

NAGARLOK

Quarterly Journal of Urban Affairs



ISSN-0027-7584



Centre for Urban Studies
Indian Institute of Public Administration

NAGARLOK

Chairman, Editorial Advisory Board
Surendra Nath Tripathi, Director, IIPA
and Editor, *NAGARLOK*

Members

ROY W BAHL
Regents Professor of Economics,
Andrew Young School of Policy
Studies, Georgia State University,
Atlanta.

SANJAY KUMAR
Joint Secretary ((NULM)
Ministry of Housing and Urban Affairs
Government of India

O.P. MATHUR
Professor of Urban Governance,
Institute of Social Sciences,
New Delhi.

K.K. PANDEY
Professor of Urban Management,
IIPA, New Delhi.

P.S.N. RAO
Director and Professor,
School of Planning and Architecture,
New Delhi

ANWAR SHAH
International Consultant
of Public Economics, Brookings
Institutions, Washington DC,
Centre for Public Economies
SWUFE.

Member Secretary

V.N. ALOK
Associate Professor, IIPA and
Assistant Editor, *NAGARLOK*

Copy Editor: USHA JHA

About the Journal

Nagarlok emphasises research and scholarly analysis on urban themes: urban life, metropolitan systems, urban economic development and urban policy. With a cutting edge approach to linking theoretical development and empirical research, *NAGARLOK* encompasses key material from an unparalleled range of critical, comparative and geographic perspectives.

Disclaimer

The views expressed in the items published in the journal are those of the authors and do not in any sense represent those of the IIPA, publisher and editor. Copyright of the materials published belong to the IIPA but they may be reprinted/published elsewhere with our formal permission and acknowledgement to this journal plus a complimentary copy to our library.

All contributions should be sent to the Assistant Editor, *NAGARLOK* at nagarlok@gmail.com. Business enquiries should be addressed to the Registrar, IIPA, I.P. Estate, Ring Road, New Delhi-110002.

Subscription Rates:

Annual subscription: Rs. 200
Single copy: Rs. 50

NAGARLOK

Vol. LII

January-March, 2020

Part 1

	PAGE
Articles	
Covid-19 and Multi-order Federalism in India <i>V N Alok</i>	1
Financialisation and Urban Governance – Patterns from Bruhat Bengaluru Mahanagara Palike <i>Shankari Murali and S. Manasi</i>	6
Stairway to Home: Addressing Housing Shortage through Microfinance <i>Debarati Bhattacharya</i>	39
Study of Gender Preference to Parameters of Public Transport Evaluation – A Case of Bhopal <i>Rahul Tiwari, Kshama Puntambekar and Purnima Parida</i>	48
Investigating Open Space Reservation as the New Urban Commons: A Case of Chennai City <i>Kiranmayi Raparathi</i>	57
Environment and Real Estate Conundrum – A Case of Okhla Bird Sanctuary <i>Reema Bali and Aparna Soni</i>	68
Book Reviews	90

Covid-19 and Multi-order Federalism in India

V N ALOK*

ABSTRACT

In India, the pandemic due to novel corona-virus has been attempted to control in its initial stage through centralized institutional arrangements with synergistic relationships of all state governments. Public servants and security forces were responsible to enforce lockdown. These arrangements, in the exit plan, need to gradually give way to the decentralized responsibilities of local governments including panchayats and municipalities. The contagion can only be prevented by changing human attitudes and behaviours. Local governments and community, closest to the residents, are best placed to bring this change and inculcate social distancing on sustainable basis. Hence, the role of local governments must be prominent, at least, in the Disaster Management Act, 2005.

Keywords: Covid-19, Corona-virus, Federalism, India, Local Government

Unlike many federations in the world, pandemic of covid-19 in India brought new vigour to federalism and devolved governance. Union and 31 state governments (including three union territories with legislative assembly) are cooperating and acting almost uniformly. The Prime Minister, Narendra Modi announced national lockdown on March 24, 2020 initially for three weeks. Through video conferencing, the Prime Minister consulted, chief ministers of states before notifying the national shutdown. Though federalism and devolution have been enshrined in Indian Constitution and powers and functions are clearly divided between the union and states by drawing Union and State Lists in the 7th Schedule. Both levels of governments have powers to enact legislations on the subjects enumerated in the Concurrent List. However, 'Disaster Management' is not specifically mentioned in all the three lists of the Seventh Schedule of the Constitution.

Such unlisted subjects come under the residuary power of the union under entry 97 of the Union List. Therefore, Indian Parliament

*Associate Professor, Indian Institute of Public Administration, New Delhi.
Email: vnalok@gmail.com

has the competency to legislate on the subject. However, the primary responsibility of managing disasters rests with the state governments. Moreover, 'Public Order' and 'Public Health' have been part of the state list since the framing of the Constitution of India. Further, consequent upon the 73rd and 74th amendments to the Constitution in 1993, 'Public Health' found place in the 11th and 12th schedules. As a result, *panchayats* (rural local governments) and municipalities (urban local governments) have been assigned civic powers to render 'public health', to the residents in their respective jurisdictions.

Both Union and state governments have the responsibility to prevent "*...the extension from one State to another of infectious or contagious diseases....*" (entry 29 of the Concurrent List). In addition, part XVIII of Indian Constitution provides emergency provisions. Till mid seventies, proclamation of emergency was permitted, under Article 352, on three grounds- war, external aggression and internal disturbance. On the third ground, i.e. 'internal disturbance', Mrs Indira Gandhi, the then Prime Minister, imposed emergency by invoking (misusing) Article 352, in June 1975. Accordingly, civil rights of citizens were curtailed considerably. In 1977 as a result, Congress Party led by Mrs Gandhi, lost the general election miserably. In 1978, through the 44th Constitutional Amendment, the Janata Party substituted "internal disturbance" with 'armed rebellion'. However, another provision, i.e. Article 355 still allows the Union to give directions to the states to protect the latter against 'external aggression' and 'internal disturbance'.

Under emergency situation, the Constitution allows the Union to give executive directions to the states and to the legislatures on matters which fall under State List such as law and order and public health. Even under normal circumstances, Article 257 stipulates that the states should not exercise the executive power in a manner that impedes or prejudices the executive power of the Union.

The outbreak of pandemic is arguably a case akin to a situation of 'internal disturbance', but cannot be a case for the promulgation of emergency by invoking Article 352 as 'internal disturbance' had been deleted in this Article.

Statutes Applied to Fight Covid-19

Irrespective of the emergency provisions in the Constitution, Union and states have the statutory basis to deal with the covid-19. They are the Epidemic Diseases Act, 1897 of 19th century vintage, enacted by the British ruler. Under this law, the power of the Government of India is restricted to "*the inspection of any ship or vessel leaving or arriving at any port (in India) and such detention thereof*".

The second legislation is National Disaster Management Act, 2005 (DM Act). The Parliament enacted the law by invoking Entry 23, namely, *“Social Security and Social Insurance; Employment and Unemployment”* in Concurrent List of the Constitution of India. Hence, it empowers Union and state governments to frame rules and issue executive orders.

The DM Act is unambiguous in assigning powers to Union and state governments. Section 62 of the DM Act stipulates extraordinary powers to the Union government by which any authority in Union ministries, statutory bodies, state governments, etc. is bound to take direction from the Ministry of Home Affairs, Government of India. The secretary of this ministry is an ex-officio chairperson of the National Executive Committee under Section 8 of DM Act. The committee assists the National Authority that is created under Section 3 and headed by the Prime Minister of India.

The authority exercised its power on March 24 in the application and implementation of various measures including nationwide lockdown, mandatory quarantine of certain cases, closing of all commercial and private establishments (except of essential items and health infrastructure), industries, hotels, educational institutions, places of worship of all faiths, political gathering, and travel bans by air, rail and road. Media, fuel stations and essential goods store, etc. have been exempted. In the normal circumstances, powers to lockdown, police, public health, shops and establishments are all in the hands of the states.

In addition, national plan is drawn up under Section 11. Accordingly, states had been warned early on February 4, 2020 by referring National Disaster Management Plan, 2019 and the Biological Disaster Management Guidelines, 2008. Both are recurring exercises under the law.

At the state level under Section 14, a ‘State Disaster Management Authority’ is required under the chairmanship of the Chief Minister of the respective state. This authority is assisted by a State Executive Committee headed by the Chief Secretary of the State. The committee prepares the State Disaster Management Plan after following the guidelines of the National Authority and a select consultation with the district and local authorities.

State and districts are authorized under Sections 24 and 34 to “control and restrict” the entry of any person and vehicular traffic from or within, the vulnerable or affected area.

Further, Section 31 of the DM Act provides for ‘district plan’ by the district authority in consultation with local authorities subject to

approval by the state authority. The provision is akin to Article 243 ZD, a mandatory constitutional provision, which envisages 'District Planning Committee' (DPC) for spatial planning, infrastructure development, environmental conservation, etc. State governments have been provided the provision of DPC in their respective Acts but seem to be reluctant to make them operational. As a result, the process of decentralized planning is hampered and associated capacity development is completely denied.

Penal provisions in Chapter 10 of the DM Act pave the way of the security personnel to take coercive measures against the offenders. However, medical professionals are not covered under this provision. Recent incidents of stone pelting and misbehaviour with doctors and nurses compelled the Government of India to introduce penal provisions protecting healthcare service personnel and their property against violence. For the purpose, an Ordinance has been promulgated on 22 April to amend the Epidemic Diseases Act, 1897 in the light of the pandemic situation of Covid-19. This could be a permanent provision to maintain the morale of the healthcare professionals and discipline the miscreants.

Fiscal Transfer Mechanism in Emergency Situation

Union government provides the financial assistance to the states to meet expenditure on specified natural or manmade disasters on the basis of the recommendations of the Union Finance Commission. The commission is mandated to make recommendation for two types of funds, one for disaster response and the other for mitigation. These two funds are envisaged under the DM Act. These funds are to be set up at three levels, i.e. national, state and district. Hence, for disaster response, the DM Act stipulates three funds called National Disaster Response Fund (NDRF) at national level, State Disaster Response Fund (SDRF) at state level and District Disaster Response Fund (DDRF) in each district. Similarly, the DM Act provides National Disaster Mitigation Fund (NDMF) at national level, State Disaster Mitigation Fund (SDMF) at state level and District Disaster Mitigation Fund (DDMF) in each district.

The 15th Finance Commission in its first report for 2020-21 has merged these two funds into one and calls it as National Disaster Risk Management Fund (NDRMF) and State Disaster Risk Management Fund (SDRMF). Two windows of DM Act- 'mitigation' and 'response' are parts of this fund. However, resource requirement needed to fight covid-19 is enormous and cannot be met through the usual financial provision recommended by the Finance Commission constituted every fifth year. Hence, the Government of India and Reserve Bank of India have to take fiscal and monetary measures respectively to target 800

million people for three to six months, at the least. These measures could be related to social security and welfare including direct benefit cash transfers in the bank accounts of unemployed workers, poor women, disabled people and the like. For the purpose, additional resources need to be transferred to states. In addition, there are number of other big windows in Prime Minister Care Fund in which almost every income tax payer contributes liberally.

The Last Mile

It may be observed that the pandemic is being controlled through centralized institutional arrangements with synergistic relationships of all state governments. Public servants and security forces have been enforcing lockdown. These arrangements, in the exit plan, will gradually give way to the decentralised responsibilities of local governments including *panchayats* and municipalities.

The contagion can only be prevented by changing human attitudes and behaviours. Local governments and community, closest to the residents, are best placed to bring this change and inculcate social distancing on sustainable basis. Hence, the role of local governments must be prominent, at least, in the DM Act.

REFERENCES

1. Government of India (2005). The Disaster Management Act, 2005 Arrangement of Sections.
2. Government of India (2019). XV Finance Commission: Report for the Year 2020-21.

Financialisation and Urban Governance – Patterns from Bruhat Bengaluru Mahanagara Palike

SHANKARI MURALI*
S. MANASI**

ABSTRACT

The article addresses the pattern of financialisation of municipal finance in India, mirroring the global trends. It explores the requirement for different sources of finance and the conditionalities they impose on the city government. The shrinking sources of municipal finance and the growing need for civic infrastructure are leading to a growing gap between municipal finance requirements and resources leading to innovative sourcing of finance from a range of agencies, with most of them being outside Government. The article focuses on the Bruhat Bengaluru Mahanagara Palike (BBMP). As a result of the series of steps of financial mismanagement, the city has mortgaged many of its key properties and requires even more capital. Such evidence of financial mismanagement raises fundamental questions on the urban financing and urban governance model, not just in Bengaluru but throughout India and other cities of the Global South. These questions bring to centre stage the urban governance institutions and processes and their need to recognise and incorporate accountability to citizens and promotion of their participation.

Keywords: *Municipal finance, National Urban Policy Framework, Bruhat Bengaluru Mahanagara Palike*

INTRODUCTION

India is experiencing an unprecedented growth in its urban population¹ unmatched in scale across the globe, with the exception of China. While urban growth in India is not the highest in percentage terms, the absolute numbers are truly astounding. While it took 40 years from

*PhD Fellow, Centre for Decentralization and Development, Institute for Social and Economic Change, Bengaluru. Email: shankarimurali@gmail.com

**Associate Professor, Centre for Research in Urban Affairs, Institute for Social and Economic Change, Bengaluru. Email: manasi@isec.ac.in; smanasi69@gmail.com

1971 for the urban population to rise to 230 million, it is estimated that it will take only 20 years from 2008 for the urban population of India to increase by another 250 million. The growth of cities is being keenly studied not only from the perspective of the cities and their residents, but also in the context of the overall national economy as cities are being proclaimed as “engines of growth” (Mukhopadhyay 2018). The charm of urban life, especially for rural migrants and the peripheral areas, is the civic amenities and the allure of organised structure of urban infrastructure. The creation of this infrastructure for all Indian cities is indeed a daunting challenge. These bustling engines of urban growth require adequate and sustainable fuel in the form of funding. This growth is not spread evenly across the country but is concentrated in certain Indian states, especially around some of the existing mega cities. This article studies the various finance options available for urban growth and development, globally and in India, with special focus on the large and fast growing city of Bengaluru.

The article is divided into seven sections. After this introductory section, the second section states the need for a robust and accountable urban local government, within the public finance and administrative framework. The third section explores the devolution of the 3Fs of Funds, Functions and Functionaries, and the imperfect fiscal federalism. Due to incomplete devolution and the yawning gap between the urban local bodies’ revenues, their responsibilities and funds, these mismatches lead to deficits in both municipal finance and the physical and economic infrastructure. The fourth section outlines the different funding agencies which are required in the wake of this deficit and the conditionalities they impose on municipal governments. The fifth section delineates the Indian urban finance scenario of India, in terms of the concept of economic financialisation and the different manifestations of Value Capture Finance (VCF), which is defined as an innovative urban-development funding and revenue generation tool. This is seen in the larger context of the significant global trends in urban finance. The sixth section deals with the National Urban Policy Framework of the Government of India in terms of how it handles the critical issue of urban finance. The concluding section analyses the significant policy implications pertaining to urban finance and local accountability.

Municipal Governments and their Citizens

The need for a municipal government and its relevance to the urban citizens is the focus of this section. It is imperative to establish the need for the municipal government, its scope in terms of functional responsibilities and the means by which it funds its functioning.

SECTION II

The Need for Urban Governments

The prevalent neoliberal paradigm of less government, at all levels – national, regional and local, requires a fundamental examination of the need for governments, including the local urban government. It is pertinent to note that even the neoliberal theoretical milieu is the local government which is most preferred or least criticised. (World Bank focused on Municipal governments from its initial forays into the urban sector in 1972). It is due to the relative efficiency and comparative economies at different levels of government that each level enjoys certain advantages vis-à-vis its counterparts at other levels of government. The only government worth retaining in the era of Thatcher-Reaganomics (the neoliberal paradigm) of “Steer-not-Row”² was the local government. The Decentralisation theory, as propounded by the economists’ trio of Arrow-Musgrave-Samuelson (AMS) and formalised into the Decentralisation theorem by Oates (1972), formed the theoretical basis of the neo-liberal manifesto of the IMF and World Bank in the form of the Washington Consensus. Economic and fiscal liberalisation, which was held out as the panacea for all the developing countries on the brink of economic collapse, in the 1990s and beyond, came coupled with shrinking governments and decentralisation.

The essential factors which form the *raison d’etre* of local governments and role performed by them are enumerated below:

- (i) Provision of civic services and infrastructure;
- (ii) Regulation of market failure and government failure;
- (iii) Accountability of public/ civic service providers to citizens; and
- (iv) Lingering concept of rural-urban dichotomy

Citizenship in Urban India

Accountability is studied as a relationship between two sets of actors, therefore, there is a need to focus on both – not only the actors who are to be held accountable, but also those who they are accountable to. The urban Indian concept of citizenship is relatively less developed than the identity of persons within their villages. Some of the features of urban citizenship are:

- (i) The urban citizens are not traditionally involved in the affairs of the city due to weak local governments. The colonial tradition of weakening the local leaders has continued to be followed

even by post-Independence national and state-level political leaders.

- (ii) The traditional urban residents are increasingly being supplanted by migrants – both from other cities and towns as well as from the countryside. The 2011 Census of India shows the deepening of internal migration trends in urban centres. Cities are the hubs of economic growth and development and this, along with the stagnation of the rural economy, is leading to “urbanisation of poverty” as outlined by Harris and Todaro (1970). Thus, the urban populations are getting concentrated at the polar ends of the economic spectrum, extremely well-off and economically deprived.
- (iii) There is a trend for migration motivated by economic reasons. These economic migrants continue to have strong cultural and emotional ties with their places of origin and they typically tend to participate in the political processes (casting their votes, at times en masse, with their own community) in their ‘native’ place rather than their place of residence.
- (iv) There are barriers to their enfranchisement in cities, especially for the newer residents and migrants.
- (v) There is a resultant situation of no obvious benefits for voting for the local leader coupled with the bureaucratic hurdles in getting enrolled in the local electoral rolls, leading to a weak nation and exercise of citizenship in urban India.

SECTION III

Funds, Functions and Functionaries and Fiscal Federalism

The real test of the effectiveness of a government in service delivery is through the study of its devolution. The three Fs of devolution are: Funds, Functions and Functionaries, in that order.

Functions

The Constitution in its Part IX A and 12th Schedule prescribes the functions / services to be provided by the city governments. There are 18 functions specified to be delegated to municipal bodies by the state governments. The Ministry of Housing and Urban Affairs (MoHUA) has further specified two sets of functions to be performed by urban governments:

- (i) Obligatory-31 including basic infrastructure of water, sewage, public street, lighting, registration of births and deaths.

- (ii) Discretionary-23 including construction of parks, orphanages, etc., transport facilities, low-income housing, planting of trees on the roadside, etc.

The actual functions devolved, in terms of activity mapping for the local governments (both rural and urban), depends on the 2nd tier of government, the state governments. This position of devolution of functions to the local bodies varies across different state governments. Since the actual devolution from the states to the local bodies is not complete in terms of the 12th Schedule and moreover, as there are many discretionary functions assigned to Urban Local Bodies (ULBs), the actual functions performed by them may not be in respect of all the 18 areas listed for them. In addition, many of the functions are actually assigned to specific parastatals of the state government, as is the case in Bengaluru with the Bengaluru Water Supply and Sewage Board (BWSSB) created for this function; Bengaluru Electricity Supply Company (BESCOM) providing electricity to the city and other surrounding districts; the Bengaluru Development Authority (BDA) responsible for town planning, land use and coordination with the BWSSB, BESCOM and other parastatals; and so on.

Functionaries

The requirement of sufficient functionaries is to discharge the devolved functions under the elected representatives. While over-deployment of manpower will adversely affect the efficiency of the bottom-line of cities, the full complement of manpower is required to ensure smooth discharge of the city's functions. This aspect has been studied in the context of the Bruhat Bengaluru Mahanagara Palike (Sivanna 2012). The study shows that the Bengaluru city administration has not been restructured or reviewed post-Independence. Therefore, the restructured, expanded Bruhat Bengaluru Mahanagara Palike suffers from an overworked workforce, outdated culture, ill-equipped to respond to the pressures of the rapidly-evolving urban scape.

Funds

The term "accountability" is defined as "*the relationship between a public actor and citizens to explain the actions undertaken in the public sphere, using the classical framework of public administration in India* for the purpose of this research. The cornerstone of accountability is the aspect of financial accountability, to the giver of the funds.

The requirement of a public agency to provide services to citizens has been established in the previous sections. However, this does not imply that the service will be owned, provided and regulated by the

public agency itself. The neo-liberal world of minimum-government maximum-governance has imposed restrictions on the size and reach of public agencies, ostensibly to cut down on inefficiencies of production and delivery. This has spawned the entire spectrum of the Government - Private continuum as can be seen in Chart 1.

The matrix in Chart 1 reveals that there should be government ownership and management only in cases where there are problems of externalities, information asymmetries, agency problems as well as distributional concerns. When both agency problems and distributional concerns are present, the matrix suggests private ownership and management with regulation and targeted subsidy. In case there are only agency problems, the matrix suggests only private ownership and management with government regulation.

In accordance with the matrix, it would seem appropriate that wherever there are issues of externalities (positive or negative), informational asymmetries, agency problems and distributional concerns, there should be government ownership and management. Most urban services would appear to attract all these four concerns, especially in the highly-economically polarised cities of India. The theoretical basis of the municipal corporation being the service provider/ regulator/ subsidizer / manager is relatively clear from

Chart 1: Private and Government Service Delivery/ Regulation Matrix

<i>Problem areas</i>	<i>Private Ownership and Management with Government Regulation</i>	<i>Private Ownership and Management with Government Regulation & Subsidy for low income clients</i>	<i>Government ownership with Contracts for Private Management and Operation</i>	<i>Government Ownership and Government Management</i>
Externalities			*	*
Information Asymmetries				*
Agency Problems	*	*	*	*
Distributional concerns		*	*	*

Source: Adapted from Blank (1999).

Chart 1, read with the emphasis on positive and negative externalities by Stiglitz (1989). However, the municipal bodies cannot take on these roles, in the absence of adequate financial resources.

Reasons for Imperfect Fiscal Federalism

This moot question is why the local governments appear to be financially distressed and why their priorities are determined by the funding agencies external to the government. The public economics theorists such as Arrow-Musgrave-Samuelson (AMS) have laid the foundations for effective financial decentralization or fiscal federalism, which has been elegantly expounded by Oates (1972). It states that under the sufficient conditions, a pattern of local outputs in accordance with local tastes will be Pareto superior to any outcome centrally determined with a uniform level of output across jurisdictions (Oates 2006). However, the breakdown of this perfect theoretical alternative in the real world, most especially in the developing and transitional countries, was in the nature of a shock to the proponents. This breakdown was impelled by a number of factors such as the absence of the Arrow-Musgrave-Samuelson (AMS) perspective, which dwelt on the conceptualisation of the private and public sectors; the Keynesian framework of government as an agency to correct market failure, ensure equitable distribution of income and to promote macro-economic stability of high growth at stable prices; and to specify public services. The AMS perspective was built on the implicit assumption that the government would act as custodian of public interest and maximize social welfare – both due to an innate benevolence and due to the more practical electoral pressures.

In the neo-liberal, post-Washington Consensus world, all countries' governments, at all levels are shedding their welfare role, and treat their citizens as customers or clients. There are hardly any goods/ services which are recognised as public goods, with externalities. Even basic services such as drinking water, education, public health and sanitation are being treated as rivalrous³, exclusionary goods, to be supplied to target segments of customers at profit or at least as close to market rates as possible. Moreover, for the federal, multi-level government setting, the First Generation Theory (FGT) of fiscal federalism was founded on the principles of assignment of functions (with appropriate fiscal tools) and tax assignment with equalizing, lump-sum grants to local governments on equity and efficiency considerations. What was not factored into this technically sound *Decentralization theorem* was the absence of hard financial constraints on the local governments and the resultant perverse fiscal behaviour which gets embedded in the system. This has led to the opinion that "exponentially growing urban public service requirements simply cannot be financed from the present urban

local tax base, which in most cases consists essentially of property tax.”
(Rao & Bird 2010)

The resource gap has become the most daunting spectre of urban planning and governance. Moreover, there was no comprehensive attempt in India to measure the size of the financial gap that municipal bodies faced in creating and maintaining the required infrastructure for their citizens. The first attempt to formally lay down the physical standards for provision of five urban infrastructure services – water supply, sewerage, storm water drainage, urban roads, and street lighting was done in 1963 by the Zakaria Committee. It also specified the corresponding expenditure norms for each of these service levels. Thereafter, more such attempts were made in 1989 by NIUA⁴ and then the Rakesh Mohan-led Expert Committee Report in 1996. However, it was only as recent as 2009 that a thorough estimate of the funds required by Indian cities for the provision of only five services – water, sanitation, sewerage, transportation and housing for the period 2006- 2031, was undertaken by the Urban Infrastructure Expenditure Exercise (UIEE Ramanathan and Dasgupta 2009).

They started with eight urban services and then chose the five services by excluding education, health and land acquisition and development. This exercise differed qualitatively from the previous estimation exercises as it had greater Granularity; real project data (gathered through the Jawaharlal Nehru National Urban Renewal Mission - JNNURM); better quality data; Demand driven projects (again from JNNURM); a proper policy framework with Standard Service Level Benchmarks – SSLBs); latest technology in areas such as waste management and urban transport; and, introduction of two hitherto new sectors – mass transport and traffic management system. The exercise determined the Per Capita Investment Costs (PCICs) for water, sanitation and solid waste management and overall costs for roads and storm water drains. It also separately allocated a corresponding percentage of the cost for operations and maintenance. For the PCICs, for the period 2006 – 2031, the exercise estimated an amount of Rs. 71620 billion with a corresponding Rs. 10030 billion towards operations and maintenance. Of this whopping Rs. 81,65,000 crore, the sector-wise break- up of 68% was towards roads; 15% towards Mass Transit; three per cent for water supply; four per cent for sewerage; three per cent for storm water drains; and one per cent each for traffic management and solid waste management.

These disturbingly large figures, estimated based on assumptions of national economic growth, raise serious questions, such as:

- (i) Are the cities equipped with the necessary institutional capacity to raise such funds?

- (ii) What is the best service delivery mechanism for creating and maintaining such infrastructure?
- (iii) What are the appropriate levels of urban services that can reasonably be provided, across different city sizes?
- (iv) Whether increasing the autonomy of local governments and exposing them to new fiscal handles for funds- related decisions will lead to control across state and local government levels, and across union-state-local levels?
- (v) What are the choices and support mechanisms for using Public-Private Partnerships (PPPs) for creation of urban infrastructure?

The present finance available with municipal bodies, including all their non-tax, tax revenues and transfers and grants from higher levels of government are woefully inadequate to create such urban infrastructure, or even to maintain the existing infrastructure.

SECTION IV

Types of Funding Agencies and their Conditionalities

Different agencies provide funds to the municipal bodies. These range from the government agencies at different levels giving grants – conditional or general to international aid organisations, to banks and private entities.

- (i) A listing of funding agencies is given below:
In terms of the government itself, there are three levels:
 - (a) Central – this includes both the Central Sector and Centrally-Sponsored Schemes of Government of India being implemented within the cities.
 - (b) State-funded schemes may complement/ supplement or totally differ from centrally-funded schemes, to reflect the states' priorities.
 - (c) Local schemes/ projects are those which are entirely funded from the local government's own revenues.
- (ii) Next are the Non-Government Organisations (NGOs) which in turn receive funds from other agencies, including the three levels of governments.
- (iii) Grant/ aid-funded organisations receiving closely-monitored

grants from international and multilateral agencies are the next category, which may be working either in a particular sector or across sectors in a geographical area or both.

- (iv) Public-Private Partnerships (PPPs) are yet another type of funding, especially for large urban infrastructure development projects, which are capital-intensive and have long gestational periods. They have a range of models too – from Build-Operate-Transfer to Build-Operate-Own-Transfer to Build-Operate-Own.
- (v) Private funding is the end of the spectrum, where there is a purely private investment, owned and operated by the private sector company, with profit motivation. This type of funding is increasingly seen in a range of urban services, including ‘essential’ services such as water supply, education, health, electric supply, among others. There is a reducing public-ness of public services with more and more services being privately provided.

Each of these types of financing imposes its own sets of conditionalities on the funded projects.

Non-governmental Funding

Unlike the past, where public funds were exclusively governmental funds, the neo-liberal paradigm offers many non-governmental options for funding the urban services. The urban centres are quite simply too big to be supported by their own revenues. The mismatch between the functions/ services to be provided by the city governments and their funds is extremely large. The tax sources devolved to the city governments are not sufficient for them. This is a classic situation of scarcity amidst plenty wherein the centres of economic growth are starved of their own resources. This also renders the city governments liable to comply with the conditionalities of the funding agencies including the higher levels of government to support them, without hard economic constraints⁵.

SECTION V

Indian Urban Finance Scenario

Economic Financialisation

The most notable development in financing infrastructure, especially large urban infrastructure, since the later decades of the 20th century, has been the proliferation of innovative projects and local government financing options. The spectrum of these solutions is

necessitated by the fact that the city revenues are grossly insufficient for governmental financing of these projects leading to a trend of financialisation.

The term financialisation was brought into popular idiom by Krippner (2005) to refer to the increase in size and importance of a country's financial sector relative to its overall economy. She, in turn, relied on the definition offered by Arrighi (1994) as "a pattern of accumulation in which profit-making occurs increasingly through financial channels" rather than trade or manufacture. This definition, in turn, is based on the emergence of "shareholder conception of control" (Fligstein 1990, 2001). Krippner distinguished between the accumulation-based and the activity-based sectors and used two measures to substantiate her point:

- (i) The increase in Portfolio income- interest payments, dividends and capital gains; and,
- (ii) The relative growth in financial sector vis-à-vis non-financial sectors.

Palley (2007) lists the principal impact of financialization as:

- (i) the elevated significance of the financial sector relative to the real sector;
- (ii) the transfer of incomes from real to finance sectors; and
- (iii) the increase in income inequality which contributes to wage stagnation and adds to the risk of debt deflation and prolonged recession.

He also indicates that financialization operates through three conduits:

- (i) changes in structure and operation of financial markets;
- (ii) changes in behaviour of non-financial corporations; and,
- (iii) changes in economic policy.

These trends towards financialisation have been replicated across the world, even in developing countries like India. The patterns of financialisation and its impact on Indian cities is discussed in the next section.

Financialisation in India

This trend of economic financialisation, reflecting global trends,

is also in evidence in urban India. In India, the municipal bodies own sources of revenue are from three sources:

- taxes levied by the municipality;
- user charges levied for the provision of civic services; and
- fees and fines levied for the performance of regulatory and other statutory functions.

Octroi, one of the sources of own revenue receipt of ULBs have been abolished, while property tax, remains under-used. Even the costing of services of ULBs is being done by state governments, even though these functions are mandated to be performed by municipal bodies under the 74th Constitutional Amendment. Overall, this has led to increased dependency on state governments and reduction in efforts made by local bodies to mobilise resources. The global patterns of economic financialization are clearly evident in the Indian economy as a whole, and in the urban areas, in particular. The major, and even the not so major, urban infrastructure projects are being financed through the non-public funds in these formats of Municipal Bonds, Green Bonds, and a whole range of finance options, referred to as Value Capture Finance Policy tools.

The global trends are being reflected and replicated in the real-world laboratories of the Indian cities. Municipal governments are either bankrupt or close to just survival. Their own sources of revenue are grossly inadequate to take up their capital-intensive infrastructure projects. Cities are being encouraged to borrow and leverage their assets through a range of innovative finance tools. Both the capital market and International Finance Institutions (IFIs) are extremely active in Indian cities.

In 2002, Foreign Direct Investment (FDI) was allowed in real estate for socially-productive endeavours, such as a new township (of more than 100 acres), that provide the much-desired boosts in urban housing and jobs. The assumption was that the size would provide a safeguard and deterrent against speculation. This FDI presence was extended in 2004 to Special Economic Zones (SEZs) to come up around cities with the Government providing land and services, such as roads, water, electricity, and the additional incentive in the form of multi-year tax breaks. This led not only to a mushrooming of SEZs in the country, but to the “transmutation of these SEZs” into luxury-end residential real estate projects. This market is so attractive as to interest the world’s largest Private Equity (PE) Firms as the leaders in the urban financialisation in India. VCC Edge, a specialist, premium

subscription-based research firm, has indicated that foreign PE firms entered the market immediately on its opening up in 2005, with \$136 million. In the year 2013 alone, private equity firms invested more than \$910 million in fresh capital with Blackstone and Xanders Group at the top. Blackstone invested \$700 million in just two years (2012– 2014), amassing 24 million square feet of office space in Indian cities at a time when both office space costs and occupancy rates were low. In 2015, Blackstone became the largest owner of office space in India, and its main rival, the aggressive Wall Street firm Kohlberg Kravis Roberts (KKR), is trying to catch up, having invested more than \$123 million in two realty projects since 2013. Meanwhile, India's large real estate developers (DLF, Unitech, Supertech) have also stepped up their own efforts by taking on unsustainable debt in order to acquire large land banks with world-class, super-sized residential complexes for global buyers. The unsustainable boom went bust in the 2008 crash, when the other IFIs and FIIs had to retreat, only to be replaced by the big PE Firms in exchange for preferential treatment and guarantees of short-term exits. This speculative investments in financing the urban sector, has led to the terms such as "corporate urbanism" (Goldman 2010, Sood 2015) and "Speculative urbanism" Sood (2017). Meanwhile, as part of the ongoing research on FDI at the Institute for Studies in Industrial Development, Chalapati Rao and Biswajit Dhar (2018) have emphasised how FDI is neither an unmixed blessing nor is it homogeneous. They question if FDI is really investing fresh capital into areas of the Indian economy that will foster innovation, productive growth, and job creation as there is a great deal of blurring of foreign/ domestic and financial/ non-financial firms. Goldman (2015) raises another disturbing issue that is the erosion of the significance and worth of labour in the creation of global Indian cities. He ascribes this to the convergence of a set of three factors in the past few decades: "the informalisation of labour, the making of global cities, and the financialisation of the economy." He quotes earlier research to highlight that "the four fastest-growing sectors in employment in urban India do not include the high-end sectors of IT engineering or finance; rather, they comprise domestic services (e.g., maids and drivers), construction, real estate, and restaurant and café work". This class of casual/ contract labour inhabit the slums (forming up to 30% of the population of Bengaluru) and tend to remain at the peripheries of policy/ administration (Roychowdhury 2011).

Value Capture Finance (VCF)

Value capture finance is a type of public financing that recovers some or all of the value that public infrastructure generates for the landowners. Since land is the asset that is owned and managed by

the states/municipal bodies it is the resource of choice to generate revenues. Traditionally, states/municipal bodies have relied on the direct sale of lands to raise funds, which is a less-efficient form of resource mobilisation, as it is one-time, compared to Value Capture. Increasingly, states/ULBs are using different Value Capture methods such as impact fee, betterment charges, etc. the major Value Capture tools⁶ at the disposal of city governments are:

- (i) *Land value tax* – This is considered the ideal Value Capture tool to assess value increments in land. It also effectively checks spikes in property prices and reduces speculative investments. Many States have passed suitable laws to allow this mechanism to cover urban land.
- (ii) *Fees for changing land use (agricultural to non-agricultural)* – This mechanism raises revenues by realising fees on change in land-use and the value enhancements due to the changes in use typically to grant permission for conversion of land use from agricultural to non-agricultural use.
- (iii) *Betterment levy* – This charge is levied as a one-time upfront charge on the land value gain caused by public infrastructure investment. This can either be a revenue source for overall development schemes in an area or be for specific projects. This Value capture tool has been used by many Indian ULBs – Mumbai, Hyderabad and even in the Bruhat Bengaluru Mahanagara Palike (BBMP) areas. In the expanded BBMP area, the former rural areas had to be provided piped water supply (from the far away Cauvery river, the source of water to the city on a plateau), and betterment charges were levied towards the cost of laying pipes to the residents desirous of getting water connections. Ranganathan (2014) has studied this and concluded that “far from reflecting an internalisation of a ‘willingness to pay’ or ‘stakeholder’ ethos celebrated by development practitioners today, payment for water provides an insurgent means to bargain for greater symbolic recognition, respectability and material benefits from the state. In particular, payment for pipes enables peripheral dwellers to strengthen their claims to secure land tenure in an era of exclusionary and punitive spatial policies. Payment thus comprises a terrain of contested meaning-making and political struggle, at the heart of which lie the stakes of urban citizenship.”
- (iv) *Development charges (Impact fees)* – These charges are localised, area-based, linking the charge to the market value of land

through regular, periodic revisions. This Value Capture tool is extensively used in many states like Andhra Pradesh, Gujarat, Maharashtra, Tamil Nadu and Madhya Pradesh.

- (v) *Transfer of Development Rights (TDRs)* – This tool is used for trading development rights over an area. TDRs seek to preserve the basic appreciation of the value of the area due to infrastructure development, even as the project-based value captures the appreciation of land and building values in the area of influence of the project. Maharashtra, Karnataka and Gujarat have enabling laws for using TDRs for developing open spaces, promoting affordable housing, etc.
- (vi) *Premium on the relaxation of rules or additional Floor Space Index and Floor Area Ratio (FSI & FAR)* – This tool permits development rights over and above the permissible limits specified in the State Town Planning Laws and Regulations. It is popular in states such as Maharashtra, Karnataka, Gujarat and Tamil Nadu.
- (vii) *Vacant Land Tax (VLT)* – This is a tax on vacant plots of land. Andhra Pradesh has imposed this in the Greater Hyderabad Municipal Corporation (GHMC) at the rate of 0.5% of the registration value if the land is not used exclusively for agriculture purpose or kept vacant without a structure.
- (viii) *Tax Increment Financing (TIF)* – TIF is a common Value Capture tool in developed countries. In TIF, the incremental revenues from future increases in property tax or a surcharge on the existing property tax rate are ring-fenced for a defined period to finance some new investment in the designated area. TIF tools are especially useful to finance new investments in existing habitations. Some of the SMART City Proposals have incorporated TIF as a finance tool.
- (ix) *Land Acquisition and Development* – This tool involves the large-scale acquisition of land by the city government to be developed in stages. The two major examples of this in the BBMP vicinity are – the Bengaluru-Mysore Infrastructure Corridor and the development along the axis towards the Devanahalli airport.
- (x) *Land Pooling System (LPS)* – This tool of LPS is gaining a lot of popularity among city governments wherein they procure and pool the land parcels of different owners to develop it with good infrastructure. The owners exchange their low-quality

lands for smaller parcels of developed plots. This has been used in Ahmedabad to develop the surroundings as well as in the new capital city of Andhra Pradesh, Amaravati.

A comparison of the enabling legal and regulatory provisions in Karnataka reveals the following position as seen in Chart 2.

Chart 2: Value Capture Financing Status in Karnataka

Provision	Compliance
Urban Land Tax	Yes
Tax on Conversion of Land	Section 18 - Karnataka Town and Country Planning (KTCP) Act and Rates prescribed by Karnataka Planning Authority Rules 1965
Betterment Levy	Bangalore Development Authority Act 1976
Development Charge/ Impact fees	Section 18 A - KTPC Act- for value-based; Area-based also levied
TDR & Incentive FSI	Section 14B - KTCP Act
Premium on Relaxation of Rules or Additional FSI	Zonal Regulations of Mangalore 2011
Charge for Regularisation of Unauthorized Development	Akrama-Sakrama Scheme ⁷
Vacant Land Tax	No specific provision
Town Planning Scheme	Act 1961

Source: VCF Policy Framework, Ministry of Urban Development, GoI, Feb. 2017.

Other Global Urban Finance Innovations

Other new financial products, like the so-called ‘pay for success bonds’, or ‘social impact bonds’, are also being added to the pool of urban financial tools. A few examples of such tools⁸ are given below:

- (i) The Massachusetts Roca program is aimed at avoiding criminal recidivism, which is the tendency of a criminal to return to crime. The bond created a risk-bearing financial arrangement between public, private, and non-profit organisations, with the state to repay the investors their principal, and a sliding scale of profit tied to the degree of success (The state is willing to do this because keeping people out of prison saves the state money). If Roca is unsuccessful, the investors could lose some or all of their money. The governments have issued social impact bonds for social, economic and environmental causes,

and in many places underwriters have been large investment banks or in some cases state-level “municipal bond banks” (e.g. in the US and Canada), or national level “specialised lenders for regional and local governments” (e.g. in the Nordic states).

- (ii) Similarly, another innovation is Sidewalk Labs, a Google-backed company with the largest pool of capital in the world focused on urban innovation. In 2016, they launched free WiFi kiosks across public areas in New York City, to access some municipal services and in effort to make the fastest public WiFi in the world freely available, with the stated benefit of reducing their spend on data plans. This Wifi network project would be delivered at no cost to taxpayers, and was set to generate more than \$500 million in revenue to the city during the first 12 years. In this innovative urban technology project utilising old telephone booths, the idea has been for revenues to be generated in large part from advertising. There are also a number of urban real estate-based finance options. Urban real estate has been the subject of Pooled Finance Development Fund Schemes (PFDF). These ‘first-loss-like’ schemes, backed by corporate partners, enable Government authorities to provide credit enhancement facilities to municipal bodies based on their credit worthiness. In result, urban bodies can access further market borrowings through state-level pooled mechanism; and as such, can have further resources to improve urban infrastructure and ultimately attain the goal of self-sustainability. Pooled finance projects attract corporates to sponsor municipal infrastructure projects. Examples are: the Mexican company CEMEX, a market leader in pavement construction model with local citizens also as shareholders; and, Colombian Metrovivienda project, in Bogota. The basic strategy is to acquire, through the negotiated purchase of privately-owned open space in suburbs, to create large assemblages of improved infrastructure – planned and parcelled – to sell to experienced developers for the construction of market-rate housing which is affordable to varying levels of low-income families. The sale of parcels makes funds more readily available for investment in subsequent rounds of acquisition and development. In Honduras and Ghana, municipal governments have collaborated with US and local software companies to address inefficiencies in land administration to build next generation, more transparent land registration, title, and payment management solutions. These platforms use block-chain technology to track assets, payments and

administrative processes to bring accountability and trust into land investments. The citizen portal allows users to manage their properties and interact with the local real estate markets in real-time. In many cases, the first projects of these platform companies are to first digitize the land cadastre (asset identification), before the platform could become a revenue-generating entity. The public sector has historically been the key financier of urban transportation infrastructure, but new private sector-led models for financing 'public' transportation are cropping up around the world. Mexico City's *The Avenida Chapultepec* project is an interesting example of innovating urban transport infrastructure financing. Mexico City's Government will also receive a small percentage of the yearly income. Chapultepec Avenue, in the heart of Mexico City, will evolve to become a three-level linear park, incorporating public and private transportation, pedestrian and retail areas.

The Specialist Financiers - International Financial Institutions (IFIs)

These institutions, originally the Bretton-Woods institutions, set up in the post-World War II era to deal with reconstruction and economic development in developing countries, are now the major lenders for urban development infrastructure projects. In addition to the IMF and the World Bank, they include other institutions such as the Asian Development Bank (ADB), Kreditanstalt für Wiederaufbau (KfW), Japan International Cooperation Agency (JICA), among others. These institutions now contribute \$30 billion of lending directly to urban projects annually. They are involved with finance and knowledge-sharing. Increasingly, these global lenders are likely to be replaced by the global capital markets, which are directly reaching out to city governments. On their part, these IFIs require cities to become more coordinated, which require significant changes like strong leadership, effective long-term planning and strengthening both engineering and financial sectors as they also require fiscal flexibility and fiscal decentralisation. Additionally, there is a need to reinforce the relationship of accountability between the cities and their citizens. Cities will have to remove sectoral boundaries and set-up inter-sector implementation and review mechanisms.

SECTION VI

National Urban Policy Framework⁹

In the context of bankrupt municipal bodies, pledged city assets, inadequate internal revenues, coupled with tremendous demand for capital-intensive urban infrastructure (to be paid for by stakeholders

who would like to maximize their assured returns), it is important to examine the national policy framework. The Draft National Urban Policy Framework has been developed by the nodal ministry in Government of India and lists the following changes to be brought about:

Legislative and Policy Changes

- All states to set norms for cities to meet their revenue expenditure from own revenue and minimum proportion of budget to be earmarked for capital works.
- Insert a 'Local Bodies Finance List' (LBFL) along the lines of the Union List and the State List.
- Central Finance Commission (CFC), Central government should provide guidance on the devolution on certain criteria.
- State Finance Commissions (SFCs) should be set up in time so that CFC has their reports for consideration in preparation of its recommendations.
- Strengthen SFCs by improving their capacity, and ensure that the state governments accept the recommendations of SFCs with suitable local modifications.
- All states must have a clear policy /law/ guideline for PPP.

Revenue Mobilisation Plan

1. The base for property tax should be comprehensive and uniform across property classes without individual exemptions.
2. Information technology should be used for GIS mapping and linking departments, such as revenue and town planning.
3. Profession tax should be collected and fully retained by the local municipal bodies. In cases where the state governments collect profession tax, the proceeds net of administrative costs should be entirely devolved to the local bodies.
4. The user charges should be so structured as to at least meet the operations and maintenance cost of running the service.
5. The Value Capture Finance Framework should be implemented by all the states and cities.
6. The municipal bodies who have been credit-rated should implement revenue enhancement plans.
7. Guidance and technical assistance to be provided for the issue of bonds and introduction of PPP.

8. State government clearances for urban local body borrowing should be based on agreed principles and not on an *ad-hoc* project basis.
9. Incentivise cities to invest in low-emission, climate-resilient infrastructure; encourage project preparation for mitigation and adaptation projects; and collaborate with local financial institutions to develop climate finance infrastructure solutions for cities, also known as green bonds.
10. Improve procurement and contracting so that expenditure growth can be contained within targeted levels.
11. There should be improved accounting system based on double entry and accrual system leading to better financial management and transparency. Municipal bodies' accounts should be regularly audited, as is being done already in some states.

SECTION VII

Analysis of the significant findings

The major takeaways from this study of the financial arrangements and the accountability structures they impose are as follows:

Neo-liberal Pragmatism vs. Critical Urban Theory

The neo-liberal paradigm has ensured that the relationship between providers of public services (whether they be public or private agencies) and their target group is different from the earlier relationship as per the public administration paradigm and radically varied from the critical urban theory even while it criticises the trend of privatisation. "Increasingly, we see the right to the city falling into the hands of private or quasi-private interests" (Harvey 2008). The expectation that public services will be provided by the local government does not hold true. This is due to the multiplicity of agencies and parastatals involved in the service provision. Many of these service providers are not even in the public sector and therefore, the concept of public accountability does not apply to them.

Decreasing Public-ness

The concept of non-rivalrous, non-excludable public goods is increasingly diluted. With the emphasis being placed on urban entrepreneurialism rather than even urban managerialism, (Harvey 1989), traditional relationships of accountability have changed dramatically. As Stiglitz (1989) has noted, "public management" is itself

a public good, and one that is often hard for voters to easily observe. This lack of public-ness is most evident in critical social infrastructure areas such as education, health and social welfare. There are hardly any resources created or earmarked for the economically disadvantaged migrants who pour into Bengaluru. While educationists prefer to focus on municipal schools as the benchmark of accountability and service delivery, BBMP has not constructed new schools in the 10 years after the incorporation of the 110 new villages. In terms of public health, the situation is further deteriorated. Bengaluru is covered by the Centrally-funded National Urban Health Mission (NUHM). However, the city does not have a network of even Primary Health Centres (PHCs) or even enough community health workers Accredited Social Health Activists (ASHAs). This lack of public-ness, to instill public welfare, is also seen in the developmental physical infrastructure such as street lights and roads. The roads and lanes are potholed, the pavements are encroached, they are unlit and unsafe for both pedestrians and motorists. Even the most “public” of public services, law and order, is increasingly outsourced to specialist private Security agencies (Goldman 2015).

Local Bodies Need External Financial Help to Manage their Affairs

The financial dependence results in a major challenge faced by the city governance in terms of unbridled interference by the state government in all the administrative, financial and political decisions of the city. In fact, there are also a lot of interventions from the Union government as well, especially in the form of conditionalities of reporting compliance to their reform agenda for the release of central grants. The absolute lack of autonomy means that the local priorities are sacrificed at the altar of the bigger levels of governments. Sitting on top of one of the most dynamically growing cities, the BBMP is like a poor big rich city. It is unable to raise its resources from the rich sources of local taxes. This is the classic case of Vertical Fiscal Imbalance. The financialisation of urban infrastructure funding is the viable option, especially when the users are unwilling to pay by way of user-fees or taxes. The former (smaller) city of Bangalore was the first in the country to raise funds to the tune of Rs. 125 crore through the issue of municipal bonds in 1997, guaranteed by the state and supported with an Escrow account, linked to state grants and property tax collection, to build the city roads and drains. Over the years, the expansion of the city and the incorporation of major revenue earning sections of the city should have led to an overall improvement in the city's finances. However, the city finds itself heavily indebted and unable to carry out most of its basic activities, including payment of salaries to its sanitation workers (*pourkarmikas*). The situation of outstanding dues to its contractors was so alarming that they had even

set up a special system of fast-tracking the payments to contractors¹⁰. The pervasive malaise in the city's finances, coupled with the delays in preparation and presentation of the annual audited accounts and the mortgaging of the city's properties including the City Town Hall itself (Table 1), to the bankers, led to the city being given a BB rating in terms of its credit-worthiness, which has since improved¹¹.

Local Government's Works

This state of indebtedness and the low credit ratings have an adverse impact on the city's precarious financial position, which is most starkly visible in the city budgets of public works. As a matter of fact,

TABLE 1: LIST OF PROPERTIES MORTGAGED BY BBMP

<i>Date</i>	<i>Total Amount (Rs. in crore)</i>	<i>Sanctioned loan (Rs. in crore)</i>	<i>Property</i>	<i>Estimated value (Rs. in crore)</i>	<i>Amount to be repaid (with interest) (Rs. in crore)</i>	<i>Loan term</i>
27.1.2012	500.00	480.00	K R Market	837.13	965.00	2012-27
29.3.2012	256.53	249.54	Malleswaram Market, Johnson Market (reclaimed) Dasappa Hospital	322.13	393.24	2012-27
26.2.2013 to 26.3.2013	751.22	747.28	Public Utility Building, Mayo Hall Court, Kempegowda Museum, BBMP West zone office, Kalasipalyam market	973.72	1229.32	2013-23 & 27
31.10.2013	169.03	169.03	Rajaji nagar market, Tannery road abattoir (reclaimed)	256.71	259.99	2013-23
3.1.2014	200.00	200.00	Sir M Puttana Chetty Town Hall JC Road multilevel parking	Not known	NA	
Total	1676.85	1645.85		2389.69	2847.55	

Source: Compiled from multiple datasets

the BBMP city Budget has as many as four sub-heads for works – Zonal works, Central works, road infrastructure and storm water drainage. Within these, the maximum weightage is for Zonal works, which are not identified or executed based on any specific need expressed by the citizens. Moreover, these works do not conform to the public policy procedure prescribed for public works. The works are bundled across wards and it is difficult to segregate them by ward boundaries. Based on the dataset of the Project ‘vigeye’ website¹², an analysis of ongoing and completed works in the selected wards was undertaken as seen in Table 2. The selected wards – Uttarahalli, Varthur, Thanisandra and Herohalli, are all former rural areas (South, East, North and West of the city centre respectively), which were incorporated into the Greater municipality of BBMP in 2007 and require urban infrastructure to be built.

This analysis reveals that the maximum works undertaken in

TABLE 2: MAJOR CATEGORIES OF WORKS TAKEN UP IN SELECTED BBMP WARDS

Sl No.	Keywords Used	Uttarahalli	Varthur	Thanisandra	Herohalli
1	Construction	64	84	58	107
2	Toilet	4	9	1	7
3	Road	248	208	268	242
4	Drain, Culvert, UGD	164	185	226	200
5	Light	21	30	22	29
6	Park, Plantation	69	24	33	140
7	Borewell	31	79	33	69
8	Rain Water (Water Supply)	29	30	25	85
9	Pothole repair	8	18	11	4
10	Landscape	2	0	1	9
11	SWD (Storm Water)	18	2	7	7
12	Burial Ground	7	12	3	4
13	Watchman kiosk	2	0	0	1
14	Children’s park	2	1	0	1
15	Footpath	3	0	11	0
16	Maternity	1	0	0	0
17	Garbage	1	0	0	1
18	Miscellaneous (Library, Telephone)*	28	61	42	29

Source: Vigeye database.

four wards were road construction followed by drain, culvert and underground drains. The categories are not exclusive and therefore the same work could be reflected in multiple categories (e.g. construction of toilets/ road/ drain). The works need to be of suitable scale to be economical for the financiers (in case of funded projects) and would typically be taken up at the city level. Such works tend to spillover the ward limits and local considerations may be set aside to ensure project design and execution. One of the first time SC (Woman) Corporators, elected from Varthur ward, Smt. Pushpa Latha said that she was unaware of the works being taken up in her ward and had to constantly follow up with the *Tahsildar* to be kept updated of the works being taken up, their status and the expenditure. In such a scenario, it is difficult for common citizens to push for and track the progress of works in their area. Moreover, the lead time of these works tends to span many years, with or without the requisite annual budgetary allocations. These delays also impact the cost of the projects.

Table 3 shows the tardy progress in the majority of the works. There is also a huge mismatch between the estimated costs and the actual expenditure incurred. This lag could be explained in terms of the number of projects which get approved without adequate budgetary provisions. Such a focus on taking up works (without prior need-based studies, or following proper procedure) resulting in a large number of incomplete projects or projects without work status or completed projects for which payments have not been settled to the contractors, are symptomatic of a deep malaise. This expenditure pattern could partly explain the financial distress that the city government finds itself in.

Financial Viability Compulsions

The pressure to ensure that there are no unintended costs in service delivery imposes the need for efficiency in funded projects. The financial concerns of the city lead it to tighten its belt. In addition, since there are a number of state government parastatals involved in the delivery of services like electricity (the Bengaluru Electric Supply Company, BESCOM) and water and sewage (the Bengaluru Water Supply and Sewerage Board, BWSSB), there is a need to bring in efficiency. This is especially true of the BWSSB which relies heavily on international aid from agencies such as Japan International Cooperation Agency (JICA) for its Cauvery water supply projects. This leads to the imposing of betterment charges for laying water pipes and sewerage lines (Ranganathan 2014). It also leads to higher tariffs for drinking water and electricity, which impacts the economically disadvantaged groups the most. In the paradigm of maximising returns on investments to the funding agencies, there is no implicit component of equity (through

TABLE 3: PROGRESS OF WORKS IN SELECTED BBMP WARDS

<i>Ward</i>	<i>Completed Projects</i>	<i>Work in Progress (VIP) Projects</i>	<i>Yet to Start Projects</i>	<i>File in Process Projects</i>	<i>Cost Overruns</i>	<i>Projects without Work Status</i>	<i>Cost Savings</i>	<i>Time Overruns</i>	<i>Total Estimated Cost (in lakhs)</i>	<i>Total Expenditure Incurred (in lakhs)</i>
Uttarahalli	59		2	14	14	390	21	1	8668.66	637.65
Varthur	97		1	13	4	348	64	50	6089.20	744.34
Thanisandra	56	25	0	6	10	382	27	25	10357.45	1456.74
Herohalli	37		0	0	1	728	9		13001.74	231.65

Source: Vigeye database.

mechanisms like cross-subsidisation) to ensure the sustainability of the service provision. The social as well as economic costs of this non-provision of essential services such as drinking water, public health and sanitation and elementary education, are not quantified or captured in any of the investment models. This does not in any way diminish their value. As a matter of fact, the market forces have developed a perfect price-discrimination model so as to extract the maximum value from each consumer based on their requirements and paying capacity, especially in the matter of payment of bribes. This has been captured by the citizens' initiative to curb corruption appropriately termed as "ipaidabribe". The paying capacity and criticality of the need of each segment is exploited to maximise the bribes extracted but the costs are disproportionately higher amongst the economically most vulnerable¹³ (World Bank 2018).

Selective Consultations with Corporates in Developing Policy

The infrastructure projects funded by VCF and other non-public sources have led to certain features in the cityscape such as shrinking of public spaces, the prevalence of private service providers for most goods and services, including world-class and prohibitively expensive education and healthcare. There is a mushrooming of large enclaves of "gated communities", which are niches of privately-funded development, distinct from their surrounding areas. This has adversely impacted social equity. There are developments to give a voice to the different socio-economic classes of citizens with Bengaluru developing a culture of Citizen Activism. As per some estimates, there are over 600 registered Resident Welfare Associations and their Federations in the city. These groups are also actively taking up their concerns to the policymakers, including fighting their public interest (common cause) cases in courts. However, this role of citizen participation in policy-making has not yet been addressed through any institutional mechanism, at either the ward or the city level.

In a bid to further reduce the publicness of city governance, even policy making and governance is increasingly aligned with corporate interests. Bengaluru city has, on the guidelines of the state government, set up bodies of prominent individuals to articulate the plans and policies. This process was first started with the Bangalore Agenda Task Force. This Task Force consisted of technocrats who were able to act as an interface between the citizens and the civic agencies. It worked from 1999 to 2004, reporting directly to the then Chief Minister, Shri S M Krishna, then of the Indian National Congress. They brought in their technological and managerial expertise as well as their personal funds to the table. However, since this was

an exclusive group, and politically allied with the Chief Minister, they had to exit with the change of party in the state government. In 2010, a similar (though perhaps not so high profile) set-up called Agenda for Bengaluru Infrastructure and Development Task Force (ABIDE) came up under the chairmanship of the then Chief Minister B S Yeddyurappa. Subsequently, the Bangalore Vision Group was set up under the chairmanship of Minister Ramalinga Reddy in 2014. In 2016, the Bangalore Blueprint Action Group was set up again under the Chief Minister, this time Shri Siddaramaiah with the Chairmen of Infosys, Wipro and the urban advocacy group *Janaagraha*.

These private groups (policy think-tanks/ task forces/ empowered citizens) seek to drive the city's agenda with their high profiles and the additional funds they bring in. However, they are not democratic and do not represent all sections of citizens. Thus, the absence of legitimate citizen engagements is creating a further wedge in civic forums and is adding to urban governance issues. This has also furthered the cause of judicial activism in the city. Even routine activities of the corporation are being undertaken on the specific directions of the courts – be it the conduct of local body elections, the constitution of Ward Committees, regular garbage clearance or even interventions in the Master Plan or composition of the Metropolitan Planning Committee.

However, this change in the accountability relationship, rather contract, has neither been discussed publicly nor is there sufficient awareness of the shifts in accountability among either the public agencies or the citizens.

Participatory Budgeting (PB)

In the context of the overwhelming trends of urban financialisation, there are certain developments, contrary to these processes, such as Participatory Budgeting. The process of involving citizens in the process of governance through the mechanism of financial planning pioneered in the town of Porto Alegre, Brazil in the late 1980s is referred to as Participatory Budgeting. This form of informal consultative deliberations worked so well that there were multiple attempts to replicate them across the world, with mixed success (World Bank 2007). Participatory Budgeting was adopted among various countries, but achieved fair success only in a few countries. The necessary and sufficient conditions for the success of Participatory Budgeting in Latin America were identified as:

- The mayor is indigenous, from a party on the left, or both.
- Opposition from local political elites is weak or non-existent.

- Project funding, technical assistance or both are provided by national or international aid organisations.
- The municipality has sufficient revenues to make significant investments in public works or programmes.
- There is a tradition of participation and cooperation within and among local civic associations that have not been destroyed by clientelist politics.

Participatory Budgeting was introduced in various Indian cities as well. Bengaluru was among the pioneers in spearheading this in the mid-1990s, with the Non-Governmental Organisations (NGOs) like *Janaagraha* and Public Affairs Centre (PAC) using the PB in their citizens Budget exercise and Citizens Report Cards (CRCs). Thereafter, a group of four NGOs – *Janaagraha*, PAC, Centre for Budget and Policy Studies (CBPS) and Voices gathered in 2002 to form a group called Public Record of Operations and Finance (PROOF). Similarly, the city government of Pune, under the leadership of one of its Commissioners and in association with a local NGO, *Janwani*, introduced some aspects of PB in 2006, which have been sustained over the years. It is creditable that these efforts have been institutionalised into the municipal system in the municipalities of Pune and its extension Pimpri-Chinchwad. However, despite this tradition being upheld, the allocation of the municipal budget to the PB exercise has remained between less than one per cent to less than two per cent of the annual budgets. Likewise, in the city-state of Delhi, the party in power (Aam Aadmi Party or AAP) introduced PB from 2015. Here too, the allocations for PB have been meager and the acceptance of PB among citizens has not been uniform across the city.

1. The overall experience of PB in the Indian cities, where it was introduced, has been limited in its impact. The NGOs of Bengaluru continue their advocacy for PB in all the city wards. Pune continues with PB and has had some visible progress in a few civic areas, such as roads, electricity connections, and drainage, among others. However, due to its limited allocation, there are those who say that it has become more of a formal exercise than an effective one.¹⁴
2. Participatory Budgeting is one of the techniques of broad-basing governance and giving voice to citizens. Even its proponents list the weaknesses of the process – in that it is not as transparent or inclusive as it can be (World Bank 2007, Menon 2013, Samy 2017). It can be used to promote the agenda

of the section which is heard, in a classic case of policy capture. Moreover, it does not involve the most vulnerable and poorest sections of citizens.

CONCLUSION

The financialisation of urban spaces has emerged as a fundamental aspect of the neo-liberal governance paradigm and a necessity for creation of urban infrastructure. However, a simplistic reduction of urban spaces as mere sources of economic value has eroded the traditional concept of local government accountability to the citizens. There is increasing pressure on the local governments to conform and be aligned to the requirements of the funding agencies. While this may not always be to the detriment of the citizens, the citizen is not central to the processes such as meeting the targets, asset creation as per the plans of the funding agencies, even if they are the higher levels of state or Central government. These patterns evident in the municipal body of the Bruhat Bengaluru Mahanagara Palike mirror the contestation between citizens' priorities and those of the funding agencies. This is most especially in the context of the latest citizens, who are situated at the peripheral areas of the expanded city. The combination of two factors – the discretionary nature of many of the municipal bodies' functions and the responsibility of even many of the obligatory functions being entrusted to state government parastatals, means that many of the municipal bodies' functions are not with the elected municipal body but with higher-level agencies. These may include big-ticket capital expenditure items (Water supply, sewerage, electric supply, town planning and development etc.) which are still in the government sector, but not with the local government. Accordingly, with the lack of functional devolution, financial devolution is also constrained in a classic chicken-and-egg conundrum. This is a sufficient condition for seeking external sources of urban finance for delivery of services and the creation of urban infrastructure. This pattern is formalized and incorporated into the urban policy framework of India in terms of the National Urban Policy Framework on urban finance.

The effect of the trend of treating urban citizens as politically-disenfranchised residents, and mere active economic agents is neither justifiable in a democratic polity nor can it be sustained even within the public economics paradigm. The covenant between the urban local body and the citizen cannot be broken due to the financial constraints faced by the local-level of government. Appropriate sets of accountability structures are essential in urban local governance as much as in the rural, state or national contexts. The involvement and engagement with citizens in local governance has to be a cornerstone of the financing

options so that the commercial or corporate culture does not seek to displace public service delivery nor are the ends of economic equity sacrificed in the interest of economic financialization.

To repeat the core issues raised by the UIEE 2006-2031, are municipal bodies equipped with the necessary institutional capacity to raise such funds; what is the best service delivery mechanism for creating and maintaining such infrastructure; what is the optimal level of urban services that can reasonably be provided, across different city sizes; does increasing the autonomy of local governments and exposing them to new fiscal handles lead to control by state and even Union government; and, what are the choices and support mechanisms for using Public-Private Partnerships (PPPs)? These questions need to be examined across different fora and addressed in the national urban policy documents. These questions have been asked and the situation is quite dire, but the process to engage across the board with all the stakeholders has not reached the momentum required. Till such time, the accountability to citizens and recognition of their voice has to be incorporated into urban governance institutions and processes.

Endnotes

1. McKinsey Global Institute Report 2010.
2. Osborne and Gaebler in their 1992 work, *Reinventing Government* had prescribed that governments should: 1) steer, not row; 2) empower communities to solve their own problems rather than simply deliver services; 3) encourage competition rather than monopolies; 4) be driven by missions, rather than rules; 5) be results-oriented by funding outcomes rather than inputs; 6) meet the needs of the customer, not the bureaucracy; 7) concentrate on earning money rather than spending it; 8) invest in preventing problems rather than curing crises; 9) decentralize authority; and 10) solve problems by influencing market forces rather than creating public programs.
3. The concept of economic non-rivalrous goods implies that the consumption of the goods by one consumer does not prevent simultaneous consumption by other consumers; likewise rivalrous goods are those whose consumption by a consumer reduces its availability to other consumers.
4. National Institute of Urban Affairs (1989). *Upgrading Municipal Services – Norms and Financial Implication*, Vol. II, NIUA Delhi .
5. The term “too big to fail”, used for unviable banking and other corporations, is also used in the context of city governments.
6. Accessed at http://amrut.gov.in/writereaddata/3-VCF%20Policy%20Book_FINAL.pdf
7. This Akrama Sakrama scheme is subject to a challenge in the Special Leave

- Petition (Civil) No. 956/2017 in the Apex Court, on the grounds that it is pro-rich, promotes disregard of rules and violative of the Constitution.
8. The examples in this section have been drawn from various online sources such as:
<https://www.weforum.org/agenda/2016/10/next-generation-urban-assets/>
<https://www.weforum.org/agenda/2015/01/the-future-of-finance-for-cities-and-urban-infrastructure/>
 9. Accessed from https://smartnet.niua.org/sites/default/files/resources/nupf_final.pdf
 10. This system called the “*hundi*” system gave the first right to contractors on the corporation’s revenues. However, it was objected to by CAG’s audit and had to be removed.
 11. In February 2018, ICRA, the credit rating agency, assigned the long-term rating of Provisional [ICRA] A- (SO) (pronounced ICRA A minus structured obligation) for the Rs. 1,257 crore term-loans and the Rs. 843.0-crore unallocated facilities of the Bruhat Bengaluru Mahanagara Palike (BBMP). ICRA has also upgraded the long-term issuer rating to [ICRA] BBB (pronounced ICRA triple B) from [ICRA] BB (pronounced ICRA double B). The outlook on the long-term rating for the term loans and the issuer rating is ‘Stable’.
 12. Project VIGEYE (VI Gilance EYE) is a citizen-centric initiative, wherein citizens join hands with the Central Vigilance Commission in fighting corruption. The data was accessed in February 2019 from <http://www.vigeyegpms.in/bbmp/?module=public&action=wards>.
 13. Accessed online from World Bank at <https://www.worldbank.org/en/topic/governance/brief/anti-corruption>
 14. CEE Member quoted in this article <https://timesofindia.indiatimes.com/city/pune/10-years-on-participatory-budget-still-mere-formality/articleshow/59007595.cms>

REFERENCES

1. Arrighi G (1994). *The long Twentieth Century: Money, Power and the Origins of Our Times*, Verso, London.
2. Blank R (1999). When can Public Policy Makers rely on Private Markets – the Effective Provision of Social Services, NBER Working Paper 7099, National Bureau of Economic Research, USA.
3. Fligstein N (1990). *The Transformation of Corporate Control*, Cambridge, MA, Harvard University Press.
4. Fligstein N (2001). *The Architecture of Markets: An Economic Sociology of Twenty-First Capitalist Societies*, Princeton, NJ, Princeton University Press.

5. Goldman M (2010). Speculative Urbanism and the Making of the Next World City, *International Journal of Urban and Regional Research*, Blackwell.
6. Goldman M (2015). With the Declining Significance of Labor, Who Is Producing our Global Cities?, *International Labor and Working-Class History*, No. 87, Spring 2015, pp. 137-164.
7. Harris, JR & Todaro, MP. (1970). "Migration, Unemployment and Development: A Two-Sector Analysis", *American Economic Review*, 60 (1): 126-142.
8. Harvey, D. (2008) 'The right to the city', *New Left Review* 53, pp. 23-40
9. Krippner, GR (2005): The Financialization of the American Economy, *Socio-Economic Review*, 3, 173-208.
10. McKinsey Global Institute Report (2010). India's Urban Awakening: Building Inclusive Cities, Sustaining Economic Growth.
11. Menon S, Madhale A, & A Karan (2013). Participatory Budgeting in Pune: A Critical Review, Centre for Environment and Education, Pune, Accessed on 14th November 2019 at https://www.academia.edu/5217974/Participatory_Budgeting_in_Pune_A_critical_review
12. Mukhopadhyay P (2018). "Engines without Drivers: Cities in India's Growth Story," Working Papers id: 12724, eSocialSciences.
13. National Institute of Urban Affairs (1989). Upgrading Municipal Services – Norms and Financial Implication, Vol. II, NIUA Delhi.
14. Oates, WE (1972). Fiscal Federalism, Harcourt Brace Jovanovich, New York.
15. Oates, WE(2006). On the Theory and Practice of Fiscal Decentralisation, IFIR Working Paper No. 2006-05, May 2006.
16. Palley, TI (2007). Financialization: What it is and why it matters, Working Paper No 525, The Levy Economics Institute of Bard College, Washington, DC.
17. Ranganathan M (2014). Paying for Pipes, Claiming Citizenship: Political Agency and Water Reforms at the Urban Periphery, *International Journal of Urban and Regional Research*, Volume 38.2 March 2014, 590-608.
18. Rao Chalapati and Biswajit Dhar (2018). India's Recent Inward Foreign Direct Investment: An Assessment, Institute for Studies in Industrial Development, New Delhi.
19. Rao G. and R. Bird (2011). Coping with Change: The Need to Restructure Urban Governance and Finance in India, IMFG Papers on Municipal Finance and Governance, No. 4, 2011.
20. Roychowdhury S (2011). "Livelihood and Income: Informality and Poverty in Bangalore's Slums." Oxford University Press.
21. Samy P. (2017). Participatory Budgeting: A Case of Delhi, Policy Briefs Centre for Budget and Governance Accountability, New Delhi.

22. Sivanna N (2012). Functional review of Bruhat Bengaluru Mahanagara Palike ISEC, September 2012.
23. Sood A. (2015). Industrial townships and the policy facilitation of corporate urbanization in India, *Urban Studies*, 1-20, Sage Publications.
24. Sood, A. (2017). Speculative Urbanism. In Orum, AM (ed) Wiley Blackwell Encyclopedia of Urban and Regional Studies, London: Blackwell.
25. Stiglitz J. (1989). Imperfect information in the product market in *Handbook of Industrial Organization*, 1989, Vol. 1, Elsevier.
26. World Bank (1972). Urbanization Sector Working Paper, Report No. 11072, June 1972.
27. World Bank (2007). Participatory Budgeting, Shah A (ed.) Public Sector Governance and Accountability Series, Washington DC.

Stairway to Home: Addressing Housing Shortage through Microfinance

DEBARATI BHATTACHARYA*

ABSTRACT

Globalisation has resulted in multiple employment opportunities in cities. While these employment opportunities are accompanied by the potential to alleviate poverty, the enhanced in-migration of more and more people into the cities has led to a housing shortage. Despite several initiatives by Central and state government over twelve Five-Year Plans, there seems to exist a demand- supply mismatch, owing to which it is unlikely that the vision of Housing for All will be realized by 2022. Lack of access to formal finance by the poor can be said to be one of the impediments to this vision. Citing a case study from the slums of Ahmedabad, the article investigates how housing microfinance can help address this shortage. The article reveals that although housing microfinance can help address the housing shortage efficiently, lack of financial literacy and schemes, debt-burden caused by irregular flow of income and multiple loans serve as primary bottlenecks for housing microfinance. The benefits associated with housing microfinance can be reaped in the long term; hence, potential borrowers need to be provided with flexible loan access and repayment options to engage them over longer period of time.

Keywords: Housing; microfinance; cities; Ahmedabad; EWS

INTRODUCTION

Economic growth in cities has led to multiple employment opportunities with the potential to alleviate poverty. Consequently, cities are witnessing an in-migration of more and more people yet the space available in urban areas is not sufficient to accommodate the growing number of migrants. While the World Bank has forecasted India's GDP to grow at 7.5% in 2019 and 2020 (PTI, 2019), this economic

*Doctoral Student, Faculty of Planning, Centre for Environmental Planning and Technology (CEPT) University, Ahmedabad.
Email: debarati.bhattacharya.phd17@cept.ac.in

growth is not accompanied by sufficient urban development. It is noted that with an increase in the real estate prices poverty-stricken families face housing-related problem in urban areas. Shelter, one of the three basic human needs, still remains beyond the reach for 18.78 million people in India, constituting 0.15% of the nation's total population (Census, 2011), who face the hazards of housing shortage.

Housing shortage has been defined by *Kundu Committee Report* on 'Housing Poverty' as households that reside in unacceptable conditions marked by either obsolescence factor – consisting of all houses more than 40 years old and structurally weak houses over 80 years old; congestion factor – households with one or more married couples sharing room with a person aged 12 years or more; the non-serviceable *kutchha* (mud brick) houses; and homelessness – households residing on pavements or in the open without a house (Kundu, 2013). The housing shortage has been skewed towards the Economically Weaker Section (EWS) within the urban population, with EWS accounting for 56% and Low-Income Group (LIG) accounting for 40% of the total shortage (KPMG; NAREDCO, 2012).

The reasons for this shortage can be attributed to resource constraints, especially in large cities leading to the poor being eliminated out of the housing market. Widening disparities in terms of income has kept the poor from getting integrated into the formal housing market. Furthermore, they don't have access to formal Housing Finance (HF) owing to their irregular flow of income and inability to provide economic collateral. From the supply side, the developers don't want to venture into this segment owing to the lack of profits while the government cannot provide for everybody, given the vast population of the nation.

The urban context represents an unmatched burden of the density of urban poor consisting of EWSs and LIGs who reside in substandard houses. The informal housing settlements in the cities of the developing world often lack hygienic and dignified living conditions. It is marked by a dearth of sanitary infrastructure leading to diseases and illnesses among the residents of such settlements. Despite several initiatives by Central and state governments over 12 Five-Year Plans, there seems to exist a demand-supply mismatch, owing to which it is unlikely that the vision of Housing for All will be realized by 2022. Urbanization has resulted in mass migration and the supply mechanisms are just not sufficient to cater to the growth rate. The housing finance companies and the formal banking sector cater to certain segments of the society, yet the LIG and EWS lack the means to get financial support from such institutions - a gap that development finance aims to bridge.

Development finance aims to assist society in enabling inclusive development by altering credit to an instrument of social emancipation and progress from a mere instrument of profit. It intends to enable poverty reduction leading to economic development and consequently to sustainable development.

Microfinance institutions emerged out of the inadequacies inherent in the development strategies within the ambit of development finance. In the 1950s and 1960s, the modernization model was followed in order to bring about development, focusing primarily on large scale investments in industries. Finance mostly flowed into the large projects related to infrastructure; only to realize a few years later that the modernization model had failed to alleviate poverty, impeding the overall development. The 1970s to 1980s witnessed a clear shift towards approaches focusing on poverty alleviation rather than merely on economic growth. In the 1970s, development policy was heavily influenced by the Women in Development (WID) approach, drawing from anti-poverty and welfare approaches. It was reasoned that a social change would only be possible if women are incorporated in the economic processes leading to equal gender relations. This development strategy was soon replaced by the Structural Adjustment Policies (SAP) in the 1980s, adopted by several developing nations in order to overcome debt crisis leading to the introduction of free-market reforms and reduction of government interventions in many sectors. This market-based approach also appeared in the domain of credit provision leading to the adoption of microfinance as a poverty alleviation tool. Hence, the rise of microfinance institutions was heavily witnessed during the 1980s and 1990s. Despite the Indian microfinance sector being one of the liveliest in the world, serving over 65 million low-income clients, financial intermediaries are still hesitant to offer housing loans to the LIG segment. Furthermore, home improvement loans don't feature within the priority sector and limited knowledge regarding the availability of these products serve as bottlenecks in the expansion (Agarwal, Jain, & Karamchandani, 2013).

Housing microfinance emerged out of the consideration that homes could be used as productive assets for enabling income generation. Housing microfinance, is not a subsidy driven model but a market-based subsidy-driven solution to offer affordable housing solutions to the poor who are not catered to, by the formal financial institutions. Housing microfinance broadly encompasses incremental housing finance and traditional mortgage finance and can be defined as dedicated small loans to be used for housing activities such as repairing, improving or upgrading the unit, infrastructure investments or construction of an entirely new unit.

However, there are several distinctions between microfinance and housing microfinance. Loans advanced for housing are bigger in size with a longer repayment period and have higher levels of associated risk with it. Furthermore, the provision for housing microfinance may not always lead to income generation (Smets, 2004).

In an attempt to play a provisionary role and cater to those who lie on the left side of the affordability line and stand unserved by the market, housing microfinance intervenes along several dimensions.

It enables one to attain Patta as in the case of Madhya Pradesh Patta Act. Further, within the Slum Networking Project (SNP), co-payment has to be made by the beneficiaries to improve the infrastructure- for example - Indore SNP. In case of In-situ slum redevelopment, co-payment is also made by the beneficiary as in the case of Basic Services to Urban Poor (BSUP). Microfinance helps the beneficiary to access loans to make their co-payment. Also, assistance is extended for redevelopment purposes to enhance the existing housing conditions.

However, opponents claim that housing microfinance institutions have often been criticized for working with safe target groups in order to avoid risk. It has additionally been stated that there is often an error in borrower selection due to borrowers' tendency to overstate income and understate outstanding debt obligations which has in several cases led to suicides. Plus, often the loans have been used to smoothen consumption and there isn't a mechanism to check that. Another issue that impedes the success of housing microfinance is concerned with land tenure insecurity. Furthermore, it is argued that the system is turning increasingly market-oriented due to which, several new product mixes are being offered (Daphnis; Ferguson, 2004).

Thesis Statement

In this article, the author argues that housing microfinance could assist in realization of the vision of Housing for All by 2022 because it extends micro loans to the poor borrowers who lack economic collateral. While critiques argue that microfinance has high lending rates that consequently leads to a debt burden for the poor borrowers, it is argued that when used productively the loans assist in housing upgradation and reap positive results.

Research Question

How could Housing Microfinance assist in realisation of the vision of Housing for All by 2022 in Urban India?

Method

Exhaustive literature review of books, documentations, reports, journal articles and Ted Talks on structure of housing microfinance, its processes and relationship with urban poverty have been reflected upon while drawing up the paper. Semi-structured interviews with the institutional heads at a microfinance institution in Ahmedabad, Gujarat and with thirty three women beneficiaries from the slums of Sanjaynagar, Abhuji Na Chhapra, and Indiranagar in Ahmedabad were conducted to gauge the role and extent of housing microfinance. The above mentioned slums were chosen as the women from these slums had availed loans from the abovementioned MFI and the sample was based on random convenient sampling of the universe. As most of the microfinance institutions target women as beneficiaries, it is felt prudent to have only women interviewed for the purpose.

The MicroFinance Institution (MFI)

The MFI was set up in Ahmedabad after a realization that most women engaged in informal labor required loans for housing and had concerns relating to housing facilities as they had no access to formal sources of finance. The MFI has worked intensively with several slums of Ahmedabad and with the urban poor women residing in those slums. It is one MFI that has worked intensively with women and housing in Gujarat as also in other states.

A senior executive at the MFI stated that it aimed to bring into light the discrepancies that arise when a policy is implemented to inform policy revisions. It has not only been a provider of finance but also acted as a catalyst in mobilizing slum communities in order to link them with basic amenities.

While the formal banking sector caters to formal income and formal tenure, it does not cater effortlessly to those who lack economic collateral, formal income slips and who have informal tenure. This is where MFIs step in to enable them to secure formal tenure and loans. Loans with interest rates of 11-15% are usually advanced with a maximum payback term of seven to ten years. The amount usually varies from ten thousand to ten lakh. The houses are mortgaged with the MFI till such time the loan is repaid. There are namely three microfinance products usually extended by MFI for shelter intervention namely for housing, water and sanitation. It additionally enables establishment of women-led cooperatives for the poor in an attempt towards financial inclusion.

Results

The three slums are located in Ahmedabad, spanning over the eastern and western banks of Sabarmati River and they were selected because many beneficiaries had availed the loans from the MFI. Ten women were interviewed from Indiranagar while 11 women were interviewed from Abhuji Na Chhapra and 12 women were interviewed from Sanjaynagar.

TABLE 1: SAMPLE CHARACTERISTICS

<i>Characteristics</i>	<i>Number out of total sample of 33</i>
Married women	33
Mean age at the time of accessing loan	28
Mean age (as on April 20, 2019)	39
Mean number of children before taking loans	2
Mean income at the time of repaying the loan	Rs. 12000/-
Mean size of the loan	Rs. 1,20,000/-
Mean tenure of the loan	7 years
Mean rate of interest	16%
Repaid the loan for housing	24

On interviewing the clients, several factors determining both the impediments to and consequences of housing microfinance were revealed which run as follows:

It was revealed that four of the 33 women had multiple loans and were facing issues with regard to its repayment. Twenty seven (80%) of the total women reported increased savings owing to a savings account that was initially opened to access the loans but it is still operational and protects them against any financial shocks and 24 (72%) of them said that they had access to micro-insurance.

Twenty nine women reported that once the loans were repaid they had better lifestyles, they could provide better for their families and 18 of them stated that they could get their children married in a grander manner owing to the improvements in housing.

There seems to be a negative correlation between accessing the loan and exercising a choice with regard to their employment- they have to work as the loan needs to be repaid. Even when the loans get repaid there are several other costs that are incurred and the women of the household are often engaged in work to be able to provide for their family. Only nine per cent revealed that they could exercise a choice regarding their employment.

It was observed that only 12 (33%) of the 33 women surveyed accounting for mere thirty three percent were aware of basic financial processes. Eighteen of them were unaware about the rate of interest charged for the loans they availed.

In summary, it can be stated that women who availed multiple loans faced issues with regard to its repayment. Often times, forcing them to overwork in order to pay off the loan. While HMF loans have led to enhanced savings and access to micro insurance and noticeable improvements in lifestyle of households who accessed HMF loans, majority of the women had an active savings bank account which better enabled them to cope with financial shocks, if any. A negative correlation was revealed between accessing housing microfinance loans and exercising choice regarding their employment. Additionally, it can be stated that accessing housing microfinance loans does not lead to enhanced awareness of basic financial processes. Interestingly, the families closer to the poverty line were able to repay the loans earlier; hence, exhibiting overall improvements in housing and lifestyle than families whose annual income were lesser and the families of the women leaders seem to be more able to repay than the other beneficiaries.

There are several bottlenecks inherent in the system ranging from unawareness of the schemes and financial knowledge. The amount available is small; hence, contributing to incremental housing rather than entirely new construction. With the high interest rates it often becomes a debt-burden for the poor borrowers. Often the clients understate their outstanding obligations and overstate their income in order to access the loans- leading to accelerated issues.

CONCLUSION

While it can be argued that with the high interest rates HMF often becomes a debt-burden for the poor borrowers, loans that are used productively can be said to have a positive impact on housing upgradation and lifestyle of the client. It also enables the client to have a greater say in decision making processes and also better prepares them for any financial shocks owing to enhanced savings. Once the loans are re-paid, respondents reported improvement in lifestyles. Moreover, it can be said that the benefits of the programme can be reaped in the long run; hence, the clients need to be kept engaged through new policies and initiatives. Only with flexibility in loan access options and subsequent repayments can housing microfinance reach its potential and assist in addressing housing shortage efficiently. The client portfolios need to be assessed a bit more stringently in order to avoid default with regard to loan repayment. Further, information regarding financial schemes

and processes needs to be disseminated in order to reach out to a wider audience. It can be argued that housing microfinance is beneficial with certain limitations; therefore, it needs to be integrated with wider strategies and framework to contribute to the “elements of entitlements, rights, voice, representation and power” (Fisher & Sriram, 2002, p. 328).

REFERENCES

1. Agarwal, A., Jain, V. and Karamchandani, A. (2013). State of the Low-Income Housing Market (July).
2. Baruah, B. (2010). Women and property in urban India. UBC Press.
3. Basu, P. and Srivastava, P. (2005). Scaling-up Microfinance for India's Rural Poor. Washington: World Bank.
4. Buyske, G. (2004). Microfinance: Part 1- Little but Mighty. *The RMA Journal*, April.
5. Census. (2011). Census of India Website : Office of the Registrar General & amp; Census Commissioner, India. Retrieved March 28, 2019, from <http://censusindia.gov.in/> Fisher, T., & Sriram, M. (2002). Beyond Micro-credit- Putting Development Back into Micro-Finance. New Delhi: Vistaar Publications.
6. Garg, S. and Agarwal, P. (2014). Financial Inclusion in India – A Review of Initiatives and Achievements. *IOSR Journal of Business and Management*, 52-61.
7. Garikipati, S. (2017). The Impact of Microfinance on Poverty Alleviation: Making Sense of the Evidence. In G. Giorgioni, Development Finance- Challenges and Opportunities (pp. 189-206). London: Palgrave Macmillan.
8. Ghosh, J. (2013). Microfinance and the challenge of financial inclusion for development. *Cambridge Journal of Economics*, 1-17.
9. Hulme, D. and Arun, T. (2009). Microfinance: A Reader. London: Routledge.
10. Joseph, J. and Varghese, T. (2014). Role of Financial Inclusion in the Development of Indian Economy . *Journal of Economics and Sustainable Development* , 6-11.
11. Kaur, R. (2016). Outreach of Microfinance in India. *IOSR Journal of Business and Management*, 77-86.
12. KPMG; NAREDCO. (2012). Bridging the Urban Housing Shortage in India [kpmg.com/in. India. Retrieved from http://www.naredco.in/notification/pdfs/Urban-housing-shortage-in-India.pdf](http://www.naredco.in/notification/pdfs/Urban-housing-shortage-in-India.pdf)
13. Kundu, A. (2013). Estimating Housing Shortage Alternate Approaches. New Delhi. Retrieved from <http://censusindia.gov.in/DigitalLibrary/Housing-Shortage.pdf>
14. Ledgerwood, J. (1998). Microfinance Handbook: An Institutional and Financial Perspective (I ed.). Washington D.C.: World Bank.
15. Lensink, R., Mersland, R., Thi Hong Vu, N., & Zamore, S. (2017). Do

microfinance institutions benefit from integrating financial and nonfinancial services? *Applied Economics*, 2386-2401.

16. Livemint. (2018, April 19). 19 crore Indian adults don't have bank account: World Bank. Retrieved from Livemint: <https://www.livemint.com/Industry/CJk2Yalf8NYRdgp8HcvFFJ/19-crore-Indian-adults-dont-have-bank-account-World-Bank.html>
17. MHUPA. (2009). India Urban Poverty Report. New Delhi: Ministry of Housing and Urban Poverty Alleviation.
18. Nyasha, S. and Odhiambo, N. M. (2017). Financial Development and Economic Growth Nexus: A Revisionist Approach. *Economic Notes- Review of Banking, Finance and Monetary Economics*, 223-229.
19. PTI. (2019). World Bank pegs India's GDP growth at 7.3 % in 2018-19. Retrieved March 28, 2019, from <https://www.thehindu.com/business/Economy/world-bank-pegs-indias-gdp-growth-at-73-in-2018-19/article25948515.ece>
20. Rao, P. (2003). *Development Finance*. New York: Springer.
21. Robinson, M. S. (2001). *The Microfinance Revolution* - Vol. 1 (1 ed.). World Bank.
22. Roy, A. (2010). *Poverty Capital: Microfinance and the Making of Development* (1 ed.). UK: Routledge.
23. Sarkar, S. and Dhar, S. N. (2011). *Microfinance- Concepts, Systems, Perceptions and Impact*. New Delhi : Readworthy.
24. Sengupta, R. and Aubuchon, C. P. (2008). The Microfinance Revolution: An Overview. *St. Louis Review*, 90(1), 9-30.
25. Shetty, N. K. and Veerashekharappa, D. (2009). The Microfinance Promise in Financial Inclusion: Evidence from India. *The IUP Journal of Applied Economics*, 8, 174-189.
26. Smets, P. (2004). *Housing finance and the urban poor*. Rawat Publications. Retrieved from https://books.google.co.in/books/about/Housing_Finance_and_the_Urban_Poor.html?id=FErtAAAAMAAJ&redir_esc=y
27. Somanath, V. S. (2008). *Microfinance: Redefining the Future*. New Delhi: Excel Books.
28. Srinivasan, G. (2013). *Microfinance India- The Social Performance Report 2012*. New Delhi: Sage Publications.
29. UN (n.d.). SDG 1: No Poverty. Retrieved from United Nations in India: <http://in.one.un.org/page/sustainable-development-goals/sdg-1/>
30. Upadhyaya, S. M. (2007). *White Paper on Microfinance: Issues and Analysis*. UDAI.
31. Yunus, M. (2007). *Banker To The Poor: Micro-Lending and the Battle Against World Poverty*. India: Penguin.
32. Yunus, M. (2012, January 18). *TedxVienna - Muhammad Yunus - A History of Microfinance*. (TedXVienna, Interviewer)

Study of Gender Preference to Parameters of Public Transport Evaluation – A Case of Bhopal

RAHUL TIWARI*
KSHAMA PUNTAMBEKAR**
PURNIMA PARIDA***

ABSTRACT

Study of relation between gender and public transport in India becomes crucial, as contrary to situation a couple of decades ago, when women participation in the total workforce was meager.

This article is an outcome of a study undertaken to understand the variation in perception of males and females about public transport. Based on the literature review, 6 performance parameters viz; Accessibility, Comfort, Cost, Environment, Reliability, Safety and Time, of the Bhopal city were taken as it has a good road based public transportation system, including BRT system.

Keywords: Gender Preference, Public Transport, Evaluation Parameters

INTRODUCTION

According to the United Nations Development Programme (UNDP) Human Development Report, 70% of the 1.2 billion people living in poverty worldwide are women. Issues like access to jobs, markets and social or educational facilities which are transport-related play an important role in aggravating women's disadvantaged position in the society. A lot of effort has been put to incorporate gender perspectives into sectors like health, education and agricultural but very less has been attempted in the transport sector. This is ironical as transport plays a vital role in women's daily routine. One of the strategy to incorporate women aspirations in the public transport is by evaluating the public transit from the gender neutral perspective, where not only aspiration of men is considered rather females are also included in the evaluation process.

*Assistant Professor, Moulana Azad National Institute of Technology (MANIT), Bhopal. Email: ar.rahultiwari@gmail.com

**Assistant Professor, School of Planning and Architecture (SPA), Bhopal. Email: kshama@spabhopal.ac.in

***Senior Principal Scientist, CBRI, Roorkee. Email: punam31@gmail.com

In light of this observation, an Evaluation Mechanism has been developed by Ministry of Urban Development (MoUD), Government of India (GoI) based on Service Level Benchmarks (SLBs). Table 1 illustrates the evaluation mechanism as developed and suggested in the SLB handbook issued by MoUD for evaluation of the public transport services in any city. The performance of public transport is separately evaluated against each of the performance parameters Level of Service (LoS) achieved against each parameter is added to arrive at the overall LoS and a set of investigative statements are associated with the range of overall LoS achieved after the evaluation.

TABLE 1: THE SLB FOR PUBLIC TRANSPORT SYSTEM IN INDIA

<i>Level of Service</i>	<i>Presence of Organized Public Transport System in Urban Area (%)</i>	<i>Extent of Availability of Public Transport</i>	<i>Service Coverage of Public Transport in the City</i>	<i>Average waiting time for Public Transport users (mins)</i>	<i>Level of Comfort in Public Transport</i>	<i>% of Fleet as per Urban Bus Specification</i>
1	>= 60	>= 0.6	>= 1	<=4	<= 1.5	75 - 100
2	40- 60	0.4 - 0.6	0.7- 1	4 - 6	1.5 - 2.0	50 - 75
3	20 - 40	0.2 - 0.4	0.3 - 0.7	6 - 10	2.0 - 2.5	25 - 50
4	< 20	< 0.2	< 0.3	> 10	>2.5	<= 25
Overall Level of Service of Public Transport facilities City wide						
Calculated LoS = (LoS1 + LoS2 + LoS3 + LoS4 + LoS5 + LoS6)						
<i>Overall LoS</i>	<i>Calculated LoS</i>	<i>Comments</i>				
1	< 12	The City has a good public transport system which is wide spread and easily available to the citizens. The system provided is comfortable.				
2	12 - 16	The City has public transport system which may need considerable improvements in terms of supply of buses/ coaches and coverage as many parts of the city are not served by it. The frequency of the services available may need improvements. The system provided is comfortable.				
3	17 - 20	The City has a public transport system which may need considerable improvements in terms of supply of buses/ coaches and coverage as most parts of the city are not served by it. The frequency of the services available needs improvements. The system provided is not comfortable as there is considerable over loading.				
4	21-24	The City has very poor/no organized public transport system.				

Source: MoUD Report (2009).

This study was conducted at Bhopal, the capital city of Madhya Pradesh, a central state of India. Direct interviews were conducted with the commuters of the City Transport Service, being offered by Bhopal City Link Limited (BCLL), which is a fully-owned Company of Bhopal Municipal Corporation. Random Sampling was adopted to select the survey respondents. Literature review has been done to identify the performance parameters of public transport, and to validate the fact that parameters for public transport benchmarking have different perceived weightage by commuters. Additionally, the study attempts to establish relation between the gender characteristic of the commuter and the perceived weight of the commuters to the Performance Parameter thereby re-defining the SLB Process. The study has relevance to the Public Transport Services in the urban areas of India.

Literature Review

A study was commissioned by the Scottish Executive to explore women's experiences of transport use in Scotland. The research outcomes indicated that there are important gender differences in travel patterns in Scotland. Women, particularly older women, have less access to cars and are more likely to rely on public transport, particularly buses. The research highlighted that "Women in Scotland are constrained in their use of public transport by a range of barriers in a system which has not been planned and delivered to take account of their requirements". These barriers have been identified as safety and comfort, access, timing / reliability, cost, information and a lack of consultation with women. Nearly half of the individual women surveyed felt restricted by transport. As per the study, several transport providers appear to have a limited understanding of the issues affecting women, with few initiatives to improve services for them and few plans to address the issues in the future. Some providers are unaware of any issues affecting women. The research clearly identified opportunities for improvement in many aspects of public transport provision for women.

User-Oriented Public Transport (UOPT) project conducted by the Middle East and North Africa (MENA) Centre for Transport Excellence (CTE) found in the project that "Safety and security concerns in public transport among women are common concerns worldwide" and that the "situation is no different in MENA Region", as research establishes "women have a fear, whether perceived or based on experience, towards using public transport". It is interesting to note that, security concerns have been identified as a major barrier, which prevent women from using public transport, in the results of the UOPT research project. In the Research, out of the 131 female respondents who are not using public transport on a weekly basis in Algiers, Amman, Beirut, Casablanca,

and Muscat, 41% cited "PT (Public Transport) is less secure than taxis or private car" as their reason. This was the second most often selected reason after "I like to use my own car" (47%). On the other hand, security concerns were mentioned by only 12% of the 137 male respondents who are not using public transport on a weekly basis. This clearly established the gap on how security of public transport is perceived by women and men.

When review of literature for the evaluation of public transport service was conducted, it was found that several studies regarding performance evaluation of public transport have been conducted. For instance, Stradling et al. (2007) conducted a survey in Edinburgh, Scotland, which found safety, walking and cycling facility, service interruptions, overcrowding, co-passengers' smoking habit, cost, as the main reasons for not using public transport services, out of the set of several reasons, provided in the questionnaire. Gatersleben and Uzzell (2007) investigated affective experiences of daily commuters. The results revealed that commuting by car as well as by public transport can be stressful because of delays caused by the traffic volume. Public transport was perceived as unpleasant and public transport users expressed a more negative attitude towards their daily commute than users of other transport modes. The negative attitudes were shown to be related to boredom caused by delays and waiting time.

UK Department for Transport (2003) has also conducted studies regarding customer need in public transport. High frequency of service, services that are reliable and fares that offer value for money are revealed as important needs of UK public transport users. Fellesson and Friman (2008) conducted a transnational comparison of customers' public transport perceived service satisfaction in eight cities (Stockholm, Barcelona, Copenhagen, Geneva, Helsinki, Vienna, Berlin, Manchester and Oslo) in Europe. The result showed four general factors: supply, reliability; bus comfort and bus stop design that makes customers comfortable and enjoy the travel experience. Eboli and Mazulla (2007) investigated service quality attributes important for customer satisfaction with a bus transit service in Cosenza, Italia. Respondents were asked to rate the importance and satisfaction with 16 service quality attributes (bus stop availability, route characteristic, frequency, reliability, bus stop furniture, bus overcrowding, cleanliness, cost, information, promotion, safety on board, personal security, personnel, complaints, environmental protection and bus stop maintenance). The result shows that the latent variable important for global customer satisfaction is service planning which is reflected in reliability, frequency, environment, personnel, convenience and time. Beirao & Sarsfield Cabral (2007) summarise

advantages in using public transport according to Portugal public transport users. The result highlights the importance of a cost-friendly and less stressful public transport service. It is perceived as less stressful since there is no need to drive, it is possible to relax and one may be able to rest or read. Travel time on exclusive bus lanes is considered faster than the car, there are less exhaustive emissions, thereby protecting the environment. From the literature reviewed, the set of parameters identified for performance evaluation of public transport are accessibility, comfort, cost, environment, reliability, safety and time.

The majority of the public transport users are captive customers to the service (Tiwari 2011, World Bank 2007) and since Indians of different income strata have different expectations of the urban transportation system, and different degrees of access to transportation decision-makers, gender issues are incorporated in the Evaluation Process of Public Transport thus, making a big difference in increasing women's productivity and promoting gender equality.

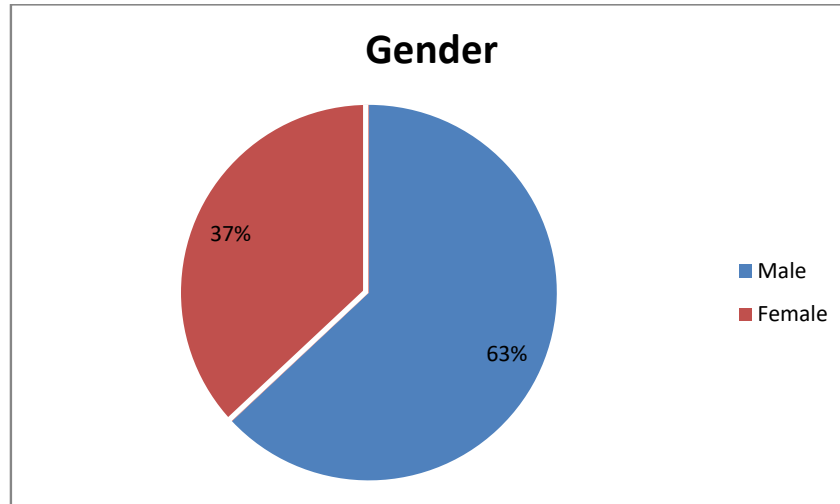
Data Collection

The questionnaire was designed to record the socio-economic information of the commuters, including gender, age, monthly income and educational qualification. Information regarding gender was recorded on a Nominal Scale while other information was recorded on an Ordinal Scale. The perceived weight allotted to the identified parameters was recorded on a Likert Scale. The passengers indicated their perceptions, relative to the importance for each of the parameter. They marked their importance from "5 as very important" to "1 as least important". Since, determination of sample size is a very important issue because samples that are too large may waste time, resources and money, while samples that are too small may lead to inaccurate results. Equation 1 was used for determining the minimum sample size.

$$n = \frac{\beta X(1 - \beta)X Z^2}{e^2} \quad \dots 1$$

Where, n is sample size, σ is standard deviation, z is reliability coefficient (1.96 for 95% confidence interval) and e is Standard error (2%). Taking the confidence level at 95% and the confidence interval at five per cent the sample population was taken as 20 lakh (equal to present population of Bhopal UA) the sample size was derived at 384, after the survey was conducted, data was punched. It was found that a total of 437 complete data samples were completed and this was more than the minimum required 384. Out of total responses, 37% of them comprised of females. The distribution of sample is depicted in Figure 1.

Fig. 1: Sample Distribution



Data Analysis and Interpretation

The responses from the survey were initially checked whether they are normal or not using Shapiro Wilk Test through Mini Tab where the shape of sample distribution is compared to the shape of normal curve. The data set was found to be normally distributed. To rank the parameters identified, weightage was allotted by the user. The sum of all responses to an item gives the score to that item or variable, where weightage for each parameter was arrived at, after removing the errors. The average sum of scores will give the importance given to a particular parameter. The average score helps in identifying the most preferred and least preferred parameter by users in an urban transport performance evaluation. In the analysis it was found that safety and time are the most important whereas accessibility is the least important parameter for public transport, as per users' opinion. The result of the mean analysis is depicted in Figure 2.

Since the data regarding gender was collected on a nominal scale, hence Multi Correspondence Analysis was used to study the correlation with the allotted weight to the identified Parameter for Evaluation of Public Transport. Two Independent Sample T-Tests have been conducted for the parameters identified to see that whether Female give more weightage than Males or not.

Analysis of Mean

The mean values allotted by the users to the parameters for

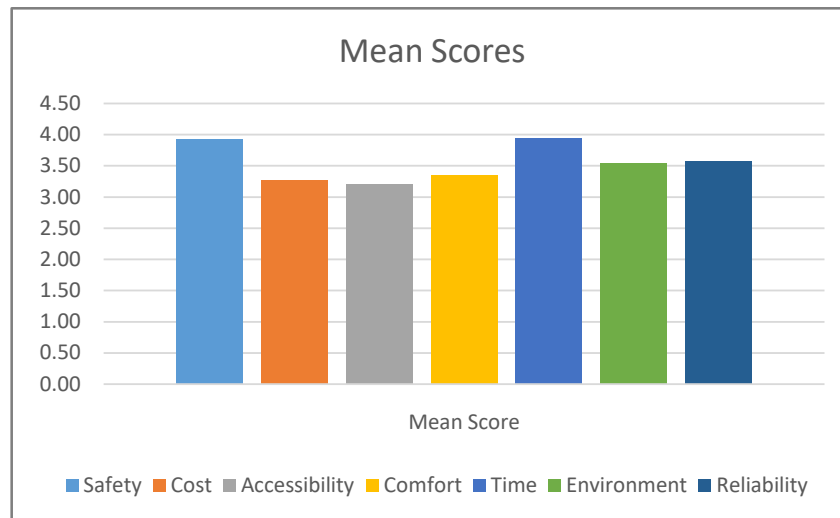


Fig. 2: Mean Score of the Identified Parameters

evaluating public transport were then analysed based upon the gender characteristic (independent variable) and the results of the analysis are tabulated in Table 2.

TABLE 2: ANALYSIS OF MEAN

Factor	Distribu- tion	Mean Value						
		Accessibi- lity	Comfort	Cost	Environ- ment	Reliabi- lity	Safety	Time
Gender	Male	3.285	3.467	3.394	3.562	3.628	3.745	3.876
	Female	3.067	3.135	3.018	3.515	3.46	4.184	4.061

T-Test Analysis

T-test, was conducted using Microsoft Excel to compare the mean of two independent samples (Male and Female) to understand the significance of the difference in the allotted score to Parameters. P-Level was calculated for understanding the significance level of difference in the Mean values. P-level is the significance level of the difference between Male and Female responses, where difference between groups is considered significant if p-level is less than one per cent, because lower the p-level, the sure one becomes, that there is a true difference between the two Groups. Results of the T-Test Analysis are as tabulated in Table 3. From the T-Test Analysis it was established that the difference between the response from Male and Female in regard to only safety is significant with P-Level of perfect 0%. It means its statistically

established that Female give more weightage (4.2) as compared to that by Male (3.7), the difference in the mean scores of other parameters is not found significant based on the results of the T-Test.

TABLE 3: RESULTS OF THE T-TEST ANALYSIS

S. No.	Accessibility	Comfort	Cost	Environment	Reliability	Safety	Time
Df	435	435	435	435	435	435	435
T-Score	2.60	3.20	2.93	0.40	1.27	4.41	1.73
P-Level (in %)	0.96	0.15	0.35	68.83	20.65	0.00	8.51

CONCLUSION AND RECOMMENDATIONS

Since the SLB Guidelines of Public Transport in India do not take into account the Customers Service related input into the Benchmarking Process, it was one of the major objective of the research whether the commuters' preference weight change for various parameters of public transport or it remains the same all throughout, and if they change, then does it have any relation with the Gender Characteristics of the commuters. During the course of research, it was observed that preference weight allotted to identified features of public transport were not static but dynamic. Upon further analysis of the Survey data it was observed that the preference weight allotted to features of public transport significantly and for female commuters, safety is the most important parameter for evaluating public transport. From the study, it is quite evident that the most important parameter for female commuters is safety and least important is cost, whereas the most important parameter for male commuters is time and least important is accessibility.

In the light of above conclusion derived from the study it is recommended to include gender analysis into every transport planning exercise, so that gender impacts are studied and considered before project implementation itself. International agencies are increasingly getting aware of integrating gender concerns into transport projects. For example, the World Bank's new Transportation Policy acknowledges that "to date, transport policies have been geared primarily towards the needs of men" and that "failure to consider ... possibilities for improving the lot of women often stems from inadequate analysis rather than excessive cost". The World Bank has also initiated a new Gender and Transport Thematic group that is presently carrying several case studies on gender concerns in both rural and urban transport projects. The UK-based Transport Research Laboratory (TRL) has also supported several important gender and transport studies in Africa and India.

To address these issues, it is also recommended to make transport policies more responsive to female needs by following a structural approach to understand their needs and identifying ways to address them. It is also required that women are represented at each step of the planning and design process of transport investments. Government agencies and NGOs, community-based organisations, and women's groups that can be used in planning and implementation should be identified and consulted.

REFERENCES

1. The National Urban Transport Policy (NUTP), India and Guidelines for Service Level Benchmarks (SLBs) for Public Transport, available on website of Jawaharlal Nehru National Urban Renewal Mission (JnNURM), Ministry of Urban Development, Government of India (www.jnnurm.nic.in) accessed on 28th December 2014.
2. Badami, M.G., Tiwari, G. and Mohan, D. (2011) Access and Mobility for the Urban Poor in India: Bridging the Gap between Policy and Needs.
3. Beirao, G, Sarsfield Cabral, J.A. (2007). Understanding attitudes towards public transport and private car: A qualitative study. *Transport Policy*, 14 (6), 478-489.
4. Eboli, L., Mazzulla, G. (2007). Service quality attributes affecting Customer Satisfaction for Bus Transit. *Journal of Public Transport*, 10 (3), 21-34.
5. Felleson, M.F., Margareta Friman (2008). Perceived Satisfaction with Public Transport Service in Nine European Cities. *Journal of the Transportation Research Forum*, 47 (3), 93- 103.
6. Gatersleben, B. & Uzzel, D. (2007). Affective Appraisals of the daily commute: comparing perception of the drivers, cyclists, walkers, and users of public transport. *Environment and Behavior*, 3, 416-431.
7. Stradling, S., Carreno, M., Rye, T. & Noble, A. (2007). Passenger Perceptions and Ideal Urban Bus Journey Experience. *Transport Policy*, 14, 283-292.
8. Women's Issues in Transportation, Research Problem Statements, Transport Research Board Task Force on Women's Issues in Transportation, Transportation Research Circular, Number E-C023, December 2000.
9. U K Department of Transport: The Department for Transport (Driver Licensing and Vehicle registration Fees) Order 2003 UK Draft Statutory Instruments, No. 2994 ISBN 0-11-048101-1. Draft Order laid before the House of Commons under Section 102(5) of the Finance Act (No. 2) Act 1987, for approval by resolution of that House.

Investigating Open Space Reservation as the New Urban Commons: A Case of Chennai City

KIRANMAYI RAPARTHI*

ABSTRACT

Open spaces form a significant part of the urban environment and play an important role, in developing a resilient and sustainable city. Underlining the importance of open spaces, planning authorities have developed standards and guidelines to safeguard and preserve open spaces. In the case of Chennai city and other cities in Tamil Nadu, the concept of Open Space Reservation (OSR) under the Tamil Nadu Town and Country Planning Act - 1971 was enacted, as a step towards promoting green cover in the city. However, till date most of these OSR's behave as poorly designed, unsustainable open spaces. The present study, sheds new light on OSR's, emphasising the need for management of OSRs and developing them into sustainable public urban spaces.

This study has an implication for mainstreaming the management of OSRs in Development Control Regulations (DCR). Thereby, emphasize the need for integrating OSR management, as a policy tool, to ensure sustainable and resilient urban development of future cities.

Keywords: *Open Space Reservation, Management strategies, DCR, Resilient and Sustainable Cities*

INTRODUCTION

Planning of urban open spaces in a sustainable manner is remarkably a challenging task, for architects, urban planners and designers in the 21st century. Debates on urban planning advocate that open spaces in urban areas, not only provide recreation and improve the aesthetic value, Bolund, P. (1999: 293-301) but also play a vital role in addressing the sustainability of a city from all its three bottom lines; environmental, social and economic (Thompson, C. W. 2002: 59-72). Open spaces

*Assistant Professor, School of Architecture and Planning, Anna University, Chennai. Email: kiranmayiar@gmail.com

provide environmental benefits such as alleviate the urban heat island effect thereby calming the micro climate, purifying the air and water, screening the noise and filtering wind. Moreover, open spaces act as a space for social gatherings and interactions as such, promote social cohesion (Opdam, P. 1991: 93-106). Besides, it also offers psychological wellbeing and improves the liveability of cities. Furthermore, urban open spaces have the potential to foster ecotourism and may directly or indirectly promote economic growth of the cities. Accordingly, open spaces offer various environmental, social, economic and psychological benefits and thereby improve the quality of life.

Conversely, within the context of a city, the negative environmental, social and economic impacts of rapid urbanization have led to an inadequate supply and distribution of open spaces and other community facilities in cities. Consequently, environmental degradation, rapid growth of urban population and demand for developable land has increased attention towards the preservation of open spaces in cities. In the case of Chennai city and other cities in Tamil Nadu, the concept of Open Space Reservation (OSR) under the Tamil Nadu Town and Country Planning Act - 1971 was enacted, as a step towards promoting green cover in the city. In 2014, the Corporation of Chennai had identified nearly 440 Open Space Reserves (OSRs). However, till date most of these OSR's behave as poorly designed unsustainable open spaces. As such the quantity and quality of OSR's is deteriorating at a very rapid pace, thereby posing a great challenge for urban planners and architects.

In this regard, this research study puts forth an effort to understand and uncover the potential of OSRs in promoting a resilient urban development. The issues, that this research study addresses are: (i) whether OSRs can serve as the new commons for the urban scenario and (ii) whether a network of connected OSRs can compensate for a large public space. This study also suggests OSR management strategies that can be incorporated in Development Control Regulations (DCRs) to promote sustainable public open spaces at the neighborhood level. Accordingly, the research emphasizes the need for integrating OSR management, as a policy tool, to sustainable and resilient urban development of future cities.

Urban Open Spaces

Urban Open Spaces are generally zoned as open space and recreational use zone. They refer to roads, spaces abutting the roads, open spaces reserves, playgrounds and parks ponds and also lakes. In general, most of the urban open spaces are primary referred to as the

lung spaces of the city. They mainly decide the quality of life in a city. Usually, most of these urban open spaces are free for public access and are mostly managed by the local governments. However, a few urban open spaces are privately owned. In the past also, most of the urban open spaces were the private gardens of the rich families and noble people.

For instance, in the 18th century, most parks in London were privatized, however, later in the 19th century they were designated as public parks (Hepcan, S., 2009: 143-154). Likewise, in many Asian cities also, most gardens that were under the privilege of the kings, and nobles and wealthy, royal people but later these parks were designated to the public and later onwards they served as places for recreational outdoor activities (Kong, F 2010: 16-27). However, in the United State of America, most urban open spaces during the 18th century were located at the fringes of cities, with an intention to replicate the natural environment. However, as these open spaces were located far away from the city, they were not much used by the public. As such children's playground were merged together with smaller open spaces, and were used as multifunctional open spaces. Moreover, these open spaces also emphasized on hosting different recreation activities such as get-togethers, outdoor activities and events.

As seen above, the usage of the urban open spaces has been changing over time irrespective of the regional location. Parks that were once seen as private gardens of the rich and the wealthy have now become the recreational places for the general public and are used for events and outdoor activities. It is hoped that these urban open spaces will serve the communities and bring in more functions to the users in the future. In the current scenario, urban open spaces are being considered as the main components of sustainable cities. Urban open spaces have more potential use apart from just serving as places for outdoor recreational use for the public. Urban open spaces have the ability to improve the social, environmental, ecological, economic, and psychological quality of a city.

Open Space Reservation in Chennai Metropolitan Area

The city of Chennai is the fourth largest metropolitan city in India with a population of 4.68 million. The city is rapidly urbanizing and has grown at a very fast pace, laterally towards the north, west and southern directions. This is mainly due to the development of the special economic zones and IT corridors. As such, the municipality along with its peri-urban fringe, including Kancheepuram and districts Thiruvallur, is now known as Chennai Metropolitan Area. However, the growth of the city has led to a great threat to the existing urban open spaces in the city.

In the case of, Chennai city and other cities in Tamil Nadu, the Development Control Rules (DCRs) for Chennai metropolitan area has stated that for layouts more than 10,000 square meters, it is mandatory to reserve 10% of the layout area as Open Space Reservation (OSR). This space reserved under OSR, shall be registered to the Authority or the Local body or the Agency designated by the development authority prior to the approval of the layout through a registered deed under the provisions of Tamil Nadu Town and Country Planning Act - 1971. The land so reserved shall be free from any construction by the layout owner, developer or promoter. This OSR must be maintained as either recreational open space or communal space to the satisfaction of the authority or transferred to the authority for maintenance. In the year of 2014, the Corporation of Chennai had identified nearly 440 Open Space Reserves (OSRs). However, till date most of these OSRs behave as unsustainable and poorly designed public open spaces.

This research focuses on the open space reserves because a relatively large amount of OSR can be found in dense core districts. These OSRs at present are mainly seen as small parks, sitting-out areas and resting gardens that are mostly privately managed open spaces open to the general public. However, they are not actively used by the public. This research puts forth an effort to identify how these OSR's can be actively used by the general public. This research focuses on the connectivity of the OSRs and whether well-connected OSRs can serve as a large public spaces. This research study tends to suggest OSR management strategies that can be incorporated in Development Control Regulations (DCRs) to promote sustainable public open spaces reserves at the neighborhood level.

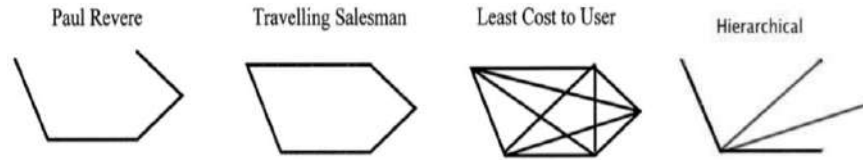
Connectivity of Open Spaces

Connectivity is one of the most important aspects in restoring the natural environments. A network of well - connected open spaces tend to have greater functions when compared to a huge number of open spaces in isolation (Linehan, J., 1995: 179-193). According to meta-population theory, more interactions tend to happen at a given point when it is well-connected. In this manner, in a densely populated city, open spaces tend to be more isolated and so, improving and developing a network of well-connected open spaces tends to improve the sustainable value of the open spaces, (Nordh, H, 2011: 95-103).

The graph theory and gravity modelling are mostly used in identifying the connectivity of urban open spaces. Graph theory is a simple graphical presentation of a given objective. As such in this research, graph theory is used to replicate all the open spaces as nodes

and the roads and paths as lines. Later gravity modelling is used to understand the interactions between the various nodes and analyze quantitatively the connectivity of the network (Peters, K., 2010: 93-100). The Figure 1 highlights the various network models that were developed by researchers.

Fig. 1: Different Network Models



Source: Hellmund P, 1989, Linehan J et al., 1995

In the Paul Revere network model, all nodes are visited only once. In the Travelling Salesman network model, each node is connected with two other different nodes. This network is considered as the simplest network model. The Least Cost to User model is regarded as the most ideal model because all the nodes in this network are interconnected. However, this network is highly impossible to be built in the present scenario because most of the linkages might be blocked by various buildings. In the hierarchical network model, a central point connects all the nodes. Furthermore, a network model tends to depend on the importance of the linkages and the cost of the linkages.¹¹

Methodology

This research uses the graph theory and gravity modelling for identifying how a network of well-connected open space reserves tend to improve the sustainable value of the open spaces. The research focuses on the IT corridor located on the Old Mahabalipuram Road (OMR). The IT corridor is populated with large developments like Technology Parks and Gated Communities. By making use of the open space reservations of these large developments, this research focuses on identifying whether OSRs can serve as the new commons for the urban scenario and (ii) whether a network of connected OSRs can compensate for a large public space.

The graph theory is used to understand the type of network (connectivity) of the OSRs. In this research all the open space reserves are seen as nodes and the roads and paths that connect these open space reserves (nodes) are referred to as lines. As such the type of network among the identified OSRs, i.e. Paul Revere model, Travelling Salesman model, Least Cost to User model and the hierarchical network model is analyzed. Later, the gravity modelling is used to analyze the degree

of connectivity of the open space reserves. In this research, the degree of connectivity is described by using the connectivity indices namely, Alpha, Gamma and Cost Ratio (Linehan, J., 1995: 179-193).

The degree of connectivity Alpha is defined as the ratio of number of links to the maximum number of links. The Alpha value highlights, how closely the OSRs are connected. The degree of connectivity gamma is defined as the ratio of number of links to the number of nodes. The cost ratio focuses on the efficiency of the network. As such a high cost ratio highlights a fairly high degree of connectivity. The degrees of connectivity are as follows:

$$\begin{aligned} \text{Alpha} &= \frac{\text{number of links}}{\text{maximum number of links}} & \text{Gamma} &= \frac{\text{number of links}}{\text{number of nodes}} \\ \text{Costratio} &= 1 - \frac{\text{number of links}}{\text{distance of links}} \times 10 \end{aligned}$$

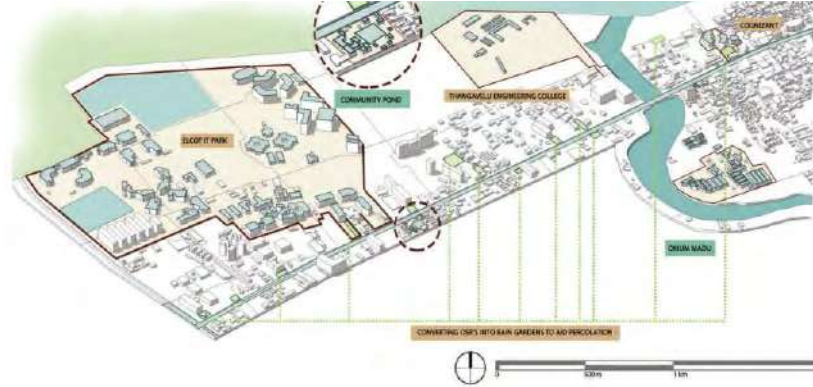
Analysing the Connectivity of the Open Space Reserves

As mentioned in the earlier section, gravity modelling is used to analyze the degree of connectivity of different OSRs (nodes) in the study area. As the study area has a lot of IT buildings, they act as hindrances in the real landscape. As such the distance between the OSRs (links) cannot be linked directly with a straight line. Instead the links between the OSRs is the main road itself. A total of 12 OSRs are identified for the research in the study area. Accordingly, there are 12 nodes.

Different types of network models were developed based on the plan. The distances between two OSRs and the length of the roads are measured using the map tools. It can be easily identified that there are various ways of forming network models. However, as the OSRs are mostly abutting the main road, the travelling time to the OSRs will not be much affected due to mostly geometrical reasons. As per the Paul Revere Model Network, every OSR will be visited at least once. According to this model, there are twelve (12) nodes and a total of nineteen (19) links identified in the study area.

In the Travelling Salesman Model Network, each OSR needs to be connected to at least another two nodes. As such the difference between the Paul Revere Model and the Travelling Salesman Model Network is very negligible. In the hierarchical model network, all the nodes need to be connected to a single node. In Figure 2, the central node is highlighted by a circle and it is chosen to study average travelling distance as it serves as a major public transport exit and also has a community pond just opposite to it. According to this model, there are 12 nodes and a total of 16 links are identified in the study area.

Fig. 2



The Alpha degree of connectivity and the Cost Ratio are important connectivity indices when evaluating the network models. The Alpha degree of connectivity value highlights how close the OSRs are connected. The Cost ratio connectivity index highlights the efficiency and simplicity of a network. As such a high alpha and low cost ratio connectivity indices indicate that the network is complicatedly linked. Table 1 highlights, the connectivity indices for the network models shown in Figure 2.

In this research study, it is identified that the hierarchical network model with the major public transport exit and also a community pond has a low alpha value and a high Cost Ratio value. Thereby, indicating that the Hierarchical network model is an efficient network and highlighting that it is more beneficial to visitors coming from other neighborhood areas. Furthermore, the research identifies that the Least Cost to user network model has the highest alpha value and the low cost ratio value, thereby indicating that this network model is complicatedly linked and is the least efficient network model. The reason for these low and high value is that the study area is very small and huge number of network linkages is mainly constrained by huge number of buildings.

TABLE 1: CONNECTIVITY INDICES FOR THE NETWORK MODELS

Network	Nodes	Links	Gamma	Alpha	Distance of links	Cost Ratio
Paul Revere	12	19	1.6	0.38	2457 m	0.922
Travelling Salesman	12	20	1.7	0.4	2637 m	0.924
Hierarchical	12	16	1.3	0.32	3645 m	0.956
Least Cost to User	12	36	3	0.72	3726 m	0.903

Source: Developed by the Author

Discussion

Based on the graph theory and gravity modelling, it is identified that location and size of an open space do not affect, the number of visitors visiting the Open Space Reserves. Rather, the facilities and features provided in the OSRs tend to attract visitors to the OSRs. Moreover, a small well-treated urban open space tends to have a better psychological restorative power, when compared to a large urban park (Nordh, H 2009: 225-235). As such, a small well-designed OSR with components such as seating areas, grass and trees will tend to improve the restorative function of the OSRs and also increase the number of people visiting the OSRs (Nordh, H., 2011: 95-103). Thereby, addressing the first research question by, highlighting that, OSR's have the ability to serve as the new commons for the urban scenario.

The research study also addresses the second research question by identifying that, a network of well-connected open space reserves cannot compensate for a large urban public space because an OSR can neither replace the environmental function nor provide recreational facilities, a large park or urban space does. However, the study highlights that the usage and function of an OSR will mainly depend upon the design of the OSR rather than the size of the OSR. Moreover, a network of well-connected OSRs tend to have shorter travelling distances, thereby making it much convenient for residents to travel. Besides, well-connected OSR tend to increase the level of social interactions among the people as there are more choices for people to decide which OSR they would like to visit and convenient for them to travel. Accordingly, higher interactions among people tend to promote social cohesion (Peters, K., 2010 : 93-100). As such, a good design and locational planning of the OSRs and well-connected OSRs provide increased social benefits to the people.

Apart from the OSRs fostering community, place making and social resilience, it is also identified that OSRs tend to promote ecological biodiversity and also environmental sustainability in the urban area irrespective of the location or scale of the landscape. OSRs can also help in promoting biodiversity, increasing food security. Well-designed and maintained OSRs also have the ability to be climate change adaptive, thereby be improving environmental resilience. Also, OSRs help in increasing the groundwater availability and quality. Well-designed OSRs can aid and flourish the evolution of the sustainable city. Accordingly, this research addresses the two research questions.

Open Space Reserve Management Strategies

A framework of open space reserve management strategies is

developed to aid in creating urban areas that tend to promote social, environmental sustainability and ecological biodiversity in urban environments. The incorporation of an integrated system thinking approach that tends to consider appropriate tools and methodologies, innovations and creativity, combined with the urban design principles and development control rules, can aid in the development and management of sustainable Open Space Reserves. Following are a few principles that tend to aid in promoting an integrated approach for OSR management.

- (i) *Food Security and Safety:* Through participatory planning, the OSRs can serve as places for urban farming thereby increasing the food security and safety of the urban areas. Moreover, it also provides food supply thereby improvising on food safety.
- (ii) *Water Management:* The OSRs can serve as areas for infiltration, retention and detention. Actively designing the OSRs with soft landscapes can help in recharging the ground water. As such OSRs can serve as potential water harvesting development.
- (iii) *Climate Adaptation for Resilient Environment:* OSRs have the ability to be resilient to climate change. Incorporation of permeable surfaces can help as we lose permeable surfaces that support vegetation and soil life to paved surfaces of streets and buildings.

Urban planning policy makers can substantially contribute to the development of safe and sustainable open space reserves by implementing the following strategies:

- (i) Enhancing the access to vacant OSR sites by improving the connectivity to the OSRs.
- (ii) Encouraging and developing an effective urban policy for the acceptance of urban farming as an urban land use in the OSRs.
- (iii) Formulating and promoting urban design guidelines for the sustainable use of the OSRs.
- (iv) Enhancing the economic viability and productivity of urban farming in the OSRs by providing advice and training to urban farmers, incentives for participation, supporting and strengthening the establishment of urban farmer organizations.

CONCLUSION

This research study article sheds new light on OSRs and has provided an overview to expand the current focus of planning and

designing OSRs towards enhancing the management of OSR's and developing them into sustainable public urban spaces.

Accordingly, the paper first discussed the need for a new focus of the Open Space Reserves, informing that the current focus is given on socio-cultural, environmental and economic benefit of urban open spaces and there is a significant need to focus on the sustainable use of the Open Space Reserves. The article used the graph theory and gravity modelling to understand and identify how a network of well-connected open space reserves tend to improve the sustainable value of the open spaces. Later, the article analyses the urban planning literature which discusses the potential uses of urban open spaces and summarized that OSRs have the potential to enhance social resilience, climate change resilience, food security and safety and water management.

The research highlights that a small well designed OSR with components such as seating areas, grass and trees will tend to improve the restorative function of the OSRs and also increase the number of people visiting the OSRs.¹³ Thereby, addressing the first research question by, focusing that, OSR's have the ability to serve as the new commons for the urban scenario. The research study also addresses the second research question by identifying that, a network of well-connected open space reserves cannot compensate for a large urban public space because an OSR can neither replace the environmental function nor provide recreational facilities, a large park or urban space does. However, the study highlights that the usage and function of an OSR will mainly depend upon the design of the OSR rather than the size of the OSR. Finally, the study recommends strategies that can substantially contribute to the development of safe and sustainable open space reserves.

This study has an implication for mainstreaming the management of OSR in Development Control Regulations (DCR). Thereby, emphasize the need for integrating OSR management, as a policy tool, to ensure sustainable and resilient urban development of future cities.

REFERENCES

1. Bolund, P. and Hunhammar, S. (1999). Ecosystem services in urban areas. *Ecological economics*, 29(2), 293-301.
2. Chen, Z. H. and Wang, J. P. (2006). From Overseas Chinese Gardens to City Parks - Research of Modern Landscape Architecture in Southern Fujian [J]. *Chinese Landscape Architecture*, 5, 013.
3. Hepcan, S., Hepcan, Ç. C., Bouwma, I. M., Jongman, R. H. and Özkan, M. B. (2009). Ecological networks as a new approach for nature conservation in Turkey: a case study of Izmir Province. *Landscape and Urban Planning*, 90(3), 143-154.

4. Kong, F., Yin, H., Nakagoshi, N. and Zong, Y. (2010). Urban green space network development for biodiversity conservation: Identification based on graph theory and gravity modeling. *Landscape and Urban Planning*, 95(1), 16-27.
5. Kuo, F. E. and Sullivan, W. C. (2001). Environment and crime in the inner city does vegetation reduce crime?. *Environment and Behaviour*, 33(3), 343-367.
6. Lawrence, Henry W. (1993) "The greening of the squares of London: transformation of urban landscapes and ideals." *Annals of the Association of American Geographers*, 83.1: 90-118.
7. Linehan, J., Gross, M. and Finn, J. (1995). Greenway planning: developing a landscape ecological network approach. *Landscape and Urban Planning*, 33(1), 179-193.
8. Nordh, H., Hartig, T., Hagerhall, C. M. and Fry, G. (2009). Components of small urban parks that predict the possibility for restoration. *Urban Forestry & Urban Greening*, 8(4), 225-235.
9. Nordh, H., Alalouch, C. and Hartig, T. (2011). Assessing restorative components of small urban parks using conjoint methodology. *Urban Forestry & Urban Greening*, 10(2), 95-103.
10. Opdam, P. (1991). Metapopulation theory and habitat fragmentation: a review of holarctic breeding bird studies. *Landscape Ecology*, 5(2), 93-106
11. Peters, K., Elands, B. and Buijs, A. (2010). Social interactions in urban parks: Stimulating social cohesion?. *Urban Forestry & Urban Greening*, 9(2), 93-100.
12. Rudd, H., Vala, J. and Schaefer, V. (2002). Importance of backyard habitat in a comprehensive biodiversity conservation strategy: a connectivity analysis of urban green spaces. *Restoration Ecology*, 10(2), 368-375.
13. Thompson, C. W. (2002). Urban open space in the 21st century. *Landscape and Urban Planning*, 60(2), 59-72.

Environment and Real Estate Conundrum - A Case of Okhla Bird Sanctuary[#]

REEMA BALI*
APARNA SONI**

ABSTRACT

A headline in The Hindu Business Line read:

"Major relief for home buyers as tribunal tells government to define Okhla green zone"

The above headline would trigger certain basic questions pertaining to the regulatory framework for the real estate. The urbanising Indian landscapes are a juxtaposition of projects, schemes, spatial plans and policies under the ambit of series of legislations, executed by a nexus of actors and more recently safeguarded by 'judicial activism'.

This research article intends to highlight a private real estate developer's implausible trait of, 'intentionally preferring to fight a court case at a later stage, than seeking innumerable permits at every stage'. There is a dichotomy of whether to play by the rules or opt for off the statutory measures.

It also emphasises the deficit of well thought out strategic perspective of the legal bodies and the resultant impact on the real estate sector. The onset of sudden legislative activity and their arbitrary and unanticipated adoption finds them difficult to dovetail with the existing archaic legal system. Various milestones and events would be highlighted to enumerate the faults pertaining to the sector.

Keywords: *Private Real Estate Developers, environmental laws, eco sensitive zone, Judicial Activism.*

[#]Article was presented at 'The 2016 Asian Real Estate Society's (AsRES) Conference, Bangalore'

*Assistant Professor, School of Real Estate, RICS School of Built Environment, Amity University, Noida. Email: rbali@rics.org

**Assistant Professor, School of Real Estate, RICS School of Built Environment, Amity University, Noida. Email: asoni@rics.org

INDIA REALTY IMPEDIMENTS

The 21st century has seen a wave of globalisation with real estate sector assuming greater prominence than ever in the liberalised Indian economy (Government of India allowing FDI up to 100% in residential real estate). However, on the regulatory index India ranked last along with Russia among the following countries China; US; UK; Singapore; Germany; Brazil; UAE; Russia; and India (GoI, 2012). Criticised though of its un-regulated nature with policy and legal bottlenecks (GoI, 2012), restrictive and multiple legislations (The Planning Commission of India, 2002) and lengthy approval processes for project clearances with ever increasing compliances; the sector has progressed and made its way with the latest Real Estate Regulation (Development) Act of 2016 in the country. The sector is positioned around a number of laws and policies directly or in-directly related. The regulatory framework for real estate may be classified into legislations and approvals related to land, urban planning, building construction, No Objection Certificate (NOC) from various Central (NOCs include ones from National Monument Authority, Ministry of Defence, Railways, Airport Authority of India, and Coastal Regulatory Zone, etc.) and State Departments, including the environmental clearances, and last but not the least, installation of urban services and utilities (GoI, 2012) like sewage connection, water connection, gas connection, telecom connection, power/electricity connection, for which a developer has to interact with individual authorities delivering public services. Laws as old as the Land Acquisition Act 1894, have been governing the basic raw material of 'land' required for real estate development, where each federal State in India has its own Land Acquisition Act. Only as recently as 2013, the dated law was revised to become the Land Acquisition and Rehabilitation Resettlement (LARR) Act 2013. All the states had then a mandate to revise their individual Land Acquisition Acts too. While the states have yet to formulate their new land laws, LARR 2013 continues to change with ordinances being passed in 2014 and 2015. State specific rent control Acts, Urban Land Ceiling Act, unclear land titles with each State's unique land record management system and Land Revenue Acts, Stamp Duty Acts and varied urban planning frameworks add to the chaos. Moreover, each state has its own Town Planning Act delegating urban planning as a function either to respective urban local bodies or entrusting state or city specific development authorities and industrial area development authorities (each with its own individual Act) with responsibilities of preparing urban development plans. These plans scale down from regional to city level master plans /development plans, to sector level layout plans. They are statutory documents, to act as broad outlines (importantly defining the allowable population density and FAR) for

future developments earmarking, zoning, plotting and designating a land use viz., residential, commercial, industrial, recreational, institutional etc., on acquired, pooled or assembled agricultural parcels or plots of land. As per their individual acts, these plans may be revised generally every 5 to 20 years. Development Authorities (DAs) typically are responsible for securing planned development by implementing these master plans. This includes acquiring land (on orders from the state government), developing (providing basic infrastructure) and disposing off serviced land as per the drafted master plans. Disposing off land includes sale, lease, and transfer by allotment or auction of a plot. If not delegated to the urban local bodies, DAs also regulate erection of buildings by sanctioning building plans and providing building permits and completion certificates. The national building code 2005 and local building bylaws (note -containing FAR calculation rules) govern the design, structural and construction related criteria to be met by any developer to get his building plans sanctioned by 'competent authority'. Any real estate project is mandated by law to adhere to these land use plans and follow the master plan prescriptions. With an array of plans and competent authorities, Land use planning is more understood as land use restrictions in the real estate industry. According to the report of the Committee on Streamlining Approval Procedures for Real Estate Projects (SAREP) set up by the Ministry of Housing and Urban Poverty Alleviation (MoHUPA) a real estate developer has to follow at least 34 regulatory processes for obtaining construction permits and that it takes an average of 227 days. When considering residential real estate in specific, there are an array of policies that add to the regulatory framework. Ensuing the National Urban Housing and Habitat Policy, various States have their individual State Housing and Habitat Action plans. To add, state level affordable Housing policies, state township policies, State Apartment Acts governing the do's and don'ts are a must for a real estate project. Also, there are innumerable Municipal acts, executive orders and gazette notifications adding to the legislations.

In real estate project, environment though seems to be a small fraction of the pie, yet it has been most instrumental in project delays over the last few decades. At present environment as a subject has special laws dealing with challenges arising in the subject area. However, much before the enactment of specific legislations in the area of environment, the conservation and protection of environment formed a part of the Constitution of India. Further to this, the Indian Penal Code also makes provisions and penalties for people adversely affecting and destroying the environment. In the decades to follow many more environment specific legislations were passed to deal with the new impediments. Some of the important

statutes are as follows:

- The Wildlife (Protection) Act, 1972;
- The Water (Prevention and Control of Pollution) Act, 1974;
- The Forest (Conservation) Act, 1980;
- The Air (Prevention and Control of Pollution) Act, 1981; and
- The Environment (Protection) Act, 1986;

The decade of the nineties saw many major developments in the Indian economy like its liberalisation. It was also during this time that internationally the issues of environment gathered momentum and importance. Though the United Nations had started its initiatives in this field in the seventies, more and more states across the world joined the cause in the coming decades. One of the most instrumental meetings under the UNEP at Rio de Janeiro in 1992 resulted in promulgation of twenty five principles out of which the following are relevant in the history of environment legislation process in India:

1. Environmental issues are best handled with participation of all concerned citizens at the relevant level. Each citizen shall have appropriate and effective access to judicial and administrative proceedings including redress and remedy.
2. Effective environmental legislations to be enacted setting environmental standards and management objectives reflecting the environmental and development context to which they apply.
3. On ratifying this convention, the national laws shall be developed giving regard to liability and compensation for environmental damage.
4. Any proposed activity needs to undergo an Environmental Impact Assessment (EIA) which will be subject to a decision of a competent authority.

Following the initiatives of the UN in the field of environment and issues surrounding it, India saw the need to implement similar provisions in the national laws to meet the challenges faced at the domestic level. India being a member and signatory of the above treaty, follows the dual system of implementing international treaties within its domestic legal system. According to this system, India first becomes a signatory to a Treaty and ratifies it in full or in part. As a subsequent step a domestic legislation is passed to give effect to the

provisions of the treaty and sensitize the relevant provisions as per the Indian legal machinery.

All these central statutes gave way to separate and independent competent authorities under each subject area making clearance and compliance for real estate projects confusing, tedious and cumbersome. As is evident from the above list of legislations, the broad framework around the issue of environment as a subject, these laws were fragmented and 'loosely structured' in their implementation. The multiplicity of legislations applicable on a project/ sector (real estate) makes the sector vulnerable and exposed to many legal complexities. With the above complex regulatory environment, the real estate projects thus become vulnerable to orders from competent authorities (GoI, 2012), often delaying the projects.

A Sanctuary by Chance (TNN, 2014)

The previous year, *The Hindu Business Line*, a leading Indian Newspaper, on 18th August 2015 read:

“Major relief for home buyers as tribunal tells government to define Okhla green zone”

The above headline would trigger certain basic questions in a leisurely reading human mind. What are the 'home buyers' to do with Okhla Green zone? Green zones? Are these really found in our cities? If at all they are, who is this 'tribunal' asking the government to define green zones? And last but not the least, what is the 'relief' that the home buyers are looking forward to? In an attempt to answer the above, one will unfold the real estate development challenges mentioned here.

The 3.5 square km of green zone addressed above is a 'bird's haven' in the National Capital Region of India, located where the River Yamuna leaves the territory of Delhi and enters the State of Uttar Pradesh (UP) with river Hindon confluence. Having more than 188 species of plants (including medicinal plants), 324 species of about 6000 migratory and resident birds (Ministry of Environment, 2014) as a part of the ecology; the aquatic habitat is surprisingly a man-made urban wetland (Sharma, 2015). The boundaries of the tourist hotspot for bird watchers, are marked by the Okhla Weir Bund (embankment) on the North. South is bound by the Okhla barrage Tie Bund, commonly known as the Amrapali Marg (a road that connects Delhi and Noida) and Shahdara drain. The east and west limits are defined by the Left afflux bund (used as a road) and right Marginal Bund respectively. A high speed transit flyway the Delhi Noida Direct (DND) runs parallel to the northern boundary a kilometre away. As one may notice in

Figure 1, the Amrapali Marg and the DND are two major connecting roads over the river Yamuna, with DND constructed only recently in the year 2001. Though internationally recognized as one of the 465 “Important Bird Areas (IBA)” in India (Sharma, 2015) attracting 2nd largest number of bird varieties only after Nairobi IBA in Kenya; designated as a ‘protected area’ by the GoI under the Wildlife (Protection) Act 1972; this part of the Yamuna River ecosystem is a territorially divided space. So much so, that it is called as the ‘Okhla Bird Sanctuary (OBS)’ in UP, but Kalindi bird sanctuary in Delhi by the local population. The two-third of its area falling in the Gautam Buddha district of the state of Uttar Pradesh is a declared ‘bird sanctuary’, while one-third of it lying in the South East District of the National Capital Territory (Parris and

Fig. 1: Location of Okhla Bird Sanctuary



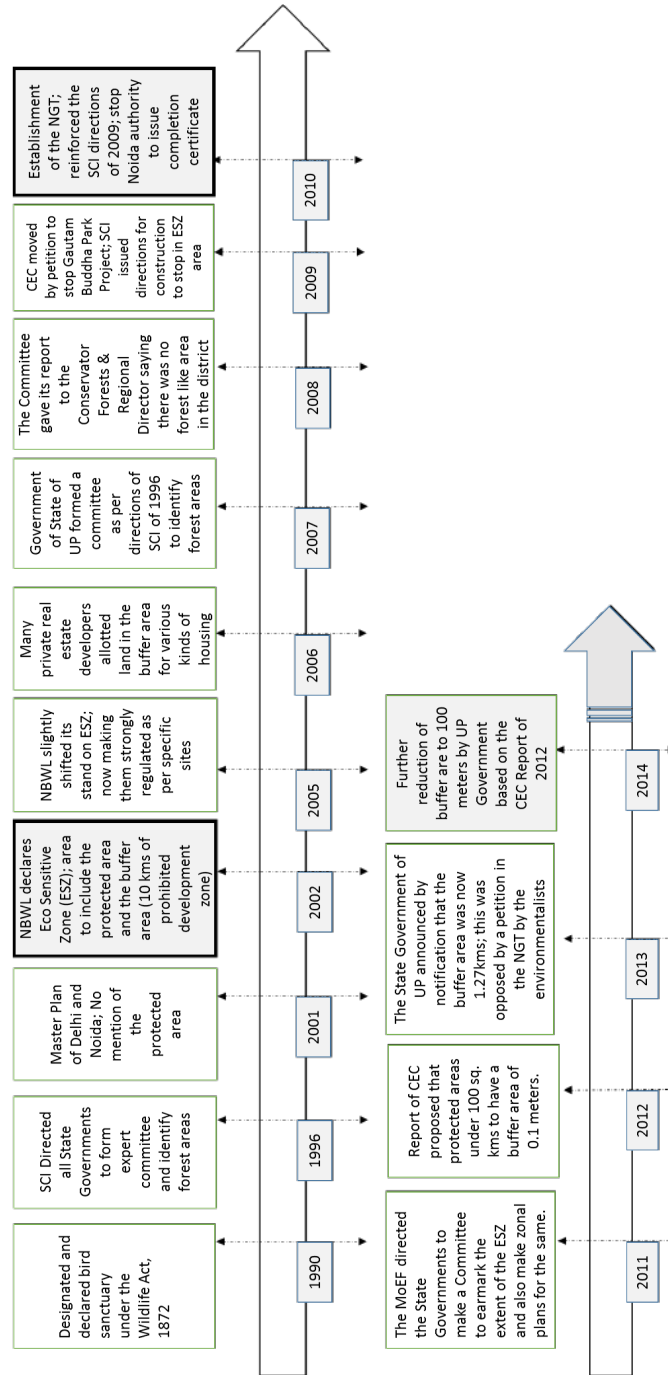
Source: Accessed at www.anandarya.com/obp_html/location.html

Schneider, 2008) yet awaits a formal declaration. Thus the same area is under the jurisdiction of two separate state governments with their individual real estate regulatory frameworks. South Delhi Municipal Corporation provides municipal services bordering Delhi, whereas the New Okhla Industrial Development Authority (NOIDA) is responsible for public service delivery in NOIDA. This implies two independent urban governance structures governing the only commonality, a 'riverfront' in the urban development vocabulary. In both the states, land development is a function performed by the respective development authorities i.e. NOIDA and Delhi Development Authority (DDA) under their respective Town Planning Acts. The Act necessitates preparation of Master plans. DDA prepares them every 20 years since 1962, while Noida prepares one for every 10 years only since 2001 (when NOIDA came into existence in 1976 as an industrial town). The Master Plan Delhi is further detailed into zonal plans (each for the 15 planning zones). These are further detailed into plots with designated land-uses as per zonal plans, into colony/enclave/area level layout plans. In Noida, the master plans are detailed further into sector level layout plans. As evident, the urban planning and land development models for the two states are different with very little participation of private sector in Delhi, whereas NOIDA has seen large scale real estate development over the past two decades.

The Eco War Zone (Noida Eco War Zone: The Timeline, 2015)

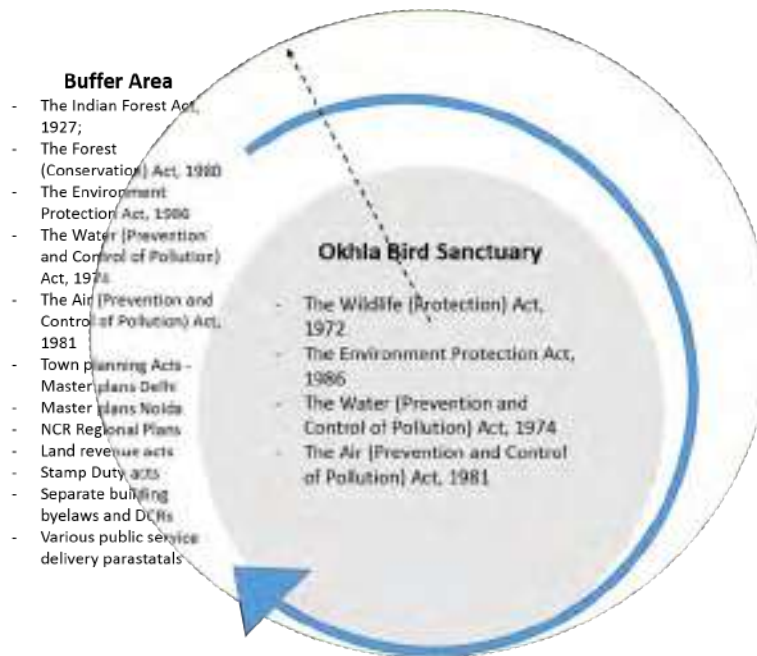
The Okhla Bird Sanctuary (OBS), due to its unique location is subject to a multiple legislations just not at the Centre level but also at the state level. Since the year 1990, when it was designated and declared as a bird sanctuary under the Wildlife Act, 1972 by the National Board of Wild Life (NBWL), it has been in many controversies with respect to its surrounding areas. Over the next two decades of its being declared a bird sanctuary (protected area), there have been a series of continuous notifications from the Ministry of Environment and Forest, directions from the Supreme Court of India, formation of committees (Central Empowered Committee) and their reports, litigations from the environmentalists lobby and petitions from the affected parties (Refer Figure 2). A closer look and analysis of the turn of events over the two decades brings out the ambiguity in terms of understanding, application and implementation of the relevant legal provisions. In addition to this, there is a clear overlap of jurisdiction of various government bodies (due to application of multiple laws over same subject matter). As is clear from above, though the management of the sanctuary is a responsibility of the Irrigation Department of Uttar Pradesh, it has a plethora of stakeholders to its efficient management. A brisk snapshot of environmental acts and actors is provided in Figure 3.

Fig. 2: Timeline of Events



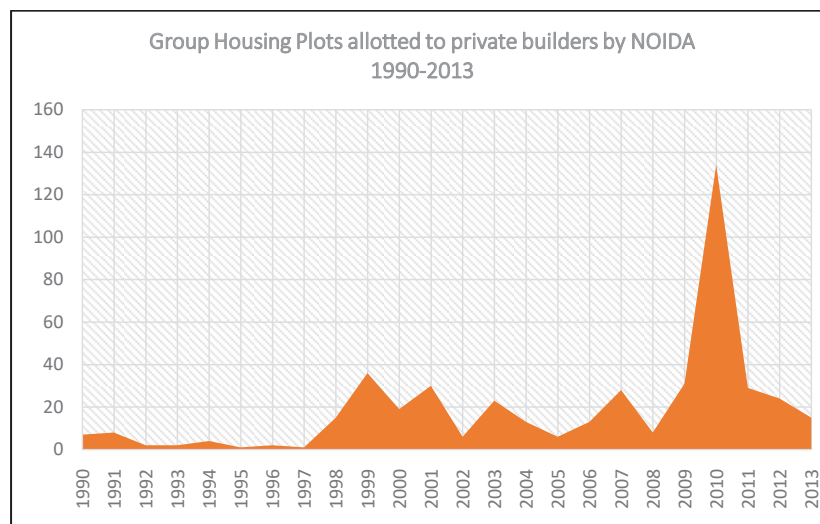
Source: Created and compiled by the authors.

Fig. 3: Plethora of Acts and Actors in the OBS Protected Zone and the Surrounding Buffer



Source: Compiled by the authors.

Fig. 4: Continuous Allotments of Plots to Private Builders for Group Housing Projects in NOIDA



Source: Compiled by the authors on the basis of information received from NOIDA Authority.

Such ambiguity and overlap leaves the private player/ real estate developer with the only option to take the huge risk of going ahead with the existing or new projects in the zone surrounding the protected area. However, this risk taking attitude of the private real estate developers is not arbitrary. They have witnessed many government-led projects in the different sectors like infrastructure (metro rail and metro depots of Yamuna Bank and Kalindi Kunj - refer Figure 5A, 5B, & 5C), Delhi Noida Direct- DND, Okhla Sewage Plant), recreational projects (Kalindi Park, Gautam Budh Park (refer Figure 6), Akshardham Temple (refer Figure 7), large scale development (Commonwealth Games village), etc. in the earmarked buffer zone of the protected area. These projects were not only completed successfully but were also initiated post the declaration of the protected area or ESZ. Seeing this trend with the government projects (in addition to the above explained ambiguity and overlap) the private real estate developer is bound to take a calculated risk and go ahead with its projects and at the same time being prepared for any notice/ action from the innumerable government bodies/ authorities as and when they are issued.

As is evident in Figure 3, initially a 10 km radius of the sanctuary was declared a 'no development' eco-sensitive zone. Unexpectedly the private developers were held liable for such uninformed non-compliances resulting in 'judicial stay' on various project sites. But, building activity continued with consistent property prices. In 2010, this decision was reinforced by a 'new actor' – the National Green Tribunal (NGT). It was moved by a local environmentalist seeking stay on commercial activities around the sanctuary. NGT was established under the National Green Tribunal Act of 2010 on 18 October 2010. Its main purpose was effective and speedy (disposal of applications and appeals within six months of filing them) disposal of cases pertaining to environment protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto.

What makes this Tribunal unique is that it is not bound by the procedural laws (Civil Procedure Code, 1908). This body is primarily guided by the principles of natural justice. This specialised tribunal was established with a view to provide some relief to the higher courts from the burden of litigation. The principle bench of the tribunal is situated in New Delhi with regional benches being situated in Pune (Western Zone Branch), Bhopal (Central Zone Branch), Chennai (Southern Branch) and Kolkata (Eastern Branch). Each regional branch has specific jurisdiction and can also have sittings (Circuit Bench) in other places within their

**Fig. 5A: Metro Construction at a 100 m Distance form
Okhla Bird Sanctuary Boundary**



Source: Photographed by the authors.

Fig. 5B: Changing Skyline of Okhla Bird Sanctuary



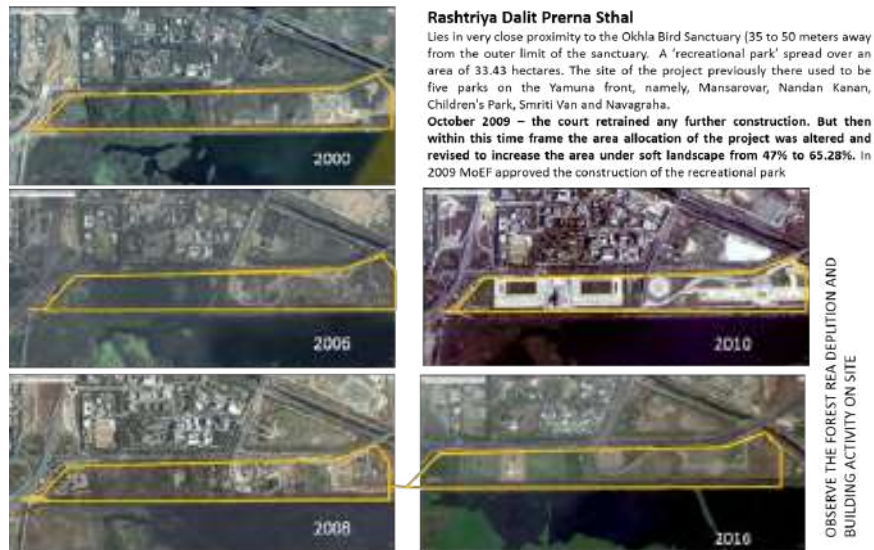
Source: Photographed by the authors.

Fig. 5C: Kalindi Kunj Udyan (The Delhi Eye)



Source: Photographed by the authors.

Fig. 6: The Controversial Site of Rashtriya Dalit Prerna Sthal (Recreational Park)



Source: Google Earth imagery, compiled by the authors.

Fig. 7: Location and Development of Akshardham Temple and Commonwealth Game Village Since 2000 to 2010



Source: Google Earth imagery compiled by the authors.

regional zones to expedite decisions in important and time sensitive matters. NGT also has the power to take *suo moto* action and start proceedings on environmental issues.

The NGT has the power to hear all civil cases relating to environmental issues and questions that are linked to the implementation of laws listed in Schedule I of the NGT Act. These include the following:

- The Water (Prevention and Control of Pollution) Act, 1974;
- The Water (Prevention and Control of Pollution) Cess Act, 1977;
- The Forest (Conservation) Act, 1980;
- The Air (Prevention and Control of Pollution) Act, 1981;
- The Environment (Protection) Act, 1986;
- The Public Liability Insurance Act, 1991; and
- The Biological Diversity Act, 2002.

A point to note here is that the NGT cannot hear cases on The Wildlife (Protection) Act, 1972; hence any matters relating to the same must be filed in the appropriate High Court of the State or the Supreme Court.

Going by the judicial precedents in the past, as expected this 10 km radius was reduced to a meagre 1.0 kilometres, which further was reduced to a 100 metres in 2015 (refer Figure 8), and most projects were once again given a clean chit. The 100 m buffer today includes NOIDA sector 95, Chhalera Orangabad, Nayabans areas in Noida and dense settlements of Shaheen Bagh, Jasola, Abul Fazal enclave, Okhla, Canal colony, Joga Bai and Khizrabad in Delhi.

Nevertheless, construction works had never slowed down in the vicinity (refer Figure 3, 4, 5, 6, 8, 9). Where on one hand the decision of NGT was a 'Breather for birds' (Yadav, 2014), the plight of the real estate developers was no surprise. On the one hand, environmentalists accused the real estate developers of 'killing the sanctuary' and on the other, buyers and investors reiterated their decisions. Though the Confederation of Real Estate Developers' Association of India (CREDAI) provided their support, but fell short of powers. The lack of a formal Act governing real estate industry was deeply felt. The circle of gloom (Noida eco war zone: The Timeline, 2015), a 10-km radius ESZ meant a complete ban on new construction in areas as far as the India Gate in the north, sector 62 A (bordering Ghaziabad in Uttar Pradesh in the east) and Greater Kailash-2 in south-west Delhi. As illustrated in

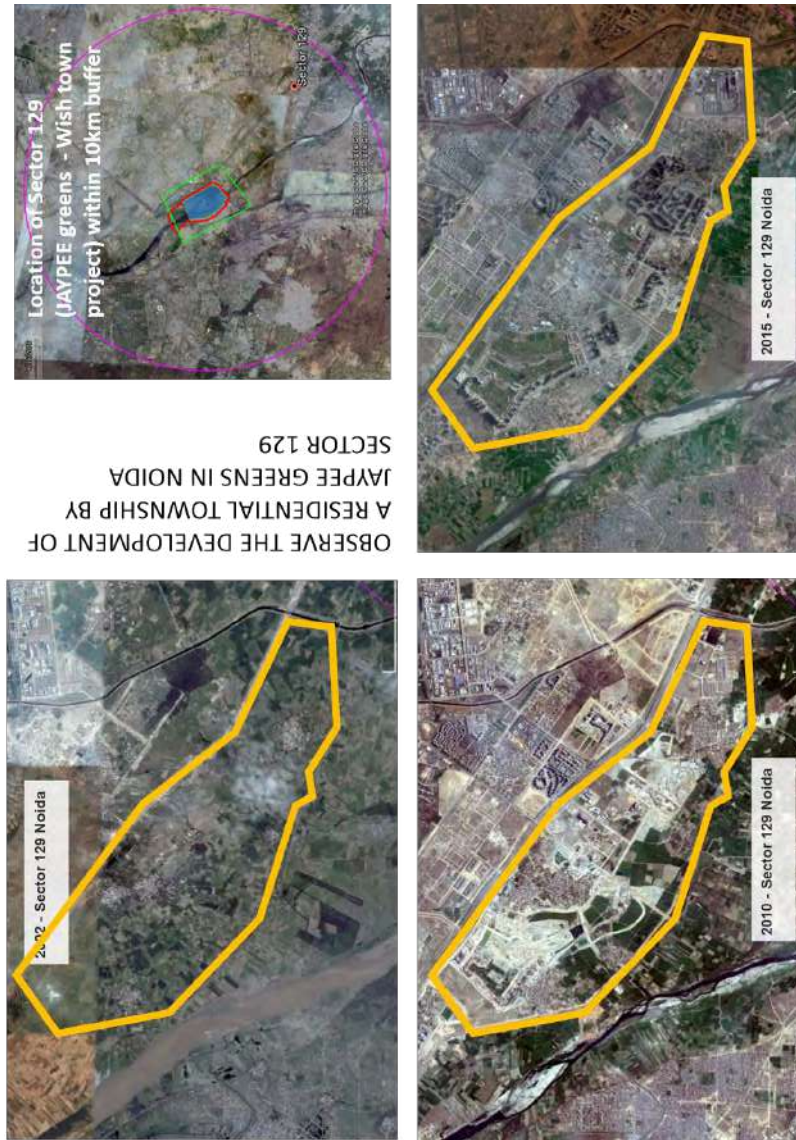
Fig. 8: Okhla Bird Sanctuary Regressing Buffer Zones



Source: Google Earth imagery compiled by the authors.

Figure 8, the 10 kms radius engulfed in it the three cities, Delhi-Noida – Faridabad of three different states of Delhi- Uttar Pradesh and Haryana. Paradoxically, the Lutyens Delhi, Hauz Khas, AIIMS and the East Kidwai Nagar redevelopment projects (under the Smart Cities Mission of GOI) areas came under the ‘no development zone’ in Delhi. Major developed sectors 15, 16, 18 (commercial and retail hub), 25, 32, 35, 36, 37 and high rising , more recently developing sectors 74, 75, 76, 78, 94, 95, 96, 97, 98, 104, 107, 110, 117, 118, 119, 120, 121, 125, 128, 129 (refer Figure 9), 131, 133, 134 with large scale, group housing, township and retail development fell within the 10 kilometres. Under NGTs directive, the NOIDA Authority conducted a survey and found 105 projects falling within the ‘no development zone’. It included projects under-construction and some awaiting completion certificates. Prominent real estate developers as Jaypee, Amrapali, Supertech, Paramount, Antriksh, Gulshan Homz, Logix and ATS had projects impacted. Ironically all these projects had received environmental clearances from competent authorities. Developers suffered from four-fold losses. Vacant inventories were on a rise. New launches were delayed. Market prices dropped (Sinha, 2016). To add, there were accumulating penalty payment to buyers on late possessions and a risk of hike of a two per cent in registration fee (Mittal, 2016) (TNN, two per cent hike in stamp duty in Noida, Greater Noida by April-end, 2016) (Aradhak, 2015) when restrictions revoked. Besides the governing bodies, the real estate developers and the wildlife at the OBS, the worst affected stakeholders were the 2,50,000 home buyers who had put their hard earned money, were repaying home loans, had been depositing instalments and dreaming of possessing their new homes in the troubled zone. More than 59400 houses were declared illegal in NOIDA (Bird Sanctuary Won’t Evict Homebuyers, 2015). On the other hand, since Delhi is yet to declare the protected area a sanctuary.

Fig. 9: Development of Residential Township in Sector 129 Noida within 10 km Buffer Zone

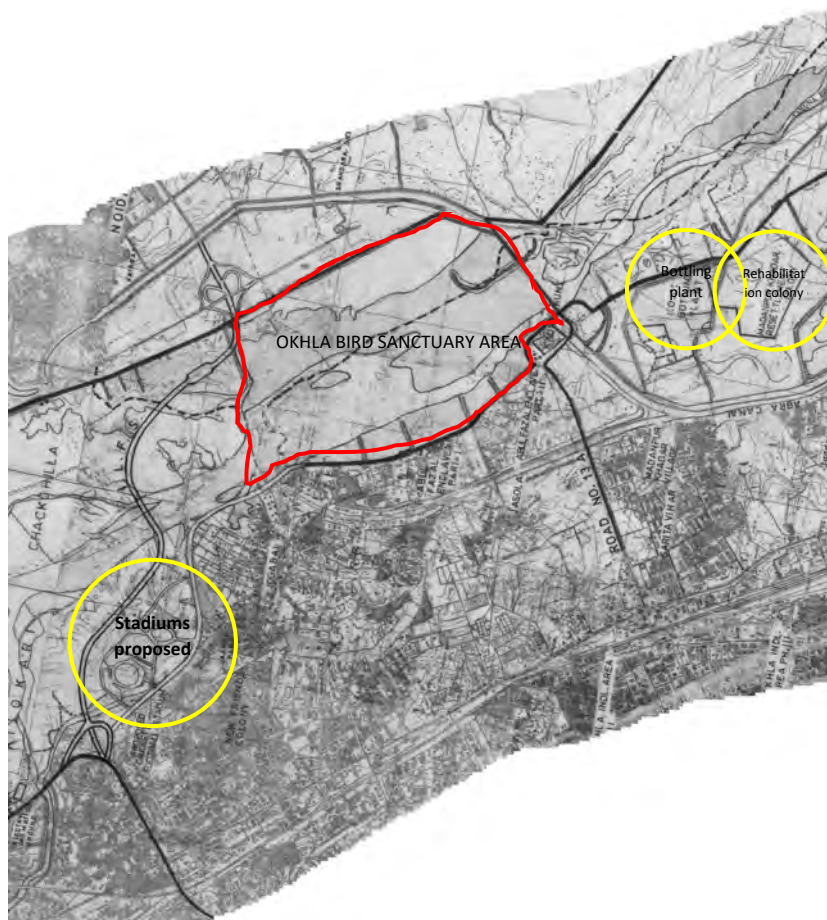


Source: Google Earth imagery compiled by the authors.

The Oblivious Statutory Plans and Development Authorities

Intuitively 'buffer zones' rightly understood as 'landuse regulated zone' must have urban development statutory plans supplementing the conservative purpose. Ironically, the regional plan for NCR 2001 though talked about conserving natural heritage, forest and wetland areas, but did not mention OBS as having a distinct identity, even when UP government declared the area into a bird sanctuary in 1990. The 2001 Master Plan Delhi (MPD) too did not mention the presence of a bird sanctuary. The Yamuna river zone O, a conserved zone, on the contrary, saw developments along the riverfront including a rehabilitation colony, stadiums and a bottling plant (see Figure 10). The conception of DND, Akshardham temple and commonwealth games village complex are

Fig. 10: Master Plan Delhi 2001- River Front Zone O

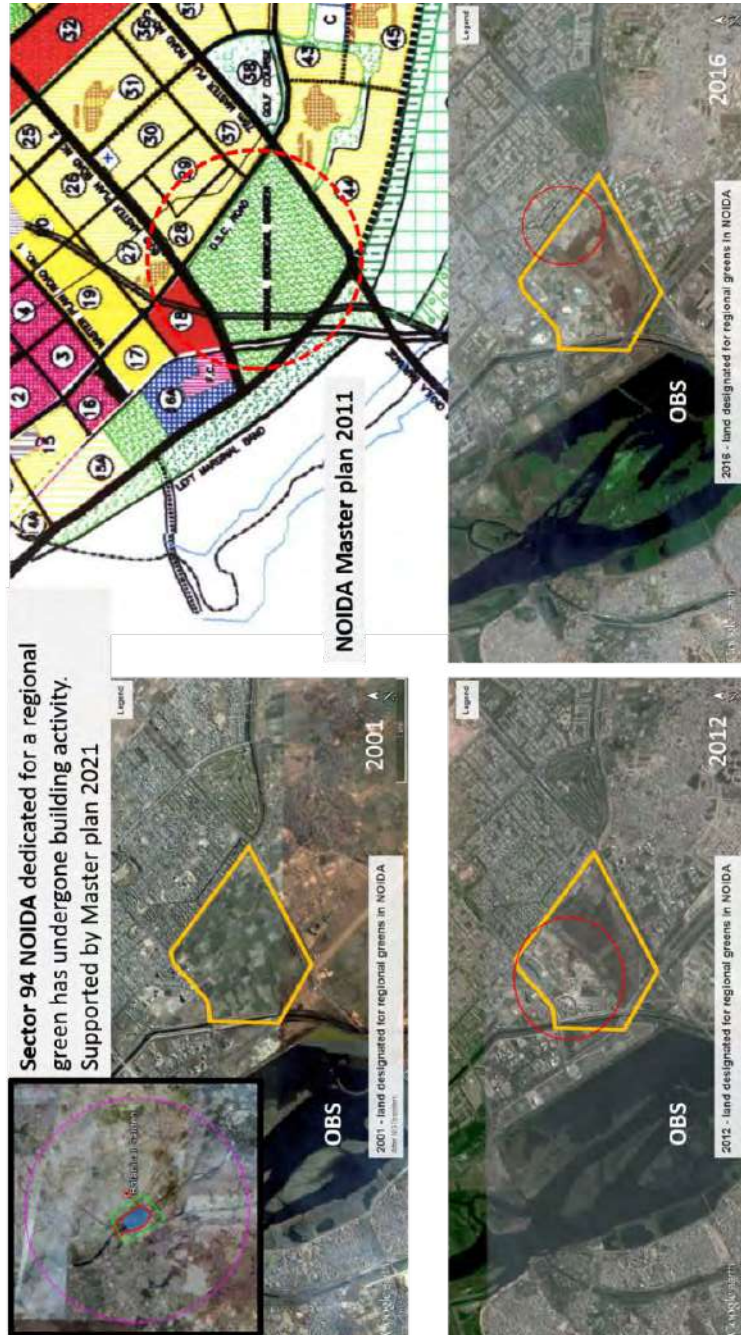


Source: Map accessed at <http://dda.org.in/ddanew/pdf/Planning/ZONE%20O123.jpg>, graphics illustrated by the authors.

also visible at the river front in proximity. Simultaneously we must recall the extensive network of the Delhi metro under construction, which included DMRC depots at the Yamuna Bank and Kalindi Kunj area. Noida Master Plan 2001 on the eastern bank, proposed a green zone along the sanctuary with 'organised and recreational land-uses'. If one considers the 10 km radius, this master plan, with all its industrial, commercial and residential sectorial grid-iron planning clearly does not seem to be a 'buffer zone' (refer Figure 11). Infact the magnitude of proposed development intensified with every Master Plan. Though the immediate precinct greens of the bird sanctuary got classified into regional botanical parks, peripheral green belts, nurseries, low density sports recreational greens, but a defined route of the MRTS surfaced with residential and commercial land-uses. More so, even after NBWL declared the Eco Sensitive Zone (ESZ) to include the protected area and the buffer of 10 kilometres of prohibited development zone, the Noida Master Plan 2021 prepared in 2011 assigned its agricultural land to high density residential and institutional land-uses along the Noida- Greater Noida expressway (Sector 125, 126, 127, 128 to name a few). SEZs and SDZs too can be seen on the master plan. Clearly, the 10 km buffer zone held no meaning. NOIDA authority continued allotment of plots to private builders. Projects received environmental clearances and were issued completion certificates until NGT's 2010 orders. Master Plan 2031 is also a no different story. The regional plan NCR 2021, however, requires the areas/zones located in NCR, falling under any one or more of these categories to be conserved/protected and mandates a preparation of a 'conservation plan' (NCRPB, 2005).

- Reserved/protected forests
- Forests other than reserved and protected forests
- Monuments-National, State, Local
- Heritage/cultural sites
- Scenic areas
- National parks
- Sanctuaries
- Areas with endangered species-flora and fauna
- Biosphere reserves
- Wetlands
- Resorts/areas of tourist interest

Fig. 11: Rampant Development in Noida



Source: Google Earth imagery compiled by the authors.

- Water bodies
- Springs/water recharge areas
- Other environmental resource areas

The above implies, UP having declared OBS as a sanctuary in 1990 (in addition to it being a protected Area), internationally recognised wildlife tourist spot, planned for the recreational landuse around it, a conservation plan must be prepared for the area. The Delhi Master Plan 2021 has proposed the river front zone O as a bio-diversity zone. The zonal development plan identifies the Okhla barrage area as a wetland and designates portions as 'interactive bio diversity zone' and 'public recreational zone'. The 'Yamuna biodiversity parks' concept is similar to the 'buffer zone' approach where protected biodiversity is in the core, with interactive and recreational greens encircling one after the other. However, as earlier discussed, to be noted is the consistent ignorance of State development planning in recognising the existence of a sanctuary and planning in accordance.

Risky Road Ahead

The above case although does not explicitly provides solutions but certainly draws one's attention to the deficit of well-thought out strategic perspective of the legal bodies and the resultant impact on the real estate sector. The onset of sudden legislative activity and their arbitrary and unanticipated adoption finds them difficult to dovetail with the existing archaic legal system. If one similarly traces the court cases filed, one may realise that never does all of the actors and legislations and plans come under one umbrella or are discussed together. Though these exist together, yet they never surface together when an area as sensitive as the OBS is discussed. They are loosely stitched and ripped apart on convenience. We thus propose to call such a regulatory framework more of a 'scheme of regulatory bastes'. But does the story end here? The Environment Ministry has approved proposals for 176 eco-sensitive zones. India has 466 IBAs (Important Bird Areas). There are 668 protected areas in India (MoEF 2011). The latest notification for OBS ESZ management by the expert committee has additionally declared it as a 'silence zone'. It mandates preparation of a zonal master plan for the ESZ, for each state to be approved by the Ministry of Environment and Forest and Climate change in consultation with a panel of members. The zonal master plan is also to be co-terminus with the regional plan. The activity relating to tourism within the Eco-sensitive Zone which should be a part of the Zonal Master Plan. Natural heritage has to be conserved. Noise pollution, air pollution, discharge of effluents in the ESZ, solid

and bio-medical waste management and vehicular movement has to be regulated and the zonal plan has to suggest for all the above. It should also ensure optimum lighting in the ESZ. The notification also mandates constituting a State level Eco-Sensitive Zone Monitoring Committee (SESZMC) by both UP and Delhi. Evidently, instead of disentangling bastes, the decision has added to the plight, hoping that no new permits will surface. The latest real estate regulation (Development) Act 2016 too establishes state level tribunals called Real Estate Appellate Tribunals. Decisions of Real Estate Regulatory Authorities can be appealed in these tribunals. The trend highlights the tendency of passing impromptu legislations/byelaws, introducing new actors, plans and policies with emerging disputes.

REFERENCES

1. Article 51 A (g)", The Constitution of India - It shall be duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life and to have compassion for living creatures.
2. Parris, K. M. and Schneider, A. (2008). Impacts of traffic noise and traffic volume on birds of roadside habitats. *Ecology and Society*, 14 (online). Accessed at <http://www.ecologyandsociety.org/vol14/iss1/art29/>
3. MoEF (2011). Protected area network in India. New Delhi: Ministry of Environment and Forests. Government of India.
4. Aradhak, P. (2015, July 20). Homebuyers in Okhla zone have to pay more. *The Times of India*. Retrieved from <http://timesofindia.indiatimes.com/city/noida/Homebuyers-in-Okhla-zone-have-to-pay-more/articleshow/48138537.cms>
5. Bird Sanctuary Won't Evict Homebuyers. (2015, August 19). *The Pioneer*. Retrieved from <http://www.dailypioneer.com/todays-newspaper/bird-sanctuary--wont-evict--homebuyers.html>
6. Government of India (2012). *Real Estate Sector- Committee on National Competition Policy*. Delhi: Ministry of Corporate Affairs.
7. India, T. P. (2002). *10th Five-Year Plan*. New Delhi: Government of India.
8. Kashyap, N. P. (2014, June 18). 99 Acres . Retrieved from NOIDA projects most impacted by Green Tribunal order: <http://www.99acres.com/articles/which-noida-projects-most-impacted-by-green-tribunal-order.html>
9. Ministry of Environment, F. a. (2014, September 24). Draft notification. Delhi, India: The Gazette of India.
10. Mittal, M. (2016, February 24). Here is why flats in Noida will soon get costlier. *Money Today*.
11. National Capital Region Planning Board (NCRPB) (2005). *Regional Plan 2021 - National Capital Region*. Delhi: GoI. Retrieved from <http://ncrpb.nic.in/regionalplan2021.php>

12. *Noida eco war zone: The Timeline*. (2015, August 19). Retrieved from magicbricks.com: <http://content.magicbricks.com/industry-news/delhi-ncr-real-estate-news/noida-eco-war-zone-the-timeline/82542.html>
13. Sharma, N. e. (2015, February 4). Challenges of small protected areas in urban cities: a case study of Okhla Bird Sanctuary, India. *Environ Dev Sustain*. doi:10.1007/s10668-015-9628-z
14. Sinha, P. (2016, January 23). *Why prices have dipped on Noida Expressway*. Retrieved from *The Times of India*: <http://timesofindia.indiatimes.com/city/delhi/Why-prices-have-dipped-on-Noida-Expressway/articleshow/50692396.cms>
15. Times News Network (2014, July 21). A sanctuary by chance, now under siege. *The Times of India*. Retrieved from <http://timesofindia.indiatimes.com/city/noida/A-sanctuary-by-chance-now-under-siege/articleshow/38800065.cms>
16. TNN. (2016, April 18). 2% hike in stamp duty in Noida, Gr Noida by April-end. *The Times of India*.
17. Yadav, A. (2014, July 1). Delhi to propose 100 m eco-sensitive zone around Okhla Bird Sanctuary. *The Hindu*.
18. Government of India (GoI) (2013). Volume I: Report of the Committee on Streamlining Approval Procedures for Real Estate Projects in India", Ministry of Housing and Urban Poverty Alleviation, January 2013, http://mhupa.gov.in/W_new/SAPREP-march.pdf.

BOOK REVIEW

'Tall Buildings and Vertical Urbanism' by A.K. Jain, 2020, Discovery Publishing House, New Delhi, p 203, Rs. 2,200/-

India's 7,936 cities and towns, which have a population of 377 million, generate around 60 per cent of GDP and 70 per cent of the jobs. These are the cauldrons of jobs, livelihoods, urban services, connectivity, education and health facilities. About 200 years ago, the Industrial revolution and the inventions of new building materials and new forms of energy radically changed the urban pattern. The discovery of engines, petrol, diesel, motor cars, trains, aeroplanes, etc., revolutionized the transport system and triggered the development of cities. The lifts, concrete, steel and electricity gave birth to high-rise buildings. This set-in motion a wave of upsizing the urban economy as manifested by global cities- New York, Chicago, Hong Kong, Shanghai, Singapore, London, etc. However, Indian cities missed the bus and perpetuated with 19th century planning approaches and construction. As a result, India is dominated by villages with diminishing returns from agriculture. Both in rural as well as in urban areas, there is a stagnation in job market, shortages of infrastructure services, connectivity and housing.

As the construction sector contributes to about 8.2 per cent of the national GDP and 11.52 per cent of total employment, the buildings form one of the crucial areas of development. The Niti Aayog estimates that per capita residential space in India will increase from 5.9 m² in 2012 to 35 m² in 2047, and per capita commercial building space from 0.7 m² to 5.9 m² over the same duration. As urbanization surges provision of adequate housing and workspaces becomes an important public investment. This demands a compact and dense urbanization which is efficient, economical and sustainable.

The sustainable urbanism starts with reducing the consumption of land and natural resources and expanding access to urban services and shelter. This requires urban densification and vertical urbanism which lead to travel reduction, economy of services and conservation of agricultural areas. The buildings should minimise their footprint, which involves exploring vertical space, synthesising the greenery and built form, local and universal cultures, and ecology and technology. The challenge is to strike an alchemized balance among real estate interests, technology and architecture.

The book '*Tall Buildings and Vertical Urbanism*' by A.K. Jain discusses the *raison-de-etre* for tall buildings. Reducing pollution and environmental impacts are the basic reasons for a compact, dense and

vertical urban eco-system. This requires a visionary and quantum leap that improves the liveability, equity and gender justice. The world is at the cusp of new generation technology which can leverage a momentum in providing affordable housing, workspaces, services and amenities. As location is one of the most important issues of urbanisation, there is no option but to go for smart and compact vertical growth.

The book '*Tall Buildings and Vertical Urbanism*' looks at the evolution of tall buildings and their relationship with the urban growth, land, economy, climate and ecology. Various iconic and landmark examples explain the context and processes, including design, structure, construction, façades, services, climatic systems and safety from fire and other risks. More than 165 visuals and flowing language make the reading interesting. It aims to trigger a debate for radical changes in the field of architecture, urbanism, engineering and real estate development.

JDS Sodhi

Fellow-Town Planner & Architect

Email: jds@sodhis.org

BOOK REVIEW

'Town Planning-Principles, Process and Practice', A.K. Jain, 2020, Khanna Book Publishing, New Delhi, ISBN: 978-93-86173-40-9, p 572, Rs. 499/-

In India about 32 per cent of its total population is living in around 8,000 cities and towns. Although the Indian cities generate around 60 per cent of GDP and 70 per cent of jobs, these are characterised by unplanned growth and shortages of housing and basic infrastructure services. At least one out of every three persons in Indian cities falls below the poverty line and about two-thirds of urban areas are unplanned.

In order to bridge these gaps, the Government of India has embarked upon several programmes, such as Smart Cities Mission, the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Pradhan Mantri Awas Yojana (PMAY) and Historic City Development Augmentation Yojana (HRIDAY). These focus on core infrastructure services like adequate and clean water supply, sanitation and solid waste management, public transportation, housing for the poor, power supply, IT connectivity, e-governance and citizen participation along with planning, land management and municipal reforms.

Parallely, the Sustainable Development Goals (SDGs) aim at making the cities and communities inclusive, safe, resilient and sustainable. These require a new paradigm of town planning, which aligns with the socio-economic changes, climate change and environmental integrity.

Town planning plays an important role in translating socio-economic and environmental goals and in making them safer, connected and sustainable.

The book '*Town Planning- Principles, Process and Practice*' by A.K. Jain in its 14 chapters explains comprehensively the principles, process and practice of urban development, which align with the socio-economic, environmental and technological changes. Written in a simple language with 380 illustrations, the book is a valuable guide for the students as well as practitioners of planning, architecture and engineering. The significant features of the book are clarity of graphics, attractive printing and its affordable cost.

JDS Sodhi
Fellow-Town Planner & Architect
Email: jds@sodhis.org

**STATEMENT OF OWNERSHIP AND OTHER
PARTICULARS ABOUT
NAGARLOK**

FORM-IV

(See Rule 8)

- | | |
|---|--|
| 1. Place of Publication | Indian Institute of Public
Administration, New Delhi |
| 2. Periodicity of Publication | Quarterly |
| 3. Printer's Name | Surendra Nath Tripathi |
| Nationality | Indian |
| Address | Indian Institute of Public
Administration, New Delhi |
| 4. Publisher's Name | Surendra Nath Tripathi |
| Nationality | Indian |
| Address | Indian Institute of Public
Administration, New Delhi |
| 5. Editor's Name | Surendra Nath Tripathi |
| Nationality | Indian |
| Address | Indian Institute of Public
Administration, New Delhi |
| 6. Names and addresses of
individuals who own the
newspaper and partners or
shareholders holding more
than one per cent of the total
capital | Indian Institute of Public
Administration
Indraprastha Estate
Ring Road,
New Delhi-110 002 |

I, Surendra Nath Tripathi, hereby declare that the particulars given above are true to the best of my knowledge and belief.

Sd/-

(Surendra Nath Tripathi)
Signature of Publisher

Dated: February 29, 2020

NOTES FOR CONTRIBUTORS

This is intended as a guide for authors submitting a manuscript to *NAGARLOK* and as an aid to the preparation of the final copy of accepted articles.

Manuscript

- Manuscript should be in MS Word format. This should include the name, email ID and the institutional affiliation of the author(s).
- Manuscripts in English should use British spelling and typographical conventions.

Articles

- There should be no line spaces between paragraphs.
- Notes should be listed at the end of the main text.
- Manuscripts should be typed in Times New Roman, font size 12, each page numbered.

Punctuation and abbreviations

- Single quotation marks should be used to enclose actual quotes from other sources or for technical terms when they are first introduced. On subsequent mention of technical terms, no quotation marks should be used. Excessive use of quotation marks should be avoided.
- Double quotation marks are used to enclose quotes within text which is itself quoted.
- Latin abbreviations such as 'i.e.' or 'e.g.' are acceptable only in expressions within parentheses, as here: 'adjectives which collocate with fare (e.g. wholesome, simple, country) ...' Elsewhere, they should be replaced by their English equivalents, 'that is' or 'for example'. Italic should not be used for such abbreviations or for such common Latin expressions as 'ad hoc', et al., etc.
- Numbers up to 9 and vaguely expressed numbers should be spelled out in words. However, any numbers in a statistical context, precise numbers, units of measurement, and numbers above 100 should be stated in figures.

Table and figures

- Every table should be given a number and brief title or caption set above the body of the table and source at the bottom.
- Figures are also given a number and a caption, set below the figure.
- Avoid such expressions as 'In the following table ...', 'As can be seen in the figure above ...' In the printed version these elements may need to be repositioned due to constraints of page layout, always after the first mention of the Table or Figure number in the text.
- Source of figures should be given at the end of the table.

Text references

- Page references should be provided when reference is made to a specific passage in a book or article. These appear after the date of publication and are preceded by a colon and a single space: Jefferson (1996: 296 – 299) or Cowie (1999: 79).
- All works cited in the running text must be listed in the reference section at the end of the text.
- The reference section should include only those works that were cited in the text.
- Whenever possible, please give the full first names of authors and editors.

INDIAN INSTITUTE OF PUBLIC ADMINISTRATION NEW DELHI

INDIAN JOURNAL OF PUBLIC ADMINISTRATION

(Quarterly: published since January 1955)

Editor: SURENDRA NATH TRIPATHI, IAS (Retd.), Director, IIPA, New Delhi

Yearly Subscription:

Individuals: (Inland) Rs. 425.00; (Abroad) \$120 or £48;

Single Copy: (Inland) Rs. 120.00; (Abroad) \$30 or £12;

Special Number: (Inland) Rs. 275.00; (Abroad) \$80 or £ 36

Institution/Library: (Inland) Rs. 700.00; (Abroad) \$ 240.00 or £ 96.00

Life Members of IIPA: Annual subscription: Rs.300.00; Single Copy Rs. 75.00;
Special Number Rs.200.00

IIPANEWSLETTER

(Monthly recorder of national and international news of
public administration and allied matters since 1956)

Editor: Surendra Nath Tripathi, Director, IIPA

Yearly Subscription: India: Rs. 10.00; Abroad: \$ 4.00 or £ 2.00

DOCUMENTATION IN PUBLIC ADMINISTRATION

(Quarterly: Published since 1973)

Editor: Surendra Nath Tripathi, Director, IIPA, New Delhi

Assistant Editor: SUNITA GULATI, Dy. Librarian, IIPA, New Delhi

Yearly Subscription: India: Rs. 150.00; Abroad: \$ 60.00 or £ 24.00

NAGARLOK

(Urban Affairs Quarterly: Published since 1969)

Editor: Surendra Nath Tripathi, Director, IIPA, New Delhi

Assistant Editor: V.N. ALOK, Associate Professor in Urban Finance

IIPA, New Delhi

Yearly Subscription: India: Rs. 200.00.

लोक प्रशासन (अर्ध-वार्षिक)

सम्पादक: प्रो. एस. एन. मिश्र

वार्षिक शुल्क : आजीवन सदस्य-रु. 150, व्यक्तिगत ग्राहक-रु. 200, संस्थागत ग्राहक-रु. 300

सामान्य अंक : आजीवन सदस्य-रु. 75, व्यक्तिगत ग्राहक-रु. 100, संस्थागत ग्राहक-रु. 150

विशेषांक : आजीवन सदस्य-रु. 100, व्यक्तिगत ग्राहक-रु. 200, संस्थागत ग्राहक-रु. 200

Bank drafts/postal orders should be drawn only in favour of

“Director, Indian Institute of Public Administration”

Note: Subscribers are advised to secure safe delivery through Registered Post @ Rs. 100.00 per periodical.

For complete information about IIPA publications write to:

THE EDITOR

INDIAN INSTITUTE OF PUBLIC ADMINISTRATION

Indraprastha Estate, Ring Road, New Delhi-110 002 (India)