domestic workers through a participatory form of governance. Evidence suggests greater multistakeholder incorporation of workers into the committee system of wage fixing for unorganised sector workers under the Minimum Wages Act of 1948, if collective mobilisation by workers, information dissemination amongst union members, and regular cooperative activities are undertaken by the same are done in an effective manner, as was observed in the case of Karnataka (Neetha, 2015).

Fourthly, this recommendation will ensure the much-needed credit for the domestic worker groups and build their financial independence, alongside providing legal education and adult literacy amongst its members provided it takes initiatives of collective meeting, training, monitoring and evaluation. A collective such as this will prove instrumental in ensuring legal resources for grievance redressal for any member worker, by availing the NALSA (Legal Services to the Workers in the Unorganized Sector) Scheme, 2015.

6. **Conclusion: Problem Implementation**

Certain challenges which are posed in this process would be to organise the domestic worker community into forming a cooperative for the purpose of materialising self-empowerment. Unwillingness to be active in unions or collectives to fulfil self-interest first is always a deterrent

in such endeavours (Tandon, 2012). Therefore, such challenges in implementation have to be factored into the process.

However, an empathetic approach to community development, particularly from the employers' and government's side can act as potent solutions to this crisis. Joint meetings, and regular trust-building endeavours (Drumm, 2013) can prove effective in building a compassionate community rather than a mere transactional market-based contract.

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Towards building post pandemic livelihood sustainability of street vendors in India

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Introduction

Street vendors form a very important component of the urban informal sector in India catering to the urban demand for affordable goods and services. It is estimated that there are about 10 million street vendors in India with the vending economy having a turnover of over Rs.80 crore a day (Kaur, Ramchandran & Nandaa, 2020).

Street vendors are often those with low skills and have migrated to larger cities from rural areas in search of employment. They resort to street vending when they do not find any other means of livelihood. Street vending contributes towards the structural transformation of a traditional economy into a modern economy by creating new enterprises and absorbing surplus labour which leads to an increase in productivity and employment across sectors, thereby contributing to low-income and developing economies' economic growth (Anokhin & Schulze, 2009).

Street vendors in India play an important role in its urban life as they cater to the needs of a vast majority of citizens, yet are unfortunately viewed as obstructions and are at risk of frequently being evicted from their place of business. There have been several policies and legislations developed over decades, however, they are different in their objective and poor implementation further exacerbates their vulnerabilities. With the nationwide lockdown in place, most of the street vendors were forced to shut shop and return to their villages. As we again observe the pace of infections in 2023, with no medical safeguard in place the street vendors continue to remain vulnerable.

Approach and Findings

Street vendors have had significant contributions towards the economic process of India. The present brief employs a mixed methods approach to assess and lays out the current policies and legislations aimed at protecting the rights of street vendors in India. This section highlights some

of the landmark policies and legislations made for the welfare of street vendors while identifying the benefits as well as identifying the areas in which there is scope for improvement beginning with the National Policy of 2009.

National Policy on Urban Street Vendors, 2009

The National Policy proposed three measures to manage and organise street vendors by promulgating zoning laws for stationary street vendors viz. Restriction-free vending zones, restricted vending zones and no vending zones. Secondly, it institutionalised participatory Town Vending Committees (TVCs) who devise city-specific zoning laws based on consensus among stakeholders. Lastly, given the vulnerabilities of the street vendors, it also proposed some social security measures. However, this did not include any direction on protecting the street vendors from often restrictive municipal laws which led to their eviction & displacement.

Deendayal Antyodaya Yojana- National Urban Livelihoods Mission (DAY- NULM), 2013

The DAY-NULM was launched by the Ministry of Housing and Urban Affairs (MoH&UA) to manage the concerns of urban street vendors by ensuring access to spaces, sources of formal credit and included certain capacity building measures for accessing emerging market opportunities.

Under DAY- NULM, states and cities are required to conduct a periodic socio-economic survey of street vendors, register street vendors and issue identity cards. This survey will help create a database of street vendors at the city level and will enable States/ULBs to prepare pro-vending urban planning and provide the necessary support to street vending.

Street Vendors Act, 2014

The National Policy were mere guidelines and not legally enforceable. After a nationwide protest in 2011, the Street Vendors Act (Protection of Livelihood and Regulation of Street Vending) was introduced to protect the rights of urban street vendors and regulate street vending. This Act gave legal recognition to the profession of street vending and provided a redressal mechanism in addition to some sort of a guarantee of security through the certificate of vending.

This Act mandates compulsory registration of every person intending to carry out street vending activities in addition to the constitution of the Town vending Committee (TVC) which is responsible for drafting the street vending plan once in every five years. The legal recognition of the profession helped in safeguarding the street vendors from being prevented by any person/ law enforcement agencies from preventing them from exercising their right to vend in accordance with the terms and conditions mentioned in the certificate of vending. Despite the law having legalised the act of street vending, the default policy in most cities across India is to clamp down on street vendors in the name of hygiene and security, even while street vending continues to remain a viable source of employment for a majority of the population.

Additionally, the Act itself is not without flaws which leads to varied levels of implementation by states that continue to make the street vendors vulnerable to externalities. A more strategic approach is required to make street vending a planned activity which is enmeshed sustainably in the urban development plans of major cities across the country.

Prime Minister Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi), 2020

The announcement of the nationwide lockdown in early 2020 led to the complete shutdown of cities. Street vendors were hardest hit with migrant workers returning to their villages in large numbers. In this context, the Ministry of Housing and Urban Affairs (MoH&UA), Government of India launched the PM SVANidhi scheme which offered collateral-free working capital loans up to Rs.10,000 and incentivized digital transactions to street vendors in order to help them resume their businesses. The scheme was aimed at formalising the profession of street vending and helping street vendors leverage emerging opportunities to move towards sustainable means of livelihood and move up the economic ladder. While the lending period of the scheme was initially supposed to end in December 2022, given that many street vendors are yet to be covered under the scheme and many are still recovering from the aftermath of the pandemic on their businesses; the lending period of the scheme has been extended till December 2024.[1] Additionally, a third loan of up to up to Rs.50,000 in addition to the 1st and 2nd loans of Rs. 10,000 and Rs. 20,000 respectively.

The scheme itself has been divided into three terms, in the first term a loan of Rs. 10,000

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[1] Extension of PM SVANidhi Scheme, Press Information Bureau, *retrieved from -* *https://pib.gov.in/PressReleasePage.aspx?PRID=1881759*
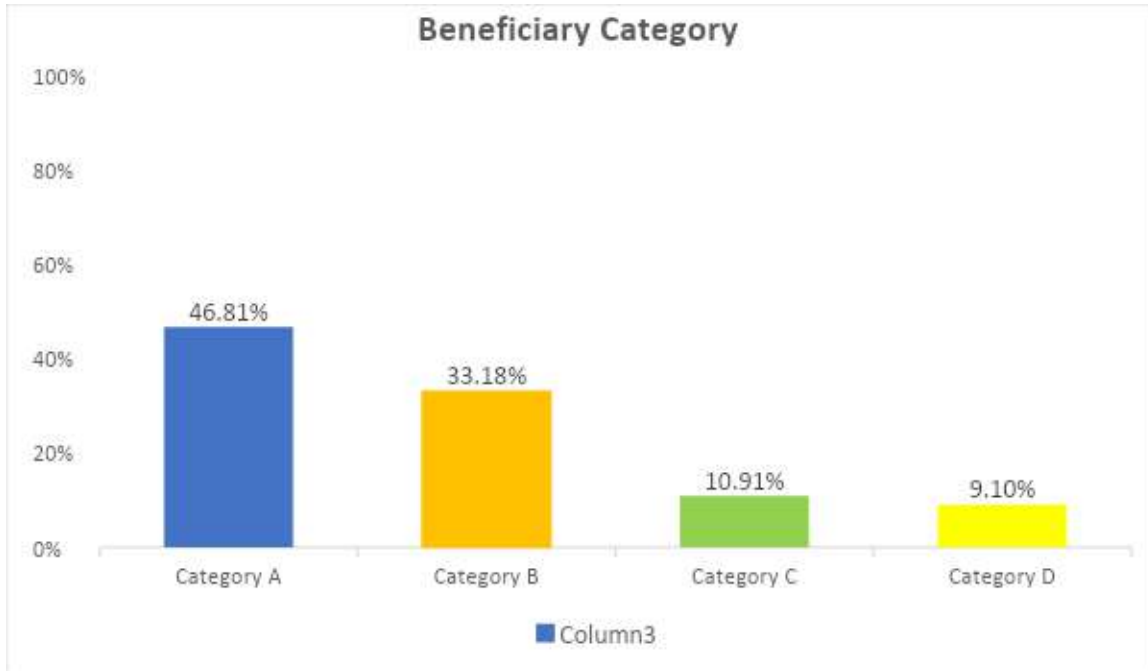
would be given, and based on the timely repayment of the loan, the person would be eligible to apply for a loan under term two in which they could get a loan of Rs. 20,000. And based on the same method of timely repayments they could avail of a loan of Rs. 50,000 under term three. This scheme could be a game changer for street vendors because not only does it provide a small-term working capital loan to get back on the working grid but also aimed at reducing their dependence on informal sources for loans.

According to the scheme dashboard[2], of the 61,99,835 eligible applications under the scheme, a total of 4,130,398 loans have been disbursed to the tune of Rs. 4,914.22 Cr. The scheme is applicable to any vendor who is engaged in vending in urban areas and has either the certificate of vending or a letter of recommendation (LoR) issued either by the TVC/ Urban Local Bodies (ULBs). As of February, 2023 the top 3 states for disbursal of loans against the target are Madhya Pradesh (100%), Uttar Pradesh (97%) and Telangana (88%), while Kerala and West Bengal had merely disbursed 14 and 5 percent of the total eligible applications respectively under the scheme. This was even lower than certain hilly and northeastern states as even Mizoram and Himachal Pradesh had disbursed 17 and 75 per cent of the total eligible applications respectively under the scheme.

While the average age of applicants is 42 years, data shows that only 41% of the total loans disbursed are to women street vendors, which highlights the need to focus efforts on extending coverage of formal sources of credit to women street vendors who form a major chunk of the informal workforce in cities.
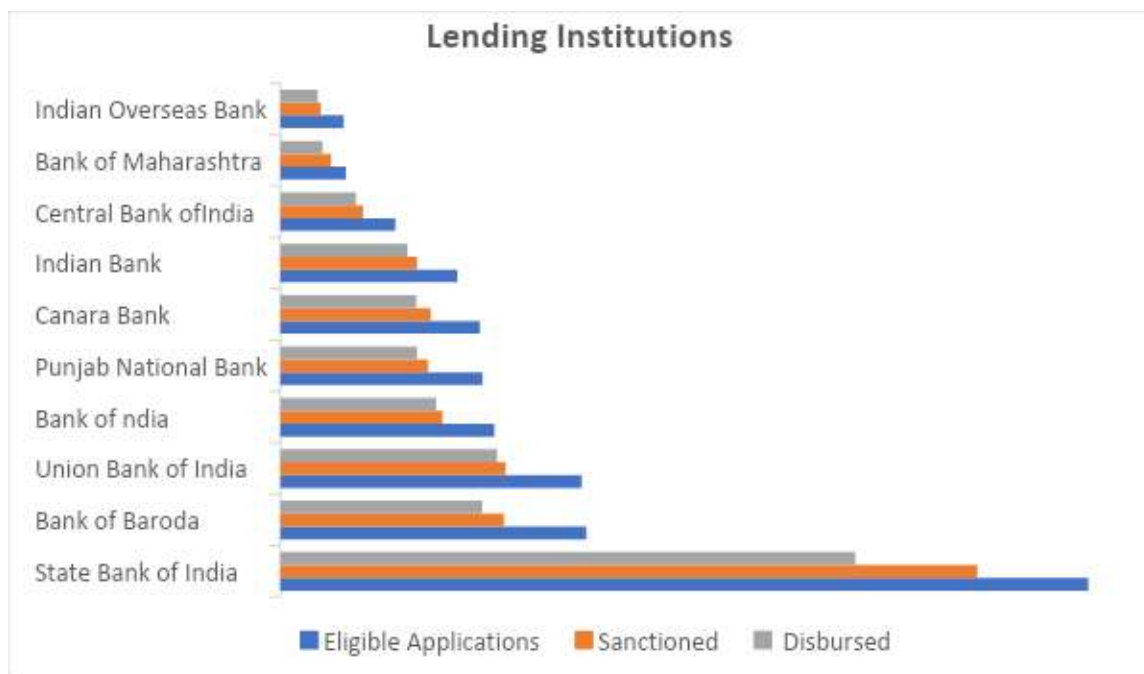
The eligible vendors are identified and categorised into 4 different categories based on their status. The graph below shows the percentage distribution of loans disbursed to all eligible street vendors under the scheme. As the graph below shows that only 20% of the total loans disbursed to the most vulnerable beneficiaries (Category C and D), as they are at the highest risk of being pushed into the vicious cycle of poverty. *(Details given in Table 1 of Annexure)*.

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[2] PM SVANidhi dashboard, Ministry of Housing and Urban Affairs, GoI, *retrieved from-*
https://pmsvanidhi.mohua.gov.in/Home/P

Beneficiary Category

This also brings forth another issue with the implementation of the scheme, which is the issue of LoRs to street vendors who were not covered by the survey undertaken by the ULBs/TVCs for becoming eligible to be covered under the scheme. Data shows that nearly 5% of the LoR applications have been rejected which might become a barrier to street vendors availing the benefit of the scheme in time.

Data from the Scheme MIS also shows that of the 125 lending institutions that extended the loans under the scheme, the major share was contributed by public sector banks such as State Bank of India (33%), Union Bank of India (12%) and Bank of Baroda (12%).

Lending Institutions

However, even this scheme is not all-inclusive and has certain lacunae. The scheme is only available to street vendors who were engaged in vending in urban areas as of /before March 24, 2020 and are in possession/ process of obtaining the Certificate of Vending/ Identity card issued by the Urban Local Bodies (ULBs). This leaves out a large number of unlicensed vendors who are dependent on their meagre earnings for survival.

Poor awareness of the scheme, complicated online procedures, delays in banks, over-dependence on ULBs for documentation combined with the absence of a well-planned digital and financial literacy programme targeted at street vendors has led to its limited success.

Recommendations

While there is a recognition that an overall change in approach is required, the following steps can be taken to increase coverage and build a sustainable livelihood for street vendors.

Centralised Land Use Plan and Urban Planning Laws

The Street Vending Act (2014) mandates that state planning laws cater to the needs of the vendors. In order to make street vending a planned activity, there should be proper identification of areas where vendors can find business easily in a way which causes minimal disruption to

daily life. Standardising the carts used by vendors across cities will help optimise land use as well as add visual appeal. Additionally, underutilised spaces could lend themselves to vending by creating a natural market. The idea of the natural market is a place where buyers naturally congregate such as a temple/ hospital as opposed to some other designated area in the city which is inaccessible. The civic authorities would need to identify such areas and organise the street vendors to ensure an adequate supply of goods and services.

Best Practices: Indonesia

In cities across Indonesia, street vendors are provided with standardised carts and lots. This is done to ensure uniformity and order. These carts are wheeled in and out at certain fixed times. Additionally, certain roads are closed for vehicular traffic during specific parts of the day. During non-operating periods, carts were neatly stored somewhere unobtrusive, thus the cities stayed clean and the roads were uncongested.

Improved work conditions for street vending must be put in place with access to clean drinking water, toilets, electricity and storage facilities. These amenities will not only increase the productivity of the vendors but also help in maintaining sanitary conditions in the area. This could be scaled and adapted by municipal authorities by piloting to test its efficiency and ensure potential roadblocks to its implementation are identified with special consideration to COVID-19.

Redesign PMSVANidhi into a convergent solution for micro-financing and skilling governed by clear regulations

The PM SVANidhi scheme has been poorly implemented and has limited impact on the most vulnerable section of street vendors (D'Cruz, 2021). Commercial banks have been unsuccessful in supporting the informal sector which led to the need for micro-financing. While it was launched as a short-term measure, it has the potential to develop into a scheme for the promotion of ultra-micro industries given that every street vendor is known to support an average of three others. (Kaur, Ramchandran.R and Nandaa R.B, 2020). The micro-credit scheme can help establish a robust debt collection mechanism which in turn will increase the creditworthiness of the street vendors, thereby helping them avail the benefits of formal credit. A unique ID provided

to street vendors could be used to track the movement of these highly mobile vendors in order to create evidence-based interventions for policy implementation. The scope of the scheme would also need to increase considerably as currently it is targeted to cover a mere 5 million street vendors across India.

Best practices - Grameen Bank, Bangladesh

Grameen Bank is a Nobel Peace Prize-winning microfinance organisation and community development bank founded in Bangladesh. It gives small loans to the impoverished without requiring collateral. Micro-credit loans are based on the concept that the poor have skills that are underutilised and with proper incentives can earn more money. India has a strong network of Self-Help Groups / street vendor organisations which can be leveraged to institutionalise and make formal sources of credit accessible to all.

The scheme includes incentives for the use & promotion of digital tools by the beneficiaries, however there are impediments to this as digital literacy continues to remain a challenge. While the shift to digital payments might enhance access to entitlements, it cannot serve as a proxy to deficiencies associated with the scope and design of the scheme. Street vendors who were not registered earlier than March 2020 and do not have access to either a smartphone and bank accounts must also be able to access the benefit of the scheme.

Conclusion

In order to build long-term livelihood sustainability for street vendors, it is imperative to take a holistic approach which would require the integration of employment generation and skill building. A localised area-based approach which caters to the needs of the street vendors in a comprehensive way, while supporting micro-enterprises and skill training can go a long way in generating jobs, reducing vulnerabilities and promoting bottom-up entrepreneurship. There is an urgent need for convergent action along with the simplification of laws and policies in place to ensure that they have optimal access to the incentives that the targeted policies entail.

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Annexure

Table 1

Categorization of Street vendors under PM SVANidhi scheme based on vendor status

Category	Vendor Status
A	Vendors have been covered in the survey of Urban Local Body and have been issued a certificate of vending /identity card by ULB/ Town Vending Committee.
B	Vendor has been covered in the survey of Urban Local Body and has not been issued certificate of vending/identity card by the ULB/ Town vending Committee
C	Street vendors who were left out of the ULB led identification survey or have started vending after completion of the survey
D	Street vendors of surrounding development/ peri-urban/rural areas vending in the geographical limits of the ULBs (not covered in Survey)

***A Place to Call Home*: Exploring the Intersection of Informal Housing and Informal Livelihoods in Indian Cities**

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The Interconnectedness of Informality: Housing and Livelihood in Urban India

A sixth of India's urban citizens currently live in slums. These informal communities have emerged on the fringes of the city, filling in unutilized spaces such as river banks, railroad tracks, and trash dumps. However, rather than creating inclusive neighbourhoods, cities in India have developed a patchwork of wealthy and middle-class housing juxtaposed with poor informal settlements. The poor who live in informal settlements often work in the nearby homes and neighbourhoods of the middle class as domestic workers, trash collectors, and so on.

Therefore, there has always existed a troubled relationship between the housing choices of the income-poor and the nature of their work. Partha Mukhopadhyay explains: *"...for the urban poor, housing is not just a place to live, it is a means of survival. They often have to make difficult choices, such as living in overcrowded and unhealthy conditions or facing eviction and homelessness."* Jan Breman, professor Emeritus at Amsterdam Institute of Social Science Research states succinctly: *"the question of housing is inherently linked to the informal economy, which is the lifeline of the urban poor."*

It would follow then, that the housing question, in many ways, is a livelihood question. As discussed in her seminal work Dispossessive Collectivism, Ananya Roy suggests that "to *address the housing challenge in India, we need policies that are rooted in a deep understanding of the struggles of the urban poor and that prioritise the needs of the most vulnerable. This requires a shift away from a narrow focus on economic growth and towards a more inclusive and equitable approach that prioritises the right to the city for all residents."*

The design and form of self-constructed houses reflect the need for multipurpose use, such as for work, storage, and commerce, as well as for residential purposes. The location where they live, whether legal or illegal, is primarily determined by proximity and access to employment. Workers may tolerate poor material quality of a house that is well-located, rather than take a structurally "better" house that makes their livelihood unviable. Jan Breman has theorised that informal households emerge from a triple burden *"of poor quality housing, inadequate services, and limited access to public spaces. This not only affects their quality of life but also their ability to participate fully in urban life."*

Housing is not just about the physical structure of a house. As Gautam Bhan emphasises, *"housing is not just houses, it is an assemblage of location, services, work, and tenure."* Residents need access to job opportunities that are situated in or close to residential areas, enabling them to improve their standard of living. The interconnection between housing and livelihoods needs to be acknowledged, and policies must prioritise the needs of the urban poor to create a more equitable and inclusive society.

Confronting the Challenge: Informality in Indian Cities

Countless urban surveys have revealed the harsh reality that low-income households in India are compelled to live in informal settlements that lack basic infrastructure and services. The result is a glaring absence of amenities like water, electricity, and sanitation that are essential for a dignified living. Additionally, housing in urban India must also provide proximity to employment centres, but many low-income households are located far away from job opportunities. Furthermore, tenure remains a crucial aspect of housing in urban India, with many low-income households living in informal settlements, lacking legal recognition and security of tenure, impeding their access to services and urban governance. As K.T. Ravindran advocates, *"we need to move away from the conventional notions of planning and design that are based on top-down, rigid approaches and towards more adaptive, collaborative approaches that take into account the needs and aspirations of local communities,"*

Similarly, Amita Baviskar has written extensively about the impact of neoliberal economic policies on urban development in India, arguing that these policies have exacerbated existing inequalities and contributed to the growth of informal settlements. She writes, *"The spectacular growth of the informal city is inextricably linked to the inability of the state to provide adequate housing, water, and sanitation to the poor, and the withdrawal of the state from social welfare provisions in the name of market reforms"*. The urban environment is not a neutral space but rather a product of the distribution of class and caste privilege, a fact that underscores the intersectional nature of the challenges associated with informal settlements. These challenges are not solely a result of poverty; rather, they are a consequence of the structural discrimination that is embedded in the Indian society's class, caste, and gender systems.

The status quo is untenable as Indian cities are changing. The most significant emerging threat to viability is not that not enough attention is being paid to informal settlements, but rather the land-owning actors are increasingly unwilling to "look the other way." This implies a new intensity to cycles of eviction and resettlement across Indian cities, as well as a policy framework of building new affordable housing in peripheral locations. According to Roy, *"the urban poor face eviction not simply because they lack legal rights or have inadequate housing, but because their presence is deemed to be an obstacle to urban development"*. She further highlights that the origin and formation of informal settlements are deeply intertwined with the structural inequalities and historical injustices present in Indian society as a result of *"state failure and market forces"* and *"embedded in the political economy of urbanisation"*. Informal housing is not so much an aberration or an anomaly, but a vital and inevitable part of urban life in India.

The issue of an appropriate scale of response is a multifaceted one, compounded by the increasingly globalised and decentralised nature of the world. As the role of city-level planners in economic management becomes more significant, the limitations faced by Indian city governments in addressing poverty, expanding labour demand, and influencing larger economic development strategies are becoming more apparent. The 74th Constitutional Amendment assigns municipalities with crucial functions, including social and economic development planning, urban poverty alleviation, and slum improvement. However, city-level economic development strategies in India are primarily determined by state governments, hindering their

ability to effect meaningful change. National policies, subsidies, and trade policies also have a significant impact on economic development outcomes, and the dichotomy between rural and urban areas, as well as the lack of detailed economic data, hampers effective economic development planning. It is crucial for city and state governments to have more granular information on economic variables at the city level.

The current state of the housing stock is insufficient, relatively affordable, but disconnected from workplaces, making it unviable. Addressing this issue requires a novel approach that prioritises the integration of housing, livelihood, and spatial planning. Such a strategy would enhance the living conditions of low-income communities and contribute to overall city development. It is time for policy and practice to recognize that housing is not merely about structures but about improving citizens' lives. The choice we face is not between informality and formality, but between informality with security and informality without security.

Shifting Paradigms, Shaping Policy

To tackle the challenges faced by informal settlements, we require a new way of thinking and working. We must rethink planning techniques and tools, engage more effectively with the state, explore new locations, and conduct research to generate new innovations in informal housing. We must shift the responsibility for providing housing back to employers, agents, contractors, and other actors that provide livelihood opportunities. Achieving this necessitates working across the formal-informal spectrum, drawing on the lessons of social security, and applying them to the problem of spatial informality.

First, we must confront the need to engage with the state rather than keeping it at a distance. Spatial informality can learn from economic informality, which has found ways to engage with the state that respects its informal nature while also seeking some form of regulation or support. For example, new legislation on street vending in India, the idea of "natural markets" as a planning category, or welfare funds for construction workers, whether formal or informal, are examples of how informal workers have been successful in finding ways to engage with the state. *"The state is not an autonomous entity that can be excluded from the workings of the*

informal sector, but a participant whose regulations and interventions can shape it in different ways."

Second, our approach to planning, as well as planning education, must change. Swati Janu states: *"the current system of architectural and urban planning education is highly compartmentalised, producing graduates who are skilled in only one aspect of urban design, with little training in the integration of various aspects of urban planning and design".* Only one architectural school in India teaches a full course on repair, and no engineering college teaches courses on retrofitting services into already-built landscapes. There is a pressing need for a new vocabulary of practice, such as repair, retrofit, and regularisation, instead of plan, build, and allocate, to engage more directly with the social and economic realities of the city, and to expand traditional focus on form and aesthetics into something far more inclusive and useful.

Third, we must make better use of arguments, frame research and advocate practice at the intersection of multiple informalities. For instance, we can argue for improvements in informal housing through its impact on employment. Bhan mentions in his work, that *"it is possible to measure service improvements, such as in housing, by measuring impacts on wages and earnings, in addition to the health benefits of sanitation. We need new connections that recognize and take further all the ways that houses become housing."* One potential solution is to explore the idea of different types of "employers" bearing responsibility for housing for informal workers. This would involve rethinking the spatial, financial, and governance aspects of housing, as well as finding ways to deliver housing entitlements to workers who do not have defined "offices" or "workspaces" in formal work.

It is essential to consider how these solutions can be implemented effectively and sustainably to improve the lives of informal workers and their families. Another potential approach is to shift some of the responsibility for providing housing back to employers, agents, contractors, and other actors that provide livelihood opportunities. Rental housing, for example, has the potential to revolutionise the way we approach housing and work. By embracing a flexible and adaptable approach, we can create a housing system that is both inclusive and secure.

The challenges facing informal settlements in India require a fresh perspective that can address the complexity of the issue. The housing crisis is not just a matter of poverty, but also a consequence of systemic discrimination based on class, caste, and gender, as well as the failures of urban planning and governance. This is where a more holistic approach is needed to bring forth sustainable and innovative solutions that prioritise the livelihoods and needs of the income-poor communities living in these informal settlements.

Informal settlements are often seen as places of poverty and crime, but they are also spaces of community, creativity, and resistance. In the struggle for housing, it is crucial to recognize that the politics of informality is about more than access to resources and services; it is about the recognition and legitimacy of urban life and the fight for citizenship. Indeed, the act of subverting everyday life is a means to create something distinct from the established order that suppresses alternative ways of utilising space. It serves as a way to carve out a space where a different form of social interaction can exist, separate from the place designated by law.

The words of Ananya Roy remind us that informal settlements are not just problems to be solved but also opportunities: *"the challenge of new housing policy is to reconcile the formal and informal, the planned and the unplanned, the large-scale and the small-scale, and to recognize that housing is not just about houses, but about building a better life for all citizens."*

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A National Urban Employment Guarantee Act (NUEGA)

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Introduction

Urban unemployment rates in India have been higher than rural unemployment rates for a long time now. Many datasets reflect that the urban unemployment rate has not just been higher, but the gap between rural and urban unemployment rates has been growing in recent years (CMIE, 2023; Goel, 2022). Even though the rates of unemployment have cooled down from the highs of 2020 during peak Covid-related lockdowns, it has exposed the fact that urban India too has a chronic high unemployment problem. More importantly, it has created the issue of the urban poor facing higher inequalities than the rural poor (Sengupta, 2016).

This leads us to a three-stage exploration. Firstly, the causes of urban unemployment. Secondly, the relationship between urban poverty that is driven by unemployment and food insecurity. And thirdly, the exploration of a solution that sustainably tackles these in an urban environment.

Causes And Relations Of Urban Unemployment And Food Insecurity

The exploration of what causes this unemployment always points firstly to the high rates of migration of rural poor to the urban areas in search of employment opportunities. This search adds to the migrant population in the urban areas with little or no skill other than agricultural knowledge that they possessed but were forced to migrate due to a lack of remunerative avenues in an already saturated agricultural sector in the villages (Phillip, 2021). Moreover, as over half of the Indian population is projected to be urban by 2030, half of that urban population is expected to be made of rural migrants (Sinha, 2022). A common problem that the country's urban governance faces due to this consistent stream of migrants is that of urban food security. Statistics reflect that urban slum populations have a higher prevalence of anaemia among

women, and malnutrition among children compared to that in rural areas (Chaturvedi, 2021; Jha, 2020; Usmani & Ahmad, 2018; Chatterjee et al., 2012).

At the level of solving the problem of unemployment, the solutions have to be sensitive to the skills carried by the rural labourers who migrate to urban areas. A regression-based statistical model showed that a lack of skills was the primary driver of unsustainable urban life for migrant farmers in urban India. Other factors like age and state of migration are not as significant, while even after a long-term stay of over ten years, an uneducated farmer migrating to an urban area was not able to sustain a livelihood (Sravanth & Sundaram, 2022). This makes it imperative to utilise the skillsets carried by the rural farmers to urban areas, by augmenting and complementing them before going for wholesale replacement of skill sets. This might help in aligning a policy with the aim of Recognition of Prior Learning (RPL) under the Skill India Mission (PIB, 2022).

Seeking A Solution Within The Carried Skillset In An Urban Setting

The skillset carried by farmers migrating to urban areas is not just an Indian context, but seen all over the developing world. In this context, an intuitive and almost natural solution crafted by communities facing distress and poverty has been urban agriculture. People and communities with prior farming skills have the world over indulged in cultivation and home gardening in order to reduce food insecurity and create a positive 'maker-space' for themselves as a form of expression in such times, whether it was in a war-torn Iraq or peri-urban Beijing (Tomkins et al., 2019; RUAF, 2018).

This program of urban farming has shown positive effects on the community, not just in terms of poverty alleviation. In fact, such members of the community have gone on to become 'facilitators' and 'trainers' for others in their community (Bessho et al., 2020). They have also worked to transfer modern agricultural skills learnt on the urban farm back to their native rural areas, thus helping to reduce distress-based rural-urban migration in their countries (FAO, 2016). This brings us to a design of such a policy for India. Its technical details can be fleshed out with organised pilots, but its contours must be defined so as to carry a blueprint of actionable philosophy at this juncture.

Havana – A Case Study

Near the collapse of the Soviet Union in the late 1980s, support for the Cuban economy and its oil demands suddenly stopped being met by the Soviets. This led to a food shortage, with an impending 'doomsday-like collapse' of food systems in the country. Central to this crisis was the capital and the largest populated city – Havana.

A solution to the crisis was found in Urban Agriculture (UA), with 30% of the city's area being cleared and expanded for cultivation (Altieri et al., 1999). New sustainable practices and training programs were also put in place (WWF, 2012)

It led to a reduction in the usage of chemical pesticides and the promotion of organic farming, with extension workers receiving much-needed training on the techniques required for organic agriculture. A lot of informal farmland in the urban area was formalised and allotted to the urban poor working on these farms. Reliable infrastructure was constructed for freshwater supply to the UA farms, which benefited the urban poor. High-quality testing labs and seed research programs in the urban area supported the need for organic compost and high-yielding seeds, which wouldn't be otherwise easy to implement in a rural setting. Farmers' markets were created to boost the sales of organic vegetables, which also provided a just revenue discovery to the urban farmers.

Despite low initial yields due to a lack of farming experience and inputs, the movement received comprehensive government support and reached a positive growth rate in the years to come. This approach yielded multiple benefits for Havana (FAO, 2014):

- Improved food supply chain resilience
- Increased access to food, fresh vegetables that are more readily available, and less expensive, and better water and waste management all contribute to enhanced public health, especially in terms of nutrition.

- Conservation of biodiversity: rarer plant species that were previously a staple of Cuban cuisine but are no longer prevalent in rural agriculture were conserved via urban agriculture. Examples include the fruit tree capul, the yam (Dioscorea alata), and the arrowroot (Maranta arundinacea L.) (Muntingia calabura Lin.). Policy on food-species biodiversity conservation for resilience was part of the quest for food security.
- Lowered the consumption of energy
- Employment generation for 40% of the urban population
- Decreased the use of fossil fuels
- By the 1990s, Havana had achieved self-sufficiency in fresh vegetables and potatoes produced for the city and had gone on to supply grains to the rest of the country's population

Adopting such a model for Indian urban areas would require concerted support from the governments of central and local areas to an employment guarantee act that would focus on the urban agricultural skillset, upgrade it, and link it to food security and diversified crop farming.

Urban Employment Guarantee Acts – Propositions And Policy Gaps

An urban employment guarantee scheme is not an entirely novel proposition per say. Proposals for a NUEGA have come from both the public (Express News Service, 2022) and civil society organisations (APU, 2019; Paliath, 2021). All these proposals look at the problem of urban unemployment through the lens of 'urban governance' as the solutions proposed are derived from the functions devolved to municipalities under Schedule 12 of the Indian constitution (GOI, 2021).

A skillset mismatch and fund shortage mean that municipal bodies remain incapable and unable to address the job demand, leaving urban unemployment rates high despite many efforts (TNN, 2016; IANS, 2022). Some states like Rajasthan, Kerala, and Jharkhand, have tried implementing their own urban job guarantee schemes modelled on the MGNREGA for rural India (Dhasmana, 2022). These have yielded some results like the provision of some employment and lower urban unemployment among urban migrant workers in cities. However, they still remain low-skill and ad-hoc solutions that employ people in temporary works like park maintenance and illegal encroachment removal (ZeeBiz, 2022).

This brings us back to the framework that recognises prior skill sets that are carried by migrant farm labourers who move to the city. It must also create permanent infrastructure for the absorption of the workforce, provide upskilling opportunities and increase turnover rates so that people don't keep availing of the scheme benefits repeatedly and can find employment or establish entrepreneurial ventures of their own moving forward (Narayan, 2022).

Towards A Nuega Linked To Urban Agriculture

Here, we explore the feasibility of linking a NUEGA with Urban Agriculture (UA) and RPL for rural migrants to urban areas. The first step in its formulation would be the identification of suitable lands for UA. An estimate based on the 2011 Census places the target of **5% area of cities to be kept aside for UA. This comes down to roughly 11,000 square kilometres of arable land (Jha, 2022).** This land can be availed from 3 sources – peri-urban cultivable wastelands, government lands with agricultural potential and properties lying under legal disputes for over 20 years without development. The Municipal corporation or state government can make a provision for the repossession of such lands with suitable compensation to the judicial bench, and bring the area under UA.

The second step is the identification of land fragment usage and technologies for agriculture. One-third of such land could go towards rainwater harvesting and storage to allow sustainable farming. Other parts could go towards new technologies of UA. For constructed properties, Plant Factory with Artificial Light (PFAL) for indoor agriculture can be used (*What PFAL Means to Urban Agriculture. - Free Online Library*). This can also be augmented with vertical farming, closed-loop aquaponics, micro-fertigation, etc. Vertical farming has been especially effective in indoor settings to set up multi-tier farms on soil-based or aqueous stands. This is a practical intervention for urban high-construction density environments. Aquaponics with cross-breeding of fishes which yields a closed loop of fish feed and crop fertiliser across two beds has been effectively used by certain farmers in urban areas (Aranha, 2020). This can move on to become a skilling component of the scheme. The first 50 days of the NUEGA work may be spent on training on one of the above technologies, with certification under RPL carried out on the last day of accepted work.

The third component is the identification of beneficiaries through NUEGA centres or portals which can be created online or on the Municipal Corporation website. Migrants to the city can register for 150 days of work, of which 50 days shall be the training module. Water resource management would mean all year-round agriculture with 2 cohorts per annum. It can also allow people to allow for specific skill sets required in specific farms and cohorts – people wanting to study water harvesting or aquaponics, precision agriculture, and organic fertiliser use, can be given those specific skills on the farms under UA.

Calculating the maximum possible turnover – if the 11,000 square kms of land can be brought under NUEGA-based urban agriculture, **it will lead to the arable land area of approximately 2.75 million acres.** Assuming 2 people for each acre for farming and 2 for water conservation practices, it can employ roughly 11 million people per cohort – leading to a maximum of **22 million jobs generated each year across 2 cohorts.**
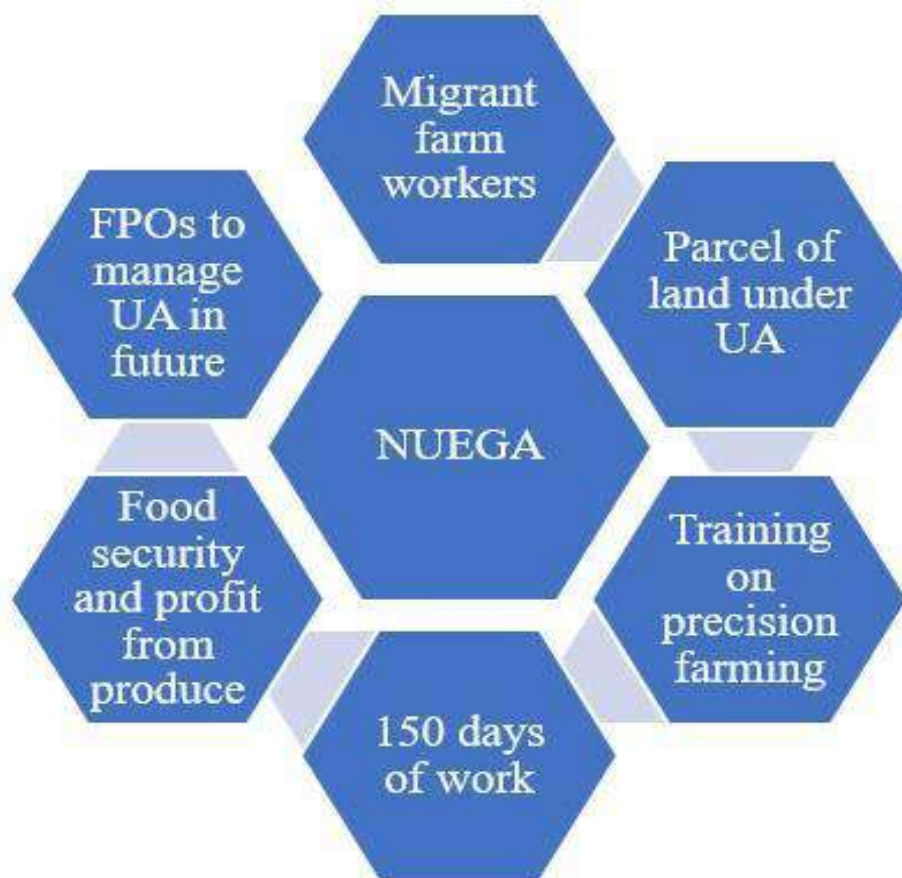
Fig 1 – National Urban Employment Guarantee Act (NUEGA) – structure and cycle

Urban Food And Job Security And Profits From The Scheme

The produce made on such farms can then be divided into 2 components –

1) To be sold at Minimum Support Prices (MSP) on the urban markets. This component shall serve to generate wages for the employed persons and trainers required by the government in the initial cohorts.

2) To be used to supply food to ration shops and outlets serving migrant worker families in the urban area, thus ensuring food security

Furthermore, a repeated application shall not be considered for consecutive cohorts and only 5 maximum cohorts can be applied for by a single person. This will ensure better turnover and newer migrating families and persons getting a shot at guaranteed employment.

Ultimate pathways for the NUEGA beneficiaries

Four major pathways shall be available for transitioning out of NUEGA benefits for the families:

1) After skill upgradation, they may be employed in farms and private companies working on precision farming technologies. They can also become entrepreneurs themselves. An option of forming women-led Self Help Groups (SHGs) post-NUEGA with credit access for trained female farmers can be set up.

2) As trainers on the same farm that they worked on as beneficiaries in the past. This can also reduce the government's requirement for trainers externally, which will ensure that it is more cost and time efficient.

3) On returning to their respective rural areas, they can adopt these practices on their own farmlands or pass the skills to people living in their rural areas or future generations. This has the indirect benefit of preventing future distress migration from rural areas.

4) Farmer-Producer Organizations (FPOs) consisting of farmers trained using NUEGA can be formed and given collective ownership of NUEGA lands to ultimately give control into the hands of the community members themselves.

Potential benefits targeted through the scheme include:

- Reducing urban unemployment, but keeping in mind the prior skill sets that migrant workers carry from agriculture in their native areas
- Establishing urban agriculture as a model for absorption of the migrant labour force, and augmenting the land use in peri-urban areas and cultivable wastelands in cities
- Ensuring skill upgradation and food security for the urban poor
- Providing job security and reducing permanent dependence on the job guarantee scheme without a chance to move out of bare minimum survival cycles

Conclusion

The aim to create a scheme to address multiple problems of modern urbanism in India has led to this proposal of a NUEGA. More importantly, it rests on two major pillars.

The first one is seeing the citizen as an active participant and controller in the process of governance rather than a simple beneficiary to be 'manipulated' (Arnstein, 1969). This aims to push for an end goal of citizen-led citizen-controlled service delivery of employment in the urban agricultural sector.

The second one is to look at a bottom-up solution for unemployment which respects the skillsets carried by citizens as they migrate rather than trying to replace them with something more suited to an already saturated market or giving them 'ad-hoc' employment that does not yield any skill base.

In addition, it looks to provide choices for migrant workers and increase turnover rates in order to lift multiple people out of poverty over a period of time. An attachment of urban agriculture and food security to the aim of job creation means that the results produced by the scheme aren't simply 'economic' in nature but 'embedded' into the social realities and prior

skills that they bring to the urban area. It can also help us tackle multiple Sustainable Development Goals (SDGs) like SDG 1, 2, 8 and 11 together (UNDESA, 2019).

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Urbanisation and cultural identity of cities

Preserving culture and heritage in an era of rapid urbanisation: The city of Hyderabad

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Preserving culture and heritage in an era of rapid urbanisation: The city of Hyderabad

The process of urbanisation, which can be understood as the expansion of cities due to societal transformations and increased migrations, has been shaping and reshaping cities. The growth and evolution of cities have been one of the most prominent phenomena-particularly in terms of their composition, form, size and structure while maintaining their significance for local and regional development (UN-Habitat, 2020). Cities have been known to be crucibles of diversity that facilitate interactions among inhabitants and have been a catalyst for change and progress. The socio-cultural and politico-economic factors constitute the dynamic components of urbanisation (Prasad, 1986), and the built environment is certainly a product of these factors.

Assets of cultural heritage are a crucial resource to ensure sustainable development. The 2030 Agenda for Sustainable Development, in particular, Sustainable Development Goal (SDG) 11 on Sustainable Cities, acknowledges the critical role that culture plays in enabling the economic, social, and environmental aspects of sustainable development. Target 11. 4 of the SDGs highlights, "Strengthening efforts to protect and safeguard the world's cultural and natural heritage is crucial to progressing cities' social resilience." Through its tangible and intangible expressions, the cultural heritage of a place summarises the identity of people, helps shape communities and creates social capital (Riganti, 2017). However, the current trends of urbanisation are causing much pressure on the fragile cultural heritage of cities, and poses a threat of an irreversible loss of the rich history cities encompass.

The process of urbanisation has been viewed as a significant threat to the distinct culture of a place, leading to a loss of identity. Urbanisation, driven by the hegemonic pressures of

globalisation and a lack of community deliberation, is leading to endogenously agreed-upon cultural transformation and a loss of the heritage of cities worldwide. The transformation of cities to meet the contemporary demands of the ever-increasing population has primarily led to urban planners overlooking the prominence of preserving the existing culture and heritage of cities. The city of Hyderabad is no exception.

In its true sense, Hyderabad, the capital city of the Telangana State[1] and India's fifth-largest metropolitan city comprising an area of 650 square kilometres, does not merely reflect the confluence of the north and south of India but is the contact zone of different cultures prevalent in several parts of India. The city plays a pivotal role in urban transition in India owing to 'Cyberabad', which was developed by urbanising agricultural land and villages to a hi-tech, state-of-the-art, globally connected enclave. While donning the hat of one of the most tech-savvy cities in India, the city is the quintessential blend of cultures, traditions, architecture and mannerisms. Hyderabad exudes the fragrance of history, with each phase of the past significantly contributing to the physical and cultural growth of the city. With its contemporary appearance, the city also has enduring signs of its natural and built heritage dating to the Qutub Shahis[2] and Asaf Jahis[3]. The city's natural heritage, including hills, water bodies and parks, also occupy a culturally significant place with granite hills and boulders dating back millions of years. However, the process of rapid urbanisation is significantly altering the cultural milieu of Hyderabad. The rich cultural heritage of Hyderabad city is now trapped between the old and the new, struggling to preserve its culture and monuments amidst the growing demands of the modern city.

A historical retrospect and a dive into the culture of the Hyderabad city

The culture and heritage of the Hyderabad city are its legacy and represent its personality. While Hyderabad has many layers to it, the actual roots of the city of Hyderabad can be traced back to the early 16th century around the Golconda Fort[4] with the expansion of urban settlements along an east-west axis. The Qutub Shahis built Charminar in 1591 and laid down foundations for Hyderabad city on the banks of river Musi since Golconda was becoming congested and it was not possible to extend the city westward due to scarcity of water. The Qutub Shahis are known to have built numerous structures that constitute the identity of Hyderabad

even to this date. However, the urban sprawl has led to the survival of only the Charminar, Mecca Masjid, along with a few aqueducts, mausoleums and bridges of the Qutub Shahi era.

The early Islamic cosmological design of the Charminar, representing the throne of Allah, surrounded by the Mecca Masjid and the boulevard leading to River Musi, set the stage for urban growth that would span hundreds of years (Rajjak, 2015). The city of Hyderabad was built to mark the Islamic millennium, and the credit for designing the city goes to Mir Momin Astarabadi. Aurangzeb's conquest of the Qutub Shahi empire in 1687 led to the shift of the Deccan Sultanate capital from Hyderabad to Aurangabad. With the advent of the Mughals and later the Asaf Jahi, the citadel began to lose its prominence and the city, after a brief transition, began to get on to the axis of growth. The Nizams were subsequently given the responsibility of overseeing the Deccan for the Mughals. In 1724, the Deccan Governor Mir Qamar Uddin declared independence from the Mughal Rule to found the Asaf Jahi dynasty. The urban built-up area was roughly 13 square kilometres in 1750. Midway through the eighteenth century, a period of urban renewal began. By the end of the century, the city had three magnificent bazaars and a wholesale area.

Asaf Jah III and the British East India Company signed a subsidiary alliance in 1789, after which the foundation of Secunderabad was laid. Even to this date, a prominent aspect of urbanisation is the connection between Hyderabad and Secunderabad, located north of Hyderabad. Hyderabad did not experience industrialisation until 1874 (Alam, 1965). However, the urban area had grown to 20 square kilometres by 1865. The inception of the railway station in Secunderabad during the 1870s brought industrialisation and ushered urbanisation into the city. The phenomenon of urbanisation picked up rapidly by the mid-nineteenth century and profoundly changed the city's urban morphology.

Urbanisation and new developments in Hyderabad city during the 1900s

The Musi River flood (1908) destroyed the core and levelled buildings bringing a significant change in the city. It resulted in the sub-urbanisation within the city with heavy migration, especially the wealthy, from the city's core to the periphery around the north and northwest suburbs (Haynes, 2020). This inevitably expanded the urban built-up areas. From 1908 to 1942, the City Improvement Board that the Nizams set up undertook public works throughout

Hyderabad, laid new street patterns, and created economic zones. The urban build-up continued to extend northwest, and the urbanisation of Hyderabad continued owing to migrations of Muslims because of the events of partition and communal violence that ensued in north India. This further expanded the urban area, measuring 27 square kilometres.

Heavy industrialisation was given priority in Hyderabad after independence as part of the Nehruvian growth plan. The formation of Andhra Pradesh in 1956, which Telangana was a part of before the partition of the state, brought a remarkable difference in the socioeconomic pattern of Hyderabad. Barren lands turned into areas with huge buildings, and the population explosion led to the development of a "complex urban settlement" in Hyderabad (Luther, 2006). The emigres from coastal Andhra mostly settled in the expanding frontiers of the city. They were increasingly entrepreneurial and subsequently shaped not only both the future and the city's political landscape (Srinivasulu, 2002).

Hyderabad emerged as a significant player in establishing Public Sector Undertakings (PSUs) during the 1960s and the 1970s. Economic development led to the creation of jobs and better infrastructure, attracting multidisciplinary centres and institutes to establish themselves in Hyderabad. Contemporary urbanisation in India, especially Hyderabad has been greatly aided by a large number of rural-to-urban migrations (Ramachandraiah & Bawa, 2000). Typically, they were not well integrated into the economy and were compelled to live in urban slums in and around Hyderabad. While the city's expansive, expanded contours were flourishing with large roads and facilities to meet the populace residing there, the old city comprising Charminar and other areas with its narrow alleys and colourful bazaars retained its original charisma (Austin, 1992).

The quest for modernity: A tale of the 21st century

Cities were seen as the centres of neoliberal development. Major Indian cities bet on the expanding service sector by building high-tech neighbourhoods (Graham, 2002). The government of undivided Andhra Pradesh during the 1990s established a Public-Private Partnership (PPP) with Larsen & Toubro[5] to build the "Hyderabad Information Technology and

Engineering Consultancy City" (HITECH City) that envisioned Hyderabad to be a hub for the Information Technology (IT) Sector on a global stage. With a massive investment of $350 million, the high-tech enclave developed in the western periphery and subsequently expanded to a 52 square kilometres Special Economic Zone known as Cyberabad. Suburban growth in the 1990s expanded in the western periphery of the city, with globalisation setting newer requirements for urban morphology (Haynes, 2020).

Cities have come into the limelight with an ever-increasing demand for development in India's IT and ITES Sectors and economic liberalisation policy initiatives, which are viewed as engines of growth (Das, 2010). While the rise and development of Cyberabad have led to the creation of a thriving economic urban centre for Hyderabad, it led to severe issues with social and environmental sustainability in cities (Ramachandraiah & Bawa, 2000). It must be noted that Cyberabad emerged from parched agricultural terrain at a significant cost to the vast majority of illiterate and underprivileged farmers. At the same time, other parts of the city had become less resilient to accommodate urban growth as a result of issues with waste management, unchecked and poorly managed urbanisation, neo-liberal changes in the Indian economy, and the prioritisation of Cyberabad, which had led to a worsening of living conditions. (Mariganti, 2011). By 2009, the western periphery expanded rapidly, exceeding the urban growth expected in the Master Plans that were drawn earlier. This resulted in unplanned growth towards the fringes of the city. Coping with this growth, the Outer Ring Road (ORR) was completed in 2015, and the Elevated Metro System opened in 2018. Amidst this, there was a lack of harmony between the old and the new parts of Hyderabad due to rapid growth and change.

The concept of contemporary landscape and architecture has been reduced to tall glass buildings in countries that have just emerged as economic centres versus cities like Hyderabad, which have a history dating back centuries. This leads to the city losing the essence that makes it unique and invites people to feel the difference it offers. Imitation has stripped cities of their cultural identities, transforming them into faceless concrete jungles. The pressures of urban development and the quest for modernity, combined with the lack of an appropriate conservation mechanism, are leading to the loss of important cultural heritage in the city.

A struggle to preserve cultural identity: Initiatives taken by *Hyderabadis* and the state

"Cultural matters are integral parts of the lives we lead. If development can be seen as an enhancement of our living standards, then efforts geared to development can hardly ignore the world of culture." -Amartya Sen

Hyderabad is undoubtedly an archive of time, with every alley of Hyderabad having a story to be told. However, the impressions of the city are now submerging into the rising tides of modernity. The urban processes surrounding the state's IT capital have been specifically engineered to meet the consumption needs of IT employees and their families, dramatically altering the socioeconomic geographies of the neighbourhood. Urban migration is putting immense pressure on the existing infrastructure of cities, calling for the building of new structures resulting in the simultaneous vertical and horizontal expansion of cities. The uniform urbanisation is making cities clones of each other, calling for the need to introspect and revisit our roots.

Hyderabad has been actively involved in heritage conservation since the 1980s. Pursuing the same, it set the standard for listing, notification, heritage regulations, and laid the foundations of the Heritage Conservation Committee (HCC) in 1996. The Urban Development Authority regulations have made it possible to notify heritage buildings. Private individuals and institutions own nearly 70% of the notified heritage buildings in Hyderabad and government departments are responsible solely for the maintenance of government buildings. Individuals possessing heritage structures must seek government assistance or demolition permission, and they see this as a prime reality. It is thus imperative to sensitise the owners of the importance of conservation. Recent events also indicate that several heritage structures that have been listed are on the verge of collapse, for instance the Irrum Manzil palace that was built during the 19th century and the old jail complex in the Monda Market area of the city. Thus, the legal status and notification of heritage are critical in ensuring heritage protection. In the face of a looming threat of rapid modernisation to the historic fabric of urban areas, the government, in collaboration with non-governmental organisations, must play a critical role in campaigning to preserve the city's heritage and environment. It must be ensured that large-scale development projects impacting historically significant areas must undergo a heritage impact assessment.

Efforts to preserve the natural heritage of Hyderabad

The city of Hyderabad lies over a peneplain, the monotony of which is relieved by granite hills with boulders which assume fascinating shapes. These rocks have been here for millions of years and are supposed to be some of the most ancient rocks in the world. While landscape protection laws are absent in India, there are laws that protect heritage[6]. Hyderabad has taken the lead in placing its stunning rock formations, which stand as a testament to time and history and signify the city's environmental, historical and natural heritage, on the "Heritage List" by the government.

Hyderabad is one of the only cities where rocks are protected by law, and permission is required to cut or destroy rocks. The Society to Save Rocks[7] have been performing valuable service in identifying these rock formations. However, there are rock formations in the city that do not fall within the ambit of the protected lists. The boulders of Hyderabad have been an integral part of the city and its identity. Rocks and boulders have been featured in Mughal paintings; the Kalamkari Tree of Life motif has served as centres of pilgrimage and bears inscriptions of rulers that have established their seat around the city from times immemorial. Rocks have also influenced Hyderabad's famous delicacy, *Pathar Ka Ghost*, which is prepared by grilling pieces of seasoned goat meat over a granite slab. While rocks occupy a position of significance, there has been uncontrolled quarrying and blasting of rock sites along with the privatisation of rock spaces, which is anti-environmental, causing a loss of heritage. Rocks are an elementary component of the ecosystem and even support water conservation by recharging groundwater through subterranean passages. With an understanding that not all rocks can be preserved, there is a need to integrate rocks into living spaces and promote conservation. The Monolith Park, established atop a dump yard in the Jubilee Hills area, has been one such attempt to preserve the gigantic rock that now holds a viewpoint.

Amidst the contemporary trend of urbanisation where land is ruthlessly acquired, it is ecstatic to witness the Kasu Brahmananda Reddy (KBR) National Park, a 390-acre public forest. The park was once a palace complex of 400 acres belonging to the Nizams. As time passed, it became a green belt open to the public and maintained by the forest department. The walking

path around the park rises and falls with the change in the topography with an effort to preserve the natural contour. The attempt to preserve the park through the means of protests and campaigns for citizenry to express their voice must be duly acknowledged. Be it attempts to construct multi-level flyovers close to the KBR Park or the decision of government authorities to chop down 3000 trees to make way for a Strategic Road Development Plan (SDRP), citizens and environmentalists have gathered to protect the ecosystem of the city from "unplanned and unsustainable" development by authorities.

Cases of destruction and restoration of heritage sites of Hyderabad

New constructions in the traditional areas of the city indicate the unwelcome ambiguity to the architectural heritage of the city. The centuries-old Laad Bazaar, a prominent bangles market near Charminar which has inspired photographers and poets alike, is now being transformed as the municipal authorities and the Greater Hyderabad Municipal Corporation (GHMC) have embarked on a revitalisation scheme to change the façade of the market and revamp 675 shops on a uniform frontage. This would lead to the loss of an old-world charm heritage that is centuries old.

The GHMC and the Hyderabad Metro Rail Authorities have failed to address the fact that the Sultan Bazaar and the Secunderabad Clock Tower would be threatened by the elevated metro rail passing within thirty metres. While shopkeepers in Sultan Bazaar have been compensated for the demolition of their shops, the cultural and social fabric of the Sultan Bazaar is now frayed, with large metro pillars overshadowing the pedestrian street.

The Mahbub Mansion in Malakpet, built by the sixth Nizam, is a bleak picture of neglect. The majestic palace constructed in classical European and Mughal styles is now in despair. The 42.5 acres of land around the mansion is now a target for encroachment, posing a danger to its structure.

There have also been efforts to preserve and find alternative purposes for spots known for their cultural identity. The British Residency, commissioned in 1803, which now houses the Koti Women's College, is an example. The Taramati Baradari, a Persian-style edifice built on the

banks of the Musi river, has been preserved, is open for tourism, and offers space for events and recreation.

What can be done to preserve the culture and heritage of a city?

The development of cities is a resolute fact, and it is necessary that development must be calibrated. The culture and heritage of the surroundings and its people are a city's greatest asset. They represent an essential resource for sustainable development, calling for recognition of inclusion practices and cultural identities along with adequate financial investments for establishing sustainable and inclusive cities. Heritage conservation must be used as a tool for modern development, and these buildings must continue being a part of the fabric of a city's existence. Cultural initiatives generate financial income for cities and have the potential to influence problematic areas using sustainable planning and design positively. Tourism must be sensitive to local resources and the needs of the population. Cities around the world must also share best practices since many cities have been facing similar challenges.

Public spaces can be shared to nurture social inclusion. Collaboration between activists and stakeholders must be fostered at all levels to meet the needs of a changing urban environment. Governments must integrate heritage urban conservation practices into the cities' development strategies to protect the natural environment. There is a need for the emergence of a nexus between heritage conservation and progress towards inclusive, sustainable communities and cities, as highlighted by Sustainable Development Goal 11.

Conclusion

The contours of a city largely depend on its environment and history. Urban identity is all-encompassing and not merely an expression of 'time' but is a function of buildings, culture, communities and available resources. Transformation of urban zones virtually guided by the west would lead to the waning of identity. The frenetic building of new layouts is usually accompanied by the dismantling of old buildings and heritage structures. Even if they are not demolished, they are often overshadowed by new buildings. With the forces of globalisation touching cities, cities need to revisit their indigenous identity. They must motivate cities to

capitalise on their strengths, most of which are drawn from their unique cultural history. Unless the culture is considered a critical enabler, sustainable development will not occur. Culture must be recognised as a core element in urban policies because cultural vitality permeates all spheres of life and ensures societal well-being. It is only when there is an amalgamation between the old and the new, i.e., the old city of Charminar with the new HITECH City, that the city's development reaches its zenith.

Numerous Indian architects have applied cardinal architecture principles to designs that are sensitive to the local environment, resources and the needs of people. It is thus time that the government starts approaching the holistic development of the city to meet sociocultural targets alongside socio-economic targets. To revitalise cities, there must be an emphasis on retaining the unique identity and not reducing cities to characterless and soulless limitations of cities elsewhere. Conservation of culture and heritage must act as a catalyst for the future, not fossilising the past.

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[1] Telangana, as a geographic and political entity, was born on June 2, 2014, as the 29th state in the Union of India.

[2] Muhammed Quli Qutub Shah (1580-1612) laid the foundations of Hyderabad, and the Qutub Shahi rulers ruled over Hyderabad and the present-day Andhra Pradesh and Telangana for a

period of 175 years from 1512-1687 and contributed immensely to the art and architecture of the well-known monuments of Hyderabad including the Charminar and the Mecca Masjid.

[3] The Asaf Jahi dynasty (Nizams) was established in 1724 and its was the Nizams who gave Hyderabad the status of a 'State'.

[4] Golconda was the seat of power during the Qutub Shahis for over half a century until the formation of a new capital city of Hyderabad in 1591.

[5] Larsen & Toubro is an Indian Multinational Conglomerate with business interests in diverse areas and is among the top five construction companies globally.

[6] The Ancient Monuments and Archaeological Sites and Remains Act of 1958 protects and preserves ancient and historical monuments, sculpture carvings and other like objects, archaeological sites and remains.

[7] The Society to Save Rocks have been working towards preserving and protecting ancient granite formations, a natural, historical and environmental heritage of the Deccan Plateau, India, since 1992.

New Towns in Contemporary Urban Discourse and Labour

A Glance at Electronic City, Karnataka

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Urbanisation patterns in India have become increasingly entwined with a plethora of intricacies, in transitioning from rural to urban to ultra-urban places in the form of satellite cities. Current urbanisation trends in India also point to the formation of 'new towns' on the outskirts of large cities, such as Navi Mumbai in Mumbai, Gurgaon near New Delhi, or Bengaluru's Electronics City (Sood 2015; Bhattacharya and Sanyal 2011; Idiculla 2016). Scholars have admitted that the increasing urbanisation trends have concomitantly also increased inequalities in the existing cities (Mitra 2020), and yet the making of such city-spaces is enthusiastically advertised as a pursuit in improving standards of living or in development itself. More alarmingly however, it is more of a story about changes of coveted forms of labour in city-spaces and peripheral urban areas in reality.

One of the most novel elements of this urbanisation trend in the contemporary neo-liberal paradigm appears to be the escalating introduction of private modes of governance in these spaces. Establishments such as special economic zones (SEZs), industrial corridors, special infrastructure regions, industrial townships or smart cities now have a presence of non-governmental bodies that regulate the administration of such spaces, akin to privatised municipal corporations. These new tendencies are believed to be ushering in "the new urban age" (Murray 2022: xi), in which new urban spaces are carved out to pursue developmental projects. Developers sell the image of luxury and exclusive, contemporary, healthy living in highly secure, green environs, but the architecture of such new towns is openly designed towards the emerging upper-middle and upper class inhabitants and can be both explicitly and covertly exclusionary for a large segment of the population. Thus, the segregation of the new towns is not just spatial, but also social.

The purpose of this paper is to examine the legal resources involved in the establishment of such 'new towns', the nuances involved in the functioning of such spaces and how legal instruments and capital relations play a role in the administration of the lives of the informal labour force in such sites. It focuses on the industrial township of Electronics City in extreme South Bengaluru, which is regulated by the Electronics City Industrial Township Authority (ELCITA). Article 243-Q empowers the state government to declare certain areas to be an industrial township if the industrial establishment of that area is capable of providing municipal services in the specific area. The administrative sway in industrial town regions then remains with establishments responsible for building the industrial townships, and not in the hands of municipal corporations. This indicates how the law has been instrumentalised to circumvent impediments to capital's smooth functioning in order to establish sanitised spaces that function as a "zone of exception" (Ong 2006). These novel regimes of urban governance, also termed "corporate urbanism" (Sood 2015) or "urbanism of exception" (Murray 2017), tend to operate in a space detached from law as the industrial companies and corporations that play the role of privatised municipal corporations are not elected bodies that are usually held accountable as public governing bodies are.

Industrial townships are thus, key legal instruments by which corporate enterprises can exist in enclaves outside the regular legal framework of the state. They represent a new regime of capital-centric urbanisation which emphasises the role of technology in governance and in the process, also seeks to bypass the politics of the local (Townsend 2013).

Electronics City: A Brief Tale of its Origins

The story of Electronics City is a story of spectacular convergence of state and capital. It was envisioned by Ram Krishna Baliga in 1978 to establish Bengaluru (then Bangalore) as the 'Silicon Valley of India'. He was the first Chairman of the Karnataka State Electronics Development Corporation (KEONICS), which was responsible for building the first phase of Electronics City. In 1992, the Electronics City Industrial Association (ELCIA) was formed to promote and safeguard the interests of the companies operating in the industrial-technological hub of Electronics City. Initially, the IT companies had expressed dissatisfaction at their management of the space and claimed that the panchayats were not geared to handle the

necessities of such an industry (Idiculla 2016). Hence, in the year of liberalisation in India, the existing companies in Electronics City mobilised to form ELCIA and proceeded to take on some of the administration responsibilities such as maintenance of roads and other infrastructure. ELCIA was further empowered when the Karnataka government handed over the upkeep of Electronics City's basic facilities to ELCIA in 1997, for which it collected annual maintenance fees from the numerous resident industrial units. In 2003, the Karnataka government amended the Karnataka Municipal Corporation Act, 1964 to introduce provisions for industrial townships.[i] ELCIA then applied for the status of 'industrial township' for Electronics City in 2006, and in 2013 it was declared to be an industrial township.

However, the Bruhat Bengaluru Mahanagara Palike (BBMP) had protested the move to award Electronics City the status of Industrial Township, and the panchayats from whom the land was acquired had also logged their protest (The Hindu 2012). ELCIA also counter-resisted BBMP's resolution as being subsumed under BBMP would mean much higher rates of taxation, a predicament that would have been unfavourable to the profit-oriented industry that was beginning to thrive. The Karnataka government rejected the BBMP's resolution and declared Electronics City as an industrial township and also transferred all administrative rights and duties of the space to the newly formed Electronics City Industrial Township Authority (ELCITA). This declaration ensured that the revenue accrued from the township remained with ELCITA, with the exception of sharing 30 percent of their annual revenue to the surrounding panchayats of Dodda Thoguru, Konappana Agrahara and Veerasandra, from where the land for the township was purchased. ELCITA has since been responsible for the administration of the Electronics City Industrial Township as a bureaucratic arm, providing essential municipal services such as water supply, solid waste management, maintenance of street lights and roads, regulation and construction of buildings and even strategic planning of the region. Bhattacharya and Sanyal (2011) had noted that such new urbanisms entail a trend of integrating their economies with the global market rather than their national economies. Today's mega-cities are not necessarily confined to cities of First world countries in North America or Europe. The trend of 'spatial fix' whereby new urban spaces are carved out to establish satellite cities, which are then imbued with colossal industrial-technological entities and lifestyle amenities that are aligned with aspirations of the urban middle and upper class citizens, has given a significant fillip to the flow of global capital.

ELCITA and the (Privatised) Administration of Electronics City

The Electronics City Industrial Township Authority (ELCITA), formed in 2013, is led by a council (or committee) made up mostly of nominated members from firms based in Electronics City. A chairperson, five members representing the owners of industrial establishments, one representative each from the departments of commerce and industries, town planning and urban development, one resident with experience in urban management, and one representative of the local authorities from the areas from which the industrial township was carved out comprise of the members of the Council. Only the chairperson and the five members representing the owners of industrial establishments have voting and decision-making rights.

Here in itself features of privatised governance are revealed: a council body where the nominated members form government departments are not allocated any voting capacity. Hence, the involvement of the government in the management of Electronics City Industrial Township is rendered infructuous. It is the technocrats that occupy decision-making positions. The point of concern here is that when power resides in members that are not government-appointed, the clause of public accountability also becomes redundant. Elected officials of municipal corporations are answerable to the populace that put them in office. The governance mechanism in industrial townships then entails an element of relative autonomy.[ii]

ELCITA is thus, a privatised municipal corporation that provides most of the essential services such as supply of drinking water, sanitation, solid waste management, transport services, etc. Security is also a key aspect of ELCITA's administration, and Electronics City's security structure consists of a four-tier security management system. In the first tier, companies hire their own security staff, the second tier comprises security personnel hired by ELCITA itself, the third tier involves government-administered security personnel, and the fourth tier entails personnel from the Central Industrial Security Force (CISF). The CISF was initially tasked with providing security for government infrastructure projects and facilities, but today its ambit includes industrial units as well. Allocating CISF security to Electronics City marked the first industrial space in India to be guarded by CISF in 2009 (Times of India 2010).

On another front, ELCITA's SMART CITY initiative is an attempt to convert Electronics City into a digitally governed space. It involves AI tools to track and receive live updates in all

facets of management, daily waste collection, google-powered 'synchronised dynamic traffic signal', and a mobile app for complaints regarding maintenance of the area. The structure of governance in Electronics City is unique in many aspects, with smooth and quick delivery of services. However, the issues of public accountability cannot assuage the concerns of endorsing such a mode of governance. ELCITA makes tall claims of accountability by declaring that all of their information is available and accessible in their online website. The provision of RTI has allegedly not been cleared by the government even when it is advertised in their website and the online grievance redressal portal is always down due to revamping of the website.[iii] Moreover, the conflict resolution mechanism charted out in the Citizen's Charter does not mention the involvement of any judicial body either, and conflicts between the residing companies are either sorted amongst themselves or mediated by ELCITA.

The Labour Dimension in Electronics City

The understanding of the nuances involved in the governance mechanism of Electronics City was imperative for us to move ahead in the discussion of the labour dimension in a space such as this. Ultra-urban spaces like industrial townships or SEZs that are IT hubs generally produce a psychological perspective in the minds of peoples that it is a region of modernised workspace where usually only formal sector employees or white collar workers are to be found. Modernised urban planning, coupled with green initiatives, very smoothly mobilises support from upper class populations and attracts their aspirations of moving away from the extant urban centres to more secluded and less crowded spaces and a subtle understanding that they will be seeing less of the informal workforce. Now, of course this is a false understanding as there is no space that is devoid of the informal workforce. The informal workforce is very much present in uber-metropolitan spaces even if their visibility appears to be low. As aforementioned, green initiatives and entertainment centres for the upper class residents simply suppress the visibility of the informal workforce in such spaces.

Likewise, the Electronics City industrial township also comprises informal workers, mostly through private contractors. However, the labour dimension in Electronics City is almost non-existent as ELCITA does not hire their labour force themselves, but through outsourced

processes via contractors. For the purposes of this paper, field work involved workers from sanitation and construction sectors only.

Sanitation workers are only involved in solid waste management in the township. For liquid waste management, the large companies are mandated to install their own sewage treatment plants while the smaller companies have septic tanks from where ELCITA collects it and transports it over to BBMP for disposal. The sanitation workers in the township work in eight to nine hour shifts and are provided with training and safety gear. However, their salaries are inadequate and they are not formalised (meaning recruited through subcontracting). They receive provident funds and some form of health insurance. Most of them are locals who reside in the surrounding villages belonging to ST and SC categories. The sanitation workers are also not involved in any sort of labour union activity.[iv]

The construction sector workers appear to be in similar condition as construction workers across India, where their precarity remains the same. ELCITA does not have any regulatory framework to manage construction workers, leaving them completely at the mercy of the contractors and their vagaries. The discussion with construction workers for this study entailed issues such as having to bear with their contractors despite wanting to change their employers, as a change of contractor would mean restarting their employment terms all over again and having to go through without PF for a considerable time. To be able to receive provident funds, a construction worker must stay employed under a single employer for a certain amount of time, and a change of contractor would mean restarting the tally all over again.

The central point here is that the labour forces involved in Electronics City were barely managed by the township authority. ELCITA's governance structure absolves them of any responsibility towards the labour force, leaving them with no scope for reformation due to private contractors and outsourcing. The most severe form of labour suppression perhaps is the case of street-vendors. Street vendors were completely and absolutely restricted from occupying any space in the streets of the township, and even the Street Vendors Act of 2014 that has provided street vendors across India with legitimacy and dignity and protection from hasty evictions does not appear to be operable in the township. This situation resonates with Partha Chatterjee's concept of 'political society' again (Chatterjee 2004). The access to streets serves as

a recourse to make themselves visible and is crucial for the informal workforce in order to realise their 'right to the city', which is not plausible due to ELCITA's 'no-street vendor' policy. The consequences on real lived experiences of the informal labour force are immense.

Bhattacharya and Sanyal (2011) argue that there is also a hegemony of 'immaterial labour' in new towns,[v] where municipal laws are strictly enforced to check the growth of the informal economy on public property. Environmental concerns are often cited to mobilise popular support for 'green' urban policies to keep dirty material production outside the limits of the new towns. However, this attempt by capital to side-step informal labour has not entirely succeeded as urbanisation processes also invite employing survival strategies by the urban poor, leading to informal settlements and incursions. Bhattacharya and Sanyal refer to the example of Navi Mumbai as a new town. The new Navi Mumbai economy, fueled by private investment, specialised in knowledge-based industries, excluding people who had lost their industrial employment and those who had been relocated without appropriate recompense for the new town's growth. However, along with the global economy, a local economy has remained and expanded in Navi Mumbai over time (Shaw 2003). Even in Navi Mumbai, a planned metropolis, "unauthorised settlements" constituted 39% of the population in 2000 (Shaw 2003: 6). This encroachment leads to future attempts by state and capital to evict such encroachers and keeps the conflict between capital and labour in an ongoing loop.

However, in the case of Electronics City, ELCITA has made it even more difficult for any scope of encroachment. The real lived experiences of the informal labour force in facing such undercurrents of 'invisibilisation' are then laden with hardships, beginning at the point of creation of such new towns itself, which entails a process of dispossession and the destruction of a previously existing primitive economy (Levien 2013; Chatterjee 2020; Dey et. al. 2013). Moreover, the extant caste structures in the villages before dispossession have a very real possibility of spilling over into the subsequent informal economy that emerges in sites of such new towns post-dispossession.

The establishments of SEZs and industrial townships are becoming a gradual norm, with the role of law and capital restricting any recording of the presence of the informal labour in its vicinity. There are many more industrial townships in planning, not just domestically but in

collaboration with other countries such as Japan. The proliferation of such spaces is not going to halt in the near future, as each of these established spaces function in ways that prolong their existence.

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[i] Karnataka Municipal Corporation Act, 1964. Available at: https://karsec.gov.in/CommonHandler.ashx?id=173

[ii] The Karnataka government however does have the authority to appoint an administrator if the performance of the Industrial township authority is not satisfactory for a period of six months. However, it has never happened. In Section 364(N) of the Karnataka Municipal Corporation Act.

[iii] From interaction with ELCITA officials.

[iv] There was a strange satisfaction among the sanitation workers when it came to their employment conditions. Majority of the workers expressed content about being employed under ELCITA.

[v] It is well understood that the concept of immaterial labour is not without contestation. The dichotomous distinction between material and immaterial labour may not be a succinct and clear one. However, this paper's argument of material labour being devalorised indicates that a certain class of labour force (the wealthier group of citizens working in the IT offices) finds itself more favoured as opposed to lower class populace (who are engaged in more rigorous manual work in the informal economy).

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Electric Buses and the Path Towards Sustainable Public Transportation : A Comparative Model from Santiago, Chile for Mumbai, India

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Introduction

In Latin America, the market-oriented economy resulting from a democratic political system has led Chile to emerge as a regional leader in financial matters. Over the years, an open market setup has offered an attractive business environment, which has eventually led to the projection of the best financial risk ratings in Latin America. Santiago concentrates almost 40% of Chile's population, which makes it Chile's most densely populated urban area. In the year 2019, this urban area had a population of 6.8 million. The city's integrated public transport system (Red Metropolitana de Movilidad) covers the entire area serving such a huge population.

With respect to environmental concerns, due to its geography and variety of climatic zones, Chile is highly prone to adverse impacts of climate change. Currently, the transportation sector in Chile is responsible for nearly 25% of carbon dioxide equivalent (CO_{2eq}) emissions. Research has also shown that the higher rates of motorization, use of private cars and conventional buses have a direct impact on the higher levels of CO_{2eq} emissions. Such factors also play a major role in the increase of nitrogen oxide (NO_3) and particulate matter (PM) in the atmosphere. Several mitigation strategies have been adopted in Chile over the past 30 years, including the use of cleaner fuels and standards of emissions for new public and private vehicles. The long term strategies have also involved the recent addition of e-buses into the city's fleets which has helped achieve remarkable reductions in emissions, especially in that of $PM_{2.5}$ and PM_{10}.
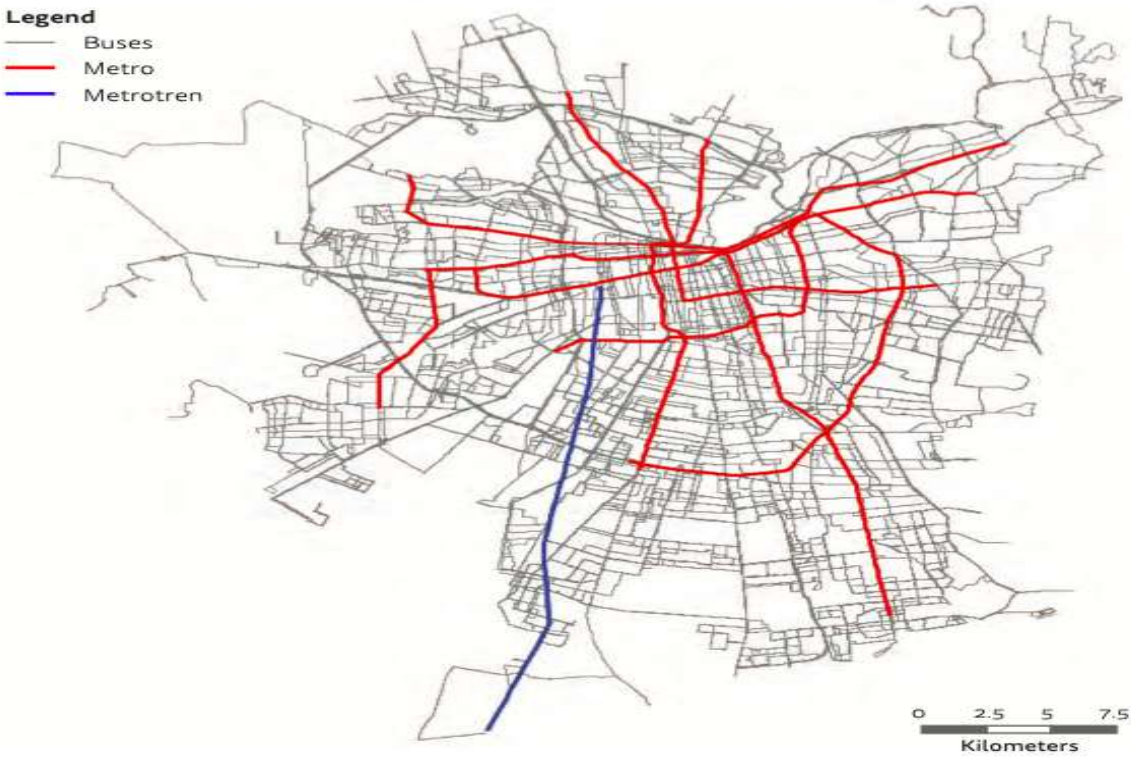
The World Resources Institute (WRI) has termed the Red Metropolitana de Movilidad (*Metropolitan Mobility Network)*; that was called Transantiago until March 2019, as one of the most ambitious projects with respect to transportation in the world. This system, which was put forward in 2007, has integrated thousands of independent bus service providers, local feeder

lines, the main bus lines along with the subway network. The system has three different components, buses; totaling 6756, covering 380 routes on 2900 kilometres of road network, metros which have a total of seven lines covering 140 kilometres and Metrotren Nos, which acts as an extension of more that 20 kilometres for 10 stations. The shift towards electric buses was started in 2014 in association with two companies, Enel X & BYD, an Italian and Chinese electric/ e-bus manufacturing company respectively. Currently, there are six bus operators[3] — Metbus, Buses Vule, STP, Redbus, Subus and Express.

The model of Santiago's integrated public transport system has been praised by experts all around, and it can be considered as a potential model for Mumbai, which is also a large and densely populated city with very high levels of air pollution. Mumbai, a mega city and India's financial hub has experienced unprecedented levels of air pollution in recent years. The city's public transport system is not as well-developed as Santiago's, and it is often overcrowded and unreliable. As a result, many people in Mumbai rely on cars to get around. This contributes to the city's high levels of traffic congestion and air pollution. Despite being located on the coastal part of India, Mumbai has observed a significant change in the levels of air pollution with a high magnitude of change concentrated on the increased levels of $PM_{2.5}$, PM_{10} and NO2 levels. According to Patankar & Trivedi, 2011, "the total monetary burden of these impacts, including personal burden, government expenditure and societal cost, is estimated at 4522.96 million rupees or $113.08 million for a 50-μg/m3 increase in PM10, and 8723.59 million rupees or US$ 218.10 million for a similar increase in NO2."

(Image 1: System Coverage in Santiago, Chile)

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[3] Previously seven, but one of the bus operators' contracts ended in 2019 (Alsacia).

Despite the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) Policy of the government of India providing generous subsidies for the procurement of e-buses to states, the utilization of funds and procurement of electric buses still remains low across states. A significant bottleneck as highlighted by Khandekar, Rajagopal et al. 2018 also points to the existence of information asymmetries as well as the lower conversion rate of fossil fuel run buses to e-buses also remains.

Integration of e-Buses in Santiago

The Chilean government has proactively worked towards ensuring a mobility network which not just focuses on improving and mitigating climate adaptability, but also seeks to ensure that the solutions put forward by them are adaptable in the long run as well. Some of the challenges and the solutions proposed for the same are as follows:
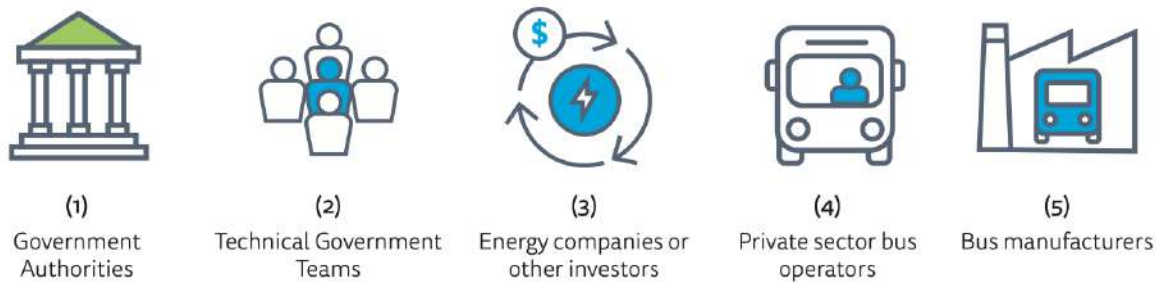
The Challenges:
There have been several challenges which have marred the implementation of the world's second largest e-bus fleet and transportation system at Santiago. While basic challenges

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like the operational level of buses, their level of penetration into the city and the per user cost mitigation factors remained, the few key challenges faced by the Red Metropolitan Network are as summarized below:

1. **Performance and Capability:** Problems such as battery charging, availability of spare parts, measures for the disposal of waste that the shift may cause and availability of alternatives for contingencies have marred the introduction of e-buses. The above-mentioned activities become crucial while determining and selecting bus technology as well as designing service. The capability and performance of the bus fleet is also dependent on the construction of the necessary infrastructure such as, electricity grids, charging stations and energy storage. Adaptation towards the Euro VI as a minimum standard for emission technology is also crucial for analyzing performance.

2. **Operation and Maintenance:** The planning for the rolling out of electricity dependent transportation services is heavily dependent upon the implementation as well as design of the operational plans. The training of manpower for the implementation of the new technology is essential for smooth operations as well as maintenance. The manpower is oftentimes reluctant towards adopting new technologies and it thus becomes more challenging for the authorities to alleviate the fears brought in by the workers and the operators. The timely maintenance of the electric buses is also one of the crucial challenges to mitigate any untoward incident from happening.

3. **Tendering Process:** The new tendering process brought forward challenges for the public transportation system. It was due to the separation of fleet provision and depot ownership from the bus operations on the street. This shift in the business model leads the state to pursue two different companies with independent contracts for the tendering process. This shift would additionally entail different responses by the companies towards incentive measures as well as penalties. The new tendering process divides the operation of buses from their

acquisition. Thus, while the fleet suppliers would be responsible for the purchase of vehicles the fleet operators will operate smaller bus fleets.

(Image 2: Actors involved in the introduction of e-buses)

Solutions:

The Chilean government has proactively worked towards ensuring a mobility network which not just focuses on improving and mitigating climate adaptability, but also seeks to ensure that the solutions put forward by them are adaptable in the long run as well. Some of the solutions proposed are as follows:

1. **Lowered Operational Costs:** It has been understood that the mitigation of the challenge of electric bus operations and the initial costs of investments and capital expenditure is possible. This can be done by ensuring lower operating expenditure incurred in the long run for electric buses than that of its counterparts in the form of diesel buses. The testing of newer technologies can also help in ensuring that newer low cost technologies can be brought forward for a fossil-fuel-free mode of operability. Technical specifications and the minimum level of operational requirements was also determined to ensure the best levels of output generation.

2. **Technological Cooperation and Partnerships:** The initial fears as brought forward by the stakeholders concerned can be alleviated by utilizing multi sectoral forms of collaboration with companies and research institutions across the spectrum. The Chilean solution involved getting into partnerships with various governments to ensure a free flow of research and data on moving towards a path of sustainability on the electric mobility front. This level of testing and

collaboration with institutes led to the finding that over 70% of the existing bus routes can be catered to by the electric buses on a single charge.

3. **Separation of Operations and Maintenance:**

    The model followed by the Chilean transportation network is that of a Public-Private partnership, wherein private bus operators contribute to running the public transportation network. The public transportation authority pays the buses directly as a form of an arrangement has been made under leasing contract. This separation of operations and maintenance related activities thus allows the government to reduce the payment risks, as well as the associated credit and funding related costs.

Drawing Parallels with Mumbai - BEST Buses

The Brihanmumbai Municipal Corporation (BMC), which is the principal urban local body for Mumbai City has estimated a population of 13.8 million for the city in 2021.[4] The Brihanmumbai Electric Supply and Transport Undertaking (BEST) has been providing public bus services since 1921. With a fleet of over 3460 buses, BEST also includes double-decker buses. Despite the offering of over ₹100 crores by the BMC's working group for alleviating air pollution – electric buses were not utilized domestically at a wider scale.

According to Chandrakant Birajdar (Executive Engineer, BEST), "Hybrid buses did not show promise. They have an internal combustion engine as well as a battery. They did not show enough tangible benefits in terms of emissions, operations, and maintenance costs. Thus, we decided to go for battery electric buses only."

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[4] Assumes a 10.7% growth rate since 2011. The population of Mumbai was reported to be 12.5 million in the 2011 census

(Image 3: Timeline of Electric Bus Procurement in Mumbai)

The Faster Adoption and Manufacture of Hybrid and Electric Vehicles (FAME) scheme provided an incentive for both the hybrid as well as the electric buses. A proposal for 100 electric buses, out of which 80 buses in two phases of 40 buses each were allotted, was submitted by the BEST. The Gross Cost Contract (GCC) method was thus adopted by the BEST for the procurement of these electric buses. The first tender was won by Evey Trans Pvt. Ltd., a subsidiary of Olectra Greentech Pvt. Ltd., whereas the other tender was won by Volvo Eicher Commercial Vehicles.

The prospect of ensuring accountability and safeguarding its investments from that of the private bus operators led to the operationalization of a joint ownership mode by the BEST. An equivalent bank guarantee from the private bus operator instead of a complete joint ownership however was settled on by the BEST. The procurement of over 340 AC electric buses (200 midi buses and 140 standard buses) from Tata Motors in 2019 brought the total fleet of electric buses with the BEST to 386. Over 1,235 ICE buses were scrapped by BEST between 2020-22 and it

further aims to scrap 200 ICE buses by 2023.

While the Municipal Commissioner of Mumbai declared that there would be a transition to 50% electric operation of BEST by 2023, the statement put forth by the then Maharashtra state environment minister with regards to the full transition to electric operation by 2028 was more widely accepted. The 2028 deadline is thus considered as a more ambitious timeline than that of the Maharashtra State EV Policy. The smooth functioning of the BEST electric buses is however hampered by a number of factors which are as follows:

The Existence of Cost Risks and Potential for Delays in Rollout due to Lack of Efficient Contracts and Tenders

1. The battery life must be aligned with the contracts as the operational life of the electric buses greatly depends on the battery and motor which are replaceable. As observed in Santiago, Chile, the electric bus contract tenure is 7 years since the battery life is assumed to be 7 years, with a provision for another 7-year extension. Such extensions in contracts also motivate the operators to maintain better service quality.

BEST, Mumbai

	2017	2018 (FAME I)	2019 (FAME II)	2021*	2022 (Double Decker)	2022 (in process)
Procurement model	OP total: 6	GCC total: 40	GCC total: 340	GCC total: 1,900	GCC total: 900	GCC Total: 2100
Number of buses	Midi Non-AC: 6	Midi AC: 20 Midi Non-AC: 20	Midi AC: 200 Std. AC: 140	Mini AC: 100 Midi AC: 400 Std. AC: 1400	10 to 10.5 m AC- 900	Std. AC: 2100
Contract cost ₹/km	—	Midi AC: 55.17 Midi Non-AC: 51.75	Midi AC: 74 Std. AC: 83	Mini: 43.75 Midi: 44 Std.: 54.85	56	46.81
Maintenance cost ₹/km	2 to 3	—	—	—	—	—
Electricity included in the rate?	—	Y	Y	Y	Y	Y
Energy efficiency	1.1 to 1.3 km/unit	—	—	—	—	—
Contract period	—	10	10	12	12	12
Assured km	—	4,000 per month	4,750 per month	5,800 per month	5,000 per month	5,800 per month

Note: OP = outright purchase; GCC = gross cost contract; mini = buses of length less than 8 m; midi = buses of length between 8 m and 10 m; standard (Std.) = buses of length between 10 m and 12 m; DD = double decker (bus length usually 10 m to 10.5 m).

* This procurement was canceled for administrative reasons in February 2022 and a fresh tender was floated later; details of the subsequent tender are not included in this report.

(Image 4: Procurement Model of BEST)

2. The responsibilities and activities which are best served by private bus operators should be transferred to them. Activities like installation of electricity infrastructure and depot development handled by private bus operators efficiently.
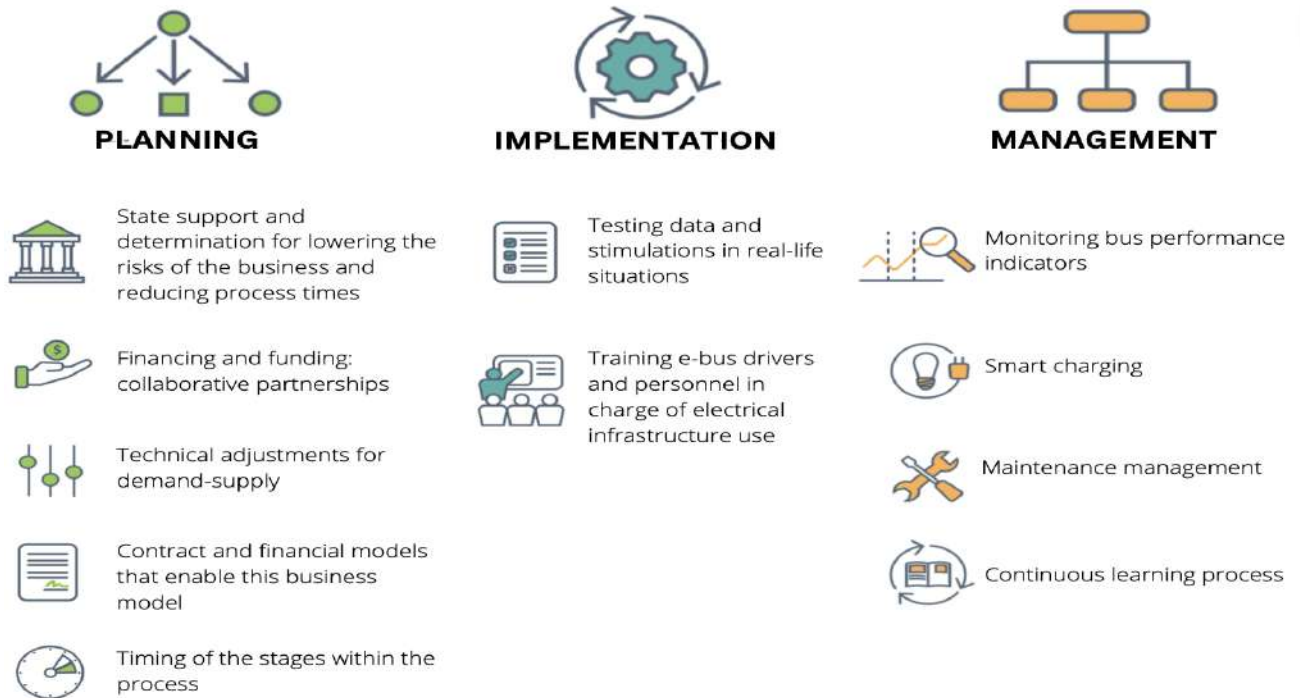
Lack of Skilled and Upgraded Employees of Transit Authorities

1. There needs to be regular refresher courses and training for decision makers, planners and the other staff even though most of the responsibility is on the private operators.

2. In order to avoid complete dependence on hired fleets, the outright purchase of the electric buses must be opted for by the transit authorities in the future. This would also be helpful in utilizing their permanent employees. Such employees need to be trained before the transition to electric.

Lack of Monitoring and Evaluation

1. The private bus operators lack mandatory data sharing on the bus operations and technology mainly with respect to battery health, maintenance cost and energy efficiency. The information provided helps in improving transparency and also, the true cost of operating the electric buses is also informed. Such transparency and sharing of information between transit authorities is crucial in order to identify the potential problems and outliers thereby improving the critical assumptions made.

2. The state of health of the battery and the energy efficiency should be estimated and monitored by the Transit authorities through the use of telematics devices (real-world performance monitoring). The buses should fit the Recommendatory Urban Bus Specifications II (UBS II) and this is the requirement of many ICE bus contracts, which also includes support for Vehicle Health Monitoring and Diagnostics (VHMD).

Recommendations

(Image 5: Recommendation chart from India's experiences)

Data suggests e-buses are a more effective and sustainable way to limit greenhouse gas emissions and reduce pollution. In comparison to the conventional diesel buses, they are typically more comfortable and quiet. However, it's just the beginning towards a long journey ahead, some of the steps to be followed by the Mumbai from the e-mobility experience of Santiago are follows:

1. There needs to be mandatory training at regular intervals for the planners, decision makers and employees to ensure efficiency and transparency through data sharing of private operators.

2. A proper mechanism needs to be in place to estimate the number of charging stations required and already existing within the city. Hence, this calls for due diligence and a sense of responsibility from electricity and regulating companies. There needs to be proper charging facilities available so as to ensure that infrastructural needs are met at the

earliest.

3. The Public-Private Partnership Model should be greatly promoted in the public transport systems which would reduce the cost and service burden on the government. The buses would be well maintained with better service and technology.

4. It is essential to provide performance based incentives to the e-bus operators. There also needs to be a proper mechanism to ensure that maintenance and operation of the e-buses works in a smooth and efficient manner.

5. Adoption of the electric mobility process is still an ongoing process across the world and while the planning, designing and implementation of mass transit might take time. However, it is necessary to improvise on technology thereby, ensure an end to end collaboration with research and development institutions, manufacturers as well as different countries.

Conclusion

To conclude, through this analysis an attempt is made to examine the relevant inputs from Santiago, Chile for structuring public transport systems, particularly those on their journey towards the renewal of bus fleets. The Chilean experience with e-mobility is a great example for cities like Mumbai for future tendering processes along with technological improvements. Such a template would help in designing, planning and implementation of public transport systems and also, reduce the risks involved.

Urban policymakers need to reinvigorate policies to include e-mobility factors and the ways in which it could benefit cities. E-mobility is a key component of a sustainable future, and it has the potential to improve the quality of life in cities in a number of ways. Sustainable transport systems have proven to be the future of mobility worldwide due to its efficiency and environment friendliness. This has led to e-mobility being defined as a solution having presented itself as an affordable and effective alternative to move towards a much cleaner and more efficient world. Urban policy makers thus need to take action to promote e-mobility and help cities move towards a more sustainable future.

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Stories From the Ground

A participatory and multidimensional approach to urban policy making is necessary for ensuring efficiency and inclusivity
In Conversation with Dr. Anusha Kesarkar Gavankar

Dr. Anusha Kesarkar Gavankar is a Senior Fellow at Observer Research Foundation's Centre for Economy and Growth. Her work is centred around how urban planning, innovation and governance engage and interact with the experiences and responses of the city's diverse inhabitants, in the process of urban transformation. She has published internationally and has over two decades of professional experience in the private sector and academia.

Can you share your views on some steps that policymakers can take in making the process of urbanisation inclusive in cities? How can cities be designed with a more participatory approach?

The 74th Constitutional Amendment Act (74th CAA) in India, mandated the devolution of powers to Urban Local Bodies (ULBs) or city governments as the lowest governance unit. State urban planning laws further grant Special Planning Authority status to entities for a notified area, within or outside the jurisdiction of a ULB. Despite these leads, piecemeal interventions and acute gaps continue to mar India's urban growth. It should be understood that lack of a participatory approach diminishes even well-meaning interventions. For instance, in Delhi's Resettlement Programme, squatters of the Sanjay-Amar Colony moved back to live in precarious and unhygienic conditions abandoning their secure resettlement quarters, as the programme failed to take into account their aspirations and needs. Likewise, the camps for farmers' consent about the second phase of Noida International Airport (NIA) at Jewar face protests for fair rehabilitation and resettlement compensation.The pattern repeats in city after city, calling into question existing approaches and presenting the pressing need to bridge urban fault lines in a reflexive, participatory, and flexible manner.

Global models from Cities such as Singapore, London, Seoul, and Kigali that have evolved successful participatory development models illustrate how urban transformation must go beyond optimising land-use and zoning rules and the importance of intensive community engagement and feedback as integral to the planning process. Analysing these templates can provide frameworks for setting the pace for urban India's progression and malleability.The success of the civil society-driven Versova Koliwada makeover project in Mumbai offers a good local template as well. The project gives fisher communities the ownership to rethink their coastal habitats.

Policymakers need to look beyond urban aesthetics and inculcate diverse views within the city's social, political, cultural, and economic fabric. Multi-stakeholder approaches can further cultivate, enhance, and restore India's cities to be simultaneously competent, attractive, adaptable and socially inclusive, providing opportunities for future growth and enabling a fulfilling life.

How can urban policy address the question of gender in building cities for the future?

Women, girls, and gender minorities make up half the urban population. Despite this, policies fail to capture women's experience and understanding of a city that is different from men. City planning often overlooks the rather complex movements of women within the city, as compared to men, including their vulnerability to sexual harassment and gender-based violence. Lack of availability of gender disaggregated data further elevates the challenges for policymakers in understanding what women and gender minorities actually want. Less than 50 percent of the indicators available to monitor the Sustainable Development Goals take into account the gender perspective

Urban planners will have to imagine novel ways of ordering and expressing their spaces to eliminate the unequal power dynamics in urbanisation. Various steps can be undertaken for the same. Women and gender minorities must be adequately represented in urban local bodies at the design, implementation, and governance levels for a gender-responsive approach to building cities. Additionally, policy transformation must be complemented by training interventions, awareness programmes, recalibration of educational curriculums to effect an attitudinal change

and social reconditioning among all stakeholders. Development models must take into consideration local and contextual micro sensitivities. Moreover, gender analysis and data collation at the national and sub-national levels is imperative for revealing trends on the right of way to a city. Global examples like that of Zurich, can show the path ahead. Zurich, has set up a separate Office for Gender Equality, which filters planning decisions through the gender lens and works towards making the city welcoming for all genders. The city provides safe meeting spaces for LGBTQ+ persons, such as the Regenbogenhaus (Rainbow House), to discuss topics and address concerns of lesbian, gay, bi, trans, and queer citizens in Zurich, thus focussing on a whole-of-society approach to urban planning.

It is a huge challenge for Urban Local Bodies, especially in the global south to manage the growing impact of climate change. Financing adaptive mechanisms, for instance, clean-tech seems to be a major bottleneck. What action points do you propose for experts and urban policymakers to deal with the problem?

Cities emit 80 percent of greenhouse gas emissions, putting them on the frontlines of climate shocks such as heatwaves, flooding, and health-related problems. Moreover, more than 80 percent of the annual global costs of adaptation to climate change are estimated to be borne by urban areas. These concerns are accentuated in the Global South, where meeting the growing population's basic needs with the limited resources at the city's disposal takes precedence over sustainability and climate goals and becomes central to building political capital.

ULBs are close to the people and are better accessed to understand on-ground situations. To be able to effectuate change they must partner with multilateral organisations, civil society, social enterprises, communities and private investors to make urban perspectives integral to green investment dialogues. They must speak to ground realities faced by climate policymakers, climate finance practitioners, local communities, urban planners, and municipal finance officials. Such local conversations can create interlinkages and bridge gaps for catering to home-grown green infrastructure demands, allowing for adaptation and periodic refinement of policies.

Additionally, it is imperative to enhance ULB personnel capability through technical assistance and capacity-building programmes for low-carbon and climate-resilient urban planning and

development. Maintaining a portfolio of proposed and ongoing projects can help ULBs frequently examine the gaps in technical and financial assistance and consider the potential for attracting additional financing. Further, in-depth studies of green project concepts, pre-feasibility studies, project financing and late-stage project preparation can help build and sustain an active investment pipeline.

ULBs' financial well-being and know-how are central to making them self-sufficient and accountable for sustainable development. Cities are a nation's engine of growth, and green investment dialogues will have to be more sensitive towards local urban needs and follow a multistakeholder approach for raising unique and diverse green finance flows.

The concept of circular economy has been discussed extensively at a global level as a tool for sustainable development. What does it mean in the context of urban development? How can it assist in building future-ready, climate resilient cities?

Cities are central to the circular economy framework through the core practices of reduce, reuse, and recycle to minimise waste and pollution while keeping resources in the 'loop'. Using nature as a template, the regenerative system of circular cities, from design to implementation, supported by policy innovations, infrastructure development, increased investments and capacity building, makes them different from linear urban models. However, for policymakers, urban planners, and green investors, the current design of urban circularity remains largely focused on parameters related to economic growth, environmental impacts, and technical advancements while overlooking social inclusion.

Efficient circular cities of the future will, therefore, have to address societal concerns and also how they can be more equitable and address the needs of even the less privileged in the planning process. Global examples such as those from Amsterdam which has displayed the first successful urban model of transition to sustainable circularity can show the path ahead. Amsterdam ensures people's basic needs, such as food, water, housing, health, and social care, are provided. The city's circular plan also ensured job growth, reducing unemployment, increasing productivity and offering a reasonable standard of living for all. On the other hand, Paris emphasises social

(solidarity) innovation through the collaborative participation of its public-private-civil society actors in its circular model.Among Indian cities, Surat has received a commendation for its circular economy model. The city has been able to consider the culture and spirit of its citizens in achieving its circularity. Mumbai's Roti Bank initiative works with the city's Dabbawala Association to mitigate its hunger problems. However, these efforts only call for more interventions applying social deliberation. India's Smart Cities Mission, Make in India, Digital India, and Swachh Bharat Mission, have much potential for integrating socio-cultural contexts at the grassroots in the shift to circularity.

Therefore, policymakers are required to look beyond the use and conservation of resources to re-imagining cities as vibrant socio-cultural systems of people and communities. Unless social impediments are addressed through evidence-based policy making, ensuring sustainable and accessible cities for all in the city will remain a power-laden, sluggish and cost-ineffective process.

Collective Action Is Key To Combating Problems Like Climate Change

In Conversation with Prachi Shevgaonkar

Prachi Shevgaonkar is a Climate Entrepreneur and the founder of Cool The Globe - An app and a movement for climate action with users from 110+ countries. Prachi has been awarded by the finance minister of India as the 'Young Change-maker of the year' and is also the first Indian citizen to be appointed on the advisory board of Climate Leadership Coalition, alongside the former Prime Minister of Finland. She was also selected by the Ministry of Environment, UNICEF & UNDP to represent India at COP27 climate summit in Egypt, where she received COP27 Young Scholar Award from the Hon. Environment Minister Bhupender Yadav. In a conversation with us, she talks about the impact of climate change on development and the ways in which technology can be leveraged for sustainable development. She also speaks about the challenges as well as opportunities, the civil society might face in dealing with climate change.

Thinking of Urban Sustainability, first thing that comes to mind is Climate change and you've rather built an innovative method to fight the same. How has your journey been like? What are some challenges you've faced?

The journey towards fighting climate change started with a simple google search that told me that climate change is one of the biggest problems facing the world and that we have just three decades to avoid the worst effects of the same. This fact troubled me a lot and I was motivated to do something about it, atleast at my own level. Moving ahead, I started reading more about it and my family and I took a simple pledge of reducing our own greenhouse gas emissions by 10 percent each year. After a due amount of research, I could build a mechanism that helped me measure emissions behind my actions. The biggest challenge was to convince people to take change and I understood that numbers are important. Gradually, I started taking calculative

measures that helped reduce emissions of my actions and my friends, neighbours and relatives followed.

Cool The Globe was thus developed as a citizen-led app for climate action. While on the app, every user has a monthly as well as an annual target to reduce their greenhouse gas emissions. A list of more than hundred customisable climate actions is available for them to be able to make change. For instance, if a user travels by a public transport instead of a private vehicle such as a car then they might see a saving of 2.3 kg of COeq of greenhouse gas emissions on the app. Similarly, all actions get recorded on the app and a person is able to see his/her/their savings on a monthly basis.

We also have a very interesting feature on the app called 'global metre' that shows a real time update of how everyone across the platform is doing to save emissions, further motivating them to take careful actions.

That seems very interesting! How do you incentivise people to use the app and take action regarding climate change?

Primarily, talking to people about climate change in their language and context was important to make them realise about the problem and that their small actions can make great contributions. Showing people the ways in which climate actions are intertwined with their day to day life is a game changer. Biggest incentive for Coll The Globe has been that it has been able to simplify climate change for people thus making them believe in the fact that action could be taken from within their homes itself!

What are the kind of responses you've received/change you've recorded because of app usage?

As mentioned previously, one of the major challenges that we face was in convincing people that change is possible and that with their daily actions. For this purpose, we started making short

video campaigns and the impact was magnanimous. People understood the message and shared videos among their friends that ultimately received millions of views.

Our initiative also received support from media agencies, policymakers, entrepreneurs and the larger civil society. I have been in touch with so many people who have been able to effect change by saving emissions. I remember a nine year old girl emailing me about the way in which she saved 15 kg CO2eq emissions by reusing the sarees instead of buying new ones.

As of today, we have reached out to around 25 million people around the world and have almost 40,000 users in over 100 countries that have come together to fight climate change. Support of millions of people over the years has been overwhelming. It has been instrumental in our growth.

What will be your message for the youth as they begin to innovate solutions for complex developmental challenges?

I started my journey as a young girl who wanted to make a difference but thought only celebrities or world leaders had that power. Today, Cool The Globe has been able to help in saving almost 1 Million kg of GreenHouse Gas Emissions - a milestone that has been achieved through collective effort of all across the globe.

Youth has a zeal to commission change and make a difference and thus are key to the climate change movement. We have just three decades to avoid the worst effects of climate change that will not just determine our present but also the life of future generations to come. This is not only a challenge but also an opportunity to make a great impact. In a world, where all the youth becomes a changemaker there is a great possibility to find solutions to common problems. I invite everyone to join our climate change movement. Let's build the world - together.

Artist's Take

Depiction of Urban inequality - Specifically the Differential Access to Income

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Brief Description - The cartoon is representative of the problem of inequality in India. It is a fairly accurate description of the global state of affairs when it comes to access to wealth. As depicted in the cartoon, the rich man is choking on a bundle of notes, while the poor man has nothing but a coin for himself. The differences in terms of clothing, facial expression, and manner further illustrate the disparity between the two societal categories.