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ARTICLES

IMAN BANERJEE

Problems of Urban Self-governance in India

1

**RITU RAJ KAUR, SAKSHI SAHNI, GURSHARAN KAUR AND
RAVI INDER SINGH**

Environmental Governance and Key Challenges at Local Level
in Indian Context

25

SMITHA PAVIANOSE

Extent of Urban Poverty in Kerala

39

MADHUKAR SWAYAMBHU

The Urban Pollutions and Its Sustainable Cure

55

STATUS ARTICLE

SANJAY PATHAK

~~Status Paper on~~ Implementation of Master Plans and Changing
Land Policies: Delhi

64

COLUMN

K.K. PANDEY

National Urban Events/ Innovations

86



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PAGE

Articles

Problems of Urban Self-governance in India

Iman Banerjee 1

Environmental Governance and Key Challenges at Local Level in Indian Context

*Ritu Raj Kaur, Sakshi Sahni, Gursharan Kaur and
Ravi Inder Singh* 25

Extent of Urban Poverty in Kerala

Smitha Pavianose 39

The Urban Pollutions and Its Sustainable Cure

Madhukar Swayambhu 55

Status Article

~~Status Paper on~~ Implementation of Master Plans and Changing Land Policies: Delhi

Sanjay Pathak 64

Column

National Urban Events/ Innovations

K.K. Pandey 86

Human Resource for Planned Urbanisation

Kusum Lata 90

From the States: The Revenue Potential of Carbon Credits for City Agencies

Sachin Chowdhry 93

Rain Water Harvesting in Delhi-Role of Civil Society

Amit Kumar Singh 97

Problems of Urban Self-governance in India

IMAN BANERJEE*

ABSTRACT

Urban self-governance in India has its own set of challenges. There are some critical, both institutional and non-institutional road blocks that are obstructing the efficient and autonomous functioning of urban local bodies in the country. Against this backdrop, the present paper throws light on the overwhelming obstructions that are making the notion of democratic and participatory self-governance, a distant reality for the Urban Local Bodies (ULBs) in India. This paper argues that the municipal bodies in India function as mere vassals of state governments. They neither pose obligatory strategic flexibility nor do they have political legitimacy. Partly this is because of the failure of the 74th Constitutional Amendment Act and JNNURM, the most concrete and profound initiatives of the Government of India regarding the acknowledgement of India's urban contingency, to envisage dynamics of the complex urban conformations. Furthermore, the paper suggests some alternative avenues through which the current urban reality of India can be lined up with the constitutional directives and existing legislative frameworks. Finally, the paper paves the path for some future research endeavours that can hold forth to the existing knowledge apertures in the field of urban self-governance in India, so that ULBs can maximise their capabilities to work as democratic institutions for local people and their interests through bridging the gap between local communities and the upper strata of democratic government.

Keywords: ULBs, self-governance, local bodies, 74th CAA, JNNURM

INTRODUCTION

Urban governance is a polygonal term that incorporates a variety of interrelated approaches. Chiefly these comprise political decision

*Junior Research Fellow, Department of Geography, Banaras Hindu University, Varanasi- 221005. Email: iman.banerjee17@bhu.ac.in

making, economic and social justice, institutional relationship, financial management, public welfare and safety, and virtually everything that enable the governance bodies (local, provincial or national) and stakeholders to design, fund and manage urban centres. Urban governance takes a critical part in framing the physical as well as the social identity of urban areas via influencing the amount and efficiency of local services. Urban local bodies, popularly known as municipalities or municipal corporations are the public institutions, formed to maintain and manage urban areas. The chief objective behind the devolution of power (political, social and economic) to local bodies is grounded on the notion of active participation and greater responsiveness of citizens to govern their own towns/cities (Agrawal and Ribot, 1999; Aijaz, 2006; Participatory Research in Asia, 2013).

India has emerged as one of the most rapidly growing economies in the world since the last three decades, which in turn is proportionately associated with a high rate of urbanisation in the country. As the 2011 census records, India contains nearly 377 million urban population, residing in 7933 urban centres of different sizes and classes. As an obvious consequence, in recent decades the importance of decentralisation as a tool for devolution of functional and financial power to the Urban Local Bodies (ULBs) has been well realised. However, there are several formidable hindrances to better local governance of urban bodies in India, such as federal government structure that has not equipped its third-tier with substantial autonomy despite amending the Constitution in 1992 for doing so, a broken thread in the institutional fabric for the urban planning and management, a political environment that is visibly inclined towards rural affairs, etc. (Ahluwalia, 2019). Consequently, urban areas of the country are suffering from severe deficiency of autonomy and urban dwellers lead a very difficult life. Therefore, it is high time that the social scientists should bring the issue of urban local governance of India into policy debates and suggest some ways to overcome the existing deficiencies which are hindering the ULBs of India to fulfil their constitutionally envisaged responsibilities.

This article aims to throw light on the overwhelming obstructions that are making the concept of democratic and participatory self-governance, a distant reality for the ULBs of India. The article is divided into six main sections. The first section contains a brief account of the importance of local bodies in urban governance. Subsequently the paper portrays a synoptic picture of the tradition of urban local governance in India. This analysis is followed by two sections, devoted to the brief discussions on the provisions of the 74th Constitutional Amendment Act (CAA) and JNNURM, respectively. The section followed is entirely

devoted to the overwhelming problems faced by the ULBs of India that are obstructing them to function as the institutions of democratic self-governance. Furthermore, the research makes some remarks over the discussion along with some recommendations in order to improve the status of ULBs in India so that the gap between the desired and the actual conditions can be minimised. The last section spells out some potential research questions that can possibly pave the path for future research endeavours in the domain.

Why Local Governance Bodies?

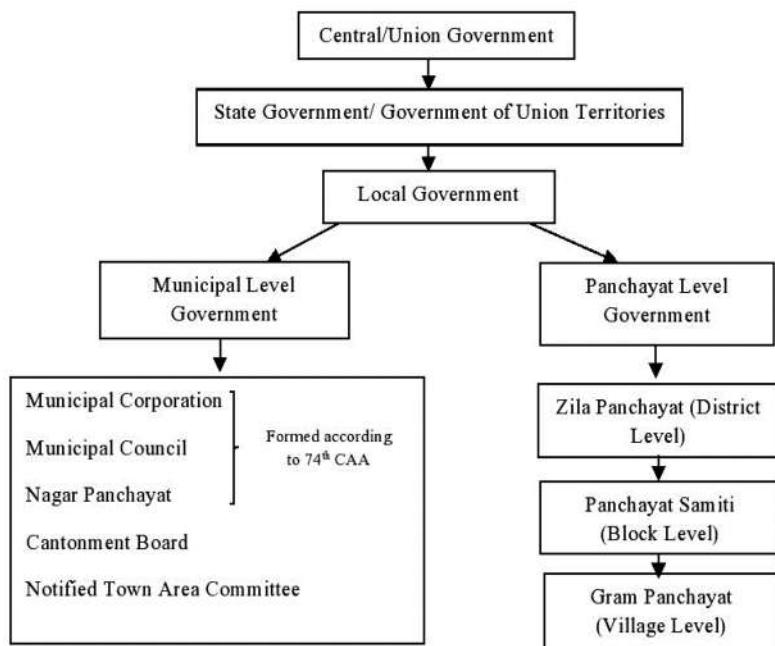
Local governments are the public institutions that govern and manage functions in a smaller geographical and political unit, a village or a city/town. Generally, they do not possess the powers to make laws, but they aid the governance functions at the ground level (Chakraborty and Chakraborty, 2016). Local government is the closest public sphere to local people. It can have the best access to the prevailing issues at grassroots level. Additionally, the local government is able to reach out to the most disadvantaged sections of the local population, and provide them with equitable facilities, which in turn can pave the path for better communication and more convenient exchange of information. Subsequently, these democratic bodies can cordially promote the strategy of active citizenship as means of fostering greater citizen responsibility for both the direct provision and management of public and welfare services (Kearns, 1992). Strengthening participatory conventions in local self-governance practices brings governance authorities closer to citizens. This helps to maintain a citizen-friendly administration. Citizens' participation expands public spaces, enhances the relationship between society and government, gives greater legitimacy to democratically elected local authorities, promotes respect for citizenship rights, refines the quality of politics, and strengthens solidarity and cooperation (Participatory Research in Asia, 2013). Thus the active performance of local bodies can act as a rationale for better pursuance of participatory democracy that enables local citizens to carry out autonomous decision-making system with ease and efficiency.

The Tradition of Urban Local Governance in India

In India, urban local governance bodies are in existence in one form or another since the ancient period. Excavated remnants of the Towns of Indus Valley Civilization (Harappa, Mohenjo-Daro etc.) provide ample evidence of well-organised urban governance. Urban bodies at that time were self-efficient governance units. Kautilya in his comprehensive treatise '*Arthashastra*' addressed the role of a '*Nagaradhyaksha*' or '*Nagarak*', the city superintendent who was responsible mainly for the

maintenance of the municipal law and order (Sharma, 2004). During the Mauryan period entire city used to be divided into four major parts, each part being headed by an officer known as 'Sthanik', a counterpart to the present superintendent of police; additionally on a unit of 10 to 40 houses there used to be an officer known as 'Gop' and his duty was not only to provide security to the residents but also keep a close eye on their activities (Sharma, 2004). During the Gupta period, towns were administrated by a council, whereas Mughal rulers assigned a 'Kotwal', who was the city governor posing powers and duties of the chief city police, magistrate and prefect of municipal administration (Aijaz, 2006). However, at that time municipal governance was largely confined in the hands of the ruling classes and their nominated or subordinate persons. That was the time when urban areas were substantially small in dimension. But with the passage of time, they grew in size and became more complex. Thus, the requirement for a more complex form of urban governance had emerged.

Fig. 1: Present form of Hierarchy of Government System in India



Source: Author.

The contemporary form of urban local government owes its genesis to the British rule, where the first Municipal Corporation was set up in Madras in 1688, followed by the establishment of similar Corporations in Bombay and Calcutta in 1762 (Savage and Dasgupta, 2006, p.42).

Samuel Laing, a member of the Hon'ble Viceroy's Council proposed the resolution of self-efficient local government in the Budget Speech of 1861-62. In 1870, Lord Mayo, in his resolution advocated for the idea of decentralised administration. Consequently, enactment of some Municipal Acts took place which extended systems of election, local finance, etc. had been introduced. In 1882, Lord Ripon often called the *father of municipal self-governance in India*, released his resolution where he advocated for the establishment of a network of local self-government institutions, reduction of the official element to not more than a third of the total membership, a large measure of financial decentralisation, adoption of election as a means of constituting local bodies, etc. (Aijaz, 2006). Consequent to the resolution, the Bombay City Municipal Corporation Act came into being that enabled the Bombay City Council to be constituted mostly by elected and nominated personnel. Since then the organisational and functional structure of urban bodies remained more or less similar despite the fact that the frequency of urban areas increased visibly and types of urban problems became much more complex. India's Independence in 1947 and consequent emergence of the Constitution of India in 1950 made urban affairs a state matter. The nature and extent of municipal power thus entirely became dependent on the state Acts. The Seventh Schedule (entry 5) of the Constitution of India, equipped the States with legislative powers to enact municipal laws related to the governance power and autonomy of local bodies. However, the recent decades have experienced an increasing consciousness regarding the requirements and significance of local democratic governance as a mechanism of participatory and responsive self-governance. A number of initiatives have been undertaken by the public and the private sector to strengthen municipal bodies and to improve the quality of services in urban areas (Aijaz, 2008). The 74th Constitutional Amendment Act (CAA), 1992 had become a milestone step taken by the Government of India in this regard that gave constitutional status to urban local bodies. It was the first momentous initiative to secure the stabilisation of municipal self-governance and its democratic structure through constitutional provisions. Since then the Government of India has initiated a considerable number of programmes and missions to strengthen urban self-governance, which cumulatively have more complex than satisfactory results.

The 74th Constitutional Amendment Act—A Remarkable Initiative to Empower Municipal Self-governance

Prior to the 74th CAA, ULBs in India lacked dignity due to the absence of proper constitutional status. In the majority of the states, they used to face tedious negligence and became frail and feeble.

Failure to conduct regular municipal elections was quite common for the majority of Indian states. The municipal bodies were suffering from weak institutional structure, functional disintegration, inadequate financial resources, lack of citizens' participation and low public status. Local governance was largely state-centric where the municipalities were financially, functionally and administratively dependent on the state governments. Thus the 74th CAA came into being like a saviour of urban local bodies, with some overwhelming aims and objectives. The primary objective of the 74th CAA was to invigorate democratic ideals at the grassroots level through urban local governments, and the secondary aim was to raise the level of participation of elected representatives of urban citizens in the governance of the cities (IGSSS, 2019). The 74th CAA addressed several mandatory reforms for strengthening municipal governance and public participation in urban local governance:

- i. Constitution of municipal bodies for five years through universal adult franchise for each statutory urban body of the country. If a municipal body was dissolved before the completion of its term then a new municipal election was to be conducted within a span of 6 months from the date of dissolution (Article 243 U). There must be a State Election Commission (SEC) in each state to ensure the regular elections for ULBs in the respective state (Article 243 K). No less than one-third of seats in the municipal bodies will be reserved for women candidates. Whereas for SC and ST candidates seats will be reserved in a proportion of their population in the respective urban body (Article 243 T).
- ii. Based on the population size, revenue structure and economic status, statutory urban bodies of the country can be placed under three different categories, such as Municipal Corporation, Municipal Council and Nagar Panchayat (Article 243 Q).
- iii. The Governor of every State has been given the responsibility to constitute a State Finance Commission for a tenure of 5 years (Article 243Y) to review the financial condition of ULBs.
- iv. For every district and metropolitan region, a District Planning Committee (Article 243 ZD) and a Metropolitan Planning Committee (Article 243 ZE) have to be constituted, with the rationale of preparing developmental plans for their respective area of interest.
- v. Article 243W of the Constitution requires the state laws

to endow the municipal bodies with such powers and authority as may be necessary to enable them to function as the institutions of self-government (JNNURM Primers, p.7). The 12th Schedule has been attached to the Constitution that provides recommendations to the states regarding the transfer of 18 mandatory functions to ULBs, in order to increase the capacity of municipal bodies to function as the self-efficient governance units.

The 74th CAA envisages enabling people to participate in development processes at the ward, municipal, district and metropolitan region level, where the empirical evidence of such optimism could be

**Box 1: Functions listed in 12th Schedule of the
Constitution of India**

- (i) Urban planning including town planning;
- (ii) Regulation of land-use and construction of buildings;
- (iii) Planning for economic and social development;
- (iv) Roads and bridges;
- (v) Water supply for domestic, industrial and commercial purposes;
- (vi) Public health, sanitation conservancy and solid waste management;
- (vii) Fire services;
- (viii) Urban forestry, protection of the environment and promotion of ecological aspects;
- (ix) Safeguarding the interests of weaker sections of society, including the handicapped and mentally retarded;
- (x) Slum improvement and upgradation;
- (xi) Urban poverty alleviation;
- (xii) Provision of urban amenities and facilities such as parks, gardens, playgrounds;
- (xiii) Promotion of cultural, educational and aesthetic aspects;
- (xiv) Burials and burial grounds; cremations, cremation grounds and electric crematoriums;
- (xv) Cattle pounds; prevention of cruelty to animals;
- (xvi) Vital statistics including registration of births and deaths;
- (xvii) Public amenities including street lighting, parking lots, bus stops and public conveniences; and
- (xviii) Regulation of slaughter house and tanneries.

Source: National Portal of India, (2012), Retrieved April 25, 2021, from <https://www.india.gov.in/my-government/constitution-india/amendments/constitution-india-seventy-fourth-amendment-act-1992>.

realised only after the incorporation of provisions of 74th CAA in the existing municipal Acts (Savage and Dasgupta, 2006, p.44). Thus all the state governments had been instructed to amend their prevailing municipal laws to create conformity with the provisions of the 74th CAA.

Jawaharlal Nehru National Urban Renewal Mission (JNNURM) - A Reform Oriented Mission to Strengthen the Provisions of 74th CAA

JNNURM is a landmark endeavour, initiated by the Government of India to strengthen municipal governance, as it brought India's urban affairs to the pivotal point of policy debates.

The mission was launched during 2005 -2012, to improve urban infrastructure and governance in selected 65 cities of different sizes/classes. Although it was predicted that the mission would be completed by the year 2012, majority of the states were unable to implement the stipulated reforms in a satisfactory manner, and thus the mission was further extended for a period of two years. The mission sought to expedite infrastructure investments by bringing the ULBs, and State Governments closer to each other, in order to endure the flow of capital resources for investment as well as leveraging required reforms for the urban sector. It was also indicated that the 74th CAA was the underlying philosophy of the mission (Sivaramakrishnan, 2011). It was the single largest initiative of the Government of India for planned urban development that integrated the two pressing requirements of urban India: massive investments required for infrastructure development and reforms that were required to sustain investments.

Besides having the tag of "infrastructure development mission", JNNURM significantly tried to accrue the status of ULBs in India. It gave momentum to the buried provisions of the 74th CAA. Many of the municipal bodies were not equipped enough to take over many strenuous functions listed under the 12th Schedule of the Constitution. Majority of them did not have the capacity to undertake the functions such as roads and bridges, water supply, sewerage and urban forestry (Sharma, 2018). Furthermore, in some of the states, a strategy had been tactically developed for municipal bodies to be amalgamated with parastatal bodies for the delivery of a number of services and thus reported those functions as allocated to the ULBs. Thus, one of the major thrusts of JNNURM was to ensure the betterment of municipal governance and service provision in order to enable ULBs to make themselves financially sound and infrastructurally sustainable. The mission initiated 23 reforms, categorised as mandatory and optional. ULBs were required to implement six mandatory and ten optional reforms, the remaining being considered as state reforms. These thirteen

**Box 2: Mandatory and Optional Reforms for Urban
Local Bodies under JNNURM**

Mandatory Reforms at the Level of ULBs and Parastatal Agencies

- i. Adoption of a modern, accrual-based, double entry system of accounting;
- ii. Introduction of a system of e-governance using IT applications, GIS and MIS for various urban services;
- iii. Reform of property tax with GIS, and arrangement for its effective implementation so as to raise collection efficiency to 85 per cent;
- iv. Levy of reasonable user charges, with the objective that full cost of operation and maintenance is collected within seven years;
- v. Internal earmarking of budgets for basic services to the urban poor; and
- vi. Provision of basic services to the urban poor, including security of tenure at affordable prices.

Optional Reforms (Common to States, ULBs and Parastatal Agencies)

- i. Revision of bye-laws to streamline the approval process of construction of buildings, development of sites, etc.;
- ii. Simplification of legal and procedural frameworks for conversion of agricultural land for non-agricultural purposes;
- iii. Introduction of property title certification;
- iv. Earmarking of at least 20-25 per cent developed land in housing projects for economically weaker sections and low income groups with a system of cross-subsidisation;
- v. Introduction of computerised registration of land and property;
- vi. Revision of byelaws to make rainwater harvesting mandatory in all buildings, and adoption of water conservation measures;
- vii. Byelaws for reuse of recycled water;
- viii. Administrative reforms including reduction in establishment cost by introducing voluntary retirement schemes and surrender of posts falling vacant due to retirement;
- ix. Structural reforms; and
- x. Encouraging public private-partnership.

Source: Ministry of Urban Employment and Poverty Alleviation and Ministry of Urban Development, Government of India, Jawaharlal Nehru National Urban Renewal Mission: Towards better cities. Retrieved March 10, 2021, from [https://mohua.gov.in/upload/uploadfiles/files/6Broucher%20English\(1\).pdf](https://mohua.gov.in/upload/uploadfiles/files/6Broucher%20English(1).pdf).

reforms permitted the ULBs to increase their efficiency to deliver urban services in an equitable, sustainable, cost-effective, transparent and citizen-friendly way. Majority of the municipal bodies that came under the provisions of JNNURM, had shown their commitments to implement these reforms. The application of e-governance through better usage of information and communication technology tried to improve the efficiency of municipal governance significantly. Registration of birth and death and redressal of grievances through

e-governance had been successfully implemented in most of the cities, whereas most of the large municipal corporations had introduced the accounting system founded on the double-entry bookkeeping (Kundu, 2014). Simultaneously, most of the ULBs had become able to increase their property tax coverage through the adoption of translucent, non-discretionary, and unambiguous urban property tax reforms. With the initiation of this reform, 40 cities had become able to bring more than 85 per cent of the properties under the coverage of the property tax net and the tax collection of 34 cities had been more than 90 per cent of the total demand (Kundu, 2014). A special mention of the Community Participation Law should be made in this regard. This Law of JNNURM contained the resolution of the Central government for the enactment of laws in different states concerning the development of Area Sabha at the sub-ward level and Ward Level Committees. This initiative was primarily endeavoured to promote public participation in municipal governance. Additionally, civil society participation was believed to be enhanced with the provisions of structures like Technical Advisory Group (TAG), City Technical Advisory Group (CTAG) and the City Volunteer Technical Corps (CVTCs) under JNNURM, where both the CTAG and CVTC were supposed to guide and support ULBs to ensure transparency and accountability (Participatory Research in Asia, 2013).

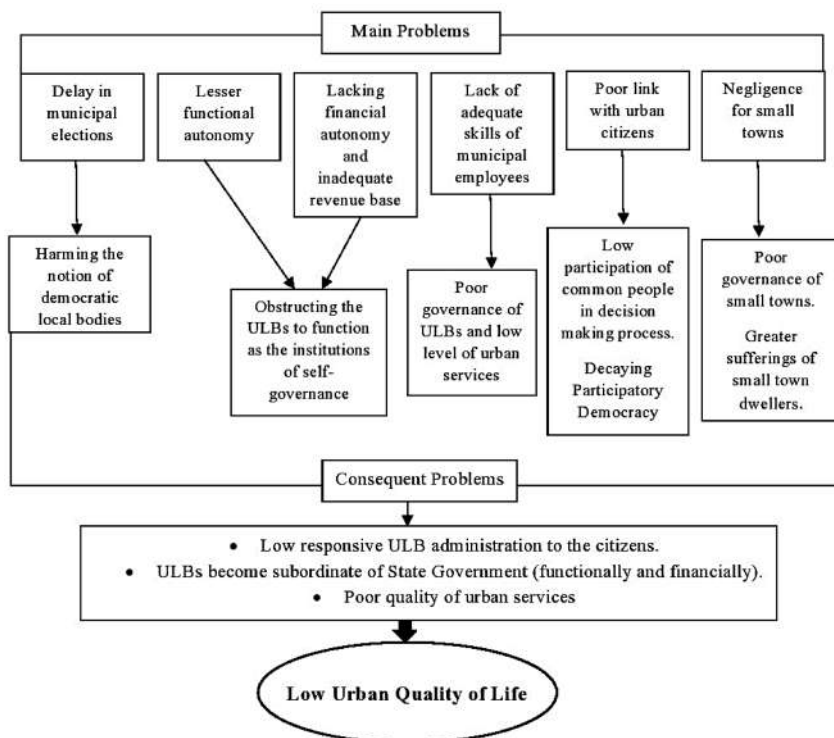
Problems of Urban Self-governance in India

Urban self-governance in India has its own set of challenges. There are some critical, both institutional and non-institutional roadblocks that are obstructing the efficient and autonomous functioning of ULBs in the country. The municipal self-governance of India is buried under the cover-mass of a huge range of problems. In India, the ULBs have been entrusted with the task of managing towns and cities, but they are not adequately equipped to ensure citizens' participation, as decentralisation and devolution reforms have not been rendered fruitful (Participatory Research in Asia, 2013). Municipal institutes have not been entrusted with substantial power and autonomy to tackle the tremendous difficulties while efficiently delivering civic services as well as planning and managing the process of urbanisation that is inevitably associated with rapid economic growth (Ahluwalia, 2019).

DELAY IN MUNICIPAL ELECTIONS

One of the most visible causes responsible for the bad shape of municipal self-governance in India, is the prolonged delay in organising municipal elections. Most Indian states do adopt tactics to delay the municipal elections according to their whims and fancies (Raza et al., 2020). State Election Commission is not equipped with enough

Fig. 2: Problems of Urban Self-Governance in India



Source: Author.

constitutional power to transparently maintain regular elections of local bodies. Despite the constitutional requisite that the municipalities will be constituted for five years only and the State Election Commission is bound to conduct municipal elections as per requirements, in many states, the State Election Commissions are incapable to do so because the authority for delimitation of municipal wards lie in the hands of the state governments and they in most of the cases consensually do not undertake the task on proper time. Thus State Election Commission becomes unable to conduct elections on time. There are enough examples to show that State Election Commissions had to confront the state government in the court in order to fulfil their responsibilities properly. For example, the Telangana State Election Commission went to the State High Court with an appeal that the state government is deliberately not making proper arrangements to conduct municipal elections for ULBs after their terms expire (Vamshidhara, 2019, cited in Prasad and Pardhasaradhi, 2020). A report of the Comptroller and Auditor General of India (2012-13) recorded that in 23 out of 30 states/UTs (that come under the 74th CAA), ULB elections were held timely; in six states (Arunachal Pradesh,

Assam, Jammu and Kashmir, Jharkhand, Meghalaya and Nagaland) ULB elections had not been held regularly and in Sikkim, the very first ULB election was conducted in 2010 (GoI, 2012, p.18). In many states, the ULB elections were announced only when the court pushed the state to do so, as happened in 2013 in the case of Andhra Pradesh, West Bengal and Karnataka (National Social Watch, 2011), and in Madhya Pradesh in 2021. Karnataka High Court set a timeline for the State Election Commission and state government to conduct elections for 21 ULBs in December 2020 (ENS, 2020). The erstwhile Andhra Pradesh government had failed in securing around Rs.3,000 crore of central grants from the 13th Finance Commission due to delay in conducting the elections of local bodies (Suchitra, 2015). The city of Visakhapatnam and Chennai had not held municipal elections since 2011 and 2016, respectively (IGSSS, 2019). The Municipal Corporation of Guntur (Andhra Pradesh), experienced local body polls after 11 years in 2021 (ENS, 2021).

LESSER FUNCTIONAL AUTONOMY OF ULBs

As recorded earlier in the 12th schedule of the 74th CAA, 18 functions are enlisted that are required to be performed by the ULBs. The main objective behind this was to equip ULBs with substantial functional responsibilities so that they can act as institutions of self-governance. However, available literature shows a different picture. By the year 2013, only 11 out of 31 states/UTs transferred all the 18 functions to ULBs, whereas in the remaining states, the number of transferred functions were varied (GoI, 2012, p. 19). Surprisingly, the state of Arunachal Pradesh, Jammu and Kashmir, and Meghalaya did not transfer a single function to ULBs, wherein Himachal Pradesh eight functions, in Manipur three functions, in Sikkim and Nagaland only one function was fully transferred to ULBs (GoI, 2012, p. 19).

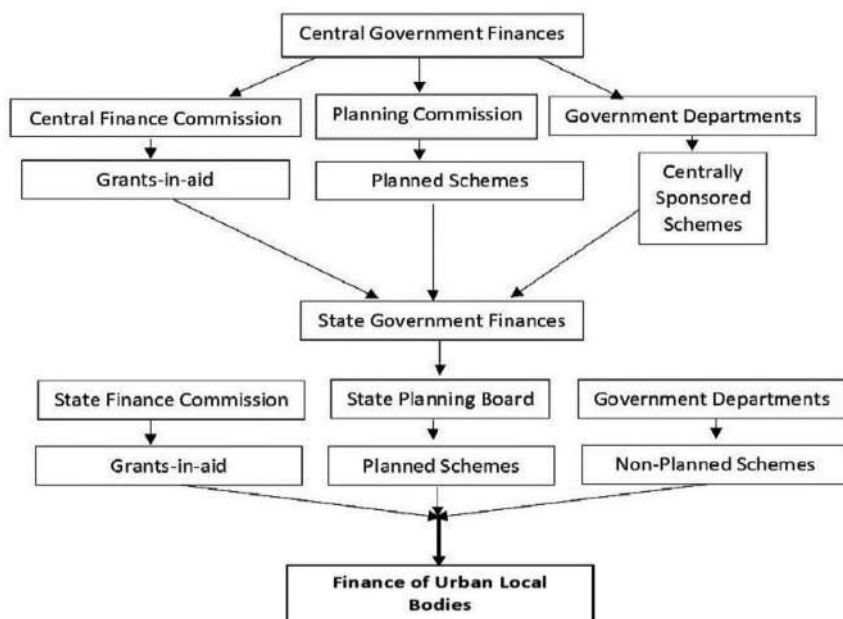
Town planning is a very significant function as it helps the ULBs to mobilise finances in a transparent manner, so as to maintain the urban infrastructure in a sustainable way and deliver urban services with greater efficiency. However, in a majority of the states like Uttar Pradesh, Punjab, Arunachal Pradesh, Manipur and Bihar it is continued to be performed by the state. Even one of the most prosperous municipal corporations of India, the Greater Mumbai Municipal Corporation that is responsible for urban governance in the Greater Mumbai region, lacks substantial powers related to urban planning and land-use regulation because it does not have any independent authority to lease land and to accrue revenue independently (IGSSS, 2019). The Tirupati Urban Development Authority was founded by the Government of erstwhile Andhra Pradesh in 1982 to solve twin problems of housing and water supply in Tirupati city and its adjacent counterparts. Thus gradually

the state government eroded the powers of the Tirupati Municipal Corporation by establishing the parallel body, i.e. Tirupati Urban Development Authority. In a considerable number of states like Tamil Nadu, Karnataka and Kerala, even water supply that is believed to be a core urban function, is continued to be performed either by the respective state government or parastatal agencies. Public Health Engineering Department in Assam and Rajasthan, and the city level parastatal bodies in the Municipal Corporation of Hyderabad and Chennai are responsible for the function of water supply (Prasad and Pardhasaradhi, 2020). A report by the Comptroller and Auditor General of India (2020) recorded that the state government of Karnataka has constituted as many as 31 Urban Development Authorities and 52 Town Planning Authorities to achieve an optimum level of planned development of major urban clusters, instead of giving more functional autonomy to ULBs. Though one of the important mandatory reforms of JNNURM was the functional amalgamation of parastatal bodies with ULBs, majority of the state governments are reluctant to do so. Additionally, some of the states comprise a bizarre arrangement in their respective municipal laws depicting that some specific functions can be occasionally allocated or de-allocated to local bodies by the government of the respective state, thereby encouraging ambiguous assignment.

LACKING FINANCIAL AUTONOMY AND INADEQUATE REVENUE BASE OF MUNICIPAL BODIES

The revenue base of municipal bodies in India does not have any special provision in the Constitution of the country. The power and authority to determine municipal revenue base, i.e. tax authority, tax base, tax rate settings, local tax autonomy, or even the grants-in-aid and other forms of financial transfers rest with the state governments (Mathur, 2006, p.84). As an obvious consequence, ULBs lack of financial autonomy and the absence of any well-ordered and structured method to transfer the financial resources to municipal authorities make them entirely dependent on the mercy of the state government. Additionally, a substantial number of municipalities, especially the smaller ones are even unable to pay salaries to their employees from their own revenue and thus have to function as auxiliary of the state governments, as that is apparently the only possible way. In Delhi, 1.25 lakh municipal employees of the three Municipal Corporations came on strike over salaries not being paid by the civic bodies (The Hindu, 2020). In Hyderabad, most of the property taxes that come from the prosperous parts of the city where property taxes are found to be highest, such as areas like IT Parks, are tactically kept by the state government through its Industrial Township Law (IGSSS, 2019).

**Fig. 3: Fiscal Dependency of Urban Local Bodies in India
(After Mohanty et al., 2007)**



Source: Author.

Municipal bodies require a considerable amount of financial resources and substantial financial autonomy to efficiently execute all of the functions assigned to them. Ironically, there is an existing mismatch between the assigned duties to the municipalities and the rights that they have on various resources. Autonomously they can extract money from various internal sources, which include both tax (property tax, vehicle tax, etc.) and non-tax (rent from municipal properties, tolls, user charges, etc.) revenue. However, most municipalities of India are unable to generate adequate funds from their internal sources, mainly due to deficiencies in calculating the tax and non-tax rates, reluctance in imposing or accelerating direct taxes, low efficiency of civic services and inadequate attention to citizens' grievances (Aijaz, 2006). Consequently, they have to largely depend on external finance that either comes from the budgetary support of state/Central government or different multilateral or bilateral undertakings funded by a variety of national or international bodies like International Monetary Fund, World Bank, etc. Thus, the total municipal revenue in the country has a very inconsequential contribution to the national GDP. In 1997-98, municipal revenue constituted merely 0.61 per cent of the national GDP of India, which was increased by 0.63 per cent in 2000-01, and 1.08 per

TABLE 1: SHARE OF MUNICIPAL OWN REVENUE IN TOTAL MUNICIPAL REVENUE IN DIFFERENT STATES OF INDIA (2010-11 AND 2017-18)

<i>States</i>	<i>2010-11</i>	<i>2017-18</i>	<i>States</i>	<i>2010-11</i>	<i>2017-18</i>
Andhra Pradesh	56.0	62.8	Manipur	3.7	4.4
Arunachal Pradesh	NA	5.7	Meghalaya	57.5	59.8
Assam	29.7	62.0	Mizoram	1.8	10.8
Bihar	4.0	6.2	Nagaland	78.4	91.5
Chhattisgarh	NA	52.5	Odisha	17.9	10.2
Goa	NA	47.0	Punjab	79.8	82.0
Gujarat	32.2	47.2	Rajasthan	43.2	32.5
Haryana	27.0	25.1	Sikkim	NA	41.7
Himachal Pradesh	33.3	30.9	Tamil Nadu	34.2	29.8
Jammu and Kashmir	11.0	9.0	Telangana	53.7	65.8
Jharkhand	NA	8.7	Tripura	8.6	5.4
Karnataka	25.5	26.7	Uttar Pradesh	16.0	13.7
Kerala	41.3	23.2	Uttarakhand	20.7	11.1
Madhya Pradesh	74.5	42.7	West Bengal	22.8	19.9
Maharashtra	83.0	65.3	INDIA	50.9	42.7

Source: Ahluwalia et al., 2019, State of Municipal Finances in India, p. 81.

cent in 2007-08, and further declined to 1.05 per cent and one per cent in 2012-13 and 2017-18 respectively. On the contrary, the same municipal revenue accounted for a much higher proportion of the national GDP in countries like Poland (4.5 per cent), South Africa (6 per cent), Brazil (7.4 per cent), United Kingdom (13.9 per cent) and Norway (14.2 per cent) in 2010 (Mohanty, 2016, cited in Ahluwalia et al., 2019, p.7). Municipal own revenue accounted for 53 per cent of the total municipal revenue in 2007-08 in India, was declined to 51 per cent in 2012-13 (Ahluwalia, 2019).

LACK OF ADEQUATE SKILLS OF MUNICIPAL EMPLOYEES

Urban self-governance in India is suffering from a serious crisis of human resources. The number of statutory responsibilities of municipal bodies has increased over time but these have not been matched by a corresponding capacity building effort of municipal employees at different levels (Hussain, 2007). These issues cut across the ULBs and are embodied in many forms. Some municipal departments are lacking in staff strength, whereas some are staffed with employees devoid of requisite skills. Municipal bodies are confronting a serious deficiency of skilled workforce, which in turn is obstructing them to deliver public services to citizens with ease and efficiency. A considerable

number of elected representatives come to the municipal offices and in a substantial case, it is their first visit to the municipal office and governance, where they are mostly unaware of the municipal systems, i.e. its laws, procedures and processes (Prasad and Pardhasaradhi, 2020). In the last two three decades, the issue of skilled manpower in ULBs has emerged as a matter of discord as the urban population has been increased massively and the complexity of urban problems took multifarious forms. Inadequate professional skills of municipal employees are reflected through poor communication of municipal workers with citizens. Since most of the civic services involve close interaction with people on a regular basis (e.g. water supply, sanitation, transportation, education), corruption of every form is easily visible (Hussain, 2007).

In 2013-14, the Municipal Corporation of Bangalore consisted of only 10,000 employees, where the sanctioned strength was 19,000 (Viswanathan and Poddar, 2014). A 2017 study by the Janaagraha Centre for Citizenship and Democracy recorded that the average staff vacancy of 23 major cities of India from 20 different states, was nearly 35 per cent, with the highest vacancy being 60 per cent in Guwahati. The study also pointed out that the commissioners of these cities do not pose the requisite experience in urban governance and management, which probably obstructs their ability to govern their respective cities efficiently. Commissioners of seven very important cities, such as Chandigarh, Dehradun, Guwahati, Kanpur, Ludhiana, Ranchi and Thiruvananthapuram had less than one year of experience in urban governance.

POOR LINK WITH URBAN CITIZENS

The 74th CAA, 1992 was a quantum leap that gave constitutional status to the institutions of self-governance, i.e. municipal bodies in order to bring the local voices to the local policy debates. This was further strengthened by JNNURM (2005). However, ground realities reflect that the citizens in urban areas are rarely included or involved in decision making, especially the marginalised and vulnerable sections of society who indeed are the most affected by the emerging crisis of urbanisation (Participatory Research in Asia, 2013). ULBs, which have been entrusted with the task of managing towns and cities, are not adequately equipped to ensure citizens' participation, as decentralisation and devolution reforms have not been rendered fruitful (Tripathi, 2018). As a combination of a host of interrelated factors, like fragmentation of responsibilities, inadequate staff strength and skills, political agenda and many more, the municipal bodies and their governance are not substantially responsive to the urban citizens

of the country. Subsequently, the ambiguous functional domain of ULBs and the inclusion of parastatal bodies, make municipal governance further remote and inaccessible for the citizens. Low participation of voters in municipal elections is of common occurrence in many of the ULBs in India, as the citizens are not being encouraged to actively participate in the political decision-making process. Additionally, the difunctionality of Ward Committees further gives momentum to the problem. Politically motivated nominations of members of the Ward Committees, non-occurrence or poor participation of members in the Annual General Meetings, lack of awareness and non-availability of information among urban citizens defeat the very purpose of formation of Ward Committee as an apolitical participatory body (IGSSS, 2019).

The low engagement of urban citizens in municipal affairs is clearly reflected through the low voter turnouts in municipal elections. In 2012, the voter turnout of Brihan Mumbai Municipal Corporation and Thane Municipal Corporation could not exceed 45 per cent, whereas, in certain wards of Brihan Mumbai, Pune and Chinchwad Municipal Corporations, the voter turnout was as low as 29 per cent in 2012 (Parchure et al., 2017). Polling for seven ULBs in Bihar in 2017 had shown a voter turnout of 64 per cent (PTI, 2017). Similarly, the election of Greater Hyderabad Municipal Corporation experienced a voter turnout of merely 36 per cent in 2020 (PTI, 2020). In 2021, the election of four Municipal Corporations in Himachal Pradesh, such as Dharamshala, Mandi, Solan and Palampur, had shown an average voter turnout of 65 per cent (TNN, 2021).

NEGLIGENCE FOR SMALL TOWNS

The governance issues of Indian urban centres that are discussed in the previous sections, appear to be more acutely prevalent for small and medium-sized municipalities of the country. Most of the fruitful missions or programmes for the development of urban infrastructure and governance are largely biased towards big cities. Big municipal bodies, having greater functional and financial autonomy, can better take the benefits of these missions and thus are better able to develop infrastructures and deliver civic services with greater ease and efficiency. Subsequently, decentralisation and delegation reforms have not yielded fruitful results for the lion share of small and medium-sized towns of the country. Caused by the limited ability to understand and execute various reforms and prepare urban development plans and project reports that are essential for being qualified for external funds, the small and medium-sized towns can take very limited advantage of various reform initiatives, undertaken by the Central or state governments. The ULBs, with a smaller dimension, are so weak, both in terms of their ability to

raise finance and resource constraints, that their low status in urban hierarchy along with their poor administrative and fiscal framework, do not allow them to attract capital for investment (Kundu, 2014). In the year 2017-18, Municipal Corporations of the country constituted nearly 80 per cent of the total municipal own revenue, the remaining 20 per cent was constituted by all the Municipal Councils and Nagar Panchayats. Therefore, the condition of most small towns in India is depressing and the local governance bodies of these towns have not been able to provide the desired level of services to their citizens (Aijaz, 2006).

REMARKS AND RECOMMENDATIONS

Local governance bodies in India have a long tradition as a service provision agents, but not as an agent of local level obedience and accountability. Consequently, local governance bodies are not responsible to local communities, as they are posing a very lean set of financial power and functional autonomy. States are still appeared to be powerful enough to control the number of agencies at a local level and a majority of the attempts to decentralise financial and functional powers did not yield desired consequences. The net result is that the urban centres are continued to be governed by a plethora of agencies/ parastatals, with weak coordination and very little accountability (Savage and Dasgupta, 2006, p.57). Indian cities have not been armed with substantial power to confront the critical challenges of delivering public services, planning and managing the process of urbanisation (Ahluwalia, 2019), which in turn is associated with a tremendous rate of urban-economic growth.

Admonishing systematic and well-planned urbanisation is of critical importance to ensure that India must remain and sustain a high growth trajectory. Urban places are the instruments, which can pave the path towards achieving sustainable development objectives in a country like India, which is urbanising very fast. Considering India's federal structure, enabling efficient local governance will be successful only when the states will be whole-heartedly willing to do so. Taking inspiration from the tremendous global trend towards devolution and decentralisation, attempts should be made to recognise a new course of action for mobilising financial resources for municipal bodies. Furthermore, a strong institutional structure is required for the ULBs where the Mayor or Municipal Chairman will have substantial autonomy to make decisions that are required for better governance at the local level. The issue of low public participation also requires an urgent solution, as the low participation of local people in municipal affairs is making the notion of participatory municipal governance, a distant reality. The key effort in this concern should be moving towards

direct engagement of people in policy decisions from merely having representatives to do so, the role of people in the gradual process in achieving participatory governance and the way forward to propose and critique to enable people-friendly governance (IGSSS, 2019). For effective participation, the civic society needs to be organised into groups, representing different collective interests that may range from neighbourhood-based community organisations (e.g. resident welfare associations) to Non-Governmental Organisations or different forms of citizen and consumer forums which represent the interest of specific groups in the society (Mehta, 1999, p.177). In addition youth participation in municipal administration also requires an impetus, so that the young brains can be engaged to open new avenues for the betterment of the municipal governance system.

Inadequate urban governance skills and management capacity of the existing municipal personnel is one of the major obstructions in the path of achieving effective municipal self-governance in India. Therefore, the capacity building programmes have to be carried out in order to improve the governance and management abilities of municipal personnel, so that they can perform their tasks with better efficiency. Capacity building does not mean administrative training solely, rather it incorporates better norms and values among municipal staff, commitment towards vision and mission of participatory democracy, management skills and virtually everything that are required for better governance of the cities. It is obligatory to acknowledge that capacity building programme is a long-term, sustainable operation that requires to be institutionalized with strong planning and implementation objectives. Subsequently, there is an urgent requirement to calibrate and benchmark continuously against measurable indicators over a period of time in order to make course corrections to achieve the desired results (GoI, 2011).

We are not too far from the desired goals. Several contemporary initiatives, undertaken by the Government of India, contributed significantly to promote better municipal governance in the country. The *Swachh Sarvekshan*, started in 2017, is one such initiative that significantly considered citizens' participation to define the hygiene status of their own cities. Another key initiative, launched by the Government of India that invites participation from every citizen and stakeholder, is the introduction of *Thematic Drives*, where every fortnight a particular *theme* is taken up for focussing on hygiene (*swachhata*) and in 2016-17, 24 such thematic drives or '*pakhwadās*' were held, each of them seeing large scale participation from citizens across sectors (GoI, 2017, p.28). A *Swachh Bharat Idea Book* has also been introduced to encourage common

people with ideas that are easy to implement so that they can contribute at their own level to the mission. Additionally, at the city level, ULBs are engaging extensively with self-help groups at the slum level, utilising their cooperative power to bring about collective behaviour change, by bringing change champions themselves, inspiring other slum residents to follow proceedings (GoI, 2017, p.30). Furthermore, the Ministry of Housing and Urban Affairs (Government of India) has introduced several indexes, like 'Ease of Living Index' since 2017 to examine the ease of living of urban citizens of select cities, across three parameters: 'quality of life, economic ability and sustainability'; 'Municipal Performance Index' from 2019 to assess the sectoral performance of select ULBs across a set of five pillars: 'service, finance, planning, technology and governance', in order to encourage healthy competition among cities to perform better in these indexes through the adoption of best urban governance practices that are both sustainable and citizen-friendly (MoHUA, 2021). However, despite all these efforts, it is quite evident that the ultimate task of uplifting the status of ULBs has to be done by the states. When the state governments will be proactive enough to come forward with obligatory legislative reforms, institutional arrangements for fiscal and bureaucratic support, functional devolution and helping the urban local bodies to function as the institutions of self-governance, the impact will be visible, and then, decentralisation objectives will be successful.

Scope for Future Research

The present work not only furnishes the key challenges of urban local governance in India and provides some potentially constructive suggestions to assist the dream of sustainable and participatory local governance to become a feasible reality but also stimulates and highlights some crucial questions that are research-worthy and require to be answered. These can be considered as the epilogue of this research and can possibly pave the path for future research endeavours in the domain. What are the contemporary global practices on active citizenship, multi-agency collaborative mechanism, community participation and modernisation of local government structures? How these can be corroborated for Indian ULBs? Which are the Indian cities/ULBs that offer satisfactory examples of successful and efficient self-governance practices and how their endeavours can be replicated (in a modified way) by other ULBs to achieve the same? How the old vertical hierarchies among government structures can be modified and in which way the virtuous democratic wings can emerge in urban areas, where active participation of citizens will bring about new contours of influence and engagement that in turn, can foster further scope for and inclination

towards more inclusion, participation and activation? What can be the potential role of urban planners and practitioners in this regard (as urban planning is associated with all the available dimensions of well-being of urban dwellers)? Future research endeavours should hold forth to these knowledge apertures so that urban local bodies can maximise their capabilities to work as democratic institutions for local people and their interests through bridging the gap between local communities and the upper strata of democratic government.

REFERENCES

1. Agrawal, A. and Ribot, J.C. (1999). Accountability in Decentralization: A Framework with South Asian and West African Cases. *The Journal of Developing Areas*, 33, 473-502. <https://www.jstor.org/stable/4192885>
2. Ahluwalia, I. J. (2019). Urban governance in India. *Journal of Urban Affairs*, 41(1), 83-102. <https://doi.org/10.1080/07352166.2016.1271614>
3. Ahluwalia, I.J., Mohanty, P.K., Mathur, O., Roy, D., Khare, A. and Mangla. S. (2019). *State of Municipal Finances in India: A Study Prepared for the Fifteenth Finance Commission*. New Delhi: Indian Council for Research on International Economic Relations.
4. Aijaz, R.(2006), *Challenges for Urban Local Governments in India*. Working Paper 19, Asia Research Centre. London: London School of Economics and Political Science.
5. Aijaz, R., (2008). Form of Urban Local Government in India. *Journal of Asian and African Studies*, 43(2), 131-154. <https://doi.org/10.1177%2F0021909607087217>
6. *Annual Survey of India's City Systems 2016: Shaping India's Urban Agenda*. (2017). Bengaluru: Janaagraha Centre for Citizenship and Democracy. Retrieved February 26, 2021, from <https://smartnet.niua.org/content/f3c13b65-947c-4173-a40b-6869db1f7443>
7. Chakraborty R. and Chakraborty, M.(2016).Dynamics of Local Governments: A Comparative Study of India, U.K. and the U.S.A. *Local Government Quarterly*, 86(4), 7-23.
8. Choudhary, B.K. (2019). Jawaharlal Nehru National Urban Renewal Mission(JNNURM). In A. Orum (Ed.), *The Wiley Blackwell Encyclopedia of Urban and Regional Studies*. John Wiley & Sons Ltd. <https://doi.org/10.1002/9781118568446.eurs0167>
9. Comptroller and Auditor General of India. (2020). *Performance Audit of Implementation of 74th Constitutional Amendment Act*. Bengaluru: Government of Karnataka.
10. Express News Service (ENS). (2020, December 18). *Karnataka High Court sets timeline to hold polls to urban bodies*. Bengaluru: *The New Indian Express*. Retrieved February 25, 2021, from <https://www.newindianexpress.com/states/karnataka/2020/dec/18/karnataka-high-court-sets-timeline-to-hold-polls-to-urban-bodies-2237762.html>

11. Express News Service (ENS). (2021, February 18). *Guntur Municipal Corporation going to polls after 11 years*. Guntur: The New Indian Express. Retrieved February 25, 2021, from www.newindiaexpress.com.
12. Government of India (GoI). (2011). *Report of the Working Group on Capacity Building: Urban Development Management for the formulation of the Twelfth Five Year Plan (2012 – 2017)*. Retrieved February 10, 2021, from https://mohua.gov.in/upload/uploadfiles/files/twelfth_5y_plan19.pdf
13. Government of India (GoI). (2012). *Performance Audit of Jawaharlal Nehru National Urban Renewal Mission*. New Delhi: Comptroller and Auditor General of India.
14. Government of India (GoI). (2017), *Annual Report: 2016-17*. New Delhi: Ministry of Urban Development.
15. Hussain, M. A. (2007). Urban Governance and Politics: A Case Study of Tirupati. *The Indian Journal of Political Science*, 68(3), 509-522. <https://www.jstor.org/stable/41856351>
16. Indo-Global Social Service Society (IGSSS). (2019). *Looking Back at 25 Years: A Review of 74th Constitutional Amendment Act - A National Level Roundtable*. Retrieved March 10, 2021, from <https://igsss.org/wp-content/uploads/2020/01/74th-Constitutional-Amendment-Act.pdf>
17. JNNURM Primers: Implementation of the 74th Constitutional Amendment and Integration of City Planning and Delivery Functions, State Level Reform. Retrieved February 25, 2021 from http://www.mumbaidp24seven.in/reference/1_2_Implementation_CAA_Planning.pdf
18. Kearns, A. J. (1992). Active Citizenship and Urban Governance. *Transactions of the Institute of British Geographers*, 17(1), 20-34. <https://doi.org/10.2307/622634>
19. Kundu, D. (2014). Urban Development Programmes in India: A Critique of JnNURM. *Social Change*, 44(4), 615-632. <https://doi.org/10.1177%2F0049085714548546>
20. Mathur, O. P. (2006). Urban Finance. In A. Rastogi (Managing Ed.), *India Infrastructure Report: Urban Infrastructure* (pp. 82-105). New Delhi: Oxford University Press.
21. Mehta, M. (1999). Participation and Urban Governance. In O. P. Mathur (Ed.), *India: The Challenge of Urban Governance* (pp. 163-212). New Delhi: National Institute of Public Finance and Policy.
22. Ministry of Housing and Urban Affairs (MoHUA) (2021). *Ease of Living Index (EoI) and Municipal Performance Index (MPI)*. Retrieved January 13, 2021, from https://smartcities.gov.in/Ease_of_Living_Index_and_Municipal_Performance_Index
23. Ministry of Urban Employment and Poverty Alleviation and Ministry of Urban Development. *Jawaharlal Nehru National Urban Renewal Mission: Towards better cities*. Retrieved March 10, 2021, from [https://mohua.gov.in/upload/uploadfiles/files/6Broucher%20English\(1\).pdf](https://mohua.gov.in/upload/uploadfiles/files/6Broucher%20English(1).pdf)

24. Mohanty, P. K. (2016). *Financing cities in India: Municipal reforms, fiscal accountability and urban infrastructure*. New Delhi: Sage India.
25. Mohanty, P.K., Misra, B.M., Goyal R. and Jeromi, P. D. (2007). *Municipal Finance in India: An Assessment*. Development Research Group: Study No. 26. Mumbai: Department of Economic Analysis and Policy, Reserve Bank of India.
26. National Portal of India. (2012, October, 12). *The Constitution (Seventy-fourth Amendment) Act, 1992*. Retrieved April 25, 2021, from <https://www.india.gov.in/my-government/constitution-india/amendments/constitution-india-seventy-fourth-amendment-act-1992>
27. National Social Watch. (2011). *Citizens' Report on Governance and Development 2010*. New Delhi: Sage Publications.
28. Parchure, R.K., Phadke, M. V. and Talule, D. (2017). *Why people do not vote in Municipal Corporation elections: A Voter Based Survey in Brihan Mumbai Municipal Corporation, Project Report*. Pune: Gokhale Institute of Politics and Economics.
29. Participatory Research in Asia. (2013). *Institutionalising Citizen Participation in Urban Governance: Policy Brief*. Retrieved March 10, 2021, from <https://smartnet.niua.org/sites/default/files/resources/Policy-Brief-Citizen-Participation.pdf>
30. Prasad, D. R. and Pardhasaradhi, Y. (2020). Twenty-five Years of the Constitution Seventy-fourth Amendment Act (74th CAA), 1992: Promise and Performance. *Indian Journal of Public Administration*, 66(2), 159-178. <https://doi.org/10.1177%2F0019556120923900>
31. Press Trust of India (PTI). (2017, May 21). *64 percent turnout in urban local bodies election in Bihar*. Patna: Financial Express, Retrieved April 17, 2021 from <https://www.financialexpress.com/india-news/64-percent-turnout-in-urban-local-bodies-election-in-bihar/678839/>
32. Press Trust of India (PTI). (2020, December 1). *Low voter turnout in Hyderabad civic polls*. Hyderabad: The Hindu, Retrieved February 25, 2021, from <https://www.thehindu.com/news/cities/Hyderabad/low-voter-turnout-in-hyderabad-civic-polls/article33224712.ece>
33. Raza, S. A., Gupta, P. and Shukla P. (2020). Democratic Governance and Local Elections. *Journal of Governance and Policy Analysis*, 2(1), 54-70.
34. Savage D. and Dasgupta S. (2006). Governance Framework for Delivery of Urban Services. In A. Rastogi (Managing Ed.), *India Infrastructure Report: Urban Infrastructure* (pp. 42-58). New Delhi: Oxford University Press.
35. Sharma, A. (2004). Police in Ancient India. *The Indian Journal of Political Science*, 65(1), 101-110. <https://www.jstor.org/stable/41855800>
36. Sharma, P. (2018). *Urban Reforms under JNNURM- An Assessment*. Retrieved February 25, 2021, from https://www.researchgate.net/publication/329912819_Urban_Reforms_under_JNNURM-An_Assessment#:~:text=The%20JNNURM%20has%20contributed%20to,resources%20to%20be%20self%20sustainable.

37. Sivaramkrishnan, K. C. (2011). *Re-visioning Indian Cities: The Urban Renewal Mission*. New Delhi: Sage Publication.
38. Suchitra, M. (2015, July 15). Supreme Court gives go ahead to local polls in Andhra. Retrieved March 5, 2021, from <https://www.downtoearth.org.in/news/supreme-court-gives-go-ahead-to-local-polls-in-andhra-40399>
39. The Hindu. (2020, November 10). *1.25 lakh municipal workers on strike as salaries not paid: AAP*. Retrieved March 25, 2021, from <https://www.thehindu.com/news/cities/Delhi/125-lakh-municipal-workers-on-strike-as-salaries-not-paid-aap/article33061669.ece>
40. Times New Network (TNN). (2021, April 8). *Himachal Pradesh municipal elections 2021: Over 65% voter turnout in 4 civic bodies, Mandi tops with 69%*. Shimla: Times of India, Retrieved April 20, 2021, from <https://timesofindia.indiatimes.com/city/shimla/himachal-pradesh-over-65-turnout-in-4-mc-polls-mandi-tops-with-69/articleshow/81961406.cms>
41. Tripathi, A.K. (2018). Public participation and urban governance in India. *International Journal of Academic Research and Development*, 3(2), 1519-1523.
42. Vamshidhara, V. (2019, June 26). *HC gives TS 149 days to conduct municipal polls*. Hyderabad: *The Deccan Chronicle*.
43. Viswanathan, S. and Poddar, E. (2014, October 15). *The talent problem*. The Indian Express. Retrieved March 5, 2021, from <https://indianexpress.com/article/opinion/columns/the-talent-problem/>

Environmental Governance and Key Challenges at Local Level in Indian Context

RITU RAJ KAUR*
SAKSHI SAHNI**
GURSHARAN KAUR***
RAVI INDER SINGH****

ABSTRACT

Governance relates to the structure and functioning of the government and the institutional arrangements and processes of civil society. A society having high degree of resource scarcity due to intense competition for raw materials and increasing demand for livelihood resources requires an efficient and just environmental governance system. This article attempts to include environmental governance initiatives at the international, national and local levels. Further, an attempt has been made to identify the key challenges at the local level related to environmental governance.

Keywords: *Environmental Governance, Local Environmental Governance, Municipal Adaptation Plan*

INTRODUCTION

Some of the key challenges, facing India are environmental degradation, poverty and economic development. For the development of the nation, different decisions, activities are undertaken from inception till completion. Almost all human activities lead to modifications, often adverse to the ecosystem. If these changes are reasonably well within the carrying capacity of the ecosystem, resilience of the system is not adversely affected. To address these challenges environmental governance plays an important role.

*Assistant Professor, GRD School of Planning, Guru Nanak Dev University, Amritsar. Email: rituraj.plan@gndu.ac.in

**Assistant Professor, GRD School of Planning, Guru Nanak Dev University, Amritsar, Email: sakshi.plan@gndu.ac.in

***Assistant Professor, GRD School of Planning, Guru Nanak Dev University, Amritsar, Email: gursharan.plan@gndu.ac.in

****Assistant Professor, GRD School of Planning, Guru Nanak Dev University, Amritsar, Email: ravi.planning@gndu

Governance, in general means a set of complex values, standards, processes, and authorities by which development happens in a society and its resolved conflicts are managed formally or informally. Generally speaking, governance involves various institutions at different levels including the local, national, regional and global levels along with civil society (Hempel 1996). It includes different institutions such as political, administrative, Non-governmental Organisations (NGOs), Community Based Organisations (CBOs), etc. that have their own set of rules and decision-making procedures. Historically, such governance included essential components of global security, physical, social and economic development issues. However, environmental issues to this list are relatively new and have emerged over the past four decades. *'Environmental governance comprises complex governance elements dealing with various environmental compartments in an integrated manner through the involvement of a wide range of actors and stakeholders'* (UNEP, 2007).

ENVIRONMENTAL GOVERNANCE

Environmental governance is important as it helps societies to identify and deal with environmental problems. It involves interactions among different stakeholders and the government wherein they identify strategies, methods, policies and alternatives to reduce the impacts, resolve the problems and devise environment management plans that can be implemented over the longer run. Environment governance emphasises the inclusion of the environment in all parts of development planning and decision-making, from the inception of the project to its final implementation. It also recognises the transboundary impacts of environmental management decisions.

The key focus is that the decision-makers must be aware of both the environmental and social impacts of the different decisions made by them. The legal and policy framework provides the public to access information and decision-making that may have a negative environmental impact on their lives, and inequitable access to recourse if such resources are damaged. Hence, 'Environmental governance is described as the sum of organisations, policy instruments, financing mechanisms, rules, procedures and norms that regulate the processes of environmental protection' (Adapted from Global Environmental Governance: Reform Agenda, IISD 2006). The three key aspects that are considered for good environmental governance include equity, inclusiveness and attention to conserve and regenerate the resources.

Elements of Environmental Governance

Some of the essential elements of environmental governance are

enumerated as below:

- Participation of all stakeholders at different levels in the decision-making to implement the decisions.
- The country and the state laws and policies reflect the needs of both the development and conservation.
- Emphasis on sustainable development considering intergenerational inequities of resources in such a way that there are no shortages for the future generations. This can be achieved by strong leadership, both at political and bureaucratic levels.
- To give required recognition to the private sector which plays an important role in the environment and supports the public good by finding a way in between private gain and social development.

Principles of Environmental Governance

Environmental governance is based on some of the key principles that include

- Preventative action is to prevent environmental damage in the first place instead of restoring the damage later on.
- Setting environmental standards that reflect the economic and social development in a given society, considering common risks to human health, to other environmental setups, financial and technical feasibility, etc.
- Sustainable development management framework to ensure close inspection to the environmental trends which should be within sustainable limits and for long-term to mitigate adhocism in case of hazards.
- Legal liability emphasises the rule and regulations laid in the country to redress environmental issues. These help to impose civil liability for environmental damage that would lead to actions against the institutions or individuals to compensate for the environmental damage.
- Economic efficiency to include services of environmental resources by attaching economic value to the environmental resources. A detailed social cost-benefit analysis will include such economic values. In addition, other measures such as

polluter pays and cost minimisation can be also included in the process.

- Equity refers to the participation of the relevant stakeholders in the decision-making processes in matters related to the use of environmental resources.

Different Approaches and Changing Trends: Initiatives Taken at Various Levels

Global Initiatives

Environmental change and development challenges are caused by the different sets of drivers. They include population change, economic processes, scientific and technological innovations, distribution patterns, and cultural, social, political and institutional processes. The responsibility for the drivers that create the pressures on the environment is not equally distributed throughout the world. One form of human activity can cause several reinforcing environmental effects impacting human well-being in many ways.²

Recommendations emphasised the expansion of international institutions for cooperation, and the creation of legal mechanisms for environmental protection and sustainable development, and also stressed the links between poverty and environmental degradation.

Important landmarks at global level are as follows:

- The most immediate and perhaps one of the most significant results of *Our Common Future* was the organisation of the United Nations Conference on Environment and Development (UNCED), also known as the Earth Summit, which gathered many heads of state in Rio de Janeiro in 1992. Not only did this meeting bring together 108 government leaders, but it also took initial measures towards sustainability.
- The summit resulted in several important steps towards sustainable development. Through the adoption of the Rio Declaration and Agenda 21, it helped formalise an international institutional framework to implement the ideas highlighted in *Our Common Future*. The *Rio Declaration* contains 27 principles that nations agreed to follow to achieve the goals articulated by the Brundtland Commission.
- Funding for the implementation of Agenda 21 was to be obtained from the Global Environment Facility (GEF). As a partnership involving the United Nations Environment

Programme (UNEP), United Nations Development Programme (UNDP) and World Bank, GEF was established the year before the Earth Summit to mobilise resources for projects that seek to protect the environment.

- World leaders sought to ensure a world free from want. In the Millennium Declaration, adopted in 2000, world leaders committed to free their people from the “threat of living on a planet irredeemably spoiled by human activities, and whose resources would no longer be sufficient for their needs” (UN 2000). The Millennium Summit adopted the declaration and created time-bound goals and targets – the Millennium Development Goals (MDGs) – to better human well-being.
- Two years after the Millennium Declaration and a decade after the Rio Earth Summit, world leaders reaffirmed sustainable development as a central goal on the international agenda at the 2002 Johannesburg World Summit on Sustainable Development (WSSD). More than 191 governments participated to discuss the state of sustainable development.
- The Intergovernmental Panel on Climate (IPC) Change was established in 1988 to assess on an objective, open and transparent basis the scientific, technical and socio-economic information relevant to climate change. In 2013, the IPC released its Fourth Assessment Report and in September 2022 6th assessment report will be released.
- Two agreements that have drawn significant attention during the last 20 years are the Montreal Protocol to the Vienna Convention on "Substances that Deplete the Ozone Layer" and the Kyoto Protocol to the "UN Framework Convention on Climate Change".
- The Montreal Protocol, which became effective in 1989 and had 191 parties at the beginning of 2007, has helped decrease or stabilise atmospheric concentrations of many of the ozone-depleting substances, including chlorofluorocarbons. The protocol is regarded as one of the most successful international agreements to date. By contrast, despite the urgency of climate change, it has been much more difficult to get some countries responsible for significant emissions of greenhouse gases to ratify the Kyoto Protocol.
- The Sustainable Development Goals (SDGs) have been set in 2015 to target the key areas of the development which are to

be met by 2030. There are a total of 17 goals and 169 targets classified under different categories. The main aim is to build a more sustainable world by having an integrated and transformative agenda. In 2019, the Sustainable Development Index was released to help the countries identify the gaps in order to achieve sustainability targets by 2030.

National Initiatives

In India, there was no consideration given to the environment before the 1970s. The efforts for legislating different environmental laws were made after the historic international convention held in Stockholm 1972, the United Nations (UN) Conference on Human, Environment and Development and this led to the start of environmental governance in the country. The first legislative effort to protect the environment was made by legislating the Water Act to prevent and control water pollution in 1974. The Act provided for the establishment of institutional setup known as pollution control boards both at the Central level and in the states.

In the year 1981, two laws related to air and forest were introduced to prevent and control air pollution and for forest conservation. To control, prevent and mitigate air pollution, the same boards were given the responsibilities. After the Bhopal Gas tragedy in 1984, the need was felt to tighten the environment regulation which paved the path for the enactment of an umbrella Environment Act i.e. Environment Protection Act (EPA), 1986. This Act vested the powers to the Central government and state governments to initiate necessary measures to mitigate the environmental impacts. There are a number of rules and notifications made under the EPA addressing different areas as solid waste management, hazardous waste, noise pollution, Environment Impact Assessment (EIA) notification, Coastal Regulation Zone (CRZ) regulations, etc. to name a few.

Besides the number of environmental legislations, the environment is continuously degraded due to the piecemeal approaches. Due to this, the pollution levels are increasing instead of declining. To bring significant improvement in the same, World Bank has identified different environmental issues and a focused study is required in order to strengthen the institutions for sustainable growth. The key drivers discussed are – Industry, Power and Linear Sources (highways).

Environmental issues identified by the above key drivers are:

- Seventy per cent of total industrial pollution load is by Small and Medium Entreprises (SME's);

- Growing municipal sources of pollution;
- Multiple industrial, municipal and transport sources contributing to environmental degradation in a particular area or ecosystem; and
- Linear projects with complex direct and indirect impacts such as highways.

Focus area of the study are:

- Promoting greater accountability, transparency, and public participation in environmental management;
- Strengthening monitoring and enforcement of policies and regulations;
- Addressing capacity needs of environmental institutions; and
- Improving institutional incentives for integrating sectoral and environmental priorities.

In light of the above focus areas, it is also important to strengthen environmental governance at the local levels. For a better solution for environmental governance, there is a need to go down to the Urban Local Body (ULB) level for better understanding and implementation of broad strategy framed at the national and global levels.

Local Level Initiatives

At the local level to strengthen environmental governance, the ULB's need to make a municipal adaptation plan which emphasises making the cities resilient rather than reactive at the time of crises. The following section includes the Adaptation plan adopted from a framework that was prepared by South Africa. In addition, it also includes decentralisation of powers to the ULB's as per the Constitution of India which can act as a step forward to empower the ULB's to take their own decisions. Further, the initiatives for environment governance at Pune city have been included to highlight the good environmental governance measures, taken by the concerned authorities.

MUNICIPAL ADAPTATION PLAN (MAP)

A number of initiatives have been taken for National Level Adaptation Plan of Action (NAPA). However, the least consideration is given to Local Level Adaptation Plans. A framework for a municipal level approach has been followed in Cape Town, a city in South Africa. As per MAP, priority initiatives should be taken to reduce the impacts

of climate change and help cities to adapt rather than react when the damage has already been done.

MAP is structured around four principles:

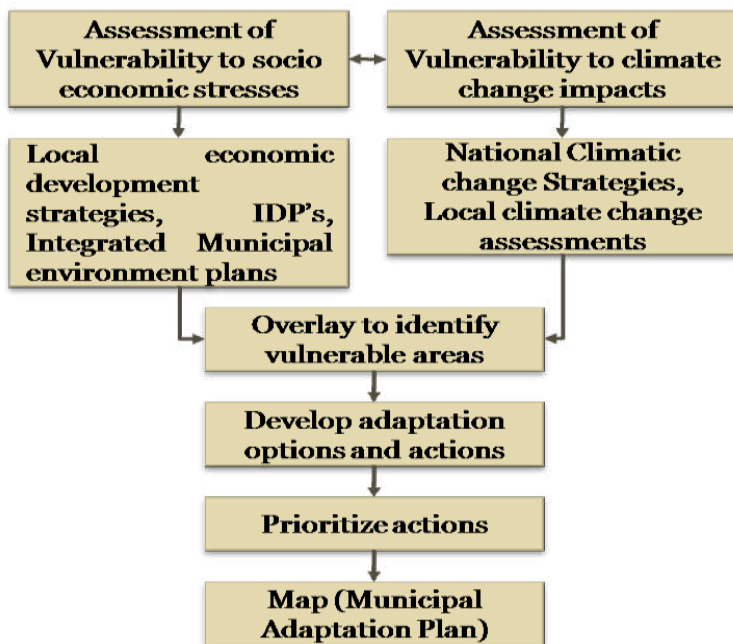
- Adaptation to short term climatic variability will reduce long-term vulnerability;
- Adaptation policies are addressed in a developmental context;
- Adaptation occurs at different levels of society; and
- Both strategy and process are equally important.

Process for developing MAP

The following steps are presented to guide the development of an appropriate local level or Municipal Adaptation Strategy (refer to Fig. 1).

- Assess current trends and future projections for the geographical region;
- Undertake a climate vulnerability assessment of the municipal area;

Fig. 1: Process of Municipal Adaptation Plan Preparation



Source: Authors

- Review of current development plans and priorities based on the strategic plans;
- Overlay development priorities, expected climatic change, current climate vulnerability and expected future climate vulnerability;
- Develop adaptation options using new and existing consultative tools; and
- Prioritise the adaptation actions using tools such as multi-criteria analysis, cost-benefit analysis or social accounting matrices;
- Develop programme and project scoping and design documents together with the associated budget. This document will be Municipal Adaptation Plan (MAP);
- Implement the interventions prioritised in MAP;
- Monitor and evaluate the interventions on an ongoing basis;
- Regularly review and modify the plans at predefined intervals.

These above steps should be complemented by two cross-cutting processes.

(i) Stakeholders engagement

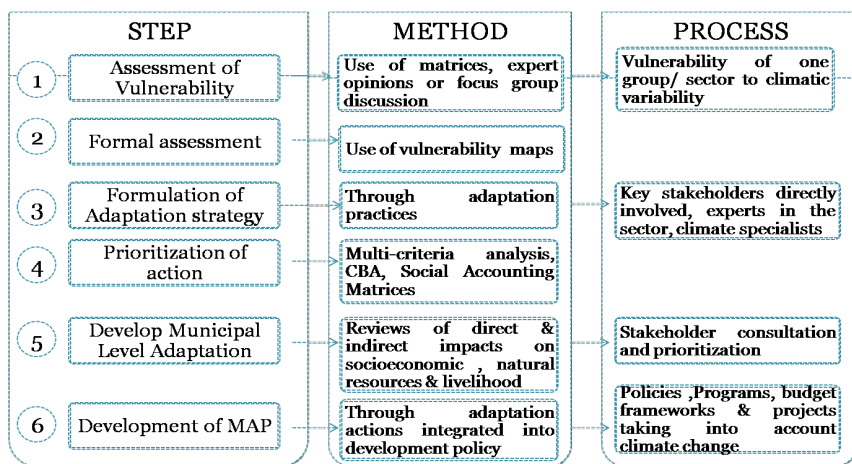
Stakeholders should be engaged in order to identify vulnerable sectors and existing and potential adaptation initiatives. This engagement process is also necessary to bring politicians and decision-makers on board and to give them insight into the projected impacts and potential adaptation actions.

(ii) Adaptive capacity assessment

The capacity to adapt by the various sectors that would be affected by the impacts of climate change need to be addressed. Adaptive capacity can be defined as the potential or ability of a system to adapt to the impacts of climate change. There are currently no methodologies for addressing the adaptive capacity of a sector.

This process also includes an assessment of the local government's capacity to implement adaptation actions in terms of budgetary and personnel constraints, with and without explicit climate change adaptation strategies (refer to Fig. 2).

Fig. 2: Method and Process for Each Step to Prepare MAP



DECENTRALISATION INITIATIVES AT THE LOCAL LEVEL: 74TH CONSTITUTION AMENDMENT ACT, 1992

Recent changes have initiated many technological and organisational innovations at both the policy and the project levels. At the policy level, an important opportunity to face the challenge of rapid urbanisation is presented by the surge towards decentralisation adopted by governments throughout the world. In India, the government took a very significant step in 1992, by making the 73rd and 74th Constitutional Amendment Act thereby transferring many administrative and financial powers to Local Bodies. This makes Urban Local Bodies (ULB's) one of the most important functionary in the provision of urban services.

As per the 12th Schedule of the 74th Constitutional Amendment Act of India, 18 new tasks have been defined as in the functional domain of the ULBs, the most important of which is related to environmental governance including urban planning, regulation and planning for development, public health including sanitation and solid waste management, protection of the environment and protection of ecological aspects. Using these powers and functions, the municipal authorities should prepare the MAPs. However, there are still various issues at the local level due to which the ULB's are not working effectively. These include:

- The problem of *ineffective participation* in the decision-making;
- *Delays in the transfer of funds* to the municipalities despite the constitution of State Finance Commissions;
- The poor capacity of municipalities;

- *Poor recovery* from various tax and non-tax sources despite devolution of powers, etc.;
- Initiatives are taken in a fragmented manner; an integrated approach has not been followed for environmental governance at the ULB level;
- Some states have not included the 74th Amendment in state legislation;
- Restrictions on the financial side and mismatch between rights and duties – duties cast on them are much larger than rights they have over other resources;
- Many ULB's could not meet the core expenditure from their own revenue generated at local levels; and
- Lack of Municipal Adaptation of environmental governance at local levels

So there is a need to approach in a holistic manner for sustainable development at the local level.

INSTITUTIONAL REFORMS RELATED TO ENVIRONMENT IN PUNE CITY

Pune, formerly called Poona, is the second-largest city after Mumbai in Maharashtra and the 13th most polluted city in India (vehicular pollution). With the growth of the city, traffic volume on several roads has increased causing congestion and low speeds, environmental pollution and degradation of the quality of city life. The intersections are overloaded and require augmentation of capacity. The city also is facing traffic problems like the paucity of parking facilities and low speeds in central areas. Besides, the city is facing many environmental problems.

Following are the initiatives taken by Pune Municipal Corporation (PMC) to undertake the various issues in the city.

- *Environmental Status Report (ESR) preparations* in Pune from last 10 years;
- The nodal agency for implementation of the action plan- like AQMC, Pune;
- Sustainable city development program: Eco housing, Clear Development Mechanism (CDM);
- Urban Air Action Plans;

- Environment management of areas with industrial clusters; and
- Safe disposal of waste material.

The above initiatives are the result of Awaked People many Public Interest Litigation (PIL) filed in the Hon'ble Supreme Court to improve the quality of the city. Moreover proactive approach of the civic agencies and responsible authorities with extensive stakeholder support resulted in an improved environment of the city. Besides this availability of in house expertise, giant market players, extensive political will and massive public and media support play a vital role. All these driving forces have led the city to a new path. Following are the outputs of the initiatives taken by the city:

- Inclusion of responsibilities for local government;
- Safeguard environment;
- In addition to basic amenities, provision of a better environment – Solid Waste management (SWM), Air Quality Measure (AQM), etc.;
- Environment Status Reports;
- 74th Amendment to the Constitution in 1992; and
- Decentralisation of Municipal Working.

All the above initiatives are piecemeal approaches, which are required for integrated environmental governance at the city level to have a sound city environment.

Key Challenges and Initiatives to be taken at the Local Level

Despite a number of initiatives taken at the national level, environmental governance lacks its appropriate place in the system. There is a lack of a comprehensive governance system dealing with environmental problems. Issue-specific, scattered initiatives such as River Action Plans, Namami Gange, Swachh Bharat Mission, etc. are some of the plans schemes dealing with environmental problems.

Legal and policy framework is well in place to deal with various environmental issues but lacks in implementation and execution of legal provisions on the actual ground. Societies and even governments are dealing with issue-specific problems. Like Master Plans, environmental plans of the cities should be prepared, which should include a baseline study of all the environmental parameters and any decision should be made according to that. For the same, there should be a legal framework

mandating the preparation and implementation of the environmental plans at the municipal levels.

At present only a few cities have prepared ESR and Apportionment studies. The online monitoring stations for different types of pollution are limited to a few stations only. Only the large cities are included in the monitoring station, with only one monitoring station in most of the cities. Although institutional strengthening is required at all levels of government, the weakest link seems to be the local level. There is a commensurate need for strengthening administrative personnel and reorienting policies.

For local level environmental governance, there is a need for ecologically sustainable development, which can be achieved by enhancing individual and collective well-being and welfare by following preventive actions:

- Providing for equity in participation of stakeholders;
- Protecting the city environment and maintaining environmental conservation as an integral part of the developmental process; and
- Protecting against legal liabilities, i.e. actions against polluters/culprits of the environment of the city.

CONCLUSION

To make environmental governance an integral part of the institutional arrangement it is important to involve all stakeholders at all levels. There is an immediate need to segregate the issues in such a way that ensures the implementation of effective interventions at the appropriate level with the appropriate stakeholders. Although institutional strengthening is required at all levels of government, the weakest link seems to be the local level. There is a commensurate need for strengthening administrative personnel and reorienting policies.

REFERENCES

1. UNEP, "GEO4: Environment for development" (2007), Progress Press Ltd Valletta, Malta [Online]. Available: (11-06-2007)
2. SEMINAR ON CSR FOR SUSTAINABLE DEVELOPMENT" (22 November 2005)[Online]. Available: www.cmsvatavaran.org/vatavaran2005/csr.pdf [2-29-2008]
3. "Global Environmental Governance: Reform Agenda", (2006), IISD[Online]. Available: www.cmsvatavaran.org/vatavaran2005/csr.pdf [2-29-2008]

4. Joshi, Shailendra (2007), "The Framework of Environmental Governance" [Online]. Available: www.hrdp-net.in/e199/e432/e3194/infoboxContent3195/Knowledge-Skills4D_No_1a.pdf - [2-29-2008]
5. Environmental Governance-East Asian Experience in Environmental Governance- Response in a rapidly Developing region.
6. Mukheibir, Perre and Gina Ziervigil, (2007), "Developing a Municipal Adaptation Plan (MAP) for Climate Change: the city of Cape Town" in *Environment & Urbanization Journal*, 19 (1):143-158.
7. Nallathiga, Ramakrishna. (2012). Review of Environmental governance in India: Cataloguing of the current initiatives. TERI Information Digest on Energy and Environment Volume 11, No. 2, pp 189-198.
8. Bedajna, Sutirtha. Between Ecology and Economy Environmental Governance in India. [Online]. Available: <http://www.mcrg.ac.in/pp37.pdf>
9. Damodaran, A. (2012). The Challenge Of Multi-Level Environmental Governance In India, *Periodica Oeconomica*, (pp. 29-37).
10. Sandhu, Vikram, A.S. Sidhu. (2015). Environmental Governance in India: A Systematic Review of the Initiatives. *Pacific Business Review International*, Volume 8, Issue 4 (pp 49-57).
11. The Constitution of India, 74th Constitution Amendment Act, 1992.
12. Localising SDG's Early lessons from India, (2019). NITI Aayog, India.
13. Sustainable Development Goals, UNDP India. <https://www.in.undp.org/content/india/en/home/sustainable-development-goals.html>

Footnotes

1. Corresponding Author
2. UNEP, (2007), "Global Environment Outlook GEO4-environment for development", published by UNEP.

Extent of Urban Poverty in Kerala

SMITHA PAVIANOSE*

ABSTRACT

Kerala has made tremendous achievements in poverty reduction over the decades, the baggage of the poverty and unemployment has been continuing in the urban areas of Kerala. A large proportion of the work force among urban poor is still in the informal sector. It has given a view point that economic indicators such as nature of employment and sources of income should be accorded with the highest priority for poverty reduction. It is clear that the growth in employment opportunities has a strong influence to reduce the extent of urban poverty. This paper looks into the profile of economic activities of urban poor to measure the extent of urban poverty at household level. It covers the areas such as employment status, category of workers, monthly earnings and determinants of income of urban poor households in Thiruvananthapuram and Kochi.

Keywords: *Urban Poor, Extent of Poverty, Employment Status, Occupation, Household Income*

INTRODUCTION

Urban poverty which is a cruel reality is considered to be one of the most demanding urban challenges and a major problem because it is poverty which leads to many other problems in the urban area (Bhasin, 2001). Poverty, in simplest terms, means a state of deprivation. In broader terms, it is viewed as a failure to meet the basic requirements (which include biological requirements and nutritional norms). The poverty is increasingly being recognised as multi-dimensional, distinguishing the numerous aspects of people's lives, including economic and non-economic dimensions. A better understanding of poverty and of the interaction between different dimensions allows a more informed choice in the design and implementation of appropriate policies to reduce poverty. As per the National Sample Survey Organisation's (NSSO) survey reports, there are over 80 million poor people living in the cities

*Assistant Professor, Department of Economics, Christian College Kattakada, Thiruvananthapuram, Kerala, India. Email: smithapavianose@gmail.com

and towns of India. It is interesting to note that the ratio of urban poverty in some of the larger states is higher than that of rural poverty leading to the phenomenon of 'Urbanisation of Poverty' (MHUPA, 2009).

Kerala was among the five poorest states in India during the Independence period. But during the period 1974 to 1994, the state achieved a remarkable decline in poverty levels, from 40.42 per cent to 25.43 per cent, which is the second highest decline attained in all Indian states. The decline in poverty level, however, was largely attributed to poverty reduction in rural areas, which declined from 25.76 per cent in 1994 to 9.35 per cent in 2000 and 13.20 per cent in 2004-05 to 7.3 per cent in 2011-12. The reduction in urban poverty was just marginal, from 25.43 per cent in 1994 to 20.27 per cent in 2000 and 20.20 per cent in 2004-05 to 15.3 per cent in 2011-12. To date, urban poverty in Kerala is more than double compared to the rural poverty level, and may further increase if not immediately addressed due to unemployment and lack of economic opportunities in urban areas.

The various studies on poverty established a close relationship between poverty and economic growth. It is clear that the growth in employment opportunities has a strong influence to reduce the extent of urban poverty. The extent of poverty focuses on the degree of poverty suffered by people, more than the number of individuals considered to be poor. Even though Kerala has made a tremendous achievement in poverty reduction over the decades, the baggage of the poverty and unemployment has been continuing in the urban areas of Kerala. Chronic unemployment of a large portion of active labour force has been the most serious socio-economic problem of Kerala during the last three decades. Available evidence suggests that the rate of urban unemployment in Kerala was very high (Prakash, 2001). It has given a view point that economic indicators such as nature of employment and sources of income should be accorded the highest priority for poverty reduction. This paper looks into the profile of economic activities of urban poor to measure the extent of urban poverty at household level. In the first section of this paper, an attempt has been made to analyse the employment status of urban poor based on NSS labour force framework. The study also examines the details of employment and subsidiary occupations of urban poor. This article also examined the sources of income and various determinants that could cause variations in household's income of the urban poor. Using the technique of multiple regression analysis, the effect of different variables on the household income has been quantified.

DATA SOURCES AND STATISTICAL TOOLS

The study is based on the use of primary data and secondary data. Interview survey method was used to collect primary data. Data were collected from the identified slums of Thiruvananthapuram Municipal Corporation and Kochi Municipal Corporation through stratified sampling. In the first stage, the entire wards of the two municipal corporations are stratified into three groups- core area, coastal area, and the wards lying outside the core area. In the second stage, 20 per cent of wards were selected from each group. After choosing those wards, in the third stage, 10 urban poor households were selected from each ward for the survey. The Thiruvananthapuram Municipal Corporation and Kochi Municipal Corporation were divided into 100 wards and 74 wards respectively. Therefore 20 wards from Thiruvananthapuram and 15 wards from Kochi were selected proportionally among the three groups. The total urban poor households selected from Thiruvananthapuram and Kochi are 200 and 150, respectively.

All the information collected from the respondents through the interviews and discussions was assembled. The used variables were meaningfully co-related to conform to the standard social science research norms. Statistical Package for Social Science (SPSS 17) was used to analyse the data. The study employed a series of statistical tools for data analysis including average, percentage, ratios, chi-square test, T test, ANOVA, and multiple regression analysis. The study also exploited graphs and tables for presentation and analysis of data.

ANALYSIS AND DISCUSSIONS

Employment Status of Urban Poor

The issues of urban poverty in the context of growing importance of unorganised workforce in the sample can be depicted. In this study, NSS labour force framework was used to measure labour force rate, work participation rate, unemployment rate and employment rate.

Labour Force Rate

Persons who are either 'working' or seeking or available for work (i.e., unemployed) during the reference period constitute the labour force and the persons who were neither working nor available for work during the reference period are considered to be 'out of labour force'. Labour force rate is the ratio of number of labour force to the total population (Government of India, 2001). The labour force rate among different age groups is given in Table 1. Of the total population, the labour force accounted for 54.3 per cent and persons not in labour force was 45.7 per

cent. The survey results showed that the labour force rate was highest in the age group of 25-54 i.e. 81.4 per cent. The old people aged 65 and above accounted for 27.4 per cent in the labour force.

TABLE 1: LABOUR FORCE RATE

Age in Years	Number of Labour Force (Labour Force Rate)								
	Thiruvananthapuram			Kochi			Combined		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
≤ 14	0	0	0	0	0	0	0	0	0
15-24	45 (57.0)	48 (47.1)	93 (51.4)	20 (48.8)	30 (69.8)	50 (59.5)	65 (54.2)	78 (53.8)	143 (54.0)
25-54	210 (97.7)	132 (62.9)	342 (80.5)	149 (96.8)	97 (67.8)	246 (82.8)	359 (97.3)	229 (64.9)	588 (81.4)
55-64	21 (75.0)	23 (51.1)	44 (60.3)	16 (66.7)	4 (15.4)	20 (40.0)	37 (71.2)	27 (38.0)	64 (52.0)
≥ 65	10 (58.8)	4 (11.1)	14 (26.4)	8 (53.3)	4 (14.8)	12 (28.6)	18 (56.3)	8 (12.7)	26 (27.4)
Total	286 (68.8)	207 (41.3)	493 (53.8)	193 (64.1)	135 (45.9)	328 (55.1)	479 (66.8)	342 (43.0)	821 (54.3)

Source: Computed

Work Participation Rate

Persons who are engaged in any economic activity are considered as employed. Work participation rate denotes the percentage of employed to total population gives an indication of the economically active population (Government of India, 2001). Table 2 gives an age-wise work participation rate for males and females. The results indicated that the work participation rate was 38.4 per cent. While the work participation rate of males was 59.1 per cent, the corresponding rate for the females was 19.7 per cent. Hence it can be concluded that there was a considerable difference in the work participation rates of males and females. The burden of household work and other responsibilities prevent the women from supplying their labour in the market. It was noted that socially and economically marginalised women were included in the labour market as they were often vulnerable, unprotected and inadequately remunerated for their work.

The summary of one sample t-test is given in Table 3. There was no significant difference between the work participation rates of Kerala (34.8) and that of sample households.

TABLE 2: WORK PARTICIPATION RATE

Age in Years	Number of Employed (Work Participation Rate)								
	Thiruvananthapuram			Kochi			Combined		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
≤ 14	0	0	0	0	0	0	0	0	0
15-24	16 (20.3)	3 (2.9)	19 (10.5)	16 (39.0)	0	16 (19.0)	32 (26.7)	3 (2.1)	35 (13.2)
25-54	195 (90.7)	68 (32.4)	263 (61.9)	143 (92.9)	51 (35.7)	194 (65.3)	338 (91.6)	119 (33.7)	457 (63.3)
55-64	21 (75.0)	23 (51.1)	44 (60.3)	16 (66.7)	4 (15.4)	20 (40.0)	37 (71.2)	27 (38.0)	64 (52.0)
≥ 65	9 (52.9)	4 (11.1)	13 (24.5)	8 (53.3)	4 (14.8)	12 (28.6)	17 (53.1)	8 (12.7)	25 (26.3)
Total	241 (57.9)	98 (19.6)	339 (37.0)	183 (60.8)	59 (20.1)	242 (40.7)	424 (59.1)	157 (19.7)	581 (38.4)

Source: Computed

TABLE 3: SUMMARY OF ONE SAMPLE T TEST

<i>T</i>	<i>Df</i>	<i>Sig. (2-tailed)</i>
2.189	1	0.273
Work Participation Rate of Urban Kerala = 34.8 (NSS 66 Round)		

Source: Computed

Employment Rate

Employment rate denotes the percentage of employed to the total labour force and is given in Table 4. The survey results showed that 70.8 per cent of the labour forces were employed. It also confirmed that the employment rate of the female was low (45.9 per cent) than the employment rate of males (88.5 per cent). Another finding was that employment rate was cent per cent in the 55-64 years age group in two Municipal Corporations. The survey results also revealed that male and female workers to total labour force were lower among youth belonging to the age group 15-24 years.

Unemployment Rate

Persons who sought work or by filing applications to prospective employers are considered as unemployed. Unemployment rate denotes the percentage of unemployed to total labour force and is given in Table 5. The survey findings suggested that the incidence of unemployment was very high in Thiruvananthapuram (31.2 per cent) and Kochi (26.2

per cent). The total unemployment rates for the males and females were estimated as 11.5 per cent and 54.1 per cent respectively. In the case of youth belonging to the age group 15-24, the rate of unemployment was (75.5 per cent) reported as very high and alarming.

TABLE 4: EMPLOYMENT RATE

Age in Years	Thiruvananthapuram			Kochi			Combined		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
≤ 14	-	-	-	-	-	-	-	-	-
15 – 24	35.6	6.3	20.4	80.0	0	32.0	49.2	3.8	24.5
25 – 54	92.9	51.5	76.9	96.0	52.6	78.9	94.2	52.0	77.7
55 – 64	100	100	100	100	100	100	100	100	100
≥ 65	90.0	100	92.9	100	100	100	94.4	100	96.2
Total	84.3	47.3	68.8	94.8	43.7	73.8	88.5	45.9	70.8

Source: Computed

TABLE 5: UNEMPLOYMENT RATE

Age in Years	Thiruvananthapuram			Kochi			Combined		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
≤ 14	-	-	-	-	-	-	-	-	-
15 – 24	64.4	93.8	79.6	20.0	100.0	68.0	50.8	96.2	75.5
25 – 54	7.1	48.5	23.1	4.0	47.4	21.1	5.8	48.0	22.3
55 – 64	0	0	0	0	0	0	0	0	0
≥ 65	10.0	0	7.1	0	0	0	5.6	0	3.8
Total	15.7	52.7	31.2	5.2	56.3	26.2	11.5	54.1	29.2

Source: Computed

Employment Details of Urban Poor

Urban sector is considered as a provider of employment opportunities to people; it attracts people from rural areas to cities. Labour market paradox is an important issue pertaining to Kerala's development experience. The employment details of the urban poor are given in Table 6. On the one end Kerala is hailed as topmost in literacy rate but on the other hand, it maintains top position in terms of unemployment, especially educated unemployment. A large proportion of the work force in urban poor is still in the informal sector. The workers in Thiruvananthapuram and Kochi were engaged in a variety of economic activities. The majority of urban poor survived through casual, unprotected, uncertain and hard labour. The major occupations among population were daily wage labourers, drivers, fishermen, domestic workers, etc.

Structure of Employment

The workers are classified into three categories viz regularly employed, self-employed and casually employed based on NSS definitions. Most of the poor were casual labourers (65.9 per cent) who are characterised by no fixed and regular income as it is clear from Table 6. Most of the female workers are employed as domestic helpers. Since there was no specific law for the minimum wages for domestic work, the income of such female workers was very low. Moreover, if a women worker was absent for a day even due to some inevitable circumstances, the wage was not paid to her. The owner-entrepreneur running a small business is a self-employed worker. Of the total workers 27.7 per cent of urban workers were self-employed. Only 6.4 per cent of workers from urban poor were regular wage or salaried employees. The data showed an indication of the low performance of secondary sector activities in the urban areas.

TABLE 6: DETAILS OF EMPLOYMENT

<i>Classification</i> <i>Thiruvananthapuram</i>		<i>Frequency (Per cent)</i>		
		<i>Kochi</i>	<i>Combined</i>	
Category of Workers	Self Employed	100 (29.5)	61 (25.2)	161 (27.7)
	Regular Wage / Salaried Employee	14 (4.1)	23 (9.5)	37 (6.4)
	Casual Labourer	225 (66.4)	158 (65.3)	383 (65.9)
	Total	339 (100)	242 (100)	581 (100)
No. of Days Worked in Last One Month	≤ 5	1 (0.3)	2 (0.8)	3 (0.5)
	6 – 10	7 (2.1)	1 (0.4)	8 (1.4)
	11 – 15	66 (19.5)	44 (18.2)	110 (18.9)
	16 – 20	115 (33.9)	59 (24.4)	174 (29.9)
	21 – 25	88 (26.0)	96 (39.7)	184 (31.7)
	26 – 30	62 (18.3)	40 (16.5)	102 (17.6)
	Total	339 (100)	242 (100)	581 (100)
No. of Hours Worked Daily	≤ 5	46 (13.6)	33 (13.6)	79 (13.6)
	6 – 10	267 (78.8)	194 (80.2)	461 (79.3)
	11 – 15	24 (7.1)	15 (6.2)	39 (6.7)
	≥ 16	2 (0.6)	0	2 (0.3)
	Total	339 (100)	242 (100)	581 (100)
Monthly Earnings	1 – 5000	142 (41.9)	84 (34.7)	226 (38.9)
	5001 – 10000	174 (51.3)	110 (45.5)	284 (48.9)
	10001 – 15000	23 (6.8)	47 (19.4)	70 (12.0)
	≥ 15001	0	1 (0.4)	1 (0.2)
	Total	339 (100)	242 (100)	581 (100)

Source: Primary Survey

The Chi-square test was used to prove the dependency between the category of workers and region. The result showed that the two variables are dependent on each other (Table 7).

TABLE 7: SUMMARY OF CHI-SQUARE TEST: CATEGORY OF WORKERS AND REGION

	<i>Value</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>
Pearson Chi-Square	7.368 ^a	2	0.025
Likelihood Ratio	7.264	2	0.026
N of Valid Cases	581		
*0 cells (0 per cent) have expected count less than 5. The minimum expected count is 15.41.			

Source: Computed.

Days and Time of Job

Indeed, more than half of the people reported that job was not available on a regular basis (below 20 working days in a month). In Kochi, 39.7 per cent of respondents had the employment between 21 to 25 days in a month. The corresponding figure in Thiruvananthapuram was only 26 per cent. This showed that employment opportunities in Kochi were very much higher as compared to Thiruvananthapuram. It was noted that for daily wage workers in urban poor, the availability of job also depends on the season. The respondents said that the availability of job in summer is more than that in winter; the monsoon months are the worst.

Monthly Earnings

Most of the jobs in the informal and especially in the self-employed sector provide low returns because of the irregularity of employment and lower profit margin. It was repeatedly found that the workers tend to report uncertain and lower incomes. Nearly 38.9 per cent of workers were earning monthly income of up to Rs. 5000. About 48.9 per cent of workers were earning between Rs.5,001 to Rs.10,000 and 12 per cent of workers were earning between Rs.10,001 to Rs.15,000. It was noted that a worker from Kochi was earning wages as high as above Rs.15,001. Not surprisingly, Kochi had better for levels of earnings than Thiruvananthapuram. The measurement of monthly earning is shown in Table 8. Mean monthly income of workers showed that, female workers had a lesser income as compared to the male workers in these two regions. The mean monthly earnings of female and male workers were Rs.3,316 and Rs.7,959.55 respectively.

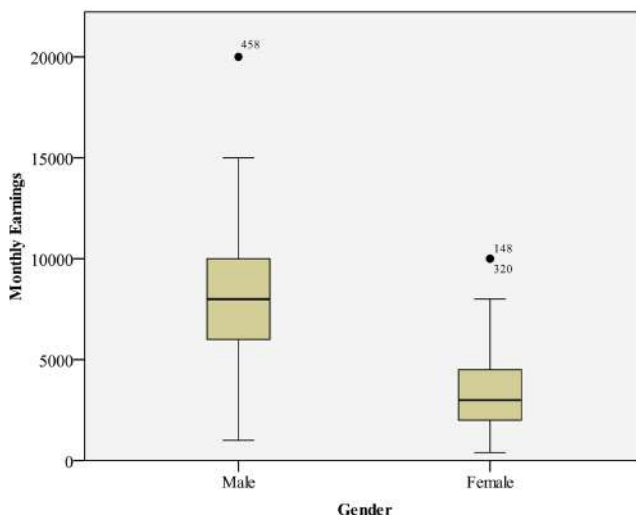
TABLE 8: MEASUREMENT OF MONTHLY EARNINGS

<i>Corporation</i>	<i>Gender</i>	<i>Mean (Rs.)</i>	<i>N</i>	<i>Std. Deviation</i>
Thiruvananthapuram	Male	7391.49	241	2685.420
	Female	3065.82	98	1837.266
	Total	6141.00	339	3153.755
Kochi	Male	8707.65	183	3009.234
	Female	3733.05	59	1507.785
	Total	7494.83	242	3459.335
Total	Male	7959.55	424	2900.656
	Female	3316.56	157	1746.208
	Total	6704.91	581	3348.868

Source: Computed.

The box plot for the monthly earnings of both groups is shown in Fig. 1.

Fig. 1: Monthly Earnings and Gender



Source: Primary Survey.

The summary of t test proved that the mean and variance of monthly earnings between male and female were significantly different (Table 9).

TABLE 9: SUMMARY OF T TEST: MONTHLY EARNINGS AND GENDER

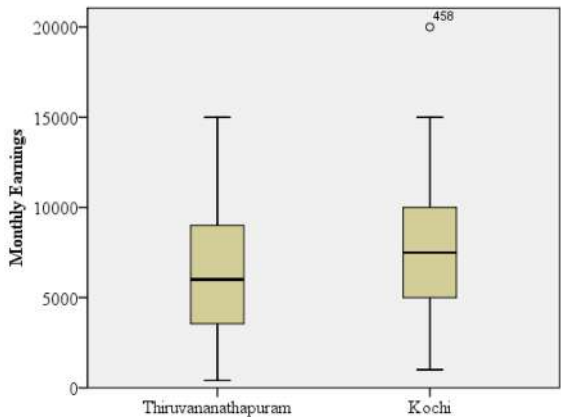
	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	41.615	0.001	18.827	579	0.001
Equal variances not assumed			23.431	460.385	0.001

Source: Computed.

Figure 2 shows the box plot of monthly earnings among the regions.

The summary of t test for monthly earnings and region is given in Table 10. The results revealed that the mean and variances of monthly earnings between Thiruvananthapuram and Kochi were significantly different.

Fig. 2: Monthly Earnings and Corporation



Source: Primary Survey.

TABLE 10: SUMMARY OF T TEST: MONTHLY EARNINGS AND REGION

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	Df	Sig. (2-tailed)
Equal variances assumed	4.489	0.035	-4.898	579	0.001
Equal variances not assumed			-4.823	489.062	0.001

Source: Computed.

The result of one way ANOVA is given in Table 11. It was found that there was a significant difference between the monthly earnings among the category of workers.

TABLE 11: ANOVA: MONTHLY EARNINGS AND CATEGORY OF WORKERS

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Between Groups (Combined)	234800000	2	117400000	10.824	0.001
Within Groups	6270000000	578	10850000		
Total	6505000000	580			

Source: Computed.

Details of Subsidiary Occupation

In the urban areas, most of the poor households were earning income from their main occupation. 2.6 per cent of total households had some subsidiary occupations (as casual labourers) and they earned an additional income apart from their main source of income. Table 12 shows that only 53.3 per cent have got an income ranges between Rs.1001 and Rs.2000.

TABLE 12: DETAILS OF SUBSIDIARY OCCUPATION

<i>Classification</i> <i>Thiruvananthapuram</i>		<i>Frequency (Per cent)</i>		
		<i>Kochi</i>	<i>Combined</i>	
Sub. Occupation	Yes	13 (3.8)	2 (0.8)	15 (2.6)
	No	326 (96.2)	240 (99.2)	566 (97.4)
	Total	339 (100)	242 (100)	581 (100)
Sub. Earnings	≤ 1000	5 (38.5)	0	5 (33.3)
	1001 – 2000	7 (53.8)	1 (50.0)	8 (53.3)
	≥ 2001	1 (7.7)	1 (50.0)	2 (13.3)
	Total	13 (100)	2 (100)	15 (100)

Source: Primary Survey.

Income of Urban Poor Households

Household income is the sum total of income of all the earners in the households. In any analysis of poverty, it is important to analyse both the level and the components of household's income.

Sources of Income

Main sources of household income in urban areas are wages and salaries (including regular and casual), self-employment earnings and income from the business. Various types of pension systems also support

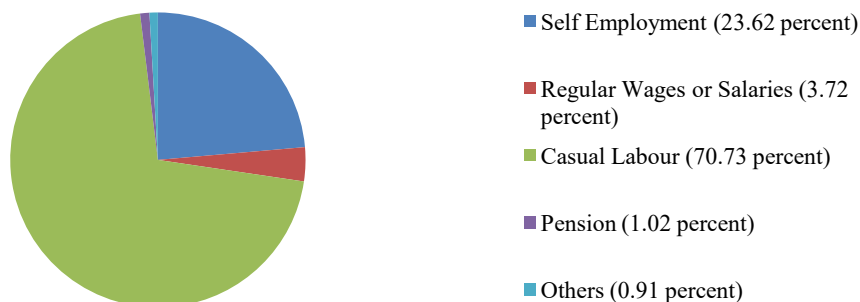
the urban poor households. Many of the households get income from more than one source. But this does not mean that they will be having higher incomes. Sometimes, despite the multiplicity of income sources, households may remain at the subsistence level. The sources of income are given in Table 13. In Thiruvananthapuram, 47.5 per cent of families had a monthly income ranged from Rs.5001 to Rs.10000 and 20.5 per cent of families had a monthly income ranged from Rs.10001 to Rs.15000. But the corresponding figures in Kochi were 32 per cent and 41.3 per cent respectively. This might be due to the better earning opportunities of Kochi compared to Thiruvananthapuram. The distributions of total income among various categories are shown in Figs. 3 to 5.

TABLE 13: SOURCES OF INCOME

Classification Self Employment		Frequency (Per cent)					
		Regular Wages or Salaries	Casual Labour	Pension	Others	Total	
Thiruvananthapuram	1 - 5000	13 (21.3)	8 (61.5)	22 (15.2)	35 (100)	14 (100)	28 (14.0)
	5001 - 10000	36 (59.0)	4 (30.8)	71 (49.0)	0	0	95 (47.5)
	10001 - 15000	9 (14.8)	1 (7.7)	33 (22.8)	0	0	41 (20.5)
	≥ 15001	3 (4.9)	0	19 (13.1)	0	0	36 (18.0)
	Total	61 (100)	13 (100)	145 (100)	35 (100)	14 (100)	200 (100)
Kochi	1 - 5000	14 (29.2)	1 (5.3)	16 (15.0)	18 (100)	2 (100)	10 (6.7)
	5001 - 10000	16 (33.3)	7 (36.8)	35 (32.7)	0	0	48 (32.0)
	10001 - 15000	16 (33.3)	9 (47.4)	42 (39.2)	0	0	62 (41.3)
	≥ 15001	2 (4.2)	2 (10.5)	14 (13.1)	0	0	30 (20.0)
	Total	48 (100)	19 (100)	107 (100)	18 (100)	2 (100)	150 (100)
Combined	1 - 5000	27 (24.8)	9 (28.1)	38 (15.1)	53 (100)	16 (100)	38 (10.9)
	5001 - 10000	52 (47.7)	11 (34.4)	106 (42.1)	0	0	143 (40.9)
	10001 - 15000	25 (22.9)	10 (31.3)	75 (29.8)	0	0	103 (29.4)
	≥ 15001	5 (4.6)	2 (6.3)	33 (13.1)	0	0	66 (18.9)
	Total	109 (100)	32 (100)	252 (100)	53 (100)	16 (100)	350 (100)

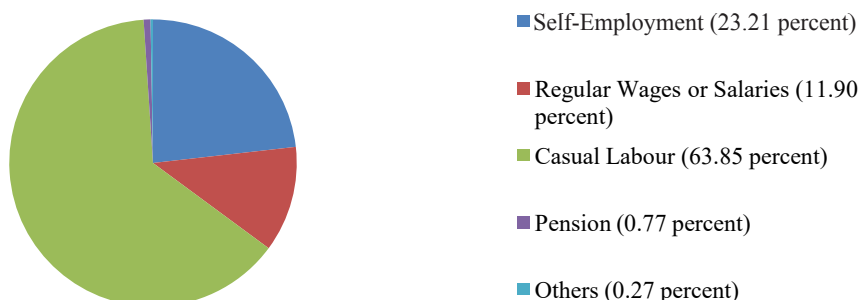
Source: Primary Survey.

Fig. 3: Income Distribution (Thiruvananthapuram)



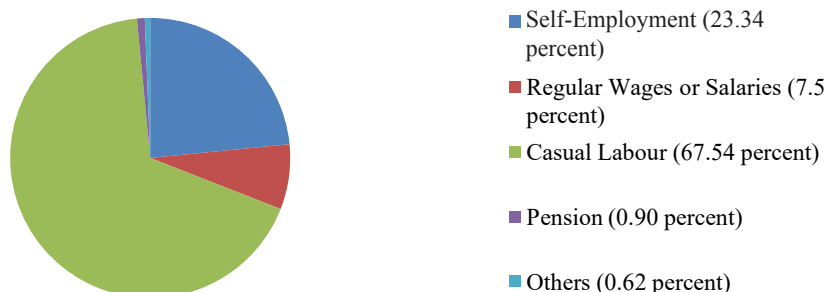
Source: Primary Survey

Fig. 4: Income Distribution (Kochi)



Source: Primary Survey

Fig. 5: Income Distribution (Combined)



Source: Primary Survey

Determinants of Household Income

Major socio-economic characteristics have a significant influence on the household income. In this section, a more rigorous analysis is undertaken so as to go through the determinants that can cause variations in household incomes.

Dependent Variable

Household income (HHY)

Household income (monthly total income) from all sources has been taken as the dependent variable.

Independent Variables

1. No of workers in the household (EMP)

The number of workers in the household always has a direct bearing on the household incomes. Bhasin (2001) used this variable and found a significant and positive relationship between the level of household income and the number of workers in the household. More number of workers in the 25 to 54 age group will lead to an increase in income. Hence a positive relation is expected.

2. Mean education of workers in the household (EDU)

Mean education of the workers in the household is considered to be an important variable in the determination of the household's income. Singh and Oberoi (1983) and Bhasin (2001) found that this variable as a most significant variable in determining the level of household income. For the present analysis, mean education of the workers in the household has been taken as the independent variable and it is hypothesised that the variable would be positively related to the level of household incomes.

3. Average working hours/day in the household (AWH)

This variable was computed as the average working hours in the total number of employees in a family. Greater the working hours in the family are expected to bring in more income to the household. Hence one may expect a positive relationship between this variable and the level of income of the household.

4. Mean age of workers in the household (AGE)

Another important factor influencing household income is mean age of workers in the household. Mean age represents the work experience also. It is generally held that as the mean age of the worker's increases, income also increases through more and more work experience.

5. Percentage of female workers in the household (PFW)

This variable has been taken as the percentage of female workers in the household. The association between this variable and the level

of household income is expected to be negative. Female workers are generally assumed to earn less than the male workers.

The mathematical model that has been used for this investigation is as follows;

$$HHY_i = \alpha_0 + \beta_1 EMP_i + \beta_2 EDU_i + \beta_3 AWH_i + \beta_4 AGE_i + \beta_5 PFW_i + \varepsilon_i$$

where ε is the error term, i represents households, α and β are the parameters, which are to be estimated.

Empirical Findings

Using multiple regression analysis, the effect of different variables on the household income has been quantified. The estimated coefficients of the whole sample was obtained and the results are presented in the Table 14.

TABLE 14: ESTIMATED COEFFICIENTS OF MULTIPLE REGRESSIONS

Determinants	Estimated Coefficients	t-Statistic	Significance Level	Collinearity Statistics	
				Tolerance	VIF
Constant	2035.917	1.585	0.114		
EMP	5154.798	20.966	0.000	0.937	1.067
EDU	194.653	2.878	0.004	0.817	1.224
AWH	343.160	2.948	0.003	0.736	1.358
AGE	-52.486	-2.574	0.010	0.847	1.181
PFW	-47.865	-6.508	0.000	0.726	1.378

Source: Computed.

Dependent Variable: HHY

The results showed that most of the variables were of expected sign and were significant, either at one per cent or at five per cent. The variable, total number of workers in the household (EMP) had a strong positive influence on the household income because the greater number leads to a large level of income. Variable, education (EDU) and average working hours/day in the household (AWH) were positively and significantly associated with the level of income. As expected, percentages of female employment in the household had negative signs thus indicating that households having a higher proportion of female workers will be having lower incomes.

TABLE 15: MODEL SUMMARY

R^2	Adjusted R^2	Standard Error of the Estimate	F
0.614	0.608	3722.07273	109.402 (0.001)

Source: Computed, the parenthesis indicates the significant level of F-statistic.

The value of R^2 (0.614) indicated that the variables explained 61 per cent of variations in household incomes (Table 15). R^2 value is low which indicates that entirety of the variations could not be captured with the model. This means that there are many other variables which might be influencing the income of urban poor households. Collinearity statistics further clarified that all the variables under consideration were required for the analysis.

CONCLUSION

The extent of urban poverty at household level was measured through various economic indicators. In this study, NSS's labour force framework was used to measure labour force rate, work participation rate, unemployment rate and employment rate. There was a considerable difference in the work participation rates of males and females. The survey result also revealed that the employment rate of the females was very low as compared to the employment rate of males. The characteristics of employment status of urban poor are studied. It was found that most of the jobs are in the informal sectors which provide low returns. Also, it was seen that female workers had a lesser monthly income as compared to the male workers. The multiple regression analysis proved that socio-economic indicators had a significant impact on the income of urban poor households.

REFERENCES

1. Bhasin, R. (2001). *Urban Poverty and Urbanisation*, Deep and Deep Publication, New Delhi.
2. Government of India (2001). *Concepts and Definitions used in NSS*, National Sample Survey Organisation, Golden Jubilee Publication.
3. Government of Kerala (2014). *Household Consumer Expenditure and Employment - Unemployment Situation in Kerala*, NSS 66th Round, NSS Division, Department of Economics and Statistics.
4. Mathew, E. T. (1997). *Employment and Unemployment in Kerala*, Sage Publications, New Delhi.
5. Ministry of HUPA (2009). *INDIA Urban Poverty Report 2009*, and UNDP, Oxford University Press, New Delhi.
6. N.S.S (1997). *Employment and Unemployment in India, 1993 - 1994: Fifth Quinquennial Survey*, N.S.S Fifth Round, New Delhi.
7. Prakash, B. A. (1999). *Kerala's Economic Development: Issues and Problems*, Sage Publications, New Delhi.
8. Prakash, B. A. (2001). *Urban Unemployment: A Study of Kochi City*, KRPCDS Report, Retrieved by <http://www.cds.ac.in>.

The Urban Pollutions and Its Sustainable Cure

MADHUKAR SWAYAMBHU*

ABSTRACT

Urban landscapes have some perennial problems like water pollution, air pollution, depleting aquifer, water scarcity, and sewage. Though they look unsolved as of today, but these are all linked towards sustainable living and understanding of the natural ecology. Vaidic Science has a sustainable solution for all these, and the same is also implemented successfully in many places across the country. The author is one of the designated partners of Vaidic Srijan LLP, which is a Limited Liability Partnership firm formed in March 2021. He and his partner have built their technology for “resurrection of the native ecology” for restoration and rejuvenation of Soil, Water and Air.

Keywords: Urban, Waterbody, Ecology, Sustainable, Vaidic, Cownomics

INTRODUCTION

Today, we are living in urban concrete jungles. 2008¹ was the first year in the modern history of the human race on the planet, when the urban population exceeded the rural population for the first time.

If we look at all the historic cities, all were dwelt on the banks of a waterbody, be it a river or a sea or even huge lakes or wetlands. The key reasons for this were, the natural abundance and the connectivity. Since water a natural flow, waterways were the cheap mode of transportation. Moreover, Wetlands also ensured the natural biodiversity to dwell, thus there was good availability of drinking water and for irrigation too. All human economic activities need a lot of water and therefore they could develop economic activities only around the centres which had abundant sources of water.

But the population rise started consuming more and more resources and eventually the abundance started turning into scarcity.

*Head (R&D), Vaidic Srijan LLP. Email: swayambhu@vaidicsrijan.com

Moreover, human beings changed their lifestyles from an eco-friendly sustainable life to unhealthy, unsustainable luxurious life against the natural harmony. This caused further depletion of the resources. And finally in the year 2008, United Nations came up with a new need for Mega cities or what we call as the Smart Cities of today. Since the resources are limited and the population is exploding, we need to smartly prioritise the resources and use them in more efficient ways. Resources like electricity, water, traffic management, security & surveillance, healthcare, transport system and so on – all urban necessities have to be planned intelligently.

In 2012², United Nations Summit in Rio de Janeiro came up with yet another concept for “Sustainable Development Goals”, or what we know as UNSDGs of today.

URBAN ISSUES: AN OVERVIEW

Urban areas be it planned or unplanned faces some of the key perennial problems, one of the major being population explosion. While we can identify and work on the root cause of increasing population itself, which is exodus from the rural to urban areas, but that’s a long-term approach. As the world needs quick fixes today, we need to isolate the problems and amalgamate the resolves too. So the best way forward is to start listing down the issues:

1. Sewage – A 2015 research in University of Tehran, estimated a per capita sewage production of 186 liters per day per human being, while the estimated treatment was found to be 136 liters per day per human, which means a deficit of 50 liters per person per day³ and this gap will continue to rise every day, because our approach of building a sewage treatment plant (STP) is neither sustainable nor economically viable.

And ultimately this waste water lands up in a natural waterbody, making it contaminated too. Water has been made as the *de facto* waste transport media.

2. Drinking Water Scarcity – UNICEF, is a global organisation, supported by United Nations, which in turn is supported by almost all the countries on the planet today. They work in 190+ countries across the globe, collect data, give aid and conduct surveys.⁴ And one of their report says:
 - (a) Four billion people – almost two thirds of the world’s population – experience severe water scarcity for at least one month each year.

- (b) Over two billion people live in countries where water supply is inadequate.
- (c) Half of the world's population could be living in areas facing water scarcity by as early as 2025.
- (d) Some 700 million people could be displaced by intense water scarcity by 2030.
- (e) By 2040, roughly one in four children worldwide will be living in areas of extremely high water stress.

But is this happening? People have the opinion that, population burst is the key reason. They are wrong.

The key reason is – contamination of the water resources. We let lose our domestic sewage and industrial effluents in the natural waterbodies (lakes, ponds, river, rivulets, wetlands, etc.), none of the land locked waterbodies are left with drinkable water. And because these are the only water resources for our race, we are facing the scarcity.

3. Air Pollution – All the landlocked cities have this problem in common. Air pollution is consistently on rise in all the landlocked cities. Fortunately the coastal cities are spared naturally, due to the presence of sea and oceans around.

Air pollution kills an estimated seven million people worldwide every year. World Health Organization (WHO) data shows that almost all of the global population (99%) breathe air that exceeds WHO guideline limits containing high levels of pollutants.⁵ Many studies have demonstrated a direct relationship between exposure to particulate matter (PM) and negative health impacts. Smaller-diameter particles (PM_{2.5} or smaller) are generally more dangerous and ultrafine particles (one micron in diameter or less) can penetrate tissues and organs, posing an even greater risk of systemic health impacts.

PM particles are free floating solid particles in air, which are positively charged and do not get an adequate surface to land, thus they keep floating in spite of the natural gravitational pull.

The quick fix that the city administrations look at – is installation of smog towers, which is again another unsustainable idea. You can't put the entire city on man-made ventilators, a failure of which will suffocate the entire city.

4. Polluted Waterbodies – for various natural or man-made reasons majority of the urban waterbodies are eutrophic today.

Eutrophication is characterised by excessive plant and algae growth due to the increased availability of one or more limiting growth factors needed for photosynthesis such as sunlight, carbon dioxide, and nutrient fertilizers. Eutrophication occurs naturally over centuries as lakes age and are filled in with sediments. However, human activities have accelerated the rate and extent of eutrophication through both point-source discharges and non-point loadings of limiting nutrients, such as nitrogen and phosphorus, into aquatic ecosystems (i.e., cultural eutrophication), with dramatic consequences for drinking water sources, fisheries, and recreational water bodies. For example, aquaculture scientists and pond managers often intentionally eutrophy water bodies by adding fertilizers to enhance primary productivity and increase the density and biomass of recreationally and economically important fishes via bottom-up effects on higher trophic levels – Definition by nature magazine.⁶

5. Depleting Aquifers – Thanks to the recent developments in boring technologies the over extraction or exploitation of the aquifers has been on all time rise, coupled with non-recharge avenues, today we see a sharp year over year decline in the underground water tables in majority of the urban areas.

The newly formed Jal Shakti Mantralaya in 2019, was created in India due to the rising water stress in the country. The Hon'ble Minister Shri G S Shekhawat, gave this statement in the same year of formation that "54 per cent of the country is under acute water stress, while the underground aquifer is already depleted by 22 per cent".⁷ While the established environmental magazine *Down to Earth* from Centre for Science & Environment (CSE), published a report that "The groundwater level in India has declined by 61 per cent between 2007 and 2017..."⁸.

It is clear that the mechanical structures or electric / fossil fuel powered machines aren't a sustainable approach at all. We need new approaches, new ideologies and new viewpoints to make the changes and interventions sustainable.

THE SUSTAINBLE APPROACH

India is the oldest surviving civilisation on this planet. By this virtue, we must've have had cracked the sustainability code for living in absolute harmony with nature. We've had the oldest surviving civil constructions on the planet, which have stood the test of time. From monolithic temple structures to forts to sea link bridges link Ram Setu – all of them have survived for over centuries, and are scientifically proven to be completely man-made structures.

Even the archeological remains of the cities, if we look at ancient Indian civilisations – all of them have been an integral part of the civic fabric. Be it the Harappa, Sinauli, RakhiGarhi, DholaVira or even further back in history for the descriptions that we find in the epics for the cities of Hastinapur, Ayodhya or Indraprastha – were excellent examples of town and city planning or what we call as the urban infrastructures. And we had all sustainable structures in place – from rain water harvesting to flood water harvesting, flood mitigation to drought mitigation, even tidal waves management and response systems were in place in this country.

Just about a millennium back, Bundela kings planned the city of Datia on a rocky plateau without any perennial source of water, in such a way that it remained pollution free and drought free for a complete millennia. Because they planned it based on sustainable Vaidic Science and we lived in unsustainable lifestyles inspired by the European values and standards.

Vaidic Science has been based upon the basic and holistic understanding of life and nature. It is the most comprehensive database upon the sustainable living in absolute harmony with nature. Therefore it is ecological and continuous. This is what creates the basic underlying principles of our social structures, civic society, science, arts, culture, and all other forms of knowledge. That's why we say, Soil, Water and Air – aren't dead substances, but living ecologies, which make life possible on the planet. And the moment we differentiate them from dead substances to living ecologies, the entire treatment or the approach changes. Because every life form or living ecology has been blessed with a basic feature of 'self-healing' by nature. Thus our approach changes from physical cleaning to boosting the metabolic rates.

If we closely look into the above mentioned perennial urban problems, all are linked to soil, water and air only. Sewage – is the waste water problem, drinking water scarcity – is again a water problem, air pollution – is all about relationship between water and air, polluted water bodies – are all linked to soil, water and air pollution and depleting

aquifers – is again associated with relationship between soil and water. If we are able to solve this jigsaw puzzle of relationship between soil, water and air, the ripple effect would solve all the problems. So let's understand the natural ecology in deeper details.

UNDERSTANDING WETLANDS AND WATERBODIES

Landlocked waterbodies and wetlands contain, the only one per cent of the Water on the planet meant for the use of terrestrial beings, including planets, animals, birds, insects and humans – who reside on the land surface, unlike the marine life which can use marine water too. These wetlands are unique structures in more than one way –

1. These are the only places, wherein soil, water and air – all come in direct contact. This creates the biggest possible pool of microbiota habitat, creating an apt environment for natural biodiversity and ecosystem services.
2. These are the only structures, which can do carbon emissions as well as sequestration, rest all the beings or structures will either remain emitters or remain as sinks for their entire lives.

And therefore specialised arrangements created by nature have been showered upon with many natural responsibilities:

1. **Between Soil and Water** – The bottom of every surface natural waterbody or wetland is the soil layer. Water grinds the bottom soil, converts it into silt, which passes through the soil layers and establishes a link between the surface waterbody and the aquifer. This is called the soil capillary link, through which water travels vertically between surface and aquifer, depending upon the pressure. The link is used for aquifer recharge in monsoon, while the same link is used to recharge the surface waterbody during peak of summers. This also maintains the mineral cycle, when water travels between the two layers, it carries the minerals along either ways.
2. **Within the Water** – within the waterbody there is an aquatic food chain. The autotrophic single celled organisms perform photosynthesis and produce oxygen, which gets trapped between the water molecules as Dissolved Oxygen (DO). These microbes are consumed by planktons, which are themselves a natural feed for bigger organisms like fishes. Fish excreta in turn is consumed and neutralised by the single celled microbes. Thus, the food chain gets established and goes on and on.

3. **Between Water and Air** – For photosynthesis naturally the carbon sequestration will be done by absorption of the Green House Gases (GHGs) from air. Moreover, the top surface of the waterbody in its natural condition is negatively charged, while the Particulate Matter (PM) which are the key pollutants of air are positively charged. Thus they naturally get attracted to the water surface and the air pollution is mitigated.

Now this brings us to the solution. If the native condition of the water bodies and wetlands are restored, the five key perennial urban problems will get solved sustainably.

RESURRECTION OF THE NATIVE ECOLOGY

This is one of the latest approaches in restoration and rejuvenation of the waterbodies and wetlands, wherein the approach is not to clean the water, but to “Resurrect the Native Ecology of the Wetlands” thereby enabling the native metabolism of the ecosystem to consume the contaminants instead of the physical removal in all the three ecosystems of soil, water and air.

Once the ecology is resurrected following functions get naturally restored:

1. **Aquifer recharge and water harvesting** – opening of the soil capillaries happens due to ecological dredging. And the same also makes the waterbody perennial, does flood mitigation and drought prevention.
2. **Ambience correction** – foul smell eradication, mosquito colony abolishment, removal of algal bloom, water color and viscosity improvement, water weed consumption, etc. all the ambience correction activities happen naturally. This also ensures the reduction in threat of vector borne and waterborne diseases to ensure a better public health.
3. **Air pollution mitigation** – with carbon sequestration and PM absorption, the air quality improvement also happens naturally.

There have been a lot of success stories on the above concept across the country, including the national capital of Delhi,⁹ and states of Uttar Pradesh¹⁰, Madhya Pradesh,¹¹ Telangana,¹² Punjab¹³ and many more.

This solution is developed by Vaidic Srijan LLP, and it is termed as Cownomics™ Technology.

The solution helps in achieving the following, with this 100 per cent indigenous technology:

1. In situ treatment of water bodies
2. Rain water harvesting and aquifer recharge
3. Air pollution, flood (water logging) and drought mitigation
4. Water abundance for drinking and irrigation
5. Sewage problem solution

The ripple effect of “Resurrect the Native Ecology of the Wetlands and Waterbodies” is there in agriculture and animal husbandry too, since the resurrected water naturally transforms in to neuro-immuno booster for plants and animals.

There is a remarkable improvement in the aquatic life due to restoration of aquatic food chain, which also results into the return of birds, bees and butterflies around the waterbody. Life exuberates in all forms around the water body, due to creation of a micro-climate around the wetland / water body, for the simple reason that the native ecology in all the three possible habitats for microbiota gets resurrected (soil, water and air).

THE PROCESS

The Science¹⁴ of Vaidic Srijan LLP / Cownomics™ Technology is purely dependent upon the ecology, environment and natural and life sciences. As per Vaidic Sciences, each waterbody has a different ecosystem, which needs to be studied in detail to understand.

So their process is to conduct a detailed study of the Waterbody / Wetlands by studying various aspects like agro-climatic zone, water quality, air quality index, sludge quality, aquifer details, contamination levels, type and kind of problems (like water viscosity, algal blooms, weed infestation (type of weed and population), aquatic life, foul smell, water or vector borne diseases spread or threat, vegetation on the embankment region and so on).

Based on this study, they carefully select certain herbs and prepare a medicine, which is 100 per cent botanical extract of the selected herbs/ shrubs / trees and plants. This is what they call as the ‘Cownomics™ Extract’.

This extract is intensified through amalgamation of the concentrate with fresh water from the same agro-climatic zone as the geographical

location of the water body to be treated, and this homogenous mix is poured in the waterbody in early morning time of the sunrise.

In presence of sunlight, the medicine is synthesised by the aquacology and then the resurrection process starts.

The process is divided into three phases, namely, Resurrection (three months), Restoration (three months) and Rejuvenation (six months), which completes a one-year time period, after which the waterbody is back in its original native condition, and has developed enough immunity to sustain the present pollution load for a few years. Ideally, just a minor maintenance is good enough to keep the water body going on for years together.

REFERENCES

1. (https://unctad.org/system/files/official-document/ecn162016d2_en.pdf)
2. (<https://www1.undp.org/content/oslo-governance-centre/en/home/sustainable-development-goals/background.html>)
3. (https://www.researchgate.net/publication/276187716_The_estimation_of_per_capita_loadings_of_domestic_wastewater_in_Tehran)
4. (<https://www.unicef.org/wash/water-scarcity>)
5. (https://www.who.int/health-topics/air-pollution#tab=tab_1)
6. (<https://www.nature.com/scitable/knowledge/library/eutrophication-causes-consequences-and-controls-in-aquatic-102364466/>)
7. (<https://economictimes.indiatimes.com/news/politics-and-nation/around-22-groundwater-has-either-dried-up-or-in-critical-category-gajendra-singh-shekhawat/articleshow/72185837.cms?>)
8. (<https://www.downtoearth.org.in/blog/water/depleting-groundwater-costs-farmers-heavily-65530>)
9. (<https://timesofindia.indiatimes.com/city/delhi/healing-touch-dda-falls-back-on-vedas-to-save-waterbodies/articleshow/81179670.cms>)
10. (<https://www.newindianexpress.com/cities/delhi/2021/jan/05/rescuing-mansi-ganga-2245655.html>)
11. (<https://www.bhaskarhindi.com/city/news/for-the-first-time-herbal-treatment-started-to-free-chitrakoots-mandakini-pollution-103700>)
12. (<https://smartwatermagazine.com/blogs/madhukar-swayambhu/hyderabad-blues-again-story-a-water-warrior>)
13. (<https://www.jagran.com/punjab/ludhiana-imperium-earth-advisors-llp-company-will-clean-drains-of-patiala-under-nala-se-nadi-project-21806993.html>)
14. (<https://smartwatermagazine.com/blogs/madhukar-swayambhu/ayurvedic-rejuvenation-water-0>)

Status Paper on Implementation of Master Plans and Changing Land Policies: Delhi

SANJAY PATHAK*

INTRODUCTION

Delhi has seen an influx of population during the 1941-1951 decade primarily due to the partition of India. The Government, Co-operative and private sector developed residential colonies through large scale acquisition of land, to accomodate increased population. The land was acquired under the provisions of the Land Acquisition Act 1894.

The Ministry of Health, Government of India, formulated and notified a Master Plan for Delhi in 1962, for a period up to 1981. The Plan proposals were based on the policy - "Large-Scale Acquisition, Development and Disposal of land in Delhi, 1961". The Master Plan for Delhi - 2001, notified in 1990 continued to follow the same land policy.

The implementation period of Master Plan 1981-2001 witnessed maximum changes such as liberalisation of economic policies, increase in urban land value, increased role of private sector etc. Thus, the Master Plan for Delhi 2021, notified in 2007, advocated modification in land policies, as per the changing economic scenario and needs of the society.

During the implementation of Master Plans, it was observed that, large land parcels are continued with private ownership, and it was not possible for DDA / Government to acquire them due to various reasons. The owners of such land have been given opportunity, to develop through "Regulations for Enabling the Planned Development of Privately owned Lands" notified in 2018.

The Land Policy for Delhi, as a Chapter of MPD - 2021 was first notified on 26/09/2013. Subsequently, based on problems of implementation, and lack of coordination between stakeholders, the revised chapter was notified on 11/10/2018. Pooling of land under this Policy will be done on the basis of sectors as delineated in the

*Former Commissioner (Planning) DDA, Adjunct Professor and Adjunct Faculty, NICMAR, Pune. Email: sppathak.arch@gmail.com

Zonal Development Plans. The Policy is open to all landowners who own land in the areas notified by the DDA / Government under the Policy. Landowners with any size of land may register and express their interest to participate as per the application process specified in the Regulations.

This paper deals with provisions in the Master Plans for Delhi and changing land policies: Public Sector oriented “Large Scale acquisition of Land” to “Land Pooling” where Private Sector plays an important role.

HISTORY OF DELHI

The history of Delhi dates back to the Mahabharata period, around 1400 BC. The capital city of Indraprastha was founded by the Pandavas, and was located between the present Purana Quila and Humayun tomb. The Mughal dynasties created a number of cities, during 12th to 16th century between slopes from the Aravali ranges to the river Yamuna. These cities are located between Wazirabad and Mehrauli and are known as i) Lal Kot ii) Siri iii) Tughlakabad iv) Jahanpanah v) Ferozabad vi) Purana Quila and vii) Shahjahanabad. The walled city of Shahjanabad with Red Fort and Jama Masjid, was founded in 1638 on the bank of the river Yamuna. The city was planned for population of 60,000, covering an area of about 569 hectares.

British Rule Period

The British Government shifted the pre-Independent India’s capital to Delhi in 1911 due to the age old tradition - *“He rules India, who rules Delhi”*. Initially the capital started functioning from the present Vidhan Sabha in Civil Lines on Alipur Road. Across the ridge, Viceroy Palace was constructed, where presently Delhi University is located.

A committee was formed to suggest a new site for the capital with Patrick Geddes as one of the members. The British Government selected the best suitable site on the west of Purana Quila up to Raisina hills, covering about 1300 hectares. The site abuts the Grand Truck Route providing connectivity with Lahore in the west and Kolkata in the east. The second best site, on the other side of Raisina hills was selected for the Delhi Cantonment.

Sir Edwin Lutyens planned the New Delhi in a geometric pattern with a visual link between Parliament Building – Connaught Place - Jama Masjid, through Parliament Street and Minto Bridge. The land for New Delhi, Cantonment, Safdarjang Airport and Golf Course was implemented through large scale acquisition of land from the villagers. The New Delhi, capital city was inaugurated in 1931.

Development Prior to Master Plan 1962 (MPD- 62)

The shifting of the capital of India from Kolkata in 1911 resulted in an influx of population, which Delhi, was unable to accommodate within the Walled City of Shahajanabad. Thus in 1935, Arthur Parke Hume was commissioned by the British Government to submit a report on the relief of urban congestion in Old Delhi. Based on Hume's report, the Delhi Improvement Trust (DIT) was formed in March 1937. DIT prepared and implemented schemes like Western Extension (Karol Bagh), Darya Ganj, Jhandewala, etc.

Delhi witnessed another influx of population after India's Independence, due to the partition, which is reflected in the population figures of Delhi. The population of Delhi in 1951 was 10,26,000 (59 per cent migrants), and it increased to 16,38,000 (62 per cent migrants) by 1961. The migrant population was provided temporary tent accommodation in refugee camps in various parts of Delhi.

The Government of India created the Ministry of Rehabilitation and assigned the work of planning and development of residential colonies for the migrants. The major colonies subsequently developed are - Lajpat Nagar, Tilak Nagar, Kingsway Camp, Geeta Colony, Chittranjan Park, etc.

Simultaneously, other agencies undertook development in different directions by direct acquisition of land. The major areas developed during this period are:

<i>Developer</i>	<i>Areas Developed</i>	<i>Use</i>
Government agencies	R.K. Puram, Timarpur, Police Lines at Model Town	Residential
Private Developers	South Extension, Model Town, Kamla Nagar, Rajouri Garden	Residential
	Najafgarh Road	Industrial
Cooperative Societies	Friends Colony, Defence Colony, Gujranwala	Residential
	Rajasthani Udyog Nagar, GT Karnal Road	Industrial

Until 1962, the post-Independence development was primarily neighbourhood / local level planned development, with spot zoning. These areas were along the existing road network, without any blue print for connectivity, or adequate physical and social infrastructure.

However, these areas are now central areas and are facing problems

such as unintended non-conforming activities, increase in population due to increase in Floor Area Ratio (FAR), lack of infrastructure, poor structural stability, etc. Crucially, they are now in need of an upgradation of infrastructure through redevelopment.

DELHI DEVELOPMENT ACT, 1957

The Delhi Improvement Trust formed was with a limited objective, at a time when the population of Delhi was only around 500,000. The Central Government felt the need of an agency, that would be responsible for Planned Development of the National Capital. In order to check unplanned and haphazard growth of Delhi, the Delhi Development Act was notified in December 1957 with the approval of the Parliament of India. Some of the major provisions in the Act relating to planning, land and implementation are reproduced below:

Section 6: *Objects of the Authority*

The objects of the Authority shall be to promote and secure the development of Delhi according to plan and for that purpose the Authority shall have the power to acquire, hold, manage and dispose of land and other property, to carry out building, engineering, mining and other operations, to execute works in connection with supply of water and electricity, disposal of sewage and other services and amenities and generally to do anything necessary or expedient for purposes of such development and for purposes incidental thereto:

Section 12: *Declaration of development areas and development of land in those and other areas.*

- (2) Save as otherwise provided in this Act, the Authority shall not undertake or carry out any development of land in any area which is not a development area.
- (3) ...
 - (ii) where that area is an area other than a development area, approval of, or sanction for, such development has been obtained in writing from the local authority concerned or any officer or authority thereof empowered or authorised in this behalf, in accordance with the provisions made by or under the law governing such authority or until such provisions have been made, in accordance with the provisions of the regulations relating to the grant of permission for development made under the Delhi (Control of Building

Operations) Act, 1955 (53 of 1955), and in force immediately before the commencement of this Act:

PROVIDED that the local authority concerned may subject to the provisions of section 53A amend those regulations in their application to such area.

Section 14: *User of land and buildings in contravention of plans*

After the coming into operation of any of the plans in a zone, no person shall use or permit to be use any land or building in that zone otherwise than in conformity with such plan:

PROVIDED that it shall be lawful to continue to use upon such terms and conditions as may be prescribed by regulations made in this behalf any land or building for the purpose and to the extent for and to which it is being used upon the date on which such plan comes into force.

Section 22A: *Power of Authority to develop land in non-development area*

Notwithstanding anything contained in sub-section (2) of section 12, the Authority may, if it is of opinion that it is expedient to do so, undertake or carry out any development of any land which has been transferred to it or placed at its disposal under section 15 of section 22 even if such land is situated in any area which is not a development area.

As per provisions in the act, Delhi Development Authority (DDA) was established in 1957.

LAND POLICY FOR DELHI - 1961

The land policy of Delhi came into force from mid 1961, integrated with the first comprehensive land use development plan called the Master Plan for Delhi 1962 (MPD-62).

The policy of “large-scale acquisition, development and disposal of land in Delhi, 1961” envisaged:

- (i) Large-scale acquisition of land;
- (ii) Release of the same to users on a perpetual ninety nine year lease system; and
- (iii) Using the Land Acquisition Act of 1894, already in force as the legal tool.

The policy of large scale acquisition had the following aims:

- (i) To offset the speculative land prices;

- (ii) Stabilize land values;
- (iii) Prevent concentration of urban land in the hands of a few;
and
- (iv) Ensure adequate supply of land for phased urban development.

The salient features of the policy were as follows:

- (i) Under the policy, land to be acquired by the Delhi Government and handed over for development and disposal to the DDA (for general development purpose), to the Ministry of Housing (mainly for government employee housing) and to the cooperatives.
- (ii) Land remained under public ownership. The developed plots or underdeveloped land sites were to be leased out to individuals and cooperative societies on an equitable basis, so that the benefits of planned growth accrue to the common man.
- (iii) The main advantage of notifying large chunks of land for acquisition was to pay cost (compensation to the farmers) at market value as on date of the initial notification, then acquire the land in stages over a period (sometimes 15-20 years) as per actual development requirements and availability of funds to pay compensation. This way, the Central Government could also have a share in the future rise in the value of the notified land.
- (iv) A Revolving Fund, provided by the Central Government was adopted as the method of financing the initial development of land. The operation of the land policy started in 1961 with an initial seed capital of Rupees 12.30 crore. This was mainly in the form of Government land, i.e., Nazul land.
- (v) Revolving fund basically meant to revolve the initial working capital in such a way that it yields a handsome return on investment, which along with the working capital is again ploughed back with a view to secure increasing returns in each cycle of investment.
- (vi) Thus, the Central Government sought to facilitate plan implementation by enunciating a progressive policy for the socialization of urban land through public acquisition of the entire area proposed to be urbanized by the year 1981.

Alternate Allotment of Developed Plots

Scheme of Large Scale Acquisition, Development and Disposal of Land in Delhi, envisages the allotment of alternative plot to the persons whose land is acquired under the scheme. As per the policy, the allotment of alternative plot is made on the recommendations of the Land & Building (L&B) Department, Govt. of NCT of Delhi. The scheme for allotment of alternative plot lays down certain guidelines in this regard.

Salient Features of Policy of Alternative Allotment

- (i) Allotment of alternative plot is made on the basis of recommendations of the L&B department and by random draw of lots subject to number of plots available for allotment and based on seniority of the recommendee. However, the recommendations issued by L&B department have no legal binding effect for allocation of an alternative plot. It is purely based on the availability of plots.
- (ii) Plots up to 400 sq. yds. were provided to the farmers based on the quantum of land acquired. However, the policy was revised after 1986 due to rise in land value of the developed plots. In case of families affected due to acquisition of land for road widening, removal of encroachment on public land etc., DDA flats were allotted.
- (iii) The current policy as per DDA website is as follows:

Size Norms

For awards announced before April 3, 1986

- (a) 40 sq. yds. for acquired land between 150 sq. yd. and one Bigha.
- (b) 250 sq. yds. For land between 1 to 10 Bighas.
- (c) 400 sq. yds. For land above 10 Bighas.

For awards announced after April 3, 1986

- (a) No plot for less than one bigha acquired land.
- (b) 40 sq. yds. for land acquired 1.00 bigha.
- (c) 80 sq. yds. for land acquired between one to five bighas.
- (d) 150 sq. yds. for land for five to 10 bighas.
- (e) 250 sq. yds. For land above 10 bighas.

Cost of Land

The cost applicable was the Pre-Determined Rate (PDR) announced by the Ministry of Urban Development, Government of India, as applicable on the date of draw. Demand letters were issued on provisional PDR pending decision of final PDR by the Ministry of Urban Development.

Source: (http://119.226.139.196/lands/alternate_allotment_residential.htm)

MASTER PLANS FOR DELHI (MPD) - 1962

A. MPD-1962 (1962-1990)

The Government of India, formed the Delhi Development Authority to promote and secure the development of Delhi in a planned manner. Accordingly, DDA, with the help of Town Planning Organisation, prepared the plan and the Central Government notified the Master Plan for Delhi in September 1962.

The implementation of the plan, was envisaged through large scale acquisition and development of land. The objective was to ensure that the public agencies should be able to plan for a projected population of 4.56 million by 1981 with adequate infrastructure. Recognising this requirement, the Government of India notified the acquisition about 35,000 acres of land, as an extension of present built up areas. The major areas developed during this period are:

<i>Policy</i>	<i>Areas Developed</i>	<i>Type of Housing</i>
Large Residential Schemes	Ashok Vihar, Shalimar Bagh, Pitampura, Vivek Vihar, Paschim Vihar	Allotment of plots and flats to individual by DDA (HUDCO, SFS schemes)
Resettlement Colonies	Trilok Puri, Shakurpur, Madipur, Jahangirpuri	Allotment of plots (21 sqm) for EWS by DDA
Allotment of land to Co-operative House Building Societies	Preet Vihar, Pitampura, Paschim Vihar	Societies to plan, develop and allot plots to members
Allotment of land to Group Housing Societies	Pitampura, Paschim Vihar, Vikas Puri, ROHINI	Societies to construct Flats for members
ROHINI Sub city Project	Sectors 1 to 19	- Allotment of plots (21 to 90 sqm) and flats to individual by DDA - Allotment of land to Slum wing for JJ Colonies

Review of MPD-62 - The basic policy frame for guiding Delhi's development using large-scale acquisition brings to fore the performance gaps in the large scale acquisition, development and disposal of land in Delhi.

- (i) MPD-62 was the first attempt of development through comprehensive urban planning for the Union Territory of Delhi, now called NCTD. The total area of NCTD is 1,48,300 hectares.
- (ii) Of this, the total urbanized area at the start of MPD-62 was 17,290 hectares and the same was proposed to be extended to 44,777 hectares by 1981.
- (iii) The land acquired through the bulk acquisition policy was mostly to be developed by DDA and disposed off to the actual users after development, only on a long-term lease basis, i.e. 99 years.
- (iv) The urban population at the start of MPD-62 stood at 2.30 million. The projected population by 1981 as per MPD-62 was 4.60 million, later revised to 5.30 million.
- (v) As per 1981 census, the urban population was 5.7 million (excluding Nazafgarh and Narela).

Status of land acquired, developed and disposed from 1961-81:

- (i) The total land proposed to be acquired during the plan period (1961-81) was 27,487 hectares.
- (ii) Of the total area notified for acquisition, only 15,540 hectares was acquired by March 1981.
- (iii) On an average, only 777 hectares of land was acquired annually instead of 1372 hectares as intended to meet the targets of the development set in the plan.

B. MPD-2001 (1990-2007)

The MPD 2001 was notified on 1/8/1990 for a projected urban population of 12.173 million (0.637 rural) by 2001. During its preparation period, DDA announced registration for residential plots in the Rohini scheme for a population of 0.85 million. Thus the policy of public sector led to growth and development process, through large scale acquisition of land continued. The type of housing and areas developed are given below:

<i>Policy</i>	<i>Areas Developed</i>	<i>Type of Housing</i>
Dwarka Sub city Project	Sectors 1 to 26	• Allotment of land to Group Housing Societies to construct flats for members • DDA Housing • Allotment of land to Slum wing for JJ Colonies
ROHINI Sub city Project	Sectors 20 to 28	• Allotment of plots (21 to 90 sqm) & flats to individuals by DDA • Allotment of to land to Slum wing for JJ Colonies
Resettlement Colonies	Bawana, Ghevra	Allotment of plots (21 sqm) to EWS by Slum Wing / DUSIB

C. MPD-2021 (2007- onwards)

Implementation of Master Plan

The implementation period of Master Plan 1981-2001 witnessed maximum changes in global economy, liberalisation etc. Thus, the approach towards Master Plan and land policy was modified, as per the changing needs of the society. The major changes observed were:

- Increase in land value and thus huge investment in land, by public sector agencies to continue large scale acquisition policy for planned development;
- Lack of enforcement to check unplanned development leading to unauthorised colonies in areas proposed for urbanisation;
- Increased air, noise and water pollution levels;
- Formation of Delhi Metro Rail Corporation and the introduction of MRTS;
- Increase in densities and FAR without simultaneous up gradation of infrastructure; and
- Sudden rise in real estate prices, due to inflation not matching with the average household income.

Considerations and Highlights of MPD 2021

The MPD-2021 was prepared on the basis of extensive consultations, and public participation. Land acquisition and development related experience from earlier Master Plans, considered while preparing MPD-

2021, presented at point 5 and 6 under Review of Past Experience are as follows:

5. The MPD-62 set out the broad vision for the development of Delhi and, with a view to realise the development plan underlying this vision, a scheme of Large Scale Acquisition and Development of Land was also formulated. The aim of the latter was to ensure that the spatial pattern of development and use of land could conform to the development plan and infrastructure and services could be laid out to match the same. At that early stage, the process of planned development was envisaged as a public sector-led process with very little private participation in terms of development of both, shelter and infrastructure services. The philosophy of public sector led growth and development process continued in general till the process of economic reforms was initiated in the early 90's. Therefore, the Master Plan for Delhi 2001 (MPD-2001) also substantially reiterated the planning process, which had been outlined in MPD-62. These plans could be seen mainly as land use plans with a three level hierarchy, i.e. Master Plan, Zonal Plans and Layout Plans for specific development schemes within each zone.
6. The population of Delhi in 2001 was 138 lakh as against the MPD-2001 projection of 128 lakh. This had its inevitable implications and impact in terms of shelter, including squatter settlements, and other infrastructure facilities. Some issues that arise for consideration and are also directions for policy include:
 - (i) Review of the scheme of large scale development and acquisition and its relevance in the present context;
 - (ii) Alternative options for development of areas identified for urbanization in MPD- 2021;
 - (iii) Evolving a system under which planning for, and provision of basic infrastructure could take place simultaneously with reference to (i) and (ii) above; and
 - (iv) Involving the private sector in the assembly and development of land and provision of infrastructure services.

Major Highlights of the Plan

The Master Plan incorporates several innovations for the

development of the National Capital. A critical reform has been envisaged in the prevailing land policy and facilitating public - private partnerships. Together with planned development of new areas, a major focus has been on incentivising the recycling of old, dilapidated areas for their rejuvenation. The Plan contemplates a mechanism for the restructuring of the city based on mass transport. The population of Delhi in 2001 was 138 lakh as against the MPD-2001 projection of 128 lakh. This has had its inevitable implications and impact in terms of shelter, including squatter settlements, and other infrastructure facilities.

The following critical areas have been the focal points of the Plan:

(a) Land Policy

The land policy based on the optimum utilisation of available resources, both, public and private in land assembly, development and housing.

LAND POLICY DELHI 2021

The Land Policy for Delhi, as a Chapter of MPD 2021, was first notified on 26/09/2013. Subsequently, based on problems of implementation, and lack of coordination between stakeholders, the revised chapter was notified on 11/10/2018. The relevant provisions at 19.1 with sub-heading 'Guiding Principles' and 19.4 with sub-heading 'Norms for Land Pooling and Development Control Norms' are reproduced below:

Guiding Principles

- (i) Pooling of land under this Policy will be done on the basis of sectors (as defined in the Regulations) and as delineated in the Zonal Development Plans.
- (ii) The Policy is open to all landowners who own land in the areas notified by DDA / Government under the Policy. Landowners with any size of land may register and express their interest to participate as per the application process specified in the Regulations.
- (iii) In order to ensure unified planning, servicing and subdivision/ share of the land in a sector as per Land Policy and Regulations, a minimum of 70 per cent contiguous land of the developable area within the sector, free of encumbrances, is required to be pooled to make the sector eligible for development. When such minimum contiguity is achieved

in a sector, DDA will intimate all the constituent landowners forming part of the contiguous land in the sector to form a consortium as defined in the Regulations. Isolated land parcels of 2 ha and above falling in a sector, that are not a part of 70 per cent contiguous land shall also be eligible for being part of the Consortium based on feasibility of the layout plan.

- (iv) Of the pooled land, the Consortium will retain 60 per cent and hold the remaining 40 per cent on behalf of DDA, to be surrendered (free of encumbrances) as and when required to DDA/ service providing agencies for development of city level physical infrastructure, recreational and public/semi-public (PSP) facilities as per the ZDPs and layout plan of a sector. Each landowner will surrender land proportionate to the area of land pooled, irrespective of land uses assigned to their original land in the ZDP.
- (v) The 60 per cent land shall be utilized by the Consortium for development of residential, commercial, public and semi-public facilities as per the Policy.
- (vi) The Consortium will mutually decide a formula for redistribution of developed land/ built space, or any other form of fair exchange as part of an "Implementation Plan" and convey the same to DDA with the consent of all landowners.

Norms for Land Pooling and Development Control Norms

The proposed land pooling and development by DE/Consortium shall be based on the following norms:

- (i) The Land Use distribution at the city level for the urbanizable areas in the Urban Extensions adopted for this Policy is as under:
 - Gross Residential: 53 per cent
 - Commercial: five per cent
 - Industrial: four per cent
 - Recreational: sixteen per cent (does not include green areas within the various gross land use categories)
 - Public and Semi- Public Facilities (PSP): ten per cent
 - Roads and Circulation: twelve per cent
- (ii) The above land use distribution will split on a 40:60 basis. A minimum of 40 per cent of pooled land in every sector shall

be reserved for city level infrastructure (surrendered as and when required to DDA and service providing agencies for provision of infrastructure). A maximum of 60 per cent of pooled land in every sector shall be available to Developer Entities (DE) / Consortium for development.

Development control norms

- (i) FAR for Residential, City Level Commercial and City Level PSP shall be as per prevailing Master Plan.
- (ii) Residential FAR for Group Housing to be applicable on Net Residential land.
- (iii) Net Residential land to be a maximum of 55 per cent of Gross Residential land.
- (iv) For the purpose of providing EWS housing, the DE/ Consortium shall utilize a mandatory FAR of 15 per cent over and above the maximum permissible residential FAR. The resultant increase in density shall be considered over and above the permissible density as per Master Plan.
- (v) EWS Housing unit size shall range between 30-40 sq.m.
- (vi) Adequate parking shall be provided by the DE/ Consortium as per MPD. In case of the EWS housing component, a norm of 0.5 ECS/100 sq. m of BUA shall be followed.
(<https://online.dda.org.in/landpooling/AppForm/docs/Notified%20Land%20Policy%2011.10.2018.pdf>)

OTHER LAND RELATED POLICIES

Surrender of land by Extensive Industries

During the pre-Independence period, large scale industries dealing with textiles, vanaspati, steel, chemicals, etc. were established, mostly in the then fringe areas of Delhi, located along G.T. Road, Rohtak Road, Najafgarh Road, Loni Road, etc. Additionally, thermal Power Plants were operational along the river Yamuna at Rajghat and Indraprastha Estate.

Master Plan for Delhi 1962, classified these as Extensive Industries. All the noxious industries, which are now located in residential areas, were to be relocated in areas meant for Extensive Industries. The vacated sites were proposed to be developed for flatted factories. Master Plan for Delhi 2001 policy for such areas is reproduced below -

Hazardous and Noxious Industries

- (i) The Hazardous and Noxious Industrial units are not permitted in Delhi.
- (ii) The existing industrial units of this type shall be shifted on priority within a maximum time period of three years. Project report to effectuate shifting shall be prepared by the concerned units and submitted to the Authority within a maximum period of one year.
- (iii) The land which would become available on account of shifting as administered in (b) above, would be used for making up the deficiency, as per the needs of the community; based on norms given in the Master Plan; if any land or part of land, so vacated is not needed for the deficiency of the community services, it will be used as per prescribed Land Use; however the land shall be used for light and service industries, even if the land use according to the Master plan / Zonal Development Plan is extensive industry.
- (iv) Action shall be taken by Delhi Administration to prepare a list of individual noxious and hazardous industrial units to be shifted and depending on the pollution / hazard, administration may force these industrial units to shift within a maximum prescribed period of three years.

Heavy and Large Industries

- (i) No new heavy and large industrial units shall be permitted in Delhi.
- (ii) The existing heavy and large scale industrial units shall shift to Delhi Metropolitan Area and the National Capital Region keeping in view the National Capital Region plan and National Industrial Policy of the Government of India.
- (iii) The land which would become available on account of shifting as administered in (ii) above, would be used for making up the deficiency, as per the needs of the community; based on norms given in the Master Plan; in any land or part of land, so vacated is not needed for the deficiency of the community services, it will be used as per prescribed Land Use; however the land shall be used for light and service industries, even if the land use according to the Master plan / Zonal Development Plan is extensive industry.

Guidelines for Surrender of land

The Supreme Court of India, vide its orders dated 10.05.96, 08.07.96, 04.12.96 and 28.04.2000 in Writ Petition (Civil) 4677/1985 titled as M.C. Mehta vs. Union of India and Others, gave directions regarding surrender of land by Industries in view of provisions in MPD 2001 referred above. The guidelines based on various orders are given below:

- (i) Approved a scheme, for relocation / shifting of certain industries from Delhi and the surrender of the land used by such industries by their owners so that it could be developed and be put to use for the community at large, the owners having been given the liberty to retain, to an extent, part of such land.
- (ii) The land which would become available on account of shifting / relocation of hazardous / noxious / heavy and large industries from the city of Delhi shall be used in the following manner:

<i>Extent</i>	<i>Percentage to be dedicated / maintained as Green (through tree plantation)</i>	<i>Percentage to be developed by the owner as a remunerative component in accordance with these regulations</i>
Up to 2000 sq. mts. i.e. 0.2 ha. (including the first 2000 sq.mts. of the larger plot)	Nil	100
0.2 to 5.0 ha.	57	43
0.5 to 10.0 ha.	65	35
Over 10 ha.	68	32

- (iii) The owner shall be entitled to one and a half times of the permissible FAR under the Master Plan, on land to be developed by the owner as a remunerative component in accordance with these regulations.
- (iv) These lands are now to be developed into green belts without any compensation. Where the land is acquired or used for any other purpose under extreme necessity, the land owner would be entitled to get 50 per cent of the compensation or consideration for the use of such land.

Regulations for Enabling the Planned Development of Privately owned Lands

The land policy for Delhi was notified in 1961 and the Master

Plan for Delhi restricted the development of unacquired land. DDA, especially after the 1990s could not acquire land due to high land values. The acquisition of land for Rohini Phase iv / v, for registrants in 1980, was possible only after interventions by courts. The Policy for private lands followed in Delhi is given below -

- (i) Building Plans not part of approved lay out plans are not sanctioned by urban local bodies;
- (ii) The change of land use of privately owned land was not processed in the absence of any policy; and
- (iii) Absence of regulations like Transferable Development Rights. Even circle rates notified by Government of Delhi are based on type and period of development. These are not feasible for TDR where land value is important criteria.

The private land owners, in view of above, under following categories started demanding permission to develop private land:

- (i) Lands with recreational land use in developed area as DDA failed to acquire land;
- (ii) Isolated pockets in built-up areas, away from DDA projects, as extending infrastructure was expensive;
- (iii) Land vacated by prohibited industries which are not covered in the Supreme Court order dated 1996 onwards;
- (iv) Old Farm houses, now part of urban area;
- (v) Land around monuments; and
- (vi) Disputed / unacquired land in approved colonies.

Delhi Development Authority, with the approval of Government of India, notified the "Regulations for Enabling the Planned Development of Privately owned Lands" on 4th July 2018. The relevant provisions of these regulations in context of applicability; pre-requisites and planning provisions; and development control norms are as follows:

Applicability

These regulations shall apply to the following types of privately owned land parcels:

- (i) "Private Land / Privately Owned Land" means any unacquired / freehold land or property, which is not open to the use and enjoyment of the public and the ownership of

the said land vests with an individual owner or a company or a society or a group of land owners voluntarily agreeing to participate pursuant to an agreement. This is subject to applicability set out in Clause 3.1 of these Regulations.

- (ii) Land parcels having activities / uses that were already in existence before the notification of MPD 1962.
- (iii) Land parcels that were left out and could not form a part of any layout plan / planned development during the implementation of the MPD.
- (iv) Land parcels that could not be acquired by DDA because:
 - (a) Acquisition proceedings were challenged by the land owners and quashed by the courts.
 - (b) Acquisition lapsed as per sub-section 2 of section 24 of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
- (v) Land parcels assigned 'Recreational use' in the layout plan, resulting in restricting their development are also included (except for notified or reserved forest area, Regional Park and Monument Regulated Zones as per MPD2021).

Pre-Requisites and Planning Regulations

- (i) Development on the privately owned land shall be in consonance with the land use as notified in prevailing MPD / ZDP or land use / use premise mentioned in already approved layout plans / schemes of that area, if any or as specified in these Regulations.
- (ii) DDA (in the 'development area') ULB (in the 'non-development area') shall take up the master planning for external development of the plots, i.e. roads and linkages required for provision of infrastructure and services (subject to payment of applicable external development charges by the landowner).
- (iii) Where any land is required for providing governmental or public semi-public use of the private land, the same shall be acquired by the concerned implementing agency either by mutually agreed rate or under the provisions of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 and appropriate compensation to be paid accordingly by the agency concerned.

Development Control Norms

- (i) Land owner shall abide by the development control norms as prescribed in the prevailing MPD and UBBL or specifically mentioned in these regulations, if any.
- (ii) Privately owned lands with pre-MPD 1962 activities / use, can choose to continue with the same activity / use provided that all provisions specified in the Regulations are met. The landowner can also opt to develop as per the use specified in the prevailing MPD/ ZDP/ approved layout plan subject to payment of requisite charges.
- (iii) Owners of the privately owned land parcels assigned 'Recreational use' in the approved layout plan shall be permitted to utilize their land as per the following provisions:

<i>Extent</i>	<i>Percentage to be dedicated / maintained as Green (through tree plantation)</i>	<i>Percentage to be developed by the owner as a remunerative component in accordance with these regulations</i>
Up to 2000 sq. mts. i.e. 0.2 ha. (including the first 2000 sq.mts. of the larger plot)	nil	*100
0.2 to 5.0 ha.	57	43
0.5 to 10.0 ha.	65	35
Over 10 ha.	68	32

*Open spaces within the plot to be maintained as 'green'

CONCLUDING REMARKS

Master Plan for Delhi 1962 was backed by Land Policy for the projected population in 1981. The Plan proposed green belts beyond urban limits. These policies were not backed by enforcement mechanism as these areas were mostly under the Municipal Corporation of Delhi. As a result, unplanned development took place across planned areas.

The progress of acquisition of land up to early 1990s was reasonably satisfactory. The process slowed down mainly due to increase in land value, and the formation of Government of National Capital Territory of Delhi. DDA has to submit request to acquire land to GNCT of Delhi, as it has no powers to acquire land on its own. The problem increases in case the Central and State Governments have separate political parties with different ideologies.

In view of large-scale acquisition of land policy, the Master/ Zonal Plans, and Sub-City Plans (land use) are mostly based on physical features and not on revenue maps. Updating notified Zonal Development Plans, for Land Pooling Zones, on revenue maps is a major challenge for DDA planners. This requires full cooperation between DDA and the Government of NCT Delhi. This is also applicable in case of implementation of Regulations for Enabling the Planned Development of Privately owned Lands.

DDA will have to ensure no development within floodable areas of Najafgarh and other drains in land pooling areas, by private developers. Thus, the Irrigation and Flood Department of Government of NCT of Delhi needs to identify them, based on 25 year's flood data.

The Master Plans are formulated in consultations with all stake holders in Delhi and National Capital Region of Delhi Plan. The services providing agencies are fully aware about projected population and proposed urban limits. However, it is observed that the agencies plans are not matching with the Master Plans. This leads to delay in the implementation of planned development. The service providing agencies are also forced to divert the services to unplanned areas due to vote bank considerations.

As per the proposed land pooling and development policy the Developer Entities / Consortium shall be responsible for assembly, planning and development. The success of policy will mainly depend upon cooperation between DDA (different department), revenue department, service providing agencies (DJB, TRANSCO, I&F) under State Government and Municipal Corporations (South & North).

The land use enforcement, protection from unauthorized construction and monitoring of acquired land is a major problem in Delhi since MPD 1962. All agencies will have to work and coordinate for success of land pooling policy. Otherwise, delay may lead to unplanned development of fringe areas with like colonies along Vikas Marg (MPD62), Budh Vihar (MPD2001), and Uttam Nagar (MPD2021).

REFERENCES

1. Government of India, (1957), Delhi Development Act 1957 (<https://legislative.gov.in/sites/default/files/A1957-61.pdf>)
2. Delhi Improvement Trust ([https://rgplan.com/delhi/DELHI%20IMPROVEMENT%20TRUST%20\(D.I.T\)%201936.pdf](https://rgplan.com/delhi/DELHI%20IMPROVEMENT%20TRUST%20(D.I.T)%201936.pdf))
3. DDA (September 1962), Master Plan for Delhi -1962 (https://dda.gov.in/sites/default/files/inline-files/MPD-1962_text_report.pdf)

4. DDA, (1962), Work studies for MPD-1962 ([https:// dda.gov.in/sites/ default/ files/inline-files/Work_Studies_VolumeI.pdf](https://dda.gov.in/sites/default/files/inline-files/Work_Studies_VolumeI.pdf); https:// dda.gov.in/sites/ default/ files/inline-files/Work_Studies_VolumeII.pdf)
5. DDA (August 1990), Master Plan for Delhi-2001 (https:// dda.gov.in/sites/ default/ files/inline-files/MPD-2001_text_report.PDF; https:// dda.gov.in/sites/ default/ files/inline-files/Work_Study_Report2001.pdf)
6. DDA (February 2007), Master Plan for Delhi-2021(modified up to 31st March 2021) (http://119.226.139.196/tendernotices_docs/aug2020/Master%20Plan%20for%20Delhi%20-%20202129062021.pdf)
7. DDA, (2005), Work studies for MPD2021 (Copy of the report with author of paper, who also worked on this plan)
8. Census of India Provisional Population Tables, NCT of Delhi Series 8, Paper 1 of 2011 ([https:// censusindia.gov.in/2011-prov-results/prov_results_paper1_ india.html](https://censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html))
9. In The High Court of Delhi at New Delhi, Date of Decision: 08 December, 2015 + LPA 190/2015 & CM No.6083/2015, CM No.6084/2015 & CM No.6086/2015) (<https:// www.google.com/ search?q=2000+AIR+SCW+3386+B.+N.+KIRPAL+AND+Mrs.+RUMA+PAL%2C+JJ.&oq=2000+AIR+SCW+3386+B.+N.+KIRPAL+AND+Mrs.+RUMA+PAL%2C+JJ.&aqs=chrome..69i57.2838j0j7&sourceid=chrome&ie=UTF-8>)
10. DDA (4th July 2018) “Regulations for Enabling the Planned Development of Privately owned Lands” and Standard operating procedure (https:// dda.gov.in/sites/default/files/gazette-notification/New%20Doc%202018-07-20%20%2822072018%29_0.pdf)
11. Ministry of Housing and Urban Poverty Alleviation, Press Information Bureau Government of India, 5th July 2018, Notification issued for Enabling Planned Development of Privately Owned Lands in Delhi (<https:// pib.gov.in/newsite/ PrintRelease.aspx?relid=180419>)
12. NCAER, Jatinder S. Bedi,(2014), Urbanisation, Development and Housing Requirements in the National Capital Region (NCR) (<https:// smartnet.niua.org/content/23bf074e-4a64-4e44-b78a-d56c8478f335>)
13. Pathak Sanjay (2016), Integrating Implementation of Development Plans Redevelopment Strategy- Delhi, ITPI Congress, Udaipur
14. GNCT of Delhi, Economic Survey of Delhi, 2018-19 (<http:// delhiplanning.nic.in/content/economic-survey-delhi-2018-19>)

ANNEXURE- 1

URBANIZATION TREND OF DELHI DURING 1901-2011

No.	Census Year	Total Population	Urban Population	Per cent of urban Population to Total	Decadal Growth (per cent)	AEGR
1	1901	405,819	214,115	52.76		
2	1911	413,851	237,944	57.50	11.13	1.1
3	1921	488,452	304,420	62.32	27.94	2.5
4	1931	636,246	447,442	70.33	46.98	3.9
5	1941	917,939	695,686	75.79	55.48	4.4
6	1951	1,744,072	1,437,134	82.40	106.58	7.3
7	1961	2,658,612	2,359,408	88.75	64.17	5.0
8	1971	4,065,698	3,647,023	89.70	54.57	4.4
9	1981	6,220,406	5,768,200	92.73	58.16	4.6
10	1991	9,420,644	8,471,625	89.93	46.87	3.8
11	2001	13,850,507	12,905,780	93.18	52.34	4.2
12	2011	16,787,941	16,368,899	97.50	26.83	1.92

Note: AEGR means Annual Exponential Growth Rate

Source: Census of India Provisional Population Tables, NCT of Delhi Series 8, Paper 1 of 2011.

National Urban Events/ Innovations

K.K. PANDEY

This section includes national urban events and innovations as reported by Ministry of Housing and Urban Affairs through its facebook and twitter account. The period of second quarter of current fiscal year - July to August 2021 - has seen specific focus on Azadi ka Amrit Mahotsav-celebrating (75 years of independence from the historic year of 1947), Digital connectivity and mobility in urban Sector in India. Various urban institutions are gearing up in these areas for a sector wise follow up. Ministry of Housing and Urban Affairs is taking actions with its institutions and also engaging states and ULBs for further replication. These include:

Central Vista: Iconic Structure - A Landmark for Azadi ka Amrit Mahotsav

As part of 75 Glorious Years of India's Independence, progress & achievements under #AzadiKaAmritMahotsav, 75 events are planned by Government of India. It began on 12th March 2021 and will continue till 15th August, 2022.

In this regard GoI has planned New India Garden on the axis of Central Vista on the western bank of river Yamuna. From this Structure one may view the whole Central Vista. It will stand out as gift of this time to the future. All Indian/ Overseas Citizens of India (OCI) architects/ planners/ designers/ institutions/ organisations were requested to participate individually or in groups in the Challenge to conceive this new identity of our capital city. It will stand out as a gift of this time to the future (September 2021).

Use of Technology

Use of technology includes a platform on innovation exchange (July 11, 2021), overflowing garbage bins and unmanaged waste picups and seven point actions taken by Central Public works department of MoHUA to adapt and show case innovations for wider dissemination.

1. The CiX (City Innovation Exchange -NIUA) is a unified open innovation platform to accelerate discovery and validation of innovative & technologically advanced solution for Indian Cities.
2. Five hundred thirty one registered solution providers are helping the 100 Smart Cities with telemedicine, smart mobility, intelligent

water and waste management, disaster mitigation, etc. (For more information please visit <https://cityinx.niua.org>).

3. The smart city Bhubaneswar has initiated unified online city portal to resolve nearly one million citizen grievances through a complete automated system with city Wi-Fi, #publictransport, Odyssey Smart Card, city events, #municipal services and more (July 11, 2021).
4. The portal is a one-stop solution for all citizen's needs! Over 300 smart solutions worth Rs. 9,900 crores implemented, cities are able to predict and plan for the future (July 5, 2021).
5. Varanasi Smart city is solving overflowing garbage bins and unmanaged solid waste pickups with #data and #tech. The solution could potentially lower operating costs by 10-15% and improve asset and resource utilization. This will also improve quality of waste pick-up service and citizen satisfaction. The volume of urban waste is projected to rise from the present 62 million tonnes in 2020 to about 150 million tonnes by 2030, and #smart solutions are vital for cost-effective management.(July 11)
6. Unified online city portal <http://Bhubaneswar.ME> has redressed >10 lakh citizen grievances through a complete automated system. It integrates city Wi-Fi, #publictransport, Odyssey Smart Card, city events, #municipal services and more. The portal is a one-stop solution for all citizen's needs! Over 300 #smartsolutions worth Rs. 9900 crores implemented, cities are able to predict and plan for the #future!#smartcitiesmission #buildingcitiesforpeople, <https://youtu.be/oAvvNOh0Ojk>

CENTRAL PUBLIC WORKS DEPARTMENT (CPWD)

CPWD -GoI has initiated several digital applications which make a remarkable change in management of administration and finances (July 5, 2021):

1. Online Contractors Enlistment management System which was launched for making the complete registration process online for providing better ease of business to the vendors, faster processing in a more transparent manner.
2. Digital reforms in CPWD also include implementation of Electronic Measurement Book (e-MB) and 'Bhavishya', an online Pension Sanction and Payment Tracking System resulting in transparency of actions and accountability and better service availability.
3. Enterprise Resource planning is initiated with a mission to

accomplish by March 2022 to radically transform functioning of propelling high growth trajectory by improved transparency, accountability, faster and effective decision-making and improved client interfaces and satisfaction.

4. CPWD accordingly has achieved 100 per cent digitisation of payments facilitating ease of doing businesses.
5. CPWD has started 36 online modules so far to extend E-Sewa all over India to improve efficiency.
6. In order to have continuous collection of all the dues /receipts through digital mode, CPWD has started use of Point of Sales (POS) machines across India in all offices of L&DO, Directorate of Estates, Printing, CPWD etc. under MoHUA in collaboration with accredited banks
7. Further Smart Imprest Cards were also introduced by CPWD in more than 1200 establishments in partnership with accredited banks for digitisation of all contingency payments.

Climate Smart Delivery of Services

Odisha as part of activities under AMRUT (Atal Mission for urban Rejuvenation and Transformation) and Delhi Metro rail Transport has shown way for more attention of climate smart delivery of municipal services. These steps include India's first case of 24x7 delivery of water and full connectivity to tap water whereas DMRC is extending network to reduce carbon emission:

1. Odisha declared the ancient holy city of Puri as India's first city to have the distinct honour of 100 per cent tap connections with 24x7 water supply in every household and facility to DRINK FROM TAP (July 26,2021). It will pave way for larger replication and save water and use of plastic (400 tons plastic in Puri alone).
2. Sixteen cities of Odisha, including capital Bhubaneswar, have achieved 100% water tap connections. Remaining 98 cities are planned to get this by December, 2022. State has leveraged Rs. 1,394 crore allocation for water supply under AMRUT for this purpose.(July 26, 2021)
3. With opening of 1.5 km link, DMRC has over 350 kms of own and 392 kms overall operational network (includes Noida-Greater Noida and Gurugram) in Delhi and NCR (national Capital Region). With 66 km ongoing and over 42 km under plans, it is poised to cross 500 km mark.

4. Hon'ble PM launched driverless operations of Metro on Line-8 few months back. Pink line with 58.4 km is likely to become driverless by September end. With that DMRC will have 96 km of network driverless, which is largest anywhere in the world.
5. Sixty five ponds and lakes to be rejuvenated in #Chennai #SmartCity through multiple water bodies restoration works. This will provide water recharge of nearly 943 crore litres of water. #smartcitiesmission #predictivemodelling .This quantity amounts 1/3rd of Chennai's overall water security requirement. With 15 such water body restoration projects completed and 23 more ongoing, Smart Cities are addressing water scarcity and ground water recharge in Urban Areas.

#easeofliving #buildingcitiesforpeople <https://youtu.be/BZXerGx7A30>

Human Resource for Planned Urbanisation

KUSUM LATA

Development is inextricably linked to urbanisation, which is a significant driver of economic growth. As India approaches the tipping point of shifting from a predominantly rural to an urban culture, the focus must be on securing the best economic growth possibilities for all sections of the population. The change is most likely to result in uncontrolled crisis and to avoid such situations; we must promptly and considerably increase the country's current cumulative capacity of urban planning and development.

Capacity building in the domain of urban planning is a rigorous but critical task which every concerned organizations must undergo. The NITI Aayog's report on "Reforms in Urban Planning Capacity in India" September 2021 effectively highlights the concerns of the Urban Planning. It enlisted few challenges as: rapid urbanization; governance of towns, cities, urban agglomerations; lack of multidisciplinary teams and human resources in Urban Planning; and an insufficient number of urban planners in state planning mechanisms. According to UN-Habitat's 'World Cities Report,' India has a dismal ratio of 0.23 accredited planners per 1 lakh inhabitants, compared to the United Kingdom, where the proportion is as high as 38. NITI Aayog's report highlighted the Town and Country Planning Organisation's estimate of 12,000 posts of town planners, required in the State Town and Country Planning departments. The current scenario shows that only 50% of sanctioned Town Planning posts (which is less than 4000) are occupied. In the country, there are just 7000 certified town and country planners, despite the fact that there are 7935 towns and cities, 640 districts, more than 6 lakh villages. The availability of urban planners, as well as their engagement in urban planning and development, is crucial for planned urbanisation.

The report recommends that qualified planners should be trained to replace vacant entry level positions in town planning. Regarding qualification for entry level Town Planner's post, Niti Aayog recommends either (a) Postgraduate Degree (M.Tech. or M.Plan.) in town/ city/ urban/ housing/ country/rural / infrastructure/ regional/ transport/ environmental planning/ any other specialization approved by AICTE from a recognized Institute/University or (b) Bachelor Degree (B.Tech. or B.Plan.) in urban and regional planning from a recognized university or institute with three years' experience in the field of urban

planning, housing and real estate, rural planning, regional planning, infrastructure planning, transport planning/ environmental planning with the Central/ State Governments/ UTs, universities/recognized research institutions/ public sector undertakings/ Semi-Government/ statutory/ autonomous organizations/ private sector companies or academic institutions.

Planning as a profession is not widely known, rather it is unknown at the secondary level of school, where a student plans to choose course/stream favorable for his/her future job options. Despite its multidisciplinary nature, Urban Planning is a specific academic discipline and profession, which should widely be promoted. There is a lack of professional awareness about planning as a profession or discipline among the school children at the secondary or senior secondary level. Being a lesser-known field, many high-school students usually lose the opportunity to learn about the discipline and, as a result, they don't consider it as a career option. According to Rodriguez's findings, high-school teachers, career counselors, students, and their parents, and the general public are all unfamiliar with the urban planning profession. (Rodriguez, 2009). Even design-oriented physical planning and policy-oriented socio-economic planning, that result in urban change are hardly acknowledged as products of planning. Danilo Palazzo, Leah Hollstein & Stephen Kofi Diko argue that University urban planning programs and concerned departments responsible for developing Design and Planning Language Programs (hereafter DPLPs) – as career programs of urban planning – to interact with high-school students, their counselors and teachers, and local design and planning professionals to raise awareness of different career paths related to urban planning (Danilo Palazzo, 2020).

In the decade of entrepreneurship, roles and career advancement necessitate different responsibilities and skillsets. Planners with analytical skillsets work in a wide range of roles and sub-sectors, from policymaking, planning, and management in urban development, to academics and research. Planners can enter in entrepreneurship with the sub-fields like Housing; or into Planning consultancy and Research (Bollens, 2003). Planners will undoubtedly benefit from a variety of entrepreneurial talents, such as networking, negotiating, and managerial ability and contribute to society efficiently.

References

- Aayog, N., 2021. *REFORMS IN URBAN PLANNING CAPACITY IN INDIA*. [Online] <https://www.niti.gov.in/sites/default/files/2021-09/UrbanPlanningCapacity-in-India-16092021.pdf>

- Bollens, J. D. G. a. S. A., 2003. *Journal of Planning Education and Research*. [Online] [https://www.researchgate.net/profile/Scott-Bollens/publication/249694584_Urban_Planners_Skills_and_Competencies_Are_We_Different_from_Other_Professions_Does_Context_Matter_Do_We_Evolve/links/02e7e5212b57dec2a4000000/Urban-Planners-Skills-and-Competencies-](https://www.researchgate.net/profile/Scott-Bollens/publication/249694584_Urban_Planners_Skills_and_Competencies_Are_We_Different_from_Other_Professions_Does_Context_Matter_Do_We_Evolve/links/02e7e5212b57dec2a4000000/Urban-Planners-Skills-and-Competencies-.).
- Danilo Palazzo, L. H. & S. K. D., 2020. *Urban Planning as a Career Preference for Students: Efforts to Improve Awareness about the Profession*. [Online] https://www.tandfonline.com/doi/pdf/10.1080/02697459.2020.1782056?casa_token=IW1sYIAFF2sAAAAA:DukZ0coHZkZ1hdp8PNhqIUpqvANtMrD314ytkPLLCBSX2SIwTo6iJRla7msDmqElkoL19FK73SLAvg.
- Rodriguez, M. A., 2009. *Planetizen*. [Online] <http://www.planetizen.com/node/40827>

From the States: The Revenue Potential of Carbon Credits for City Agencies

SACHIN CHOWDHRY

Trading of carbon credits emerged as an incentive for implementing 'Clean Development Mechanism' (CDM) emphasized under Kyoto Protocol. One carbon credit permits any entity to emit equal to 1 ton of carbon dioxide. So the entity reducing its Green House Gas (GHG) emission earns carbon credits to the extent it is able to reduce its GHG emissions, which it can sell in a carbon market to another entity which is emitting more than the permissible limits.

India's carbon market is one of the fastest growing markets in the world and had already generated approximately 30 million carbon credits by 2020. Bureau of Energy Efficiency notes that "carbon markets have been successful in reducing GHG emissions by setting a limit on emissions and enabling their trading. It puts the estimates for India's gain to '5- 10 billion dollars from carbon trading'.

City level agencies in India have significant achievements to show in this area. Some of which are mentioned below:

Delhi Metro Rail Corporation (DMRC)

DMRC earned a commendable Rs. 19.5 crores from the sale of 3.55 million carbon credits, collected between 2012-18. It had registered itself with the United Nations (UN) under CDM in 2007. The first CDM project of DMRC was based on the regenerative braking technology, which earned it Rs. 9.55 crore. Its second project under CDM was based on the principle of Modal Shift. The essence of this project is that the carbon footprint of people travelling by metro is much less than that of the same journeys performed by other modes of transport.

A Press information Bureau release mentions that DMRC has so far registered four projects with the UN under CDM. The other two projects are Mass Rapid Transit System (MRTS) Program of Activities which provides an open platform for different agencies engaged in MRT projects and the DMRC Solar Project which is about the initiative of solar PV roof-top installations. DMRC is now providing consultancy services as well, since 2015, to other metro systems in India to enable them to earn carbon credits from their projects.

Indore Smart City

The Special Purpose Vehicle (SPV) set up under Smart Cities Mission of the government, Indore Smart City started working on carbon credits in 2017. In the first phase it registered three projects- (a) Wet Waste Management (composting); (b) bio- methanation; and (c) solar energy production. It generated 1.70 lakh carbon credits from these between October 2017 to June 2019, which earned the Municipality Rs. 69 lakh. In the process it claims to have become the first ULB in Asia to tap carbon finance. In the second verification (July 2019 to December 2020) of the same projects it earned Rs. 8.34 crore. Now it has registered new projects under CDM such as sewage treatment plant, new decentralized composting, plastic recycling, led lighting etc.

Like DMRC, the Indore SPV too has chalked out a plan to provide consultancy services to other ULBs, Rural Local Bodies, Smart Cities, industries as well as other government agencies. It has planned to provide consultancy services on revenue sharing basis, where all the expenditures would be incurred by it, which would be subsequently adjusted in the revenue realization from the trading of carbon credits. The agencies availing the consultancy would be responsible for providing data in the appropriate formats, which would be submitted to the verification agencies.

Chennai

In 2021, Chennai Municipal Corporation along with Chennai Smart City too has identified projects which can be registered for earning carbon credits. It had been taking several green initiatives but thought of registering now. One of the initiatives to be registered first is Miyawaki Urban Forest. The Corporation intends to use the earnings from the sale of carbon credits for supporting other city infrastructure projects. The other projects which it is planning to register are bio-methanation plants, tree planting projects, biofertilizer projects, electric vehicles and energy efficient lighting. The Corporation is looking for consultants to set up the carbon credit framework.

Mumbai

The Brihanmumbai Municipal Corporation could have been the first ULB to have earned carbon credits, had its project delivered. The ULB had claimed to have earned Rs. 24.51 crore in September 2009 for the scientific closure of the Gorai garbage dumping ground. By 2015, it expected to receive Rs. 72 crore from carbon credits. It received Rs. 24.51 crore from Asian Development Bank (ADB), with whom it had signed an Emission Reduction Purchase Agreement in 2008 for the

sale of carbon credits generated from the closure of the Gorai dump. However, on verification it was found that the dumping ground could reduce the carbon emission only to the tune of 14,477 Carbon Emission Reductions (CER) against the earlier estimation of 2,74,500 CERs. The ADB then asked the BMC to return the amount, BMC purchased CERs from the open market by spending Rs. 11.23 crore and closed the contract with ADB. In fact, the consultant to the project- Infrastructure Leasing & Financial Services (IL&FS) had overestimated the GHG reduction overlooking the composition of the waste.

Junagadh

Junagadh Municipal Corporation is expecting to earn carbon credit in 2021-22 from its Municipal Solid Waste Management Project. The bio methanation plant which processes green waste, generates fuel that can be used in vehicles. The plant has the capacity to use 15 ton green waste to generate 500 kg of gas, which can be used as fuel. The corporation is planning to start city bus service which may use gas from this plant for fuel.

Approaches

The awareness about the revenue potential from the sale of carbon credits has long been there in the country. There have been several approaches and more significantly both in the public sector as well as in private sector. While companies like Suzlon Energy and Shree Renuka Sugars registered their projects under CDM from the private sector, DMRC in the public sector took the initiative for the same. Jindal Steel Works had been awarded 5.4 million carbon credits in 2010-11. By June 2011, more than 200 entities had applied for registration for availing carbon credits.

While these were entity led approaches, the Government of Gujarat launched a state led initiative. A new Department of Climate Change was created in 2009 to act as a bridge between the government and the society, as well as within the government. One of the mandates of the Department is 'to promote availing of benefits of CDM by earning CERs through public and private sectors'. Another mandate of the Department is 'to make suggestions and provide guidance on disposal of solid waste, sewerage waste and medical waste in the context of climate change'. Similarly, Gujarat Urban Development Company, a government nodal agency, got 75 of the total 159 ULBs in 2009 to set up compost plants.

Conclusion

Carbon credits could be billion dollars opportunity for the

Indian companies/ organizations both in the public sector as well as in the private sector. ULBs too have gains to make as many of their responsibilities like solid waste management, sewerage management, street lighting etc. can earn them millions over the years. However, sincere efforts need to be put into it, otherwise it may backfire like in the case BMC.

As mentioned above, Gujarat had got 75 ULBs in 2009 to set up the compost plants, but it was in 2021 that Junagadh Municipal Corporation could aim at earning those carbon credits. Though starting much later, Indore became the first city government in the country to earn them through their projects. On the other hand, BMC, which had also started its project earlier had to pay back ADB due to over-estimations made by its consultant, IL&FS. Therefore, care needs to be taken to ensure that proper data is collected and information is furnished in appropriate format, once the project has been identified and registered under CDM.

Government Initiatives to Strengthen the Street Vendors of India

AMIT KUMAR SINGH

During the COVID-19 pandemic when lockdowns and restrictions were enforced, the Ministry of Housing and Urban Poverty Alleviation (MoHUA) took several initiatives under the National Urban Livelihood Mission to address the livelihood concerns of the urban street vendors by facilitating. These initiatives facilitate access to institutional credit, suitable online market space, social security, etc. Some of the recent initiatives are as follows:

SVANidhi se Samridhi

- Street vendors (SVs) in India sell various products ranging from ready-to-eat street food, tea, vegetables, fruits, cloth and handloom, beauty and fashion accessories, footwear, artisan products, etc., and also provides various services like barber shops, cobblers, paan shops, laundry services. However, during the Covid-19 induced lockdown vendors had severely affected across India. To help the street vendors and provide them new opportunities to move up the economic ladder, Ministry of Housing and Urban Poverty Alleviation, GoI has launched the PM SVANidhi scheme in June 2020. Under the scheme government is providing a loan of Rs 10,000 as working capital to street vendors to restart their businesses which have been hit by the Covid-19 pandemic. The scheme plans to extend the microcredit to over 50 lakh street vendors across India, which is the estimated number of the hawkers as per various urban local bodies.
- The Central Government envisages that lenders (including Banks, non-banking finance companies, and microfinance institutions) will mount a larger outreach under the PM SVANidhi scheme. Over the last one year, lenders received a total of 42,27,999 applications under the PM SVANidhi scheme.
- As per the recent data of Ministry of Housing and Urban Affairs (MoHUA), the ratio of the number of loans sanctioned and disbursed as a percentage of the total applications was only 58 per cent. The ratio of the number of loans disbursed to loans sanctioned stood at 84.41 per cent. In total, the loans approved and disbursed by banks stood at Rs. 2,457.85 crore and Rs. 2,059.46 crore, respectively.

- According to data, the average days to sanction a loan to SVs were 20 days. It is important to note that a large number of female street vendors have taken loan under the scheme. About 40 per cent of loan has been disbursed to female Street Vendors.
- It has been found that majority of the street vendors have preferred public sector banks over private financial institutions for PMSVANidhi loan because of their low interest rates and also because they have branches spread out in various parts of the country.

Convergence of PM FME (Prime Minister Formalization of Micro food processing Enterprises) Scheme with DAY NULM

- Deendayal Antayodaya Yojana - National Urban Livelihoods Mission (DAY-NULM) is one of the most important missions of Ministry of Housing and Urban Affairs (MoHUA) which aims to remove poverty and vulnerability in urban areas through creation of community based organisations like SHGs at the city-level. The mission provides financial and handholding support to SHGs and Federations through the Self Employment Programme for setting up of micro-enterprises. As per the MoHUA, at present 5.36 lakh SHGs of micro-enterprises have been formed under DAY NULM.
- Similar to MoHUA, Ministry of Food processing Industries (MoFPI) is implementing PM Formalization of Micro food processing Enterprises (PM FME) Scheme. Main objective of the scheme is to enhance the competitiveness of existing micro-enterprises processing in the unorganized segment of the food industry and support FPOs, SHGs and Producers Cooperatives along with their entire value chain.
- As per the MoHUA, at present 5.36 lakh SHGs of micro-enterprises have been formed under DAY NULM and many of them are involved in food processing sector. Therefore, both Ministries decided to extend the benefit of PM FME scheme to SHGs/ Federations in urban areas leveraging the State Urban Livelihood Missions (SULMs) under DAY-NULM. Out of these, approximately 32,000 SHGs have been identified by States/ UTs to be involved in Food Processing activities.
- Both ministries have agreed to work together to ensure that SHG members are able to avail the benefits of the scheme, especially in the component to support SHGs. The convergence guidelines for implementation of different components under PM Scheme assigned specific roles to the both ministries.

- DAY-NULM through SULMs and SNAs will coordinate to extend support to target beneficiaries. SULMs would provide hand-holding support to identified SHGs/ Federations and their members in preparation of DPRs, getting bank loans, necessary technical training, etc. Purpose is to enable them to access benefits under various provisions of PM FME Scheme including the Capitan investment.
- MoFPI will support MoHUA in carrying out the functions by extending support to submit applications, giving seed money, building the capacity of DAY-NULM Staffs, establishing incubation centres to facilitate common services and other assistance, as per the provisions of the PM FME.
- The State Level Approval Committee set up for monitoring the components of PM FME Scheme will also monitor various components for convergence listed under the guidelines. The Monitoring Committee will also be represented by respective State Mission Director of DAY-NULM.
- The District Level Committee will be headed by District Collector and also include the authorized representative of the concerned Urban Local Body(ULB)
- MoFPI and DAY-NULM will review the status and implemented modalities from time to time. Any revisions of the guidelines may be jointly reviewed and agreed upon. The States/UTs have to prioritize activities for supporting the SHGs under DAY-NULM as per the guidelines of schemes.

MoHUPA signed MoU with food aggregator Zomato to provide online market to Street Food Vendors

- Under the SVANidhi scheme, the Ministry of Housing and Urban Affairs has taken an innovative step to upscale the businesses of roadside street food vendors. The Ministry has tied up with Indian restaurant aggregator and food delivery start-up Zomato to provide roadside vendors an online market.
- Zomato has over 200,000 restaurants on their platform for food delivery and over 1.5 lakh delivery partners across about 500 cities in India. With this, government hopes that through the Zomato online platform and last-mile delivery services, street vendors would be able to reach a much larger customer base. In the past, the government has also signed a MoU with Swiggy for the PM SVANidhi Scheme now this programme is being implemented in 125 cities of India.

- Till January 2021, SVANidhi scheme had received loan applications from 147,000 street food vendors. From these, in the first phase alone, Swiggy has taken onboard about 36,000 vendors to whom the loan has been disbursed in 125 cities, potentially making this initiative by Swiggy and MoHUA the largest of its kind not just in India, but globally.
- Initially, Zomato will work with 300 street food vendors across six cities- Bhopal, Raipur, Patna, Vadodara, Nagpur, and Ludhiana. Based on the popularity of street food in these cities, Government believes that there is an immense growth potential for these street vendors in the online food delivery sphere.
- The Ministry has also roped in the Gurugram-based firm to train the street vendors in food safety, hygiene, and advanced packaging practices to ensure these vendors are fully equipped to serve through Zomato.

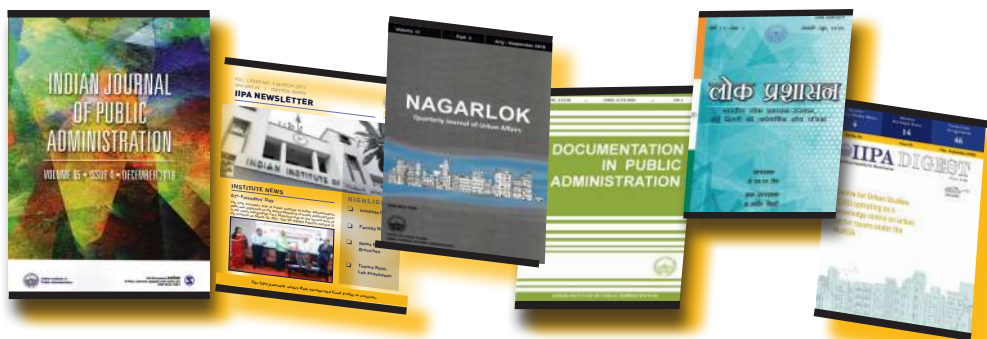
References

Press Information Bureau Government of India, Ministry of Housing & Urban Affairs, <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1758633>

<https://mohua.gov.in/cms/about-day-nulm.phpa>

<https://pmsvanidhi.mohua.gov.in/>

<https://www.thehindubusinessline.com/money-and-banking/step-up-working-capital-loans-to-street-vendors-rbi-nudges-psbs/article34812258.ece>



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