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The Concepts of Green and Hygienic Communities and Buildings

A.K. JAIN*

ABSTRACT

The Covid -19 pandemic has affected the life, health and livelihoods of millions, especially the poor, migrants, children and women. This needs revisiting the concepts of housing and community planning, which focus on public health and hygiene, livelihoods and composite redevelopment. The buildings by themselves should be able to detox the air, function as water capturers, energy generators and promote waste recycling. The paper suggests a resources pyramid and morphotectonic strategies for green and hygienic communities and buildings.

Keywords: *Jobs, Air Pollution, Building Materials Pyramid, Urban Services, Circular Construction*

Covid-19 in India has caused massive disruption to the economy and the livelihoods, especially of the working classes. Their income sources have vanished, and the lockdown has been a cause of severe misery for women and children. It is estimated that the Covid-19 pandemic has resulted in loss of 200 million jobs of daily wagers and many small businesses have shut down. Most of them live in slums, lack space, sun, air, clean water and sanitation. The Covid pandemic has exposed them to the epidemiological, transitional, health, and other vulnerabilities. This calls for a systematic analysis of planning of built environment, building design and construction towards creating a healthy, resilient and anti-frugal living and workspaces. These should be adequate to avoid transmission of the epidemic. The services – water, sanitation, drainage, electricity and recycling of wastes have to be hygienic.

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India's 7936 cities and towns, having a population of 377 million, generate 60 per cent of GDP and 70 per cent of the jobs. The cities have 1.39 crore slum households, mainly inhabiting the migrants, who work as domestic servants, labourers, vendors, construction labourers, etc. They live in crowded, cramped and congested slums. According to the National Sample Survey Office (NSSO) 76th round (2018) 62 per cent urban houses have one room or less. 40 per cent do not have access to tap water and nine per cent are without washrooms/latrines. This makes it almost impossible to abide by the norms of social distancing, self-isolation and regular hand washing.

Healthcare facilities are strained with shortages of medicines, hospital beds and oxygen cylinders. The multitude of people who flocked to the *Kumbh Mela* and election rallies endangered the public health. The pandemic compounded by the polluted environment disrupted the people's life to a gargantuan extent. Climate change, loss of biodiversity, deforestation and poor infrastructure services add salt to the wound, along with long term impacts on the economy, human health and livelihoods.

In Auroville, the Khzuhuveli network believes that *'we live in a world that has understood the role of economy all upside down. Instead of economy serving society and all of life for that matters..... education, culture, health, knowledge, art, religion, polity We have inherited serving the economy that is dysfunctional, a parasitic system that has lost its soul and its way'*. Bill Gate has stated that the world needs to use green cement and green steel in future to achieve zero emission. *'we must recognise that along with dynamism and growth, we need resilience and security- or else the next crisis could be the last'*.

This reminds of 1947 when about 50 million refugees crossed into partitioned India. The Government of India created the Ministry of Refugees (later Ministry of Rehabilitation) which provided immediate relief – food, shelter, medicines, water and sanitation facilities. Simultaneously, livelihoods – kiosks, shops, work sheds, small scale/ household industries and homes were provided to the refugees. The refugees in Delhi were resettled in 36 rehabilitation colonies with about 70,000 plots of 60 to 80 sqm, besides 15,000 shops.

Healthy Environment

According to UN Habitat and World Health Organisation (2020), *if the purpose of planning is not for human and planetary health, then what it is for?* The concern for human health and well-being is the focus of planning of the built environment.

The public health depends largely on a pollution free environment with adequate services, housing and workspaces, free from Sick Building Syndrome (SBS). The indoor and outdoor environment should not cause rheumatic complaints, fever, fatigue, respiratory diseases, asthma, etc. due to microbial, allergy, toxins, dust and mites. The spaces should be comfortable with proper ventilation, sun and temperature control.

The determinants of health and well-being in human habitation encompass climate stability, global eco-system and biodiversity, that converge at the people, lifestyle, community, local economy, work, natural and built environment.

Healthy and sustainable development involves reducing emissions from transport, power and industries, incineration of wastes, dust, etc. Such a city is planned on the principles of compact and dense development, intelligent traffic management, transport demand management, efficient, comfortable and non-polluting public transport, bicycles and Non-Motorised Transport (NMT) and walk-to-work. The urban plans should incorporate low carbon transit system, zero net energy buildings, black-chain technology of waste management and smart utilities, intelligent and smart systems.

According to the Intergovernmental Panel on Climate Change (Climate Change Report, 2014, WG III), urban areas account for 67 to 76 per cent of global energy use and 71 to 76 per cent energy related CO₂ emissions. The critical aspects of spatial planning comprise:

- Density, Floor Area Ratio (FAR) optimisation, compact and integrated development;
- Land use (mix of activities, population), inclusiveness;
- Connectivity, walkability and traffic density;
- Accessibility for all by public transit, cycle, walking; and
- More resilient, healthy environment, buildings and services.

Location is most important for the livelihoods of the informal sector workers who cannot afford to lose time and money in commuting. As a principle, the distance between work and living should be below 15 minutes by public transport, cycle or walk, that is 10 km, three km, and one km respectively. In view of recent work from home trend due to corona lockdown, it may be mandatory to provide at least half of the built space for work-life integration and mixed land use. This will save the need to commute.

Compact and Dense Housing

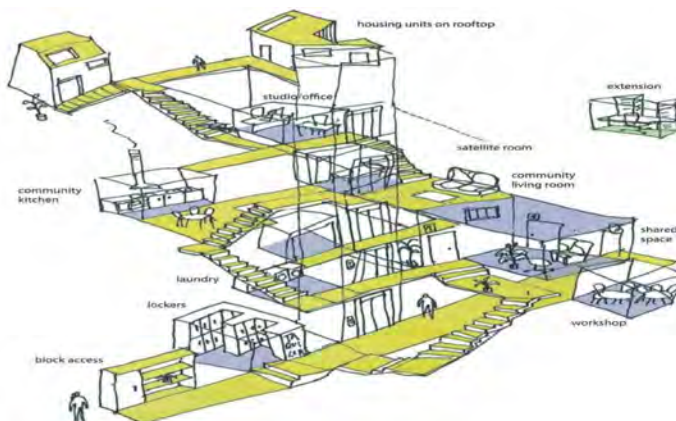
The Niti Aayog projects that per capita residential space in India should increase from the present 5.9 m² to 35 m² in 2047. This means a revision of spatial standards of housing along with an optimally compact and dense urban pattern. Even the poor now realise that a house is at least for 50 years and refuse to have pigeon-hole dwellings, as seen during last five years in response to Delhi Development Authority housing schemes.

Prof. Richard Sennett of the Massachusetts Institute of Technology (MIT) states that *"on the whole density is a good thing. "Denser cities are more energy efficient."* London School of Economics in its study *"Experiencing density living in a denser London"* (March 2020) found that *'surprisingly residents' satisfaction with their housing has little relation with their aesthetic quality. The degree of density also does not correlate with how much they like their homes. Rather, a building's internal design and comfort are most important.'*

The optimum density is important for efficient use of land with minimum building footprint, especially for the projects of in-situ rehabilitation of slums.

In view of work from home trend, apropos of the Covid lockdown, it is necessary to adopt mixed use in place of single use zoning. The housing schemes need to be more inclusive and a catalyst in enhancing the relationship between city and street children, homeless, destitute and beggars. In practical terms, it may be mandatory that in all redevelopment schemes, including Transit Oriented Development

**Fig. 1: Mixed Land Use for Work-Life Integration
(Work from Home)**



Source: www.npr.org

The built environment not only shapes bodies and brains, but also behaviours. There is a close relationship among the environment, behaviours, architecture and spiritual traditions. The green mind theory centres on simple idea that the brain comprises two parts – red and blue. The red brain is ancient, fast, involuntary and the driver of behaviours. The blue brain is more recent, slower, voluntary and driver of rest and digestion. The red brain reacts and directs the Sympathetic Nervous System (SNS). The blue brain is calming, directing the Parasympathetic Nervous System (PNS). A balance of blue and red is ideal for health and happiness. This can be obtained by three types of engagements, viz. nature, social and the crafts.

The studies show that the blood pressure, obesity, gastrointestinal and cardiovascular diseases are reduced by half in the areas with parks and pavements, where people walk more, exercise and do regular physical activity outdoor. In terms of urban design, it is necessary to achieve harmonious balance between built and natural environment (See Figure 2).

Fig. 2: Health vis-à-vis Planning of Human Habitation



Source: UN Habitat and WHO (2020) Integrating Health in Urban and Territorial Planning (2020) & Barton and Grant (2006)

A healthy built environment depends upon integrity of land uses with adequate open spaces and protecting living and working areas from hazardous and polluting activities, such as, industry, heavy traffic, wholesale trade, etc. The land use plan and density pattern should strike a balance between the aspects of crowding, health and traffic generation, besides conserving the greenery.

According to the recommendations of the World Health Organization (WHO), the bed population ratio to be achieved is five per thousand persons, whereas in 2011 it was 2.55 in Delhi. As such, the number of hospital beds needs to be doubled to about 115,000.

This necessitates development of new hospitals, enhancement of Floor Area Ratio and rebuilding of the old hospitals, health centres, nursing homes, dispensary, *mohalla* clinics, path labs, etc.

Green Building

A green building is defined as the one which is environmentally responsible and resource-efficient through its design, construction, operation, maintenance, renovation and demolition. It integrates the following:

- Sustainable site planning;
- Energy conservation and net-zero energy with natural ventilation and passive design;
- Reduced air and water pollution; and
- Sustainable building materials with recycled and renewable contents and low emissions.

A healthy building is free from Sick Building Syndrome (SBS) caused by microbial, allergy, toxins, dust and mites. According to the Covid 19 Guidelines for Air-conditioning and Ventilation, issued by the CPWD (April 22, 2020), low temperatures (7-8^o C) are optimal for air-borne influenza virus survival, which decreases progressively at temperature 20.5- 24^o C. Covid-19 survives for 14 days at 4^o C, one day at 37^o C and 30 minutes at 56^o C. As such, room temperature should be set at 24^o to 30^o C, humidity of 40 per cent to 70 per cent with fresh air flow to inactivate aerosol droplet virus. As AC ducts are potential carriers of virus and bacteria, the system should be self-cleansing and sensor controlled.

In view of impending warming, air pollution and water shortage, it is time to conceive zero net-energy buildings, which use sustainable building materials and detox the air, work as bioreactors and energy

generators. They provide water loops for its conservation and rainwater, provide space for pneumatic, underground scrapers for waste treatment. They multiply the space and promote urban agriculture, blurring the borders between urban and rural. The design of building adopts biomimicry, the emulation of nature's model, processes and systems, that is clean and organic. Like food pyramid, building materials pyramid can be a new way of building design, based on the use of materials with least environmental footprints.

Building Resources Pyramid

It is projected that India produces 62 million tons of municipal waste annually. In the up-cycle scenarios, the building materials have to be sustainable, local, recycled, organic and affordable. Ways and means have to be promoted whereby the urban waste of one industry feeds another, described as circular economy. Such measures accord priority to efficient disposal and reuse of wastes and adopting zero waste. This involves a new design thinking based on reversible solutions, the reuse and recycling of building components and wastes. Life Cycle Analysis (LCA) and Life Cycle Costs (LCCs) are the basis for absolute sustainability and green transition with the following principles:

- Prioritise renewable, bio-based materials over non-renewable materials;
- Avoid environmentally harmful materials and construction processes;
- Use green energy sources;
- Ensure that such resources are included in the standards, specifications, technologies and biological circuits; and
- Incorporate the social and cultural dimensions of green transition.

Akin to the concept of food pyramid, the building materials pyramid shows the environmental impact of various materials (See Figure 3).

Construction and Demolition Waste Recycling

Construction is one of the largest industries in India. Construction involves generation of construction and demolition wastes. It is estimated that 350 litres of water is consumed for one sq. m construction. Products like Rhino Brick (Hyderabad) are mixing 20 per cent plastic shreds and 80 per cent sand and dust to make bricks, eco brick, large format hollow bricks and interlocking bricks. Paper and wood can

Fig. 3: The Building Materials Pyramid



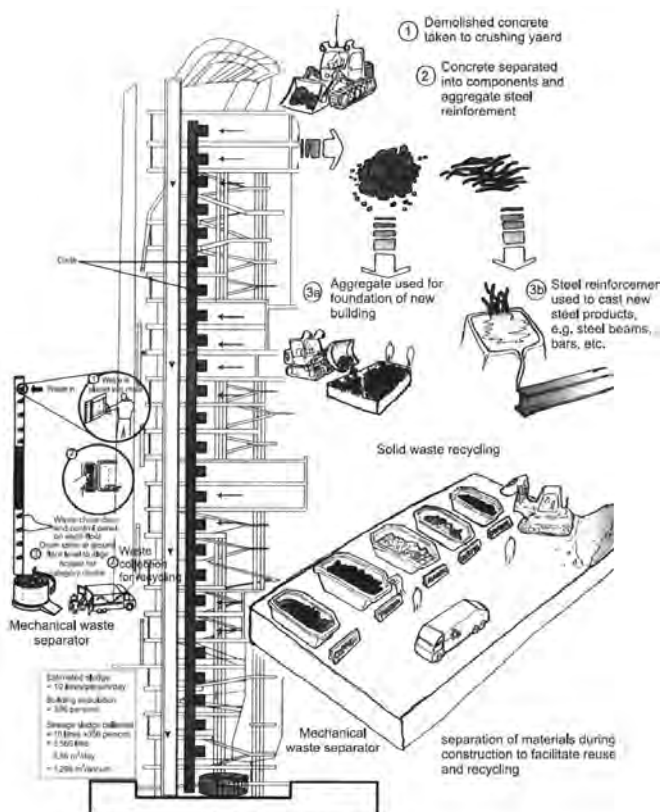
Source: Cinark, Kdak (2019) Circular Construction Materials, Architecture Tectonics, Umwelt, Udgivet, Copenhagen, Denmark.

be recycled to make tiles. Non-degradable plastic waste, like bottles, polyester bags, packings, etc. are converted into colourful tiles.

Building waste needs to be disposed of and recycled as per the Construction and Demolition Waste Management Rules, 2016. Recycled products reduce the demand for new materials. Such materials include reused brick, steel, concrete, gypsum, sulphur, wood alternatives, reconstituted wooden pallets, combination of straw, bamboo, lime tiles wood waste and cement for wall, roof and floors with insulating felts. The Construction & Demolition (C&D) waste should be segregated at site and exclude the inert, chemical or hazardous wastes. such as oil, paint, batteries and asbestos. Recyclable wastes, such as plastics, timber, steel, aluminium, bricks, wood, concrete, etc. can be reused in building construction (Refer Figure 4).

There are several examples of successful use of C&D wastes in new

Fig. 4: Concrete Recycling, Editt Tower, Singapore



Source: Hamzah TR and Yeang, Ken, Ecology of the Skyscrapers (2001), Bawttle McCarthy, Consulting Engineers.

buildings, e.g. Editt Tower, Singapore and New Moti Bagh Government Housing Complex, New Delhi. C & D waste has also been successfully used for paving of roads, footpath and landscaping.

It is time to make it mandatory that all new constructions should use at least 25 per cent of recycled materials. It is also necessary to think of the vertical waste scrapers in place of large overflowing landfill sites and their environmental hazards. Vertical waste scrapers can act as green filter, air purifier, for O₂ enrichment and Suspended Particulate Matter (SPM).

The waste collection modules separate the leachate and treat, recycle and compost the wastes. The gasification process for organic wastes uses an oxygen starved high pressure and high temperature environment to kill the virus and germs and to remove impurities before full combustion. The decomposition of organic wastes produces methane gas, which can be used as fuel. Containerised processing allows emission free composting on site.

Buildings as Respirational System

With critical levels of air and water pollution in the cities, there is a need to revisit the concept of building services and examine whether these can be designed as detox tower and as bioreactors. Buildings can be designed as huge air-purifiers, which transform the pollution and exhaust fumes into clean air by water algae and sea sponge. These contain organisms that convert pollution and exhaust fumes into oxygen. The building can be designed for the chimney effect that cools the air entering at its base and flows out at the top, cooling the whole structure.

The Urban Nebulizer, a device to aid breath for an asthmatic, takes temperature inversion, smog and polluted air of atmosphere and diffuses it by smokestack, combined with water vapour.

A building designed as a detox tower cleans air through its outer skin and internal detox loop. The detox tube has three layers—the first is Voronoi/ aerodynamic adaptable structure, the next is a nano-hydrophobic membrane layer with venturi that uses lichen and algae for purification purposes. Finally, the air passes through layer three, which is comprised of a flexible aerogel. The building façade of the Algae Bioreactor can make it zero-net energy building.

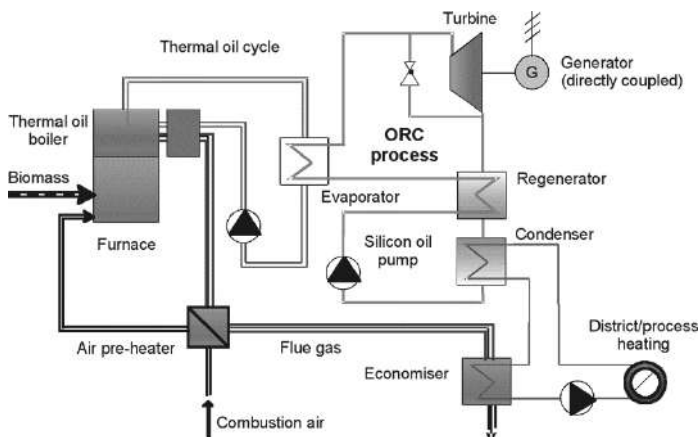
Noise and heat insulating panels, made of carbon fibre and cyanobacteria can create a closed autonomous system of air circulation within a building, protecting it from air pollution by providing fresh ionized oxygen. The exterior should be able to open and close, blooming

like a sunflower. Within these modules, the cyanobacteria grow. The modules are filled with a 'special water solution' that reacts with carbon dioxide to produce oxygen by photosynthesis process.

Converting Noise into Energy

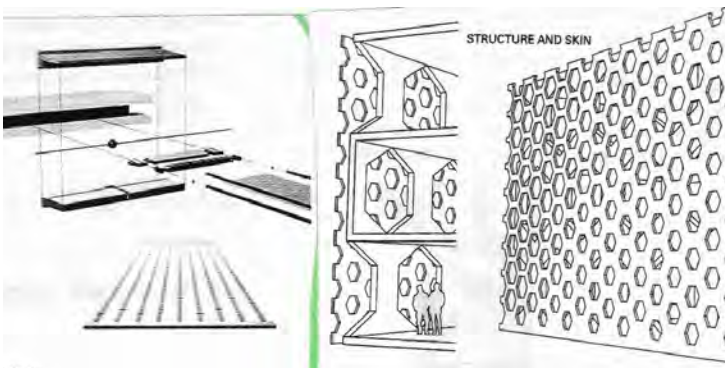
The urban transducer captures airborne sound converting it into energy for the buildings by using acoustic panels that perceive frequencies and wave lengths to capture energy from noise. The urban transducer has ability to remember the frequencies and their locations (See Figures 5 and 6). It can also be combined with the wind energy produced by miniature turbines. The acoustic panels that envelope

Fig. 5: Gasification Process: Electricity from Bio-mass



Source: Trashscraper, David Constable in Evolo Skyscrapers, 2012.

Fig. 6: Acoustic Panel and Urban Coral Reef Skin for Energy from Noise

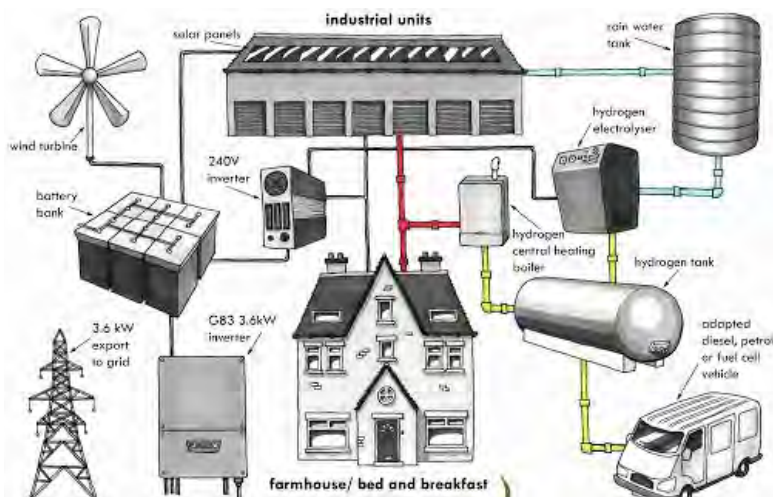


Source: Ryan Browne, Nathaniel Dunn, Daniel Nelson and B. Scholten, Urban Transducer, and Amandine Quillent, F Zaini, Urban Coral Reef, in Evolo Skyscrapers, 2012.

urban transducers are made up of multiple metal bands with individual tuners and sensors that sense frequencies. These panels with tuners resonate at a specific frequency. They can slide to the desired locations, changing the bands frequency. The bands change the magnetic field by electrostriction and transform noise into electrical current by a piezoelectric transducer.

The vibration of the band alters the magnetic field with a copper wrap magnetic rod that runs along each band. A piezoelectric transducer transforms the movement into an electric current and sends it to storage unit, which is transferred to main storage battery for use (See Figure 7).

Fig. 7: Wind Turbine, Solar Parabolic and Microgrid



Source: microgridmedia.com

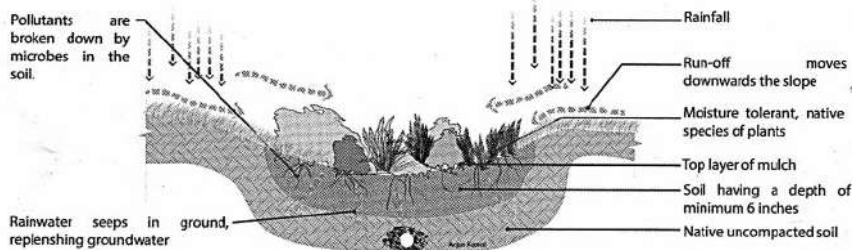
Water Conservation and Eva-Transpiration

With increasing urbanisation and water shortage, there is a need to adopt watershed approach, water recycling, rainwater harvesting, desalination and purification of salty/brackish water and conservation of water sources, rivers and lakes.

Grey water treatment by root zone system can produce evapo-transpiration. Water reservoirs in the form of reed fields serve as a hydrobotanic treatment unit. The irrigation system is one m below ground to reduce evaporation losses, pollution and to prevent odour. The vegetation cools the environment. An adult beech (*Fagus Sylvatica*) can cool 1,000 mega-joules of water per day. Each litre of water evaporated by a tree produces 2,300 kilo joules (0.64 kwh) of cooling. This energy can be exploited to cool buildings, besides suction of particulate, evapo-

transpiration and waste water treatment, which can be used for toilets, watering plants, cleaning floors, etc. (See Figure 8)

Fig. 8: A Rainwater Garden and Bio-swaales Capture Rainwater and Recharge Groundwater



Source: Jain, A.K. (2015) The Idea of Green Building, Khanna Publishers, New Delhi.

Urban Agriculture

For urban agriculture, multi-level platforms can be created along with micro-irrigation and humidifying mechanisms. Methanisation of organic wastes, air supply and photovoltaic systems provide supports to the idea of the artificial urban biotope. This can help in availability of organic produce locally, reduce haulage and wastage of agriculture produce and bringing greenery amidst concrete jungle.

Computer Aided Manufacturing (CAM) and Building Information Modelling (BIM)

During recent times, the purpose of automation has been shifting from increasing productivity and reducing costs to broader issues, such as increasing sustainability, energy efficiency, quality and flexibility of the building. Automation and robotics are being used in prefabrication of building components and also for speed, accuracy and customisation. The flexible production system using robotic cells could execute various tasks – setting moulds, placing reinforcement bars or distributing concrete for various products, such as floor, roof, wall, beam and column. Computer- Aided Manufacturing (CAM) and Computer Integrated Manufacturing (CIM) are shifting construction process from manual to fully automated processes.

As building design and construction are becoming more complicated with smart materials, services and digital networks, understanding and tracking various systems becomes crucial. Building Information Modelling (BIM) provides computerised layers of information, planned details of the structure containing everything from 3D drawing and planning documents, service plans and controls to the specifications of building materials, components, light fitting and fixtures. BIM is

an integrated, collaborative process that enables engineers, architects, contractors and clients to work from a single, digital model and share reliable, coordinated information at every stage of a project life cycle.

CONCLUSION

In the context of the Covid-19 pandemic, and the high level of pollution, the idea of green communities and buildings needs to embrace the factors of public health and hygiene. These should address the issues of air pollution, sanitation, waste recycling, detox the air, and function as a bioreactors and energy generators. This involves morphotectonic strategies, circular economy and sustainable construction.

(An earlier version of the paper titled, Covid-19 GIS and Digital Urban Planning was published by the author in My Coordinates (June 2020).

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Fiscal Decentralisation in Haryana: Some Suggestions for the Sixth State Finance Commission

V N ALOK*
PRADEEP PANDA**

ABSTRACT

Through 73rd and 74th Constitutional Amendments, Panchayat and Municipal systems were provided a systematic and endurable structure of participatory political process at grassroots level. State finance commission is constituted for determination of vertical and horizontal fiscal transfers to municipalities and panchayats. Haryana State Finance Commission (SFC) has been constituted regularly. Sixth SFC was constituted on 22nd September 2020 for the period 2021-22 to 2025-26. The state has also showed progressive development towards achieving Sustainable Development Goals except gender equality (SDG 5) and life on land (SDG 15) goals. Sixth State Finance Commission may review previous SFC reports, suggest, inter alia, new local taxes, present data on which the reports are based, complain about poor data base, attempt estimates of local taxable capacities in terms of measurable indicators, indicate full O&M requirement of core services and suggest budget and accounting reforms of the local governments. It may recommend to standardise procedures for levy of property and other taxes, norms for basic services and norms for staffing and salaries, incentivise performance through levy and collection of taxes and user charges, economy in expenditure and people's participation.

Keywords: *Haryana, State Finance Commission, Devolution, Panchayats, Municipalities, Local Governments, Decentralisation*

INTRODUCTION

SEVENTY third and 74th Constitutional Amendments were passed by the Parliament of India in 1992 and ratified by States in 1993. Through

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these amendments local self-government was introduced in rural and urban India, respectively. Through this enactment, Panchayat and Municipal systems were provided a systematic and enduring structure of participatory political process at grassroots level. The amendment has also enlarged the space for people's representation and their agency in matters of governance and moved decisions-making closer to them. The operative vision of grassroots governance mandated by Constitution has given greater emphasis on devolution of powers to panchayats and municipalities as enshrined in the Constitution of India. Article 243 G and other Articles of the Constitution have made it very explicit that there is greater need for devolution of roles and responsibilities and power and authority to local governments. This translates to statutory transfer of rights, powers, authority and resources as also roles, responsibilities, duties and obligations from state government to local governments by an Act of State Legislative Assembly.

State Finance Commission is constituted for determination of vertical and horizontal transfers to municipalities and panchayats in the state. Haryana State Finance Commission (SFC) has been constituted regularly. Sixth SFC was constituted on 22nd September 2020 for the period 2021-22 to 2025-26 under the chairmanship of P. Raghavendra Rao, a retired civil servant.

The Commission is required to make recommendations relating to the following matters:

1. (a) the principles which should govern:
 - (i) the distribution between the State and the Zila Parishads, Panchayat Samitis and Gram Panchayats, of the net proceeds of the taxes, duties, tolls and fee leviable by the State which may be divided between them under Part IX of the Constitution of India and the allocation between the Zila Parishad, Panchayat Samiti and Gram Panchayats at all levels of their respective shares of such proceeds;
 - (ii) the determination of the taxes, duties, tolls and fee which may be assigned to, or appropriated by, the Gram Panchayats, Panchayat Samitis and Zila Parishads; and
 - (iii) the grants-in-aid to the Zila Parishad, Panchayat Samiti and Gram Panchayat from the Consolidated Fund of the State.
- (b) the measures needed to improve the financial position of the Gram Panchayats, Panchayat Samitis and Zila Parishads.

2. (a) the principles which should govern:
- (i) the distribution between the State and the Municipalities of the net proceeds of the taxes, duties, tolls and fee leviable by the State, which may be divided between them under Part IX A of the Constitution of India and the allocation between the Municipalities at all levels of their respective shares of such proceeds;
 - (ii) the determination of the taxes, duties, tolls and fee which may be assigned to, or appropriated by the Municipalities; and
 - (iii) the grants-in-aid to the Municipalities from the Consolidated Fund of the State.
- (b) the measures needed to improve the financial position of the Municipalities.

In making its recommendations, the Commission shall have regard, among other considerations, to:

- (i) the objective of balancing the receipts and expenditure of the State and for generating surplus for capital investment;
 - (ii) the resources of the State Government and demands thereon particularly in respect of expenditure on Civil Administration, maintenance and upkeep of capital assets, maintenance expenditure on plan schemes and other committed expenditures or liabilities of the State; and
 - (iii) the requirements of the Panchayati Raj Institutions and the Municipalities, their potential for raising resources and for reducing expenditure.
- (Finance Department, Haryana)*

Against the backdrop, the paper is organised in six sections. Beside the introductory part, section two presents a brief profile of the Haryana economy. Next section deals with the public finance management and fiscal health of the State. Section four is devoted to the devolution to local governments—both Panchayats and Municipalities in the State. Section five reviews the previous state finance commissions. Section six outlines some suggestions to the Sixth Haryana State Finance Commission for its report.

SECTION 2: THE ECONOMY – A BRIEF PROFILE

The state of Haryana was carved out on November 1, 1966 as a result of the bifurcation of the state of Punjab. It is surrounded by Himachal Pradesh in North, Uttar Pradesh in East, Punjab in West and Rajasthan in South. Adjacent to the National Capital Territory of Delhi, the state

surrounds it from three sides. It is spread over an area of 44,212 sq. km with an area covering 1.3 per cent of the country. Haryana contributes significant amount of wheat and rice to the pool, i.e., a national repository system of surplus foodgrain. Haryana is India's 4th largest producer of cotton. The state has also made rapid strides in development of industrial sector. Major industries in Haryana are automotive, IT, agriculture and petrochemicals. Haryana's structural transformation has been seen from an agrarian State to industrial State, with services sector recording robust growth. The state has also showed progressive development towards achieving Sustainable Development Goals except gender equality (SDG 5) and life on land (SDG 15) goals (NITI Aayog, 2021).

Though Haryana is geographically a small state, the contribution of the State to the National Gross Domestic Product at constant (2011-12) prices has been estimated as 3.8 per cent as per the Quick Estimates of 2019-20. As per the Advance Estimates for the year 2020-21, the GSDP of the State at current prices has been estimated as Rs. 7,64,872.41 crore, recording the negative growth of 2.0 per cent in 2020-21 due to Covid-19 as compared to the growth rate of 10.7 per cent achieved in 2019-20. The GSDP at constant (2011-12) prices is estimated to be Rs. 5,28,069.75 crore with a negative growth of 5.7 per cent in 2020-21 as compared to the growth of 8.2 per cent recorded in 2019-20. However, this negative growth of 5.7 per cent recorded in real GSDP is lower than the negative growth of 8.0 per cent recorded at All India level in 2020-21 (*Economic Survey of Haryana*, 2021). The GSDP of the State at current and constant (2011-12) prices is given in Table 1.

TABLE 1: GROSS STATE DOMESTIC PRODUCT OF HARYANA

(Rs. thousand crore)

Year	GSDP at Current Prices	GSDP at Constant Prices	Nominal GSDP Growth Rate (%)	Nominal GDP Growth Rate of (%) India
2011-12	0.29	0.29	16.04	15
2012-13	0.34	0.32	16.63	13.3
2013-14	0.39	0.34	15.05	11.5
2014-15	0.43	0.37	9.49	10.5
2015-16	0.49	0.41	13.35	8.7
2016-17	0.56	0.45	13.30	9.9
2017-18	0.64	0.48	14.88	10
2018-19	0.70	0.51	9.30	11.2
(Q) 2019-20	0.78	0.55	10.73	7.2
(A) 2020-21	0.76	0.52	-2.02	-3

Note: Q: Quick Estimates A: Advance Estimates

Source: Authors' computation from the data provided in *Economic Survey of Haryana* and *Economic Survey of Government of India*

Per capita income: In 1966, when Haryana was formed as State, the per capita income of the State at current prices was only Rs. 608. Since then, the per capita income has increased multi-fold with the exception in 2020-21 due to the impact of Covid-19 pandemic. The per capita income of the State at constant (2011-12) prices is estimated to be Rs. 1,63,992 during 2020-21 with a negative growth of 6.9 per cent as compared to the growth rate of 6.8 per cent recorded in 2019-20. At current prices, the State's per capita income is likely to be Rs. 2,39,535 during 2020-21 showing the contraction of 3.3 per cent as compared to the growth of 9.4 per cent recorded in 2019-20. Though, the State is maintaining per capita income during 2020-21 at both current and constant prices higher as compared to the National per capita income of Rs. 1,27,768 and Rs. 85,929, respectively.

Structural Transformation of Haryana's Economy

In 1966, at the time of formation of Haryana State, the State's economy was predominantly an agrarian economy. At the beginning during 1969-70 of Fourth Five-Year Plan, the contribution of Agriculture and Allied Sectors (crops, livestock, forestry and fishing) to the GSDP at constant prices was the largest (60.7%) followed by services (21.7%) and industry (17.6%) sectors. During the period of 37 years (1969-70 to 2006-07) intervening 4th and 10th Five-Year Plans, industry and services sectors registered higher average annual growth than the agriculture and allied sectors which resulted in the increased share of industry and services sectors and decreased share of agriculture and allied sectors in the GSDP (Reserve Bank of India, 2021). The share of Agriculture and Allied Sectors in GSDP declined from 60.7 per cent in 1969-70 to 21.3 per cent in 2006-07 while the share of Industry Sector increased from 17.6 per cent in 1969-70 to 32.1 per cent in 2006-07. The share of Services Sector increased from 21.7 per cent to 46.6 per cent during this period. Since the 11th Five Year Plan, the pace of structural transformation of the State's economy remained continued. In spite of the robust growth recorded in Services Sector during the past era, the spread of Covid-19 pandemic has largely affected the economic activities in 2020-21. Almost all the sectors with the exception of Agriculture and Allied Activities have been adversely affected. As a result, the share of Agriculture and Allied Sectors has improved to 18.9 per cent in 2020-21 but the share of Industry Sector has decreased to 30.2 per cent. The share of Services Sector at constant prices has been recorded as 50.9 per cent in 2020-21 (Government of Haryana, 2021).

SECTION 3: STATE OF PUBLIC FINANCE

Haryana is one of the most progressive States in the country. It has

been a pioneer State in carrying out fiscal reforms and public finance management (World Bank, 2020). Public finance relates to the collection of taxes by the government and the use of those tax funds towards production and distribution of public goods. Resource generation, resource allocation and expenditure management (resource utilisation) are the essential components of a public financial management system. The purview of public finance is considered to be three-fold namely: efficient allocation of resources, distribution of income, and macro-economic stabilisation. As a result of prudent fiscal management, fiscal parameters such as fiscal deficit and debt to GSDP ratio of the State are within the stipulated limits prescribed by the successive Union Finance Commissions and the Government of India. As per the budget estimates for 2020-21, fiscal deficit was projected at Rs. 25,682 crore, constituting 2.73 per cent of GSDP, which is well within the stipulated norm of three per cent under FRBM Act. Similarly, the debt to GSDP ratio has also been maintained below the norm of 25 per cent as prescribed under the FRBM Act.

Revenue Receipts and Revenue Expenditure

The revenue receipts comprise State's own tax and non-tax revenue; share in central taxes and grant-in-aid from the Union. As per Budget Estimates of 2020-21, the revenue receipts of the Government of Haryana are expected to be Rs. 89,964.14 crore against the estimated revenue expenditure of Rs. 1,05,338.09 crore. The revenue receipts of the State Government was Rs. 77,580.73 crore against revenue expenditure of Rs. 92,256.10 crore in 2019-20 (RE). It was Rs. 65,885.12 crore against revenue expenditure of Rs. 77,155.54 crore in 2018-19.

Total Tax

The tax position of Haryana State from 2017-18 to 2020-21 (BE) is given in Table 2. Total tax comprises State's own tax revenue (OTR) and State's Share in Central Taxes (SCT). State total tax is expected to

TABLE 2: TAX POSITION OF THE STATE

(Rs in crore)			
<i>Year</i>	<i>State's Own Tax Revenue (OTR)</i>	<i>Share in Central Taxes (SCT)</i>	<i>Total Tax</i>
2017-18	41099.38	7297.52	48396.90
2018-19	42585.60	8250.34	50835.94
(RE) 2019-20	47842.04	7111.53	54953.57
(BE) 2020-21	52095.65	8484.82	60580.47

Note: RE - Revised Estimates, BE- Budget Estimates

Source: State Budget Documents.

increase from Rs. 48,396.90 crore (Rs. 41,099.38 crore OTR + Rs. 7,297.52 crore SCT) in 2017-18 to Rs. 60,580.47 crore (Rs. 52,095.65 crore OTR + Rs. 8,484.82 crore SCT) in 2020-21 (BE).

Own Tax Revenue

As per the Economic Survey of Haryana 2020-21, the contribution in tax revenue from SGST is estimated at Rs. 22,350 crore in 2020-21 (BE) as compared to Rs. 19,723.86 crore in 2019-20 (RE) showing an increase of 13.31 per cent in 2020-21 (BE) over 2019-20 (RE). The contribution in tax revenue from State Excise is estimated at Rs. 7,500 crore in 2020-21 (BE) as compared to Rs. 6,700 crore in 2019-20 (RE) showing an increase of 11.94 per cent in 2020-21 (BE) over 2019-20 (RE). The contribution in tax revenue from Stamps and Registration is estimated at Rs. 7,500 crore in 2020-21 (BE) as compared to Rs. 6,600 crore in 2019-20 (RE).

Share in Central Taxes

Transfer from the Union mainly consists of State's share in central taxes, grants for centrally sponsored schemes, grants under the award of the Union Finance Commission and other grants. The share in central taxes is estimated at Rs. 8,484.82 crore in 2020-21 (BE) against Rs. 7,111.53 crore in 2019-20 (RE). It shows that Share in Central Taxes is likely to increase by 19.31 per cent in 2020-21 (BE) over 2019-20 (RE).

Grants-in-aid

The Grant-in-Aid received in the State is shown in Table 3. Apart from the significant amount from central taxes, Union Finance Commission has made recommendations regarding grant-in-aid to the States for specific purpose. State is expected to receive about Rs. 13,955.45 crore as grant-in-aid in 2020-21 (BE) against Rs. 12,492.07 crore in 2019-20 (RE). It indicates that grant-in-aid is likely to increase by 11.71% in 2020-21 (BE) over 2019-20 (RE).

TABLE 3: GRANT-IN-AID RECEIVED FROM UNION
GOVERNMENT

(Rs. in crore)

<i>Year</i>	<i>Amount Received</i>
2017-18	5185.12
2018-19	7073.54
(RE) 2019-20	12492.07
(BE)2020-21	13955.45

Note: RE - Revised Estimates, BE- Budget Estimates

Source: State Budget Documents

State of Fiscal Health of Haryana

There are various indicators of measuring fiscal health pertaining to state governments. For the purpose, we would only be using three indicators of fiscal health namely, Revenue Deficit (RD), Fiscal Deficit (FD) and Primary Deficit (PD). Broad deficit indicators of – revenue, fiscal and primary deficits – for the period 2001-02 to 2013-14 as ratio of Gross State Domestic Product (GSDP) at current prices are given in Table 4. Data indicates that fiscal health of state improved in early half of the decade upto 2006-07 (Sen, 2000). Since then it started an upward trend and fiscal deficit was as high as 4.9 per cent in 2009-10 primarily due to implementation of Sixth Pay Commission recommendations and fiscal measure undertaken in wake of global financial crisis (Bishnoi, 2018). Still Haryana has manageable gross fiscal deficit as FC-XII target of three per cent for the year 2013-14 is well above fiscal deficit of 2.1 per cent realised by Haryana. But the state is not able to bring its revenue deficit to zero as mandated by 13th Finance Commission. This indicates that though Haryana has fiscal deficits within limits set by FRBM Act but it had higher deficits than most of other states in the country and state is able to bring revenue deficit to zero as mandated by FC-XIII (Sen and Rao, 2000; Dholakia, 2003). Haryana Fiscal Responsibility and Budget Management (HFRBM) Act, 2005 which stipulated that (i) Revenue Deficit to be reduced to zero by 2008 - 09 (ii) Fiscal Deficit to be brought down to three per cent of GSDP by 2009 (iii) Debt Liability to be contained to 28 per cent of GSDP by 2010. As per the guidelines of Ministry of Finance, Government of India, the Government of Haryana has amended HFRBM Act, 2005. Now, the Government of Haryana has to attain zero revenue deficit target from 2011-12 and maintain the same till 2014-15, fiscal deficit to be brought down to three per cent of GSDP

TABLE 4: DEFICIT INDICATORS OF HARYANA

<i>Year</i>	<i>Revenue Deficit (%)</i>	<i>Fiscal Deficit (%)</i>	<i>Primary Deficit (%)</i>
2011-12	0.49	2.40	1.06
2012-13	1.28	2.99	1.62
2013-14	0.97	2.08	0.61
2014-15	1.90	2.88	1.29
2016-17	2.23	4.27	2.51
2017-18	1.69	3.05	1.14
2018-19	1.20	2.90	0.95
2019-20	2.04	2.88	1.80
RE 2020-21	2.43	2.90	0.85

Source: Authors' computation from the data provided in State Budget Documents

from 2011-12 and maintain the same till 2014-15. The total debt liability is to be retained at 22.4 per cent of GSDP in 2010-11, at 22.6 per cent in 2011-12, 22.7 per cent in 2012-13, 22.8 per cent in 2013-14 and 22.9 per cent in 2014-15 (Bishnoi, 2018).

SECTION 4: DEVOLUTION TO LOCAL GOVERNMENTS

As per mandate of 73rd Constitutional Amendment, the State Government has been regularly constituting the State Finance Commission under Article 243-I read with Section 213 of the Haryana Panchayati Raj Act, 1994 from time-to-time to review the financial position of the Panchayats and to make recommendations on the principles which should govern the distribution between the State and the Panchayats of the net proceeds of the taxes, duties, tolls and fees leviable by the State, which may be further divided between them and the allocation between the Panchayats at all levels of their respective shares of such proceeds; the determination of the taxes, duties, tolls and fees which may be assigned to, or appropriated by the Panchayats; the grants-in-aid to the Panchayats from the Consolidated Fund of the State and the measures needed to improve the financial position of the Panchayats (Alok, 2021). The grants sanctioned by State Government on the recommendations of the State Finance Commission are distributed/ released to the Gram Panchayats (GPs), Panchayat Samitis (PSs) and Zila Parishads (ZPs) (Table 5).

An amount of Rs.308 crore had been released to local governments—both Panchayats and Municipalities during the year 2015-16 in Haryana. This amount has increased to Rs. 424 crore in the subsequent year i.e., 2017-18. Thereafter, a declining trend is noted in the fiscal transfers to local governments in Haryana as evident from Table 6.

TABLE 5: LOCAL GOVERNMENTS IN HARYANA

<i>Particulars</i>	<i>No</i>
Panchayats	7030
Zila Parishads	21
Panchayat Samitis	126
Gram Panchayats	6234
Municipalities	90
Municipal Corporations	11
Municipal Councils	22
Municipal Committees	57

Source: Haryana State Government

TABLE 6: SHARE OF LOCAL GOVERNMENTS IN HARYANA

<i>Year</i>	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Total Revenue (Rs '000 cr)	5416	6032	6269	6588	7758	8996
Own Tax Revenue (Rs '000 cr)	3493	3784	4183	4274	4784	5209
Transfer to Municipality and Pancha- yat (Rs cr)	308	424	391	222	232#	184#

Source: Authors' computation from the data provided in Handbook of Statistics of India States, RBI

Note: # Figure is extrapolated as no data for Haryana was provided in the given source.

SECTION 5: STATE FINANCE COMMISSIONS IN HARYANA

SFC has been set up in Haryana regularly to review the financial position of the State, Panchayats and Municipalities and to make recommendations with regard to distribution of the net proceeds of taxes/duties and fees etc., between the State Government and Panchayats and Municipalities and to suggest measures needed to improve their financial position. The First SFC was set up in May, 1994 and the award period was 1997-98 to 2000-2001. The Health Minister Kamal Verma was the chairman. There were four other members including the member-secretary. The commission submitted its report in March 1997. After more than three years, in September 2000, the State Government had accepted the recommendations with modifications of the First SFC regarding the sharing of the proceeds of stamps and registration, cattle fairs and motor vehicles tax. The Second SFC was set up in September, 2000 under the chairmanship of Suraj Bhan Kajal with four other members and the award period was 2001-02 to 2005-06. The Commission submitted its report in September 2004. It made recommendations for total transfer of Rs. 1117.51 crore to Panchayats and Municipalities for the period 2001-06, of which 696.22 crore to Panchayats and Rs 421.29 crore to Municipalities were earmarked. The State government accepted the report following Articles 243 I (4) and 243 Y (2) in December 2005 with many modifications.

The third SFC was set up in four stages, initially in February, 2005 and finally constituted in December 2007. Former civil servant A. N. Mathur was the chairman. There were five other members. The Commission recommended four per cent of the own tax revenue as devolution to local governments in the ratio of 65:35 to Panchayats and Municipalities. The Fourth SFC was constituted in April 2010 with

retired civil servant L S M Salins as chairman and five other members. The Commission submitted the report in June 2014 and recommended 2.5 per cent of the net own tax revenue of the State to be shared with Panchayats and Municipalities in the ratio of 65:35 based on the rural-urban population ratio as per 2011 census. The State government deferred the consideration on the recommendations.

The Governor of Haryana constituted the Fifth SFC of Haryana on 26th May, 2016 by nominating as many as eight members including a chairman and a member secretary. The award period of the Fifth SFC was 2016-17 to 2020-21. In September 2017, the Commission submitted its report which was considered in September 2018. The Commission recommended vertical devolution of seven per cent of the State's own tax revenue to local government to be shared in the ratio of 55 per cent for Panchayats and 45 per cent for Municipalities. According to the figures available on the transfer of funds to Panchayats (see Table 6), it suggests that the funds have not been budgeted by the State. For details, please see Alok (2021).

Devolution and Delegation as per State Panchayati Raj Act and Rules

The State of Haryana through its Panchayati Raj Act, 1994 has devolved all 29 matters, enumerated in the Eleventh Schedule of the Constitution, to the three rungs of Panchayats. However, activity mapping was done for 14 departments only.

Panchayat Finances

Provision of adequate financial powers to the Panchayats by equipping them to generate sufficient resources on their own is necessary to enable them discharge their functions and obligations satisfactorily (Alok, 2021). Under the Haryana Panchayati Raj Act, 1994, Panchayats have been given powers to impose taxes and fees. The Act also provides that the Panchayats may impose any tax, duty or cess which the State Legislature may assign. However, only house tax has been imposed as per 117 (I) of Panchayat Rules in the following rates :

- (i) A land owner or a shopkeeper, Rs. 30 per annum
- (ii) A tenant of land or an artisan, Rs. 20 per annum
- (iii) An unskilled labourer, Rs. 10 per annum
- (iv) Any other person not falling under above categories may be bracketed with the above classes as may be determined by GP.

Box 1: Glimpses of State Finance Commission's Recommendations

First State Finance Commission

- First SFC was constituted on 31st May, 1994 covering the period of four years, i.e. 1997-2001.
- The report of First SFC was submitted in March 1997 and the ATR was laid in September 2000.
- State Government considered only one year, i.e. 2000-01.
- SFC recommended Rs. 869.31 crore for the period 1997-2001 (Rs. 567.48 crore for Panchayats, and Rs. 301.83 crore for Municipalities).
- SFC recommended Rs. 263.38 crore for 2000-01 (Rs.144.59 crore for Panchayats, and Rs. 118.79 crore for Municipalities).
- State Government accepted Rs.99.49 crore (Rs. 34.13 crore for Panchayats and Rs. 65.36 crore for Municipalities).
- Only Rs. 66.36 crore was actually transferred to the local government during 2000-01.
- Municipalities were given Rs. 65.36 crore, but Panchayats were given only Rs.1.00 crore

Second State Finance Commission

- Second SFC was constituted on September 6th, 2000 covering the period of five years, i.e. 2001-2006.
- The report of second SFC was submitted in September 2004 and the ATR was first laid in December 2005, then on September 16th 2006 and on March 6th 2007.
- State Government considered only one year, i.e. 2005-06.
- SFC recommended Rs. 1117.51 crore for the period 2001-06 (Rs. 696.22 crore for Panchayats, and Rs. 415.37 crore for Municipalities).
- SFC recommended Rs. 231.05 crore for 2005-06 (Rs.138.43 crore for Panchayats, and Rs.92.62 crore for Municipalities).
- State Government accepted devolution of Rs.100 crore (Rs. 50 crore for Panchayats and Rs. 50 crore for Municipalities).
- Rs.100 crore was transferred to the panchayats and municipalities in 2005-06.
- Municipalities were given Rs.50 crore and Panchayats were given Rs. 50 crore

Third State Finance Commission

- Third SFC was constituted on 22nd December, 2005 covering the period of five years, i.e. 2006-2011
- Recommended sharing of state taxes at the rate four per cent excluding Excise Duty and LADT with Panchayats and

Municipalities after retaining 1.25 per cent as collection charges of the Government.

- Devolution to Panchayats and municipalities in the ratio of 65:35 giving a weightage of 40 per cent to population, 25 per cent to SC population, 25 per cent to number of villages and cities/towns and 10 per cent to literacy gap.
- SFC recommended Rs. 2540.44 crore for the period 2006-11 (Rs. 1651.27 crore for Panchayats, and Rs. 889.17 crore for Municipalities).
- State Government accepted Rs. 1304.60 crore [Panchayats: Rs. 847.99 crore (65%) and Municipalities: Rs. 456.61 crore (35%)]

Fourth State Finance Commission

- Fourth SFC was constituted on 16th April, 2010 covering the period of five years, i.e. 2011-2016.
- The report of 4th SFC was submitted in June 2014.
- SFC recommended Rs. 3573.12 crore for the period 2011-16 [Rs. 2322.52 crore for Panchayats (65%), and Rs. 1250.60 crore for Municipalities (35%)].
- The Panchayats share to be allocated among GPs at the district level: PSs: ZPs in the ratio of 75:15:10 respectively.
- The share of local government, both Panchayats and Municipalities, has recommended seven per cent of the divisible pool, i.e. net own tax revenue.

Fifth State Finance Commission

- Fifth SFC was constituted on 26th May 2016. The report of the commission covers the five-year period commencing from 2016 to 2021.
- It is recommended that financial devolution of seven per cent of the State's Own Tax Revenue (SOTR) to panchayats and municipalities in the ratio 55:45 (Panchayats: Municipalities) and stamp duty of two per cent will be over and above the recommended devolution of seven per cent of SOTR to panchayats and municipalities.
- Distribution criteria will be based upon the population and area in the ratio of 80:20.
- Inter-se share of panchayats will be in the ratio of 75:15:10 among Gram Panchayat, Panchayat Samiti and Zila Parishad.
- Specific grants of Rs. 250 crore for establishment of state level Urban Shared Service Centre and Rs. 70 crore for Swarna Jayanti Haryana Institute for Fiscal Management.

House tax is an important source of income to Panchayats. The State Government had abolished House tax with effect from 1 November 2007. Subsequently, State Government enabled the Gram Panchayats by issuing a notification to impose house tax in rural areas. Our field study reveals that in almost all sample Panchayats, house tax is being collected by GPs. In Haryana, *Shamlat*¹ land is the main source of income to Panchayats. The Panchayats have 849587 acres of *shamlat* land out of which 233051 acres are cultivable *shamlat* land and 598856 acres of uncultivable *shamlat* land. During the year 2012-13, the income from *shamlat* land was Rs. 230.94 crore. Lease money is being collected from *shamlat* land in almost all villages (*Economic Survey of Haryana*, 2020-21).

SECTION 6: SUGGESTIONS FOR SIXTH STATE FINANCE COMMISSION

Though the constitution of the SFC in Haryana has been regular but the treatment to their recommendations has been far from being satisfactory. The state government, in tradition under different political parties, has adopted casual approach by: a) nominating a large number of members as the case noted in the 5th SFC; and b) constituting the SFC in four phases in the case of 3rd SFC. Both practices are unparalleled across states in India. The sixth SFC is constituted by the State government by nominating only the chairman and a part-time member secretary and no other member. The order is issued from the chief secretary without a reference to the Governor. The practice is inconsistent with the constitutional provisions enshrined in Articles 243 I and 243 Y. Moreover, the terms of reference issued by the chief secretary direct the constitutional body to explore avenues so that both Panchayats and Municipalities reduce expenditure.

Under such surroundings, it is a challenge to the sixth SFC to produce a report which could be of liking to State government and consistent with the spirit of the provisions enumerated in Part IX and IX A of the Constitution at the same time.

Nevertheless, the Sixth State Finance Commission, at the outset, may review previous SFC reports; focus on SDG indicators on which the State is lagging; present data on which the reports are based; complain about poor data base; suggest new local taxes, if necessary; attempt estimates of local taxable capacities in terms of measurable indicators; indicate full O&M requirement of core services; and suggest budget and accounting reforms of the local governments.

The Sixth SFC report may recommend standardising (a) procedures for levy of property and other taxes; (b) norms for basic services by

Panchayats and Municipalities; and c) norms for staffing and salaries. At the same time, the commission may recommend incentivise fiscal performance by local governments through: (a) levy and collection of taxes and user charges; (b) economy in expenditure and (c) people's participation.

In addition, the 6th SFC may recommend the following for the efficiency:

- Database on local governments and their finances;
- Standardising the template- web based;
- Local Government Profiler, Directory, Assets Register, Institutionalising the arrangements for data collection;
- Notification of Activity Maps for all schemes and services;
- Delineating roles for the local governments and others in schemes;
- The above be the basis for assignment of assets, staff and budget allocations;
- Entitlement of local governments for funds that can be indicated preferably in State Annual Budget;
- Release of funds in two installments and second installment after the receipt of first Installment's Utilisation Certificate;
- Release of funds directly to the bank account earmarked;
- Payment of interest by the State, if delay is beyond seven days; and
- Details of grants to be placed before gram sabha and ward sabha.

Finally, a clearing house at State level may be recommended for the dissemination of best practices; information sharing; professional inputs through Swarn Jayanti Haryana Institute of Fiscal Management, Panchkula.

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Footnote

1. *Shamlat* land is owned by Gram Panchayat in Haryana according to Village Common Land Regulation Rules, 1964.

Inclusive Development through Municipal Governance

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ABSTRACT

Since decades, the debate has been going on about social, economic, cultural and political development. In recent years, there has been a growing need for “inclusive development” to meet contemporary development demands and challenges. It is argued that although economic growth is important, but it is not enough to foster people’s welfare. The time demands for such a development approach which may ensure the equal, fair and equitable distribution of growth benefits across all parts of society, especially large sections of vulnerable communities. In Indian context, inclusion and exclusion have multiple dimensions as the country has lot of heterogeneity and diversity in terms of many aspects; it may be culture, language, beliefs, geographical location, educational status, caste, religion, creed, races, etc. Keeping in view these dynamics, each area people have different needs and concerns and their visualisation and expectations of inclusion and exclusion also differs. Therefore, each area has a different system of governance structure at local level. The research study attempts to delve into relevant literature to discuss the role of urban local governments in ensuring inclusive development.

Keywords: *Municipal governance, inclusive development, urban local government, performance, development*

INTRODUCTION

Today, 55 per cent of the world’s population lives in urban areas, a proportion that is expected to increase to 68 per cent by 2050 (UN). According to 2001 and 2011 Census, 28.53 per cent and 31.16 per cent of

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Indian population was residing in urban areas respectively. As per the World Bank Report, 2018, it was estimated that 34.03 per cent of Indian population lived in urban areas. UN State of the World Population report (2007) projected that by 2030, 40.76 per cent of country's population is expected to reside in urban areas. In the present context, if we look into the city infrastructure we can see that metro cities are highly dense and overloaded with people. Basic facilities like clean water, 24x7 electricity, housing and sewerage are not available to them.

According to census 2011, 92.67 per cent of the households in urban areas use electricity as the main source of lighting. The Census Report (2011) identified 13.8 million households — about 64 million people are located in city slums nationwide, that is 17.4 per cent of all urban households, accounting for roughly one-third of India's 1.2 billion people. World Bank data (2014) shows that 24 per cent urban population is living in urban slums and 28 per cent people in rented houses (Economic Survey 2017-2018). After seven decades of Independence we have not achieved basic sanitation facilities in Indian cities, so it is a matter of great concern and it is clear that high level of exclusion exists in urban areas of the country.

Now, the question arises how and who will address these issues in a logical and sustainable way. Here the role of urban local bodies becomes relevant as local level of governance will only be able to work according to peoples' needs and concerns in a sustainable manner. The main purpose of the study is to document all the ongoing initiatives of the identified study areas and to understand as to how to make those programmes more inclusive. There are many issues which create barriers for inclusion of many communities or sections in the mainstream society. The present study has come out with this report with sufficient field based information about the inclusive approaches and dimensions of the municipal governance with special reference to the study area. It is an honest attempt to understand the process of inclusion in concerned local bodies of study areas. The findings of the study can be used for planning of further strategies of inclusive development.

Defining key terms

Inclusion: Inclusion is considered as a universal human right. The central concept of inclusion is to embrace each and every individual irrespective of their race, gender, disability, medical or other need. Inclusion is all about giving equal access and opportunities and absence of any sort of discrimination. Inclusion is mainstreaming the people who are otherwise disadvantaged and left behind.

Development: It is a process of creating growth, progress and positive change or the addition of physical, economic, social and demographic components. The ultimate purpose of development is a rise in the standard and quality of life of the people (Sid Isreal, 2018). 'Development' is a very complex, highly contested, ambiguous, and elusive. MDG-Monitor, 2016 states that generally, the term development describes good change. But it also raised another question, that how do you tell which change is good? So researcher described development in three ways like development as a vision, historical approach and as an action.

Professionals, scholars and researchers have come out with a variety of meanings and definitions for the word 'development' over the years. For example, Amartya Sen came up with the 'capability approach', and defined the term 'development' as a tool of enabling people to reach the highest level of their ability. He suggested ultimate freedom of action, i.e., economic, social and family actions, etc. as necessity to achieve the highest level of ability.

Inclusive development: Inclusive development is the process of ensuring that excluded and marginalised groups are taken along in the development activities. Inclusive development is the result of a combination of principles and processes. Marginalised and disadvantaged sections should be as equal partners in development process. "Leaving no one behind" is the central idea of the concept of inclusive development: the imperative of inclusive development.

Governance: There is no such consensus on a single definition of governance. World Bank defines governance as 'the exercise of political authority and the use of institutional resources to manage society's problems and affairs'. Stephen Bell in his book titled '*Economic Governance and Institutional Dynamics*' defined governance as 'the use of institutions, structures of authority'.

Review of Literature

In 2015, Organisation for Economic Co-operation and Development (OECD) published a report which gives a glimpse of how governance plays a multidimensional role for inclusive growth where it has given an overview of governance system and inclusive growth from various developed countries. The document has widely discussed that how governance plays an important role in ensuring inclusive growth and it stated that slow growth, high unemployment and widening inequalities are barriers for inclusive governance. For the inclusive growth and development, governance needs to ensure the societal well-being and health for all. The report rightly mentioned that a strong governmental

will, mid-term budgetary considerations, sustainable policy making and inclusive institutions are essential for designing policies which will be closer to society's needs and lead to inclusive growth and development. Inclusive growth approaches also depend on openness and accountability in decision-making. These components ensure just and equal representation of needs and aspirations of all the stakeholders, including underserved populations, in decision making. Openness and accountability in decision making also prevent it from elite capturing, so that the process of achieving inclusive growth objectives reflects collective interest, rather than special or individual.

In 2016, United Nations Educational Scientific and Cultural Organisation (UNESCO) released a report aiming to see the various categories of people who all are under the risk of exclusion and how to address their exclusion and bring in the fold of inclusion. The report was purely based on Canadian cities and government activities. This study explores the context in which local actors are working to eradicate prejudice and discrimination, and highlights social inclusion initiatives, especially for groups most at risk of marginalisation. The report also attempted to provide recommendations for local actors. It stated that when towns and cities do not operate for the good of everyone, it leads to discrimination which creates cycle of deprivation for underprivileged and exclusion starts. In the context, to promote inclusion for all, ensuring justice and equity in opportunities and services, as well as equal distribution of the rewards and responsibilities of society is required at all levels. Cities have lot of inclusion initiatives but still we can see various issues which can be identified as reason for exclusion like unemployment, poverty and inequality. The report emphasised that municipal governments are best positioned to take appropriate and prompt steps to take on the problem of exclusion by identifying best practices related to inclusion in the development, execution and evaluation of policies and services at the city level.

Mehta & Kumar (2019) studied the challenges faced by Kolkata, capital city of West Bengal which is believed to be India's oldest metropolitan city – vis-à-vis the country's Smart Cities Mission. They examine the various issues relating to the slapdash urban growth of Kolkata and the various steps taken to preserve its liveability and sustainability by the Government of West Bengal and the local government. Cities have greater contribution for economic growth of the state as well as country, however recent spatial and demographic growth acceleration of Indian cities is challenging their sustainability and inclusivity to cultivate. The report concluded with the recommendation for effective and efficient policy interventions to address those challenges.

Sharma (2015) has published a research paper titled *Sustainable and Socially Inclusive Development of Urban Water Provisioning in Indian city of Patna, Bihar*. The paper assesses the current paradigm of drinking water provisioning in Patna and intends to position the 'water economies' in the broader debates on inclusive development, state and sustainability. The study found that state machinery has failed to manage water economics, leading to the uncontrolled appropriation of groundwater by individuals and community. The study concluded by stating that sustainable inclusive development in urban areas will be possible only when natural resources like water will be managed through institutional provisioning with equitable water provision for citizens.

Davison Muchadenyika (2015) has conducted a research study to know how the "Harare Slum Upgrading Programme" had been creating and strengthening local governments and community partnerships to take on city challenges in an equitable and inclusive way. The research was initiated among urban poor in Harare and Zimbabwean cities. Major finding of the study was that the participatory slum upgradation initiative not only promotes inclusive local governance, it also strengthens partnerships between municipal governments and community. It also highlighted that the political will plays a vital role in shifting the attitude of ULB's towards the urban poor. The paper strongly emphasises about people and institutionalisation of development process by the city level government. It also argues that inclusive development needs systematic and regular approach and it is to opposed for project based development approach.

Catherine Sutherland (2015) opined that due to rapid urbanisation Durban city municipal actors are struggling to achieve inclusive and economic growth. Inclusive development of cities depends on inclusive city governance but her study reveals that deep spatial and socio-economic inequalities seem to be the challenges to achieve the same. The study pointed out that ensuring water and sanitation provision gained international recognition for its inclusiveness. So the study considers that universal access to basic water and sanitation can be major indicators for inclusive development in Durban city. The author found that Durban city people have achieved universal access to water and sanitation but it creates uneven waterscape.

Lee (2019) discussed about various dimensions about the concept of inclusive growth and recognised that it is a new *mantra* for local economic development. In his paper, he elaborately discusses about evolution of the concept and definition of inclusive growth, arguments for inclusive growth in metropolis and its limitations. In conclusion, the author stated that there is now considerable traction around the inclusive

growth in agendas of city governments. It is not mandatory that the inclusive growth agenda should be perfect, it needs to be better than the available alternatives. Although the pinpoint meaning of inclusive growth is fuzzy, the overall goal is straightforward.

Ahluwalia (2017) has carried out a research study to see the federal framework's structural characteristics and devolution frameworks through which cities have to provide their citizens with a better standard of life and create an investment environment capable of sustaining rapid growth and inclusive development. In his paper, he emphasises that cities in India are not empowered as its missing metropolitan planning and governance and it affected by anti-urban biasness by political spectrum. For inclusive governance and development city level government needs strategic leadership, adequate financing, and capacity building assistance for urban planning and management. Central, state and city level government need to create enabling environment where every level of government can discharge their constitutionally assigned responsibilities.

Gupta and Ros (2015) have elaborated the very important dimensions of inclusive growth and defines the larger concept of inclusive development and its linkages with sustainable development. The authors also discuss about the nexus between inclusive growth, inclusive wealth and inclusive economics and how it can have an impact on governance. Hence, inclusive development is not just a technocratic and instrumental approach; it also questions the fundamentals of unequal societies. Thus, it gives us a layer in which we constantly challenge social, political and economic structures and arrangements. Therefore, inclusive development can be ensured through genuine interactive governance which must work for the empowerment of marginalised people.

Pouw and Bruijne (2015) have conducted an interdisciplinary and trans-disciplinary research where they majorly discussed about the ideas and perspective about 'strategic governance' and 'inclusive development' in urban settings, especially in the Global South. The authors argued that urban governments of Indian metro cities have been strategically adopting new forms of governance to deal with challenges arising due to rapid urbanisation. Such forms of governance strive for greater participation, higher engagement and negotiation at the ward level. The study documents various challenges involved in the process of building strategic governance for inclusive development and some of these challenges are glocalisation, lack of reliable data, political constraints and lack of political will, inter-cultural differences, suitable public policy and action etc. While addressing all these challenges the author stated that boosting the voice and power of marginalised

people with suitable policy action is required. The study emphasised that adoption of a governance system, which is both—interactive as well as strategic is required for planning and execution of inclusive development initiatives.

Kundu & Samanta (2011) opine that the development of urban areas or urban renewal is one of the important national common minimum programmes in India. In this paper, the author analyses various urban development policies with a focus on its coverage among different class level and the extent of equity and effectiveness of the programme. The study found that 58 per cent of urban population not covered by the JNNURM and funding patterns also creates big city bias. There are challenges where small urban local bodies and economically backward states have reported under-utilisation of funds or expressed their inability to prepare detailed project reports. So, the researcher suggested for unconditional generous grants support for those states and smaller urban bodies so that growth process will be inclusive and urban poor can be a part of that development. The author also emphasised that to address these issues, urgent attention needs to be paid for urban governance reforms, building capacities at the ULB level so that the inclusive development can be a reality through urban governance.

Ruble, Tulchin, and Hanley (2005) in their research paper highlight that from both academicians and policy makers' view, it is difficult to make the city inclusive as it is not just some basic services it needs to combine services where all may get a standard place to live, education, recreation, health, sanitation, water and jobs as well. So, it is a challenging job to make the city inclusive. The study focused on four principal factors, i.e. informal economy, basic infrastructure and services, migration, governance and planning. So to make the city inclusive, the research discussed about various approaches and stated that local government has a significant role to make the city inclusive but voice of civil society also needs to be taken care of through a democratic process. In conclusion, the author stated that effective and efficient urban development needs strong local government with democratic participation of civil society.

Sustainable Development Goals (SDGs)

There are 17 SDGs and 169 targets where local level of government has larger role to play for achieving these goals and targets. In this context, recognising rapid urbanisation and change, the UN Secretary General, Ban Ki-moon said that, "our struggle for global sustainability will be won or lost in cities". There are three Sustainable Development Goals (SDGs) which are most relevant to ULBs: The SDG 1: End poverty

in all its forms everywhere; SDG6: Ensure availability and sustainable management of water and sanitation for all; and SDG11: Make cities and human settlements inclusive, safe, resilient and sustainable.

Apart from these, Central government and respective state governments may take many initiatives or schemes for the inclusive development of urban areas. Some of the very important schemes of Government of India are: *Rashtriya Swasthya Bima Yojana* (RSBY), *Pradhan Mantri Awas Yojana* (PMAY)-Urban, *Public Distribution System* (PDS), *Deendayal Antodaya Yojana-National Urban Livelihood Mission* (DAY-NULM), *Atal Pension Yojana* (APY), *Pradhan Mantri Jeevan Jyoti Yojana* (PMJJY), *Swachh Bharat Mission* (SBM)-Urban, *Pradhan Mantri Ujjwala Yojana*, *Atal Mission for Rejuvenation and Urban Transformation* (AMRUT)—to address the issues of poverty, sanitation, housing, etc. Now, urban local governance has a very significant role for the proper implementation and monitoring of all schemes. So, for ensuring inclusive development in urban areas role of urban local governance is unquestionable.

CONCLUDING OBSERVATIONS

In 1993, after the 74th Constitutional Amendment Act, was passed all urban areas received a structure of local level government which was supposed to look after the prosperity of city and welfare of all sections of citizens. The Act, its 12th Schedule with 18 subjects incorporated provisions for devolution of certain powers and functions to third tier of Governance structure, i.e. ULBs. The responsibility of local economic development and social justice has been devolved to ULBs. The institutional structure of ULBs is not uniform across states or metropolitan areas, and it is complicated with political and administrative problems. As ULBs are set up under an Act of the State Legislature, hence the size and criteria of these ULBs are decided by it. For example, Rajasthan Municipal Act 2009 defines the role and responsibilities of all 191 ULBs of state. The purpose of urban local governance is to create effective, responsive, democratic, transparent, accountable governance framework, according to a rational structure which promotes responsiveness and accountability.

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Smart City in India and Urban Planning – An Assessment

MANISH PRIYADARSHI*

ABSTRACT

The rapid urbanisation in India has resulted in un-unibiquitous regional development and multilateral difficulties at diverse levels starting from city to regional levels, which clearly demonstrated the lopsided urban planning and unregulated governance of the urban ecosystem unfavourably. Indian cities are facing the problems of traffic congestion, reduction of green cover, haphazard peri-urban settlements, an increased traffic, affecting the cities and surrounding areas' environment adversely. The present problems will worsen over the coming decades with phenomenal urban population that requires an urgent attention to urban planning with reference to smart city mission project.

The article evaluates the significance of smart city missions in comprehensive planning which could deliver an improved urban milieu and help achieve the goal of resilient Urban India.

Keywords: Urbanization, Urban Planning, Smart City Mission, Sustainable Development, Urban Environment

Today the world is getting urbanised and so do our characteristics and habits are getting urban. The leap of western urbanisation is greater and steeper than the Indian urbanisation, although its growth has gained the momentum after Rao Singh model which includes liberalisation, privatisation and globalisation (1991). Urban population is estimated to surge by 600 million by the year 2031.¹ However, almost 50 per cent of the total population will reside in urban areas; the high-powered expert committee set up by Government of India (GoI) to analyse urban infrastructure and services by the Indian government, stated that urban share would rise 75 per cent by the year 2050.² The number of Million Plus cities is expected to surge to 87 by 2031; Urban areas are critical for the economic growth and that would require a massive refitting to

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accommodate the future urban population. The Government of India started the Smart City mission in 2015,³ *“which will provide ambient, livable conditions for increasing urban population in the future, suitable environment for future investments, creation of smart jobs and livelihoods, building of green and trustworthy community substructure, provision of social services to the person who is in last line of accessibility with affordable housing, efficient and consistent energy and most importantly sustainable use of resources for an ecological quality of life”*.

The Urban Chaos: The world is getting more urban and where in re-classification and de-classification are the major factors for the increase in urban population as a whole. Urbanisation is a significant trend of 21st century, where proportion of urban population has increased exponentially and is expected to increase to 50 per cent in next few decades. Urban population grew by 91 million to 377 million between 2001 to 2011 and by 2030 it is anticipated that it will surge by more than 200 million (NUHM-NHSRC).

The cities in general and metropolitan cities specifically have become a magnet for poor and vulnerable population. At the same time, the cities and metropolitan areas are being subjected to determined collective challenges namely: water, sanitation, vicious cycle of unemployment and crime, energy usage increase and energy efficiency are becoming urgent problems, increasing population puts higher pressure on the urban infrastructure like electricity, water, sanitation and public transport and Municipal and public authorities need to do more to curb the menace of urbanisation.

Evolution of Smart Cities – The concept of smart city is different from “one city to another city” and “one country to another country”. The progress of a smart city is dependent on a country’s stage of development, political and financial willingness to change and reform the urban system.⁴

The urban planners preferably aim at developing the urban ecosystem, which is characterised by institutional, physical, social and economic infrastructure called as the four pillars of comprehensive development. Whereas the long-term goal of the smart cities is to develop comprehensive infrastructure with addition of layers of ‘smartness’ which fulfills the aspirations and needs of the citizens.

Smart Cities Mission⁵ objectives are to promote cities that offer fundamental structure and a decent quality of life to its citizens, which includes a clean and sustainable milieu embedded with application of ‘Smart’ Solutions.⁶ The focus is on inclusive and sustainable development

and the idea is to look at compact areas, create a replicable model which will act like a light house to other aspiring cities.

The ruling National Democratic Alliance government implemented the smart cities mission to fulfill its pre-election manifesto; which started with the primary idea to build state-of-the-art technology 100 new cities.⁷ In August 2014, the National government asked the state governments to select three existing cities in each state and a national consultation on modalities of smart city mission started.

In September 2014, National Conclave on Building Smart Cities organised by Government of India⁸ to deliberate on following three key aspects for smart cities:

- (i) Competitive (attracts investors and residents)
- (ii) Sustainable (social, financial and environmental)
- (iii) Capital Rich (human and social).

On June 25, 2015 “Mission Statement Cities and Mission Guidelines” released by the Ministry of the Urban Development (MoUD)⁹ to provide clarity on smart city and its related aspects and on the Mission itself. Strategic components of the Mission include:

- (a) Retrofitting
- (b) Redevelopment
- (c) Green Field development
- (d) Pan-city development.

However, the primary objective of the Smart Cities Mission is to amalgamate economic growth with improvement of the people’s quality of life by empowering local area development and connecting technologies, especially by linking technology with smart outcomes. “Area-based development will transform existing areas (retrofit and redevelop)”, including comprehensive planned slum development to improving livability index and condition of the whole City.¹⁰ New areas (Greenfield) have to be developed in the periphery of cities to house the growing population of urban areas, to enable the application of smart solutions via technology creation and fusion, creation of information highway and data for evidence creation to expand infrastructure and services for residents and communities of smart city which in turn improve quality of life, create employment opportunities’, improved income structure for all, especially for the poor and the vulnerable sections leading to creations of inclusive cities to cater to the present and future needs of cities.¹¹

Need for the Smart City: Indian urbanisation needs a total retrofitting to accommodate growing urban population which is going to be half of Indian population by the next two decades. To accommodate the rapid urbanisation and a range of the socio-economic and technological developments across the globe, the Government and policymakers decided to implement smart city mission. To support government initiatives and opportunities, the startups would agglomerate to seize emergent prospects in the “Smart city mission”¹².

Scope of Smart City: While launching Digital India, a plan to build 100 smart cities across the country, PM Modi in his speech said, “Cities in the past were built on riverbanks. They are now built along highways but in the future, they will be built based on availability of optical fiber networks and next-generation infrastructure.”¹³ Following are the features of Smart Cities:

- *Promotes development* – Smart cities augment the developmental activities such as creation of school building, Government and private organisations offices and shopping malls. These activities benefit chain of developmental activities including citizens, businesses, government and environment.
- *Housing for All* – Today in urban areas, housing is a major issue. The smart city mission will work on provision of “housing for all”. With the 70 per cent of the Indian population living in cities by 2050 complete overhaul of urban planning is needed to provide a better standard of living. A paradigm shift in planning is needed which will provide green and sustainable model of housing for poor and vulnerable population.
- *Provides employment* – A smart city creates agglomeration economics which provides a conducive environment, opportunities and advantages for its residents to get gainful employment. While India is expanding rapidly, the smart city has the potential to provide employment for present and future residents, as the structure of a smart city necessitates a lot of human resources.
- *Smart Health*¹⁴ “the concept of smart health means innovative, simple and low-cost smartphone technologies for a larger, less expensive healthcare workforce which can provide state-of-the-art electronic clinical decision support systems for Evidence-based, quality-controlled, affordable healthcare for all”. “SMART” Health is an exceptional low-cost, high-quality healthcare delivery system for all residents which provides state-of-the-art healthcare for diseases at a nominal price.
- *Smart Infrastructure*¹⁵ “Smart infrastructure is the need of Indian

cities. This includes roads with cycle tracks, 24x7 water and power, ICT enabled infrastructure, domestic waste collection, recycling of water, rainwater harvesting, waste to energy processing and more". The "Smart Infrastructure" is not just a theoretical premise today but the smart city mission will work to make them a reality.

The Government of India started a bold, new initiative of Smart Cities Mission in 2015 to create smart cities that can be imitated inside and outside the geographical coverage of Smart City, which catalyzes the creation of smart cities in different regions and parts of the country.

The core infrastructure elements in a smart city: Situational and Gap analysis

All urban researchers must work together for the creation of the smart city and overall provision of best basic needs to the people and the community as a whole.

SMART- S- Sustainable, M-Modern, A-Ambitious, R-Renewable, T-Technology Friendly

Adequate water supply – World Bank report suggests that more than 90 per cent of urban India has access to drinking water and more than 60 per cent has access to sanitation (World Bank, 2011)¹⁶, after the onset of Swachh Bharat Abhiyaan, the accessibility has improved. However, urban India still lacks in providing reliable, sustainable and affordable water supply. No Indian city gets water on 24 x 7 basis and piped water is never distributed for more than few hours a day. This few hours of piped water at home is available to only 50 per cent of the total population of the cities.¹⁷ The non-revenue water meaning water that is lost due to pilferage, leakage, unauthorised connections, collection lacunae and billing inefficiency is accumulated to 40 to 70 per cent of the total water supply of the government. Due to high non-revenue water in cities, most of the water supply does not provide value for return and in turn is totally dependent on large operating subsidies and capital grants by the Central and state government. Today, the urban India is at the bottom of the international performance and smart city project may deliver the goods for the urban India. The smart city project has been assigned about 18861.1 crore and around 71 per cent of the planned projects are meant for area based projects with focus on sewerage, solid waste management and allied projects.¹⁸

A Smart city must not only focus simply upon creating the water supply infrastructure but also on the distribution procedure as well because non-management of the services does not lead to desired levels of sustainable services. The true challenge of a smart city project is not

to increase the infrastructure but to increase reliable, sustainable and affordable services.¹⁹

- *Assured electricity supply*— Growth of urban India will soar to about 814 million by 2050 then the demand of the electricity will be twice of what is prevailing now.²⁰ The demand for electricity in 2047 would be 1500 million tonne.²¹ (In the terms of electricity, it's the coal comparison being done, as to what quantum of coal would be needed to produce such quantum of energy)

Cities use more than 70 per cent of the global energy and produce 40-50 per cent of the global greenhouse gas emissions worldwide. With the threat of climate change looming large on world, the usage of energy and its creation needs a hard thought so what can be done to make energy sustainable and uninterrupted.

So, what smart cities are going to do with the energy sector and how it's going to bring positive change in it? Smart city project looks for creation of Modern district energy systems which consists of Combined Heat and Power (CHP), thermal storage, heat pumps and development of non-central production and supply of energy. Modern district energy systems if implemented, will reduce CO₂ emission by 58 per cent.²² Currently smart city necessitates creating Special Purpose Vehicle (SPV) which will manage the implementation of the projects and all the rights and obligations of the Municipality will be transferred to Special Purpose Vehicle (SPV). Currently 59 out of 60 cities under the smart city mission have created the Special Purpose Vehicle (SPV).²³

- *Sanitation, including solid waste management*— the major feature of urbanisation in India is that it grows without much planning and when we look for cities with the planned infrastructure we realise that this unplanned growth in urban India led to shortfalls of urban facilities like water, sanitation, energy usage, etc. According to Water Aid Report of 2016, around 157 million people living in urban India do not have the toilet facilities. Smart city in collaboration with Swachh Bharat Mission have gained some good grounds and many parts of India are now open defecation free and improvised toilets have been made for the usage of the public.

The smart city project will look for sanitation programme on the basis of economic viability, socially acceptable, technologically viable, and institutionally appropriate and protection of environment and natural resources.

With rapid urbanisation, solid waste management is a major challenge, with 377 million people living in 7935 urban cities creating

62 MT of solid waste out of which only 11.9 MT is treated and 31 MT are dumped in landfills like Ghazipur and Badli in Delhi. Solid waste management is one of the primary duties and obligations of any Municipality but from collection to disposal everything is done haphazardly. Smart city uses waste as a resource and after segregation of the waste it will be used for fertilizers and for electricity generation projects. The real time information, to monitor waste collection and improve street sanitation in a smart city, is the hallmark of smart city mission.²⁴

Smart city mission would use the geo-tagging street sweepers and waste collection fleets to gather and dispose waste. The garbage trucks having the provision of location-tracking devices and cameras will provide and collect real-time information. The sanitation workers will be equipped with GPS-enabled watches to provide information to the smart monitoring centres for seamless integration.

Efficient urban mobility and public transport— Transport is a major sector for any urban area or city, it increases the exchange of the public movement from one place to another and reduces the burden on urban resources. The smart city plan has proposed budget of Rs 32,600 crore (INR 326 billion), which is around 25 per cent for the top 60 cities of India. 71 per cent of the financial resources will be spent on area based projects and around 29 per cent would be spent on improvised traffic system and in creation of information system for public transit.²⁵ Around 40 per cent of the money has been assigned for creation of roads and parking lots, 20 per cent for public transportation and only two per cent had been assigned for the efficient buses. Around 38 per cent would be used for creation of bus rapid transit system, creation of hard infrastructure namely bridges, flyovers and eco-friendly roads. Smart cities also glance at the non-motorized transport creation.²⁶ Smart city project is to enhance the sustainability of the urban resources and its utilization but on the contrary it will also be beneficial for the private transportation. Roads, public transit and parking have been given prime importance and the economic returns of above three are higher.

• ***Affordable housing, especially for the poor***— Housing is the basic human need and in Urban India it is a major challenge for the municipalities. “Around 63.67 million urban and rural households do not have adequate housing” (Arjun Kumar, 2014).²⁷ Adequate housing means adequate privacy, adequate space, adequate security, adequate lighting and ventilation, adequate basic infrastructure and adequate location, with regards to work and basic facilities at reasonable cost (Global strategy for shelter to the year 2000). Technical group on housing shortage in the country for

2012-2017 reported 18.78 million are living with inadequate housing conditions leading to housing poverty.²⁸

The housing sector under smart city mission has been earmarked with a budget of 16381.2 crore, out of which 99.4 are for area based projects for housing. Whereas, the IT component is just 0.2 per cent; nearly half of the projects are devoted to real estate and other half is related to mixed or lower income housing projects. In budgetary terms, the housing sector is unevenly distributed for major 60 cities with five cities accounting for 65 per cent of the all housing projects.

- ***Robust IT connectivity and digitalisation***— With onset of Digital India, the IT connectivity has become the priority of Central government. Digital India scheme launched to make available the services under the different government schemes digital by means of improved online infrastructure and increasing internet connectivity to every part of India. E-health, startups and infrastructural support are the major initiatives under the Government of India digitisation project. Digital India platform and emerging development are the visionary steps and the synergy between services and providers will bring paramount change in urban development scenario in India. The digital India will provide on-demand services and digital empowerment of the individuals and community leading to successful implementation of the smart cities mission.²⁹

Around 98,000 crore were sanctioned for the transformation of 100 cities of the country with the heavy dependence on “*information and communication technology*”, which in turn will enhance the efficiency of the services and effective management of the resources without any wastage. Comprehensive management of transportation, housing, water supply etc will enable to reduce wastage and offer better services to the citizens.³⁰ The central concept is centred around improvement of lifestyle by means of efficient and optimum resource management without any wastage. Whereas the role of digital technology is critical for wastage reduction and this transformation offers the finest thinkable answer to screen the wide array of urban amenities related to city living and amenities, which will seamlessly connect citizen centric policy-making and governance.

Utilisation of digital platforms for regulatory mechanism, Municipal financing, and administration of Urban India, by retrofitting planning and smart services would provide a people centric governance in smart cities with Smart urban India. Digital technology will be a key to increase real time monitoring and evaluation of public life in smart cities, which in turn will boost safety and decrease crime for citizens and Netizens.

The current landscape for the digital platforms is not supportive and it is non-smart leading to weak security and increasing cyber-crimes and will bring vulnerability to the citizens.³¹

• ***Good governance, especially e-Governance and citizen participation***— The major problem of Indian system of governance is implementation part and governance and e-governance are the major steps by the government to improve governance. With the implementation of digital platforms and digital India, the governance systems will improve the accessibility of the services.

The e-governance and internet-based solutions based on smart city mission will create citizen-centric development and eco-friendly construction that would promote sustainable development and paves the path of ecological balance.³²

• ***Sustainable environment***— The concept of smart city empowers and enhances citizens' quality of life, strengthens and diversifies the urban economy with prioritisation of urban environment sustainability through adoption of smart solutions.³³ Sustainable smart cities means creation of green building, eco-friendly and sustainable township, which recycles garbage to compost, creates sewer methane gas to power and harnesses wind and solar energy to provide power requirements. It calls for sustainable usage of rain water by means of rain water harvesting to sewage treatment facilities to make water useful again. Smart city mission will address the issues like matchless civic and infrastructure with attention on technology determined method of urban planning, urban governance, implementation, monitoring and upkeep of the project.

• ***Safety and security of citizens, particularly women, children and the elderly***— With a good chunk of population in urban India, the safety is a major issue. Today and in future the safety and security issues will always remain a challenge and today India ranks 54 in crime index. The city can be smart only if it is safe first. Safer cities are the ones which have multiple layers of intelligence system to gather public safety information effectively, respond efficiently alongside creating a database of forecasting and averting suspicious unlawful activities.

As the women and elderly are most vulnerable sections of the society, smart city will create a centralised surveillance and management system for monitoring and controlling the security and traffic condition alongside assets, population protection and reduction of urban crime and improvement of urban safety. Additionally, the smart city mission will gather information for Gunshot detection, social media intelligence, GIS mapping for advanced intelligence and situational analysis.³⁴ Surat

is the only city under the smart city project that has implemented the concept due to which crime rate dipped by 27 per cent. The new initiatives like HIMMAT app, mapping of streets and reduction of dark areas and mapping of vulnerable locations are few leading examples of measures taken for the safety of elderly and women.

Health and education are the major benchmarks for the smart city mission and improvement of health and education service can not only improve citizens' quality of life but also improve the smart city initiative.³⁵ Poor educational qualification and poor health are the major factors for urban poverty. According to latest CBS report, the exorbitant cost of health care pushed 39 million people back to poverty.³⁶

Evaluation of Smart City Project: The Smart Cities Mission in India introduced at a time when India was in transition of becoming more urban. *Since the launch of the smart cities mission in India, 5,151 projects identified by the cities worth more than Rs two lakh crore are in various stages of implementation in 100 cities and 534 projects worth Rs 10,116 crore have been completed,* according to a Ministry of Housing and Urban Poverty Alleviation statement. Around 536 kms of metro networks are now operational in 10 major cities across India. SCM made very good progress and the Development projects appear to be directing in the right direction as envisioned. There are challenges in meeting timelines due to large existing infrastructure which gets overlapped with newer initiatives. However, due to magnitude of the Programme the challenges are only routine problems that can be removed in the longer run of implementation. So far, only 10 per cent of the planned projects have been completed till 2018. The deadline for completion of these projects was set between 2019 and 2023, which is going to be an uphill task for the implementers.

The smart city solutions are deployed to serve its citizens better and if we are not able to provide central role to consumer than the impact of smart city can't be measured. The entire concept of smart cities revolves around enhancing citizen standard of living, ICT, Data Analytics and e-governance, which in turn decide how the Smart technology will improve the areas of a consumer's life.

CONCLUSION

This paper concludes that the Smart Cities Mission in India is an urban regeneration retrofitting programme with a strong focus on physical and cyber infrastructure. In terms of its planning, the smart city mission is an area-based planning with strong forward and backward linkages with creation and return of investment and finances, inspiring

Indian cities to move towards market-based funding so that it can create healthy competition for growth and development of smart cities. The 'smart city' must make available meticulous information for formulation of financial capacities of the city and elaborate the finance requirement for empowering the seven sectors of smart cities, and the sources of funding, which are a major challenge for the smart city mission. Smart Cities mission in India has proposed the blueprint of different phases of smart city development but not provided the data for each project breakup city wise. The leanings in the finances from corner to corner rounds indicates a move towards more conservative budgets and greater reliance on public sources of funding with a view that private players will invest in coming years. The Smart Cities mission empowers the state governments for their planning, creation and maintenance. The mission has already started rating the existing projects under five parameters – planning, technology, governance, services and finance, along with climate sensitive action and ease of living sensitive action but it missed the community participation, community planning and individual say in the Programme. All the major sectors under the SCM namely adequate water supply, assured electricity supply, sanitation, including solid waste management, efficient urban mobility and public transport, affordable housing, especially for the poor, robust IT connectivity and digitalisation, good governance, especially e-governance and citizen participation, sustainable environment, safety and security of citizens, particularly women, children and the elderly, and health and education needs an overhaul if we expect commitment for building sustainable cities that will last centuries.

Finally, this paper finds that the citizen engagement is not documented in spite of the extensive rhetoric of communal participation.

Overall, the Smart City Mission is a great thought and can only be achieved if planning is properly implemented on ground with special references to finances, timelines and accountability of the implementers.

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Streamlining Urban Governance in Haryana

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ABSTRACT

Urban local bodies can substantiate their relevance in the decentralised structure of governance by measuring up to competitive environment in which they have to function. The mandate of being institutions of participative democracy is to be vindicated with a changed paradigm of accountable service delivery. To this end, restructuring aimed at a financial and functional autonomy, is the key to institutional reforms in the modern day urban governance. This paper highlights structural and functional dimensions of urban governance system in Haryana as well as the best practices being followed in the other states. The state has challenges peculiar to its geopolitical realities and the prevalent system of urban governance in Haryana needs to be streamlined for coping with the increasing pressure owing to the rapid pace of urbanisation in the State which is likely to be accelerated in the years ahead. Adaptive structures of local governance are needed to maintain social capital and address economic interests that are engines of growth in the emerging cities.

Keywords: *Urbanisation, landfills, ICT initiatives social audit, professional tax, single window.*

INTRODUCTION

India has about 8,000 urban centres having a population of 31.2 per cent. These local bodies have been facing challenges pertaining to pollution, infrastructure, water supply, ground water depletion and sanitation. However, there are inter-State variations in this context. The situation is all the more grave in Haryana. Presently, more than half of its population lives in urban areas. It had increased from 17.66 per cent in 1971 to 34.90 per cent in 2011 and has been increasing at a faster pace since then.

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In line with the mandate of 74th Constitutional Amendment Act (1993) Haryana has 10 Municipal Corporations, 19 Municipal Councils and 58 Municipal Committees. However, the functional and financial devolution to these bodies has so far not been as per the spirit of 74th Amendment Act. As a result ULBs (Urban Local Bodies) have imbalance in functions, functionaries and funds.

Consequently, the ULBs of Haryana do not fulfill their mandate on safe water supply and waste disposal which pose a serious health hazard. The landfills have become potential hotbeds of diseases due to the leakage of poisonous gases from them into their surroundings. Unplanned urbanisation is another disconnect adversely affecting the peripheral rural areas. Unauthorised constructions in complete disregard of the building byelaws and safety standards is quite common. The builders have been able to influence a sizeable segment of the enforcement agencies in their quest for high profits. The disguised involvement of political leaders and other powerful sections in this realm has made it more complex.

The above context affects property tax revenue which is one of the lowest in Haryana among all other states in India. It has been estimated by various studies that only 38 per cent of the taxable properties have been covered so far and even only 63 per cent of the revenue has been collected from these. The real problem, in fact, lies in the lack of enumeration of taxable properties on the one hand and persistence of a large number of exempted properties on the other.

Key Issues for Consideration

The following issues, need to be addressed urgently for ensuring effective management by the ULBs of Haryana:

1. **Capacity Building of the Elected Representatives:** Despite the fact, the Government of Haryana had laid down in minimum educational qualifications and also prescribed essential disqualifications for ensuring that only educated and responsible persons are elected as the representatives in ULBs, there has only been a mild change in the quality of urban leadership.

There is an urgent need for their capacity building in the same manner as is being done by the Government of Haryana for the representatives of the PRIs through the training programmes that are being organised by the Haryana Institute of Rural Development (Nilokheri) and Rajiv Gandhi Community Development and Panchayati Raj (Nilokheri).

This task may either be assigned to Haryana Institute of Public

Administration (HIPA), Gurugram or an urban development institute be set up in the State for the capacity building of the elected representatives of the ULBs.

It shall also be worthwhile to organise exposure visits of the representatives of ULBs from Haryana to those states where the best practices are being followed. But the capacity building programmes should be need based, regular and should be conducted by professional Master Trainers.

It could also be useful if the Public Administration Departments of various Universities of Haryana and HIPA start a Diploma Course in Urban Local Governance for this purpose.

2. **Capacity Building of the Officials of the ULBs:** The capacity building of the elected representatives and office bearers of the ULBs alone is also not sufficient. Their officials too need it. Regular training in various dimensions of their respective job profiles is also required. Besides, programmes are also needed to inculcate the culture of transparency in them. Far more important than all these is their training in Information Technology in this age of e-governance.
3. **Promoting Healthy Relationship between the Elected Representatives and the Officials of ULBs:** A major conflict is lack of trust and respect for each other among the elected representatives and the officials. While the former tend to ignore them, the latter feel that the former make impermissible demands. In other words, there prevails a trust deficit among them. This can be minimised by organising special training programmes.
4. **Streamlining the Administration Structure:** Most of the functionaries of ULBs are either of outsourced category or they are deputed from various departments of the State. This coordination within ULBs is rather difficult. Outsourced employees do not feel a sense of belonging to these. Hence there is a need for creating a Municipal cadre of services. They should not undergo pre-service training but in-service training programmes from time-to-time. Above all, there should be downsizing and rightsizing of their administrative structures. Besides, all their records should not only be computerised but also put into public domain.
5. **Optimum Resource Mobilisation:** The ULBs should also ensure that full potential of the Property Tax is utilised. There should be accurate updating of the mapping of the taxable properties. The assessments for imposing the property tax should also be

efficient, fair and updated. This task may be outsourced using GIS techniques. The Property Tax Rates should also be periodically revised. Water and Sewage charges should also be revised to meet the increasing costs.

The unauthorised colonies may also be regularised after imposing due penalties. Collection work may also be decentralised for the convenience of the citizens/residents of the ULBs. This may also be outsourced to private agencies.

6. **Proper Land Management:** All the Municipal Corporations, Municipal Councils and Municipal Committees own large chunks of land. But these remain unutilised or underutilised. A sizeable part of these lands has been encroached upon by undesirable elements. The ULBs can setup parking places, public parks, herbal parks and gardens on these lands. They could also lease it out to the private players for increasing their income.
7. **Efficient Financial Management:** ULBs also suffer from poor accounting standard and inefficient tax collection mechanism. Tax collection demands are issued on the basis of prior surveys and outdated records. Consequently, the amount collected from both residential and commercial properties is often lower than what it should be. Enforcement of collection is another problem, as the zonal tax bodies often lack the manpower to review and collect taxes from property owners. Income generation also gets stalled in the recently added villages to ULBs, as these are neither properly surveyed nor adequately mapped. As a result, a large amount of accruable taxes remains uncollected.

All the accounts should be in one bank. e-Payment should also be encouraged. A software on the pattern of PRIA being used by the PRIs may be developed for the ULBs for this purpose.

Double Entry System to be utilised for the proper upkeep of the record of the accounts. All out efforts should also be made to reduce the financial costs. Outsourcing services delivery of works could also be done to save the huge amount that is spent on the salaries. Public Private Partnership Model too could be used by the ULBs.

8. **Enhancement of Accountability:** Clear cut role identifications and role differentiation are needed for this purpose. No official should be allowed to pass on the buck. A system of rewards and punishments or incentives and disincentives may also be introduced. There should be individual liability for the performance of well specified roles.

9. **Tackling corruption:** The urban local governance allegedly suffers from large scale corruption. An internal mechanism needs to be set up to check this menace. There should be transparency in the acceptance of tenders and proper checking of material before supply needs to be ensured. The Corporators/ Councillors will also have to play a proactive role. The technical staff too will have to do the needed surveillance. Some in-house system of vigilance needs to be set up.

Basically, it is a problem of the mindsets which need to be changed through the inculcation of value of honesty. As a matter of fact, culture of honesty needs to be inculcated among the elected representatives as well as the officials through training and handholding.

10. **ICT Initiatives:** e-governance can be very useful for streamlining the functioning of the ULBs. The computerisation of records, their easy accessibility to the people, RTI activists and other proactive members of the civil society as well as the public representatives and the availability of information in public domain can go a long way in ensuring good governance in the ULBs. This can also be very helpful in checking red tape, favouritism, bungling and misappropriation. Setting up an efficient Grievance Redressal Mechanism on the pattern of CM window and other ICT initiatives of Haryana Government too needs emulation in this context.
11. **Strengthening of the Committee System:** As in the Local Government in England, the Committee System enables all the elected representatives are made to feel that they are stakeholders in local governance. Therefore, every member of the Municipal Corporation, and Members of the Municipal Council and Municipal Committee may also be associated with one of such committee here. The representatives of the Resident Welfare Association and Civil Society as well as the experts from the universities, engineering colleges and other technical and professional institutions may also be associated with these committees.
12. **Streamlining Social Audit Mechanism:** It is equally important to put in place an effective social audit mechanism for the Social Audit of the expenditure of the ULBs for different works. For this purpose, Social Audit Committees comprising of experts, social activists from different NGOs and Media as well as the educational institutions be created in all the ULBs at the levels of the Sectors and Wards. The office bearers of the Resident Welfare Associations should also be involved in these. The Social Audit may be conducted after every six months and the agenda for these may be carefully prepared.

The Way Forward

In the light of the above issues, a range of suggestions and actions need due consideration from Government of Haryana.

1. **Structural Reforms for Personnel Management:** There is an urgent need for the creation of a cadre of municipal service—for the performance of both administrative and technical functions. A skill gap analysis is also needed, to identify the number of vacancies, to define job positions, to explore the qualifications, experience and competencies required for these and to suggest pay scales for these. A transparent selection process is also required for the process of performance management. The personnel management too needs to be streamlined and rationalised by recruiting qualified manpower particularly in the areas of finance, accounting, urban planning, public health, etc. The career paths for cadre officers too need to be specified, transfers and promotions also need specifications. Provisions are also needed for their intensive pre-service and in-service training. Above all, a sound system for cadre management needs to be introduced.

The emphasis in their capacity building should be on:

- the sensitisation of the elected councillors;
- the practical, hands-on training of the selected officials of the ULBs in accounting systems, financial management practices, internal controls, audits and an efficient management of information system;
- the preparation of environmental status reports and infrastructure priority studies;
- the formulation of environment management plans and
- the documentation of best practices.

Besides, there is an urgent need for developing a Vision for the mandated activities of ULBs. The supply side constraints need to be addressed. Learning through exposure visits for seeing good initiatives too needs to be stressed. The short-term focus, however, should be on gathering information from the already available training materials, identification of the master trainers and selection of reputed institutions for conducting Training of Trainers (TOTs). However, the focus of training needs to be made demand driven. The capacity building efforts should cover officials at all the levels. Enhancing capacity periodically will not only help in inculcating a sense of responsibility but also culture of accountability in them for the delivery of functions devolved on the ULBs.

2. **Revamping Tax Administration:** Economic transformation in urban infrastructural investment and alternative sources of investment in areas such as water and in identification of enhancement of the charges for sanitation facilities, affordable urban transport and urban land development also need attention. Moreover, apart from improving the collection of non-tax revenues such as user charges for various public services/utilities, a focus should also be on existing and potential revenue enhancement.

In this context, it is pertinent to bring to sharp focus the fact that the collection of the Property Tax has so far been abysmally low. It has fallen short of stipulated target by about 50 per cent. Some of the organisations have been able to collect only around 40 per cent of their targets due to pandemic. It is merely 0.2 per cent of India's GDP. The improvements, therefore, are necessary in the coverage as well as collection of taxes. Besides, there is a need to identify the unassessed properties for enhancing the tax potential of taxation. The self-assessment of property tax has, as a matter of fact, become the *de facto* practice for facilitating the ease of compliance for the taxpayers in Haryana. In case of differences between the self-assessed property tax and the assessment by the ULBs, the Municipal Act provides for the imposition of a stiff penalty as a deterrent but this has not been practiced in the State. A reassessment needs to be done in this context. Billing and payment procedures need to be made easier through web portals of the ULBs and the grievance redressal also needs to be done through the anomaly committees.

- (i) **Revenue Performance Issues and Needed Reforms:** A big challenge for the property tax administration has been the non-availability of accurate property tax rolls in the ULBs. The following steps may be undertaken in the above context:
 - proper mapping of properties by using GIS;
 - streamlining of the property tax as a self-assessment system; and
 - collection of at least 85 per cent of the property tax demand.

The properties should also be assigned unique IDs. Their preliminary digital assessment needs to be done to identify for under-assessed ones. Their digital database also needs to be created for preventing manual errors and for making the process of data management simpler and transparent. Follow-up visits by the officials too are necessary to identify the property owners.

- (ii) **Property Tax Rates and Classification:** The property tax rates ought to have an objective relationship with revenue needs and these must follow some benchmarks in this context. They should be determined in conjunction with the valuation bases. Moreover these need be kept sufficiently flexible for ensuring a reasonable tax burden.
- (iii) **Property Tax Exemptions:** A clear cut criteria is needed for keeping these as minimum as possible. Property owners of all categories must be made to pay an affordable amount on their properties. It may also be ensured that all non-domestic properties attached to brick kilns, rice shellers, stone crushers, petrol pumps, stud farms and small and large scale industries too are brought under the tax net.
- (iv) **Profession Tax:** Profession tax may also be revived. It should be imposed by the ULBs on commercial entities such as the private schools that have high fee structures as compared to the government schools, which are charging only nominal amounts for it. It should, however, be left to the local bodies to decide whether to levy or not to levy the tax on such institutions on the basis of assessment of their financial position.
- (v) **Fire Tax:** The ULBs must impose Fire Tax on all the properties in urban areas – residential and non-residential, institutional and commercial irrespective of their type. It is essential because higher density of population in residential areas – especially in the old inner city areas where various types of economic activities are being pursued, are prone to fire hazards.
- (vi) **Vacant Land Tax:** It should be levied by ULBs on the basis of the capital value of a property. Besides, the vacant land including open land and un-built plots should be clearly demarcated. Such lands are being frequently used during the marriages, receptions for entertainment and parking, etc.
- (vii) **Vehicle Tax:** The motor tax should also be doubled on all kinds of vehicles to improve resources of the ULBs.
- (viii) **Non-Tax Sources:** The rates of fees/charges must be updated periodically to boost their revenues. This would also inculcate in the citizens a habit of payment for the services being availed by them.

Some non-tax fees or levies may also be charged in lieu of improved level of services in the form of valorisation fee for increase in capital value, impact fee and betterment levy which may not be resisted to by the general public.

(ix) *Other Measures*

- The option of development beyond the current restrictions of Floor Area Ratio (FAR) needs to be provided, and the additional FAR, however, needs to be provided selectively. The ULB must levy the charges on it and on land-use conversions. These, however, must be determined professionally and be at least 50 per cent of the area rate.
- In order to effectively cover Operational and Management (O&M) costs, appropriate level of user charges must be levied on all the measurable services from the beneficiaries. Ideally, a tiered structure linked with level of consumption exist be put in place.

(x) *Institutional Model for Property Tax Reform:* The Thirteenth Finance Commission has suggested the establishment of Municipal Revenue Boards (MRBs).

- These have been envisaged as operational bodies.
- They ought to have a working IT platform for building databases.
- MRBs shall themselves conduct Property Tax Surveys and develop the database as well as the management information system. It would be especially useful for the small municipalities that do not have the resources to turn the investment to such an exercise. Modern technology ought to be used by them to implement the 'back office' functions of a typical property tax administration.

3. **Land Management and Resource Mobilisation and Financial Management:** Fiscal decentralisation has to be at the top of the agenda for the mobilisation of financial resources of the ULBs. Their income from the tax sources, non-tax sources, fiscal transfers and borrowings needs to be enhanced.

After the abolition of octroi and the loss of buoyancy and elasticity in Annual Rental Value (ARV) based Property Tax, fiscal stress on the ULBs has considerably magnified. Therefore, new sources of

revenue need to be created from them. The following measures can be undertaken in this context.

- (i) **Enhancing Revenue from Existing Taxes:** There exists a substantial scope for the enhancement of revenue from existing local taxes. Tax administration remains constrained by: (i) not-so-effective tax administration and (ii) difficulties encountered in the administration of its major tax — the Property Tax. Tax collector and generation of additional revenue could also be ensured through the following steps:

A scheme of incentives and penalties be introduced for the municipal staff and the taxpayers. ABC Analysis, which is usually applied in material management of inventory also known as the inventory categorisation technique in an organisation or a project, be also adopted.

Land be used as resource for revenue enhancement. The ULBs ought to devise innovative ways for this purpose. Land based non-property taxes may be used to generate financial resources by regulating the use of land. Vacant Land Tax, Tax on Land Value Increment and Betterment Levy may also be levied in this context.

It may be pointed out in this context that a number of countries have taken recourse to Vacant Land Tax. The rate of tax is doubled by them every year till the vacant land is developed. The share of the ULB may also be increased in the Stamp Duty, which is imposed and administered by the state governments.

- (ii) **Non-Tax Sources:** As a matter of fact, the generation of additional financial resources calls for innovative approaches. Traditional sources of revenue of the ULBs have a limit up to which they could be stretched. Non-tax sources, therefore, constitute promising areas for resource mobilisation. These include fees, charges, price, remunerative municipal projects and enterprises and land based mechanisms of revenue generation. These also comprise, *inter alia*, development charges, user charge and cost recovery.
- (iii) **Asset Management :** The ULBs mostly have their own assets like the land, plants and equipment. Many of these, however, do not, have their inventory. Hence they are not in a position to make optimum use of these. They are also not able to leverage these for raising funds from the market. Asset management could help the ULBs in making use of their passive assets for

remunerative uses like giving on outsource basis to private people for sports and recreation purposes.

- (iv) ***Tapping of New Revenue Sources:*** The following strategies could be used for augmenting the financial resources of ULBs.

Land and Property: The rates of conversion charges and license fee levied for Change of Land Use (CLU) could be increased in proportion to market potential value and 50 per cent of their proceeds be devolved to the concerned ULB. The owners charge huge vehicle parking fees. These too could also develop their parking areas near the malls and the bazaars for raising their own resources. The ULBs should also be given a fixed share in the Labour Cess as these provide basic civic amenities to the labour colonies. Like-wise, they should also be given a share in the Toll Tax.

Municipal Assets: Municipal Assets like the land, buildings and other commercial properties should be identified and listed. Suitable guidelines be prepared for their proper valuation in order to mobilise optimum revenue. There should be an effective management system for this purpose. A Municipal Valuation Committee could be set up in each of them to expedite this process.

Civic Services: Suitable measures should also be initiated by the ULBs for the conservation of energy and water in the public places and meters be installed by these at suitable places. Sewerage connections in unauthorised colonies too should be regularised by levying appropriate charges. Licensing policy for the municipal areas too needs to be liberalised for reducing the pressure of the unauthorised colonies in the controlled areas.

New Taxation Avenues: These too need to be explored, identified and brought under tax net. Revenue generated from local economic base such as the fuel tax, entertainment tax should be shared by ULBs for efficient delivery of local service. Existing rates of electricity tax, liquor tax, mobile cess, cable tax, advertisement tax, etc. too should be suitably revised.

Professional Accounting Process: ULBs should also initiate steps to introduce the Double Entry Accounting System for promoting transparency and accountability in their financial management and decision making process.

Incentives and Special Drives: Taxes and user charges should be

collected through effective drives such as e-collection, collection at doorsteps, mutual resolution of disputes, *lok adalats* and attractive incentives and penalties.

4. **Steps for Manpower Management and enhancing Accountability in Civic Services:** The effective Personnel Management System will assist the ULBs in managing their human resources by using Information Technology. It will also help in centralising, standardising and governing its human resource functions in a more effective and efficient manner. It aims at evolving an employee-centric portal for streamlining the complex processes, providing a 'single window' services to employees and ensuring the timely and reliable management of information relating to human resources for effective decision-making.

5. **Steps for Tackling Corruption**

- (i) ***Single Window Clearance for Various Approvals and Procedures:*** It is an innovation that is growing in popularity among the ULBs and the development authorities. All agencies involved in the process need to be physically located in a single facility and are often connected by a shared computer system. Efforts have to be made to constitute teams comprising of experts from various agencies under the overall supervision of a Town Planner from ULB, designated to assist developers/builders complex projects operationally by cutting down delays through an improvement in the sanction process.

ULBs have to take the following steps for the implementation of this reform:

- To do stakeholder consultations for the modifications in the building bye-laws and for streamlining approval process and for making provisions for disaster mitigation as a part of bye-laws;
- Amend the existing legislation for framing new building bye-laws and its dissemination through website;
- Implementation of Common Building Rules;
- To do MIS linking of all the offices connected with building permissions;
- To put into place a Citizen Enquiry System for disclosing status of approvals;
- To set up timelines for reducing the period for granting approvals; and

- To organise city level workshops for addressing general queries of public.
- (ii) **Building Approvals:** The functions of the ULBs pertaining to Building Approvals Section are both regulatory and development oriented. On the regulatory front, these include formulation of building by-laws and rules, preparation of master plan, enactment of rules and zonal regulations, processing and disposal of court cases and petitions, etc. On the developmental front, these cover implementation of master plans, issuing permission for buildings and layouts, removing encroachment, calculating and collecting various fees and maintaining accurate and updated records. The ULBs standardise the building fee and other charges by linking the property with GIS for the automation of the plan scrutiny and auto generation of approval.
- (iii) **Single Window Grievances Redressal:** Grievances redressal is one of the most critical tasks of an ULB. It is, therefore, imperative for them to strengthen the machinery for public grievances redressal and to establish a “Single Window System” for all departments for facilitating disposal of grievances, for increasing transparency, and for encouraging citizen participation and for ensuring performance accountability. On lodging of a grievance, a Registration Number is to be given to the citizen for further reference and for tracking status of the grievance. On receiving the grievance, the departmental officials are to respond by disposing the grievance in a fixed time limit stipulated for public grievances and staff grievances. They should also ensure that time limits are strictly adhered.
- (iv) **Personnel Management System:** This module will assist the ULBs in managing their human resources by using Information Technology. It will also help in centralising, standardising and governing its human resource functions in a more effective and efficient manner. It aims at evolving an employee-centric portal for streamlining the complex processes, providing a ‘single window’ services to employees and ensuring the timely and reliable management of information relating to human resources for effective decision-making.
6. **ICT Initiatives:** Besides the following ICT initiatives need to be emulated as these will go a long way in strengthening urban governance in a sufficient manner.

E-MaaS (E-Municipality as a Service): eMaaS is a cloud based

system for providing a uniform e-governance platform that enables the municipalities to serve the citizens online. Starting with the creation of a city portal, Andhra Pradesh and Madhya Pradesh have already taken a lead in rolling out eMaaS. It aims at enabling the municipalities to offer citizen services online/via mobile. It also promises transparency and accountability in services to the citizens. It also makes these services to them available in a cost effective way. In the new eMaaS project, the Ministry of Urban Development has procured Managed Service Provider to develop End-to-end mobile/web application, Data Centre on Public Cloud which is also available for use by ULBs for providing customised services. The ULBs, should digitise and upload data for, procuring local hardware. They can train their manpower for using e-MaaS.

7. **Privatisation of Municipal Services:** The ULBs should develop mechanism for service enhancements so that citizens are able to get maximum benefit. These must also become sensitive to the needs and aspirations of households and businesses. Only that can give the cities their much needed identities as worth living places.

The services like street lighting, water supply, solid waste management, construction/ maintenance of toilets, garbage collection and disposal, street cleaning, maintenance of roads/ gardens/parks/playgrounds should be privatised in all the major municipalities. Model bye-laws be enacted and guidelines be issued for this purpose.

A strong regulatory mechanism and oversight system, and a appropriate institutional and legal framework too needs to be put into place for keeping a strict watch on private service providers for obtaining quality service from them at a minimal cost. Community participation too should be encouraged as well for developing a cost effective system for maintaining and operating civic services.

8. **Regulatory Mechanism:** Cities should plan keeping in mind the regional context as the nearby towns and rural areas are dependent on these. A closer relook is needed at the regulatory issues relating to urban administration. For example, municipal bye-laws under the ULBs have a crucial impact on the way a city grows, expands and develops. These regulations also have a big impact on ULBs resources and economy. Long standing demand of rationalisation and standardisation of Floor Area Ratio (FAR), has been accepted by state government. This is a welcome step. Steps are, therefore, needed to augment the supply of developed urban land for preventing proliferation of illegal or semi-legal habitations. Hence

a proper urban land policy needs to be framed by keeping in view the realities and dynamics of urban growth.

CONCLUSION

The above discussion of structural and functional dimensions of urban governance system in Haryana as well as the best practices being followed in the other states leads to the conclusion that system of urban governance in Haryana needs to be streamlined for coping with the increasing pressure on it on account of the rapid pace of urbanisation in the State which is likely to be accelerated in the years ahead.

This is a challenging task. Yet, Haryana has political leadership committed to decentralised urban governance as well as the required bureaucracy and technocracy for helping the ULBs in performing their role in a competent manner. Moreover, the State has got the requisite potential to achieve the goal of providing a responsible, responsive, cost effective and efficient governance to its people. Last but not the least, people of Haryana in general and its urban population in particular are vigilant enough to get their entitlement and above all, the political dispensation in power has the political will to ensure good governance through ULBs.

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Case Study

Naina Town Planning Schemes – Land Owners’ Meet in Pre-Covid and Post-Covid Times

KANCHAN GUPTA*
SMITA NIMSARKAR**

Executive Summary

Town Planning Scheme is one of the best tools in Urban Land Management for transforming irregular shaped lands into serviced plots. For Government organizations implementing mega infrastructure projects, this is the paramount alternative to Land Acquisition Act in today’s world where land prices are sky-high. In Town Planning Scheme public participation in the project through consultation and interaction is one of the primitive factor for transparency and effective implementation of the project.

The paper portrays case of City and Industrial Development Corporation of India’s (CIDCO) Navi Mumbai Airport Influence Notified Area (NAINA) Town Planning Schemes (TPs), a regulatory time bound micro level planning adopted to implement infrastructure in sanctioned NAINA Development Plan under the ambit of Maharashtra Regional and Town Planning (MR & TP) Act, 1966. The objective of this article is to enhance the environmental and institutional framework of land Owners’ Meet conducted in NAINA Town Planning Schemes. The outcomes of consultative mechanism of NAINA TPs in pre-COVID and post-COVID times is the tangible learning for Global practices. The extent of NAINA TPS public consultation can be taken to Central Government Public Service delivery programmes such as Smart Cities Mission, Digital India, Heritage City Development and Augmentation Yojana (HRIDAY) and Atal Mission for Rejuvenation and Urban Transformation (AMRUT) mission and also to administrative organizations like Amaravati Metropolitan Region Development Authority (AMRDA), Ahmedabad Urban Development Authority (AUDA), Delhi Development Authority (DDA), Pune Metropolitan

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Region Development Authority (PMRDA), etc. who are involved in urban development projects.

To highlight the key features of NAINA Development Plan is its land pooling model, developed for land assembly under reservations without resorting to Land Acquisition procedures of LARR Act. The NAINA land development model is a shift from 'NAINA Scheme- a voluntary approach' to 'NAINA Town Planning Scheme - an Act driven Land Pooling' prepared under the provision of MR & TP Act, 1966 for timely implementation of infrastructure in NAINA Development Plan.

This paper shows the mechanism adopted in NAINA for conducting Land Owners' Meet for its Town Planning Scheme under Rule no. 4 of MR & TP Rules, 1974. Though the main objective of Owners' meet is to explain the land owners' tentative proposal of the scheme, CIDCO explains complete layout of the scheme and comprehend details of their land transformation from irregular shape to regular serviced plot, raises public participation and reach out grassroots level.

NAINA Interim Development Plan currently covers 10 Town Planning Schemes, wherein TPS 1 to 5, resulted in active participation of landowners during Owners' meet which helped CIDCO to achieve acceptance of schemes to the public at large. However, on account of nationwide lockdown and social distancing norms due to COVID 19 as NAINA progressed its further schemes TPS 6 and 7, the conventional Meet was transformed into the Digital Meet. This not only advanced the schemes but also formed innovative method and new venues of public participation. This article explains NAINA TPS public participation in two parts briefed as below;

PART I

Part I explains formation of the NAINA Town Planning Scheme and presents the mechanism of one of its important stage that is Land Owners' Meet. It further explains impact of COVID 19 which led to Digital Land Owner's Meet, its objectives and procedures.

PART II

Part II evaluates Conventional Public Meet vis-a-vis Digital Public Meet carried in NAINA TPS. It further recommends the adaptation of Digital Public Meet, its procedures and the enhanced level of public participation in implementation of land development projects.

Way Forward

The key findings of the article are: Digital Land Owners' Meet can be trusted as an effective and advance way of public participation than

Conventional Land Owners' Meet. In the wake of pandemic or any uncertain situation, Digital Meet is the responsive solution for the timely progress of projects. E-governance and transparency are strengthening factors in NAINA TPS, contributes to Digital India Movement – a flagship programme of Digital India and is a take away for organizations under AMRUT mission, HRIDAY and others in the country to create citizen-friendly approach especially those who are dealing with public projects related to infrastructure and land development.

PART I

This section explains formation of NAINA Town Planning Scheme and presents the mechanism of one of its very crucial stage that is Land Owner's Meet. It further explains impact of COVID which led to Digital Land Owner's Meet, its objectives and procedures.

Urban Land Management is the answer to growing urbanization and economic development which generates the need for controlling the urban sprawl and providing infrastructure and services in a planned manner. Town Planning Scheme is one of the best tools of Urban Land Management to get serviced land with infrastructure and amenities, which are likely to grow haphazardly. Town Planning Scheme mechanism is being widely adopted by Government organizations across India for planned development and implementation of infrastructure projects which is possible due to transparency and public participation created in the mechanism. Town Planning Scheme offers platform for people to give opinion about their city level projects through 'Land Owners' Meet'.

CIDCO as Special Planning Authority for NAINA

City and Industrial Development Corporation of Maharashtra Ltd. (CIDCO), is a Government of Maharashtra (Undertaking) company, incorporated on March 17, 1970, with the specific aim of creating a new planned city of Navi Mumbai adjoining Mumbai. Considering CIDCO's capability for City and Infrastructure development projects, dated January 10, 2013, State government appointed CIDCO as the Special Planning Authority (SPA) under Section 40(1) (b) of MR and TP Act, 1966 for notified area around proposed Navi Mumbai International Airport (NMIA) called as 'Navi Mumbai Airport Influenced Notified Area (NAINA).' CIDCO as SPA for NAINA has prepared its Development Plan under Section 21(1) of MR and TP Act 1966 in two stages; First - an Interim Development Plan (IDP) for 23 villages with an area of 3,683 ha and second, Development Plan (DP) for 152 villages with an area of 33,452 ha. Government of Maharashtra sanctioned both the Development Plans within 1.5 years from its submission to Government.

This is the best ever and fastest-approval of two development plans for the city by Government in the State of Maharashtra. (Sanction IDP map of NAINA is kept at Encl. 01).

The Key feature of NAINA DP is its land pooling mechanism coined as 'NAINA scheme'- developed for land assembly under reservations without resorting to Land Acquisition procedures of LARR Act. The NAINA land development model is a shift from 'NAINA Scheme- a voluntary approach' to 'NAINA Town Planning Scheme - an Act driven Land Pooling'.

Journey from NAINA Scheme to NAINA Town Planning Schemes

On sanction of NAINA IDP, group of land owners demanded CIDCO to initiate NAINA scheme as they were short of funds, technical knowhow, internal clashes, access issues, problems in aggregation, stamp duty waiver etc. Looking at the situation, Urban Development Department, Govt. of Maharashtra directed CIDCO to intervene and implement NAINA scheme in the mechanism of Town Planning Schemes as per Chapter- V of MR & TP Act, 1966 for timely implementation of IDP infrastructure. Thereon, CIDCO transformed its methodology of land pooling from voluntary (by land owners) to the TPS (by Authority). TPS is a regulatory mechanism of 100% public participation ensuing each individual to participate in the scheme.

Making of Town Planning Scheme

Government of Maharashtra meticulously laid time bound procedures of TPS through MR and TP Act, 1966 and MR and TP Rules, 1974. TPS is broadly divided into four stages — Declaration stage, Owners' Meet Stage, Sanctioning of Draft Scheme, Appointment of Arbitrator and its Role (See Figure 1).

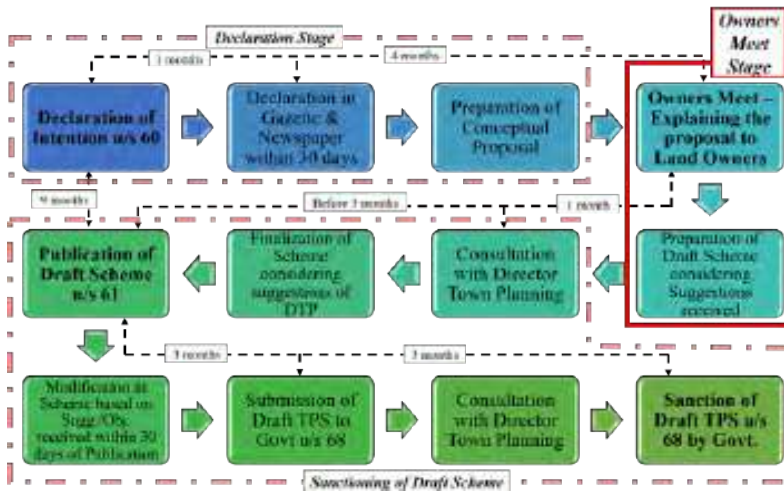
Every stage includes public intervention in making of Town Planning Scheme. In this paper, we are looking at one of the very crucial stage of public participation in TPS that is 'Land Owners' Meet'.

NAINA Town Planning Schemes and its Status

As per the government directives and on Board's approval, CIDCO launched its first pilot TPS-1 of 19.11 ha on August, 2017 which got its preliminary sanction by Government in September, 2019 i.e. in record break time of 25 months. CIDCO is privileged amongst the first Urban Development Authorities in Maharashtra to achieve the sanction status of preliminary TPS after about three decades' time. CIDCO started laying of infrastructure on site for TPS-1. Subsequently, in 3 years CIDCO declared another Ten Town Planning schemes covering 75% of

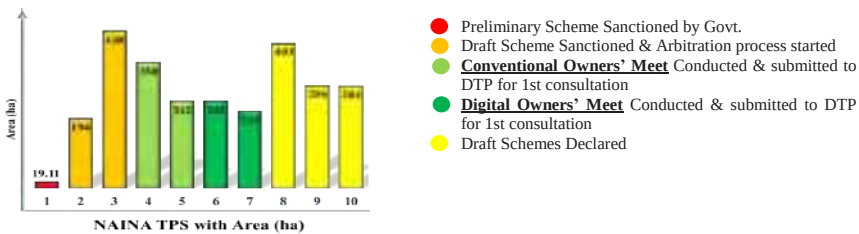
NAINA IDP area. Thus TPS has ensured speedier implementation of infrastructure in Development Plan. The details of all 10 schemes with its area and stages are given in Fig. 2.

Fig. 1: TPS stages along with its statute time period



Note: The flow chart explains sections up to Sanction of draft TP Scheme. MR & TP Act also includes further sections from 72 to 112 which explain Arbitration procedures of TPS.

Fig. 2: Stages of Schemes



Thus, CIDCO envisages implementation of IDP by way of taking 11 TPS and thereby experiencing the development plan in reality. (NAINA Sanction IDP map covering 11 TPS is kept at Encl. 02). For TPS 1 to TPS 5, Land Owners' Meet was conducted in a conventional way. Further, in the wake of nationwide lockdown due to COVID 19 post March, CIDCO conducted Land Owners' Meet digitally for TPS 6 and 7 in the month of April and June, 2020 respectively to honor the statute time period and timely completion of project.

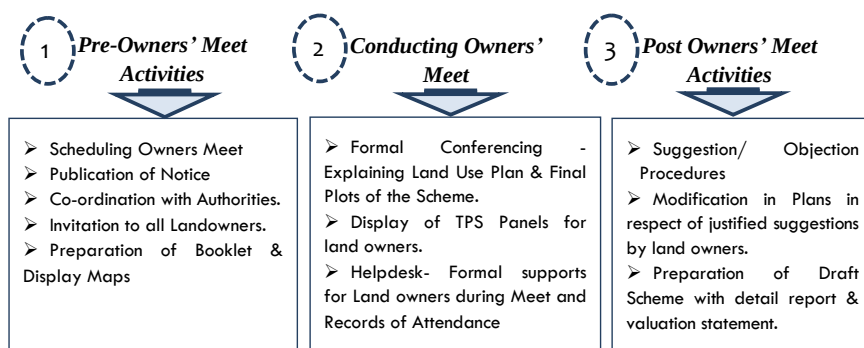
Conventional Land Owners' Meet for NAINA TPS-1 to 5 (pre-Covid)

As per Rule no. 4 of MR and TP Rules 1974 for TPS, Planning Authority shall call a meeting of land owners included in a draft

scheme by issuing a public notice and individual notices to such owners explaining the draft scheme with the *Objectives*:

- Convey land owners the complete layout of the scheme and comprehend details of their land transformation from irregular shape to regular serviced plot.
- Eliciting public opinion and suggestions thereon for finalizing the draft scheme.
- Raise public participation and reach out at grassroots level, so as to cause inclusion in the scheme and cause win-win situation amongst all stakeholders.

Conventional Land Owners' Meet Steps



Pre-Land Owners' Meet Preparation

- (a) **Scheduling Owners Meet:** The Land Owners' Meet is scheduled for 2-3 days depending on the number of land owners in the scheme, groups of 100-200 people are scheduled for each day with different time slots to avoid overcrowding at the venue and everyone gets a chance to understand the scheme personally. A team of about 10-15 planners (CIDCO officials) other than security members and helping staff, is involved in the complete process of the Meet. The Meet schedule includes one of the non-working day that is Saturday for the convenience and maximum participation of land owners.
- (b) **Publication of Notice:** Public Notice regarding Owners' Meet is published in local Newspaper in English and Marathi (regional language) inviting all the owners to attend the meeting. This notice along with list of owners' name, survey no., date and time of public meet is displayed at CIDCO's NAINA office and uploaded on CIDCO's official website.

- (c) **Co-ordination with Authorities:** Notice along with public meet schedule, date, time and location is displayed in respective Gram Panchayat offices and *Tehsil* office.
- (d) **Invitation to all Land Owners:** All the owners in the scheme are invited for the Owners' Meet by sending letters through registered post before 15 days of the meet. This gives land owners sufficient time to gather relevant documents of their land, if required.
- (e) **Preparation of Booklets and Display Maps:** Plan depicting land owner's each and every plot with its original plot (OP) on Layout Plan, Final Plot (FP) with adjoining road width, Survey Number area as per 7/12 extract and corresponding entitlement on one sheet are prepared which accounts to 600+ plans. 2-3 copies of large scale maps showing complete layout of the scheme is displayed. A conceptual 3D view is prepared to get better understanding on how the city would develop (TPS Layout Plan, Sample OP-FP map is kept at Encl. 03, 04).

Conducting Land Owners' Meet

Venue: CIDCO NAINA Office

Members Participated: CIDCO Officials, Concerned Land Owners, Concerned Gram panchayat members, Group Gram panchayat and other Concerned Authorities.

- (a) **Formal Conferencing:** During three days of Manual Conferencing of Land Owners' Meet, Team of planners warmly grace landowners, explaining them various steps, process and timelines of the scheme. CIDCO officials assist all the landowners individually and explain them the plans made for individual plot and layout plan of scheme, making it certain that the landowners understand their land details and their queries and doubts are resolved appropriately. (Conference photographs of the Meet are annexed at *Encl_05*)
- (b) **Display of TPS Panels:** The Conference includes display of TPS panels addressing benefits of the scheme, amalgamation of plots, justifying land share and land entitlement, relaxations proposed in DCR, enhanced potential of land without losing FSI potential (Sample of Panel is annexed at Encl. 05A).
- (c) **Helpdesks and Record of Attendance:** With the support of helpdesk land owners are routed to the conference and an attendance record is created for number of land owners visited during the Meet. The track of attendance in the Meet is an important factor showing the outreach of the scheme to the extent of land owners. Even after

Owners' Meet, landowners visit the office on regular days to see their land details.

Post Land Owners' Meet Activities

- (a) Suggestions/ Objections Procedures:*** Owners are requested to submit their suggestions/objections within 7 days so that justified suggestions/objections are incorporated in draft scheme.
- (b) Compilation and categorization of applications received:*** The suggestions/ objections received are categorized as General in nature, Plan related and others. The plan related applications are examined critically to consider the valid suggestions.
- (c) Preparation of Draft Scheme:*** Once the layout plan is finalized, draft scheme along with the detailed report, infrastructure plans and valuation statements for the cost of scheme are prepared and the Draft scheme is processed for consultation to Director Town Planning, GoM for the purpose of publication.

NAINA TPS 1 to 5, caused active participation of landowners during Owners' Meet which helped CIDCO to achieve acceptance of schemes from public at large. However, on account of nationwide lockdown due to COVID-19 as NAINA progressed its further schemes TPS 6 and 7- a Conventional Formal Land Owners' Meet was transformed into Digital Land Owners' Meet which not only advanced the schemes but also formed new venues of Public participation.

Digital Public Meet for TPS-6 and 7, a response to Covid-19

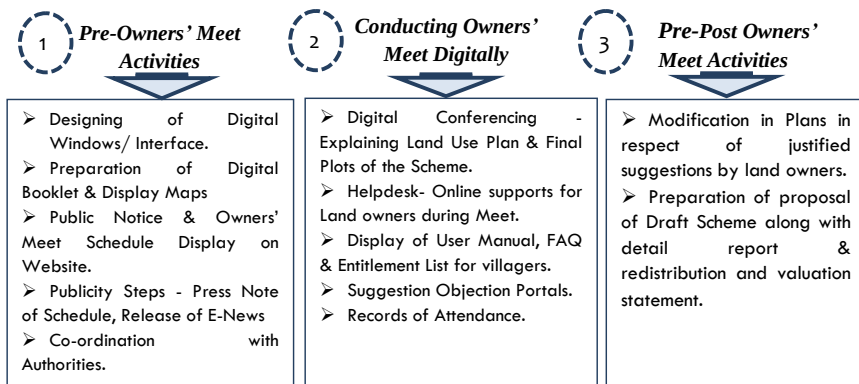
Land Owners' Meet of TPS-6 and 7 was due in April and June, 2020 as per the timelines of MR & TP Act, 1966. In the wake of the unprecedented scenario of COVID-19, nationwide lockdown and social distancing was declared post March, 2020. In a situation wherein land owners could not be invited to CIDCO office, nor could the officers reach them at their villages, it was found appropriate to reach out the land owners to explain the draft layout of TPS-6 and 7 through digital means by making all necessary information available on CIDCO's website by providing channel for submission of suggestions and objections through email and dedicated WhatsApp contact number.

Thus, CIDCO proposed Land Owners' Meet of TPS-6 and TPS-7 to go Digital with these objectives:

- Create an Ease of Procedures to continue progress and timely implementation of the Schemes under the ambit of MR and TP Act, 1966.

- Formulate the mechanism to increase land owners' participation in the Meet so that they can easily communicate and put up their suggestions/ objections in regards to the scheme that safeguards them in the national lockdown due to COVID-19.
- Create sureness to all the land owners in their land development, assuring strong commitment to retain economic stability and infrastructure development in the uncertain times of COVID-19.

Digital Owners' Meet Steps



Pre- Digital Land Owners' Meet Preparation

- Designing of Digital Windows/ Interface:** With the experience of Conventional Public Meets, the touch points of Public Interface were converted into the mediums of Digital Windows for the purpose of Public Interventions. For this the web pages were designed that include: i) Explanation of layout plan of entire scheme, ii) explaining each and every land owners' final plot details and iii) Submission of suggestions/ objections related to the scheme. The user interface was created in two languages; English and Marathi (regional language) both.
- Preparation of Digital Booklets and Display Maps:** Draft scheme deliberated by CIDCO senior officials is taken ahead for designing a detailed booklet in the similar lines as prepared in conventional meet showing details of each and every land parcels along with its entitlement. The draft layout plan of the scheme and final plot booklet are then linked with digital windows during meet.
- Public notice with entitlement list uploaded on CIDCO's Website:** Public notice along with Entitlement list of landowners is uploaded

on CIDCO's website before 10 days of the Meet, so that land owners can see their land details, and accordingly participate in Digital Meet.

- (d) **Press publicity via E-newspapers:** Public notice is then published in two local newspaper English and Marathi, inviting all the land owners to attend the Meet giving them the schedule and procedures of Digital Meet. Since the Meet took place in digital fashion, wide publicity was done via press release in five regional E-papers along with news circulated in Business Standard, News Bands etc. The news was also twitted @ CIDCO.Ltd, CMO-Maharashtra, MCHI_President enhancing the highlights of schemes. Special efforts of 100 hard copies distribution of local newspaper in the concerned villages was taken by News agencies to maximize participation in the Digital Land Owners' Meet due to the situation of lockdown coz, of COVID 19. (*The press clips are annexed at Encl. 06*)
- (e) **Co-ordination with Authorities:** Letters were mailed to all the concerned Gram panchayats and Group Gram panchayats along with the list of survey numbers from the respective villages falling under the scheme, requesting the Gram *sewaks* to inform all the concerned landowners to consider the letter as a personal invitation for Digital Land Owners' Meet.
- (f) **Invitation to all Landowners:** In the wake of lockdown, in absence of any postal/ courier services, invitation of Digital Land Owners' Meet along with the schedule, website link and procedure to submit suggestions/ objections was sent to landowners in the form of bulk SMS messages before two days and on the day of the Meet so as to make Digital Meet Owner's-Friendly.

Conducting Land Owners' Meet Digitally

Venue: CIDCO's official website-<https://cidco.maharashtra.gov.in/naina>

Members Participated: CIDCO Officials-Administration, NAINA Officials (Planning Team), PRO Team, IT Department (Web Developers Team), concerned Land Owners, concerned Gram panchayat, Group Gram panchayat and other concerned authorities.

- (a) **Digital Conferencing:** The invitation to Digital Meet was highlighted at CIDCO's Home Page in News and Events. Separate tab of TPS Digital Land Owners' Meet was created on NAINA webpage at <https://cidco.maharashtra.gov.in/naina>. The entrance page showcased the draft layout plan of the scheme, with an additional tab inviting land owners to participate to view the detailed maps

of their original and final plots at http://cidco.maharashtra.gov.in/Digital_owners_meet/showtpsmap. The authentication of final plots viewing entries was improvised through OTP based systems to avoid duplicity of entries. The digital conference was open for duration of 11 days for 24 hours. (*Digital Meet Layout Plan, Final Plot page sample, List of OP-FP annexed at Encl. 07, 08 and 09*)

- (b) **Helpdesk (Additional Support):** Helpdesk facility through telephonic support and dedicated Whats App contact was made available for the specified dates during 10 am to 5 pm to navigate the website, to help land owners if having any difficulty in viewing the plans and information uploaded on website. (Helpdesk details are annexed at Encl. 10)
- (c) **Display of User Manual and FAQ:** User Manual to guide the villagers on how to participate in Digital Meet was available on homepage along with Frequently Asked Questions (FAQ) for better understanding of the scheme in English and Regional language.
- (d) **Online Suggestions/ Objections:** Suggestions/ Objections auto-generated fillable formats were prepared, which was linked to a dedicated email id for documentation. The land owners were requested to send the suggestions/objections as in the prescribed format on the website along with their identity proof and relevant copy of scanned documents. The Suggestions/ Objections window was kept open during the entire Meet. (Suggestions/ Objection formats are annexed at *Encl_11*)
- (e) **Attendance of the Digital Land Owners' Meet:** The visitors who accessed the Digital Land Owners' Meet was linked with the landowners' list falling under the scheme at http://cidco.maharashtra.gov.in/Digital_owners_meet/view_visitors_details. The site could segregate and trace the attendance and participation of all the concerned landowners and public at large.

Post- land Owners' Meet Activities

- (a) **Compilation and Categorization of applications received:** Land owners easily submitted their updated land records, location of structures, revenue or court case entries, plan related matters and others with the digital suggestion/ objection window. This procedure is eased out in Digital Meet as compared to manual procedures.
- (b) **Preparation of Draft Scheme:** The justified suggestions helped in reshaping the draft layout plan to the accuracy. Based on this,

the draft TPS is submitted for consultation to Director Town Planning, GoM for the purpose of Publication (Part Plans showing incorporation of justified suggestions/objections is annexed at Encl. 12).

To understand the efficacy of procedures and level of public participation with Government Organization for public projects and understanding the outreach of scheme to grassroots level, evaluation of Conventional and Digital Land Owners' Meet is enhanced in Part II.

PART-II

PERCEPTION OF THE CASE WRITERS

This section evaluates Conventional Land Owners' Meet vis-a-vis Digital Land Owners' Meet carried in NAINA TPS. It further recommends the adaptation of Digital Land Owners' Meet, its procedures and the enhanced level of public participation in implementation of land development projects.

Assessment of Conventional and Digital Land Owners' Meet

The assessment for both the Meets is done on the basis of public participation, efficacy of procedures, its limitations and administration perspectives.

A. Records of Public Participation

Figure 3 shows the level of public participation in NAINA TPS through the attendance records and suggestions/ objections received against the total number of land owners.



- **Attendance Records:** The land owners' participation across TPS 1 to 5 in Conventional Meet is about 60%. Whereas land owner's participation in the First Digital Meet of TPS 6 is about 40%, which eventually took hike in Second Digital Meet of TPS

7 to about 60%. Thus it is seen, Digital Meet has raised interest in wide level of citizens' participation and has created an access to reach out the grassroots level with ease and velocity, very effectively.

- **Numbers of Suggestions/ Objections received:** As seen from the figure near about 50% of land owners who attended the Meet, submitted their suggestions/ objections in Conventional Meet of TPS 1 to 5. The overwhelming response of E-correspondences of suggestions/ objections received from land owners and citizens in case of TPS 6 is 145% and in case of TPS 7 is 75% in respect of land owners who attended the Meet. The suggestions/ objections digital window created space of effective communication between land owners and authorities.

B. Efficacy of Procedures

<i>Steps</i>	<i>Conventional Meet</i>	<i>Digital Meet</i>	<i>Effective</i>
Queries of Land Owners	One to one interaction (makes it more attentive)	Through telephonic or online communication	Conventional Meet
Intervention in Planning by Land Owners	Interaction on plan improvises the scheme.	Through suggestions/ Objections submission (creates legal back up)	Both the Meets
Participation by Land Owners	Less participation, conducted at office	Scheme reaches to all concerned and public at large through web portal.	Digital Meet
Manual Recordings	Videos, photographs, Official records captured.	No scope of creating manual records	Conventional Meet
No. of Staff Involved	10-15 Planners, Draftsmen, Other Staff, Security	2-3 Planners (less manpower requirement)	Digital Meet
No of Days	3 days – office closed for other applicants	11 days – doesn't affect the routine	Digital Meet
Presentation, Filing of Data and Invitation letters.	A0 size Layout Plans, A2 size Final Plot details 600+ Plans and Invitation letters, Display Panels are printed.	Digital Booklet and Digital Display Maps, Invitation is through email (paperless, saves print, saves time and energy)	Digital Meet

Submission of Suggestions/ Objections	Suggestion/ Objection to be submitted during office hrs., duration 7 days.	Suggestion/Objection to be submitted online even after office hrs., duration 11 days	Digital Meet
Visiting Times	Landowner visits 3 times to office, 1-During Meet, 2-For query, 3- submission of suggestions/ objections	Landowner may not visit the office, Access to the Meet is from home available online 24 hrs. at the fingertip.	Digital Meet
Maintenance of Records	Hard Copy will be discarded in due time	Digital records will be long lasting.	Digital Meet

The Digital Meet has marked efficacy and opened up new channel to communicate with land owners in the safe confines of their homes, available anytime anywhere at their fingertip.

C. Limitations to Digital Meet

- (i) **Absence of Manual Records/Manual Interactions** - This limitation can be well addressed by digital records, online / telephonic interactions and online video conferencing.
- (ii) **Lack of Digital Knowledge base may be amongst fewer senior citizens/villagers** - For villagers who may not be well versed with the online systems/ technical aspects and are unable to access the web portal have to depend on others for getting the details of scheme. Thanks to Digital India movement and mobile revolution also, where every home especially youngsters are becoming well versed with digital technologies, who can support the senior citizens. In the Digital Meet, care is taken to guide the villagers for web portal through user manual and technicalities of scheme thro' FAQs in English and Regional language both.

D. Administration Perspective

The planning and administration perspective for TPS Land Owners' Meet are:

- It is a mandate to scrupulously implement the mammoth task of TPS in a time effective way.
- Land being a sensitive and costly matter, it is necessitating to raise land owner's participation to 100 per cent.

- Simplification in explanation procedures and bringing consensus is must.

Thus, it can be assessed, that digital methods can serve the intentions of scheme and help in drawing administration perspective more effectively.

Way Forward

The response to Digital Land Owners' Meet is found progressive than Conventional Land Owners' Meet. Though some land owners showed their discomfort to the Digital Meet, most were satisfied and appreciated the efforts of CIDCO in reaching out digitally even during pandemic. *NAINA TPS Digital Meet is the first ever Land Owners' Meet in the state to be conducted digitally owing to the unprecedented scenario created by COVID-19 pandemic.*

1. In the wake of pandemic or may it be due to any other uncertain situation, Digital Meet is the responsive solution for the timely progress of projects.
2. E-Governance and Transparency in the preparation and explanation of the scheme are strengthening factors in NAINA TPS, which is a takeaway for many government organizations working on mega infrastructure projects, where citizens' participation in land development has been a concern.
3. Digital Public Meet has opened up new ventures for land owners to participate in the scheme through the process of authentication – registrations, digitization and owners' friendly approach at CIDCO's SAMWAAD Citizen Portal. One Stop Portal SAMWAAD (संवाद) is a window of transparency under E-Governance aims to reach out, each and every stakeholder, assuring them in stabilizing economic development and business opportunities in the area.
4. Digital Land Owners' Meet of NAINA TPS may encourage policy and law makers to adopt insertion of new para about online public participation in newer Section in MR & TP Act, 1966, synchronizing with current times to make it adaptive and effective for results.
5. CIDCO will be advancing the orientation to the villagers in the Land Owners' Meet from display of TPS Panel, User Manual, FAQs of Schemes to audio visual trainings and mobile based applications in the upcoming schemes. This can also be upgraded by creating private business video conferencing softwares such as Microsoft Teams, Zoom and others. Also to ease out villagers'

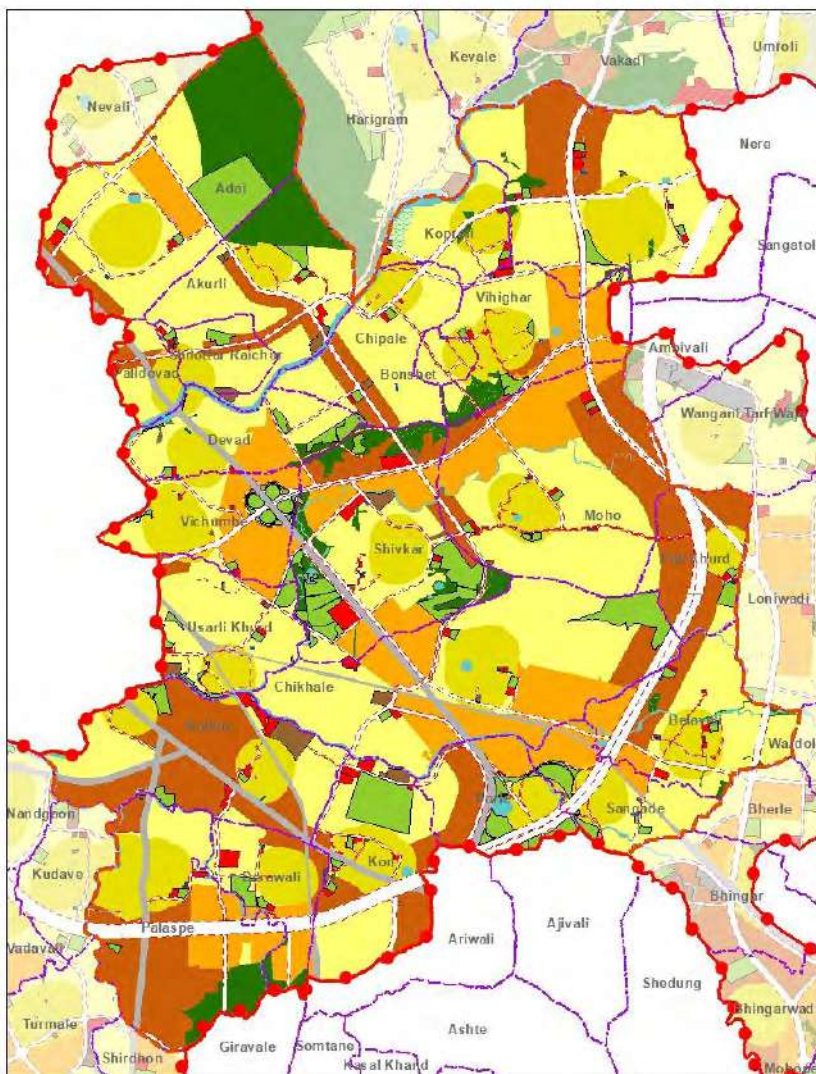
participation, *SETU* Kendra can be created by means of moving vehicle/ temporary set ups at Gram panchayat level.

6. CIDCO NAINA TPS Digital Meet thus becomes the integral part of one of the pillars, i.e E-governance of Digital India Movement, whilst achieving its vision of governance and services on demand.
7. The Public Consultation Mechanism can be adopted at Central government public service delivery programmes in selected cities of *HRIDAY* and *AMRUT* Mission (where in stakeholders' consultation will be done through TPS/LAP).

(Abbreviations and Bibliography are annexed at Encl. 13)

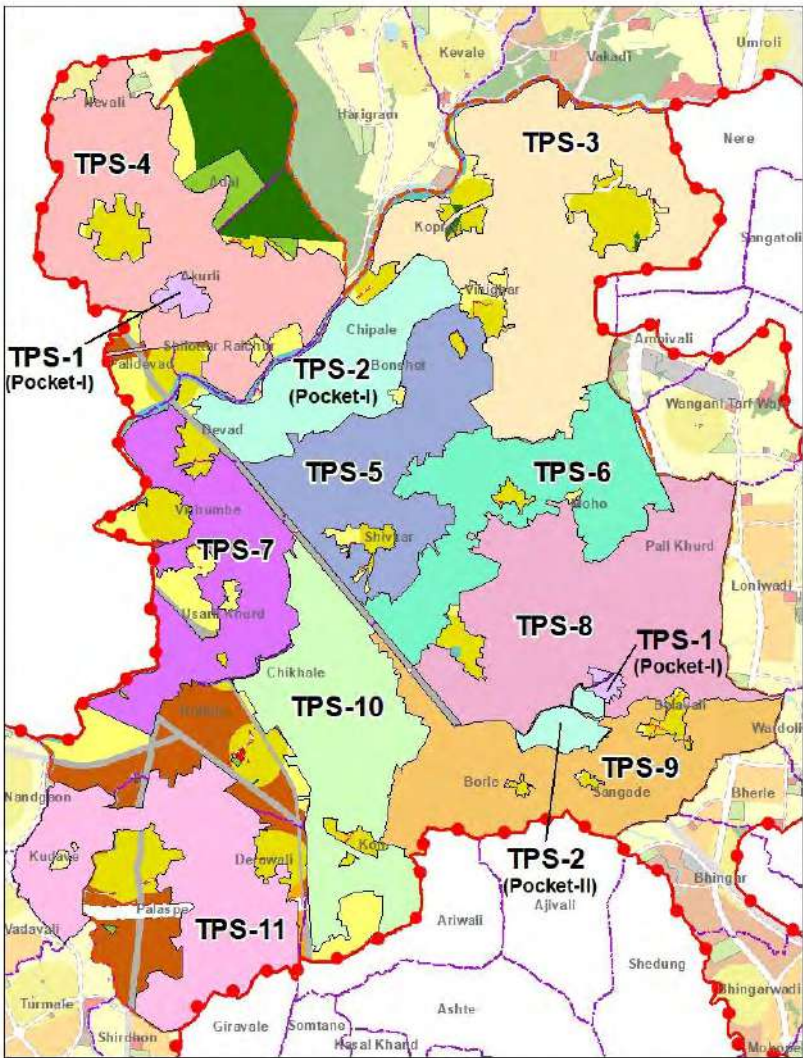
Enclosure 01

Interim Development Plan Area Covered Through TPS 1 to 11



Source: NAINA IDP Report, 2017.

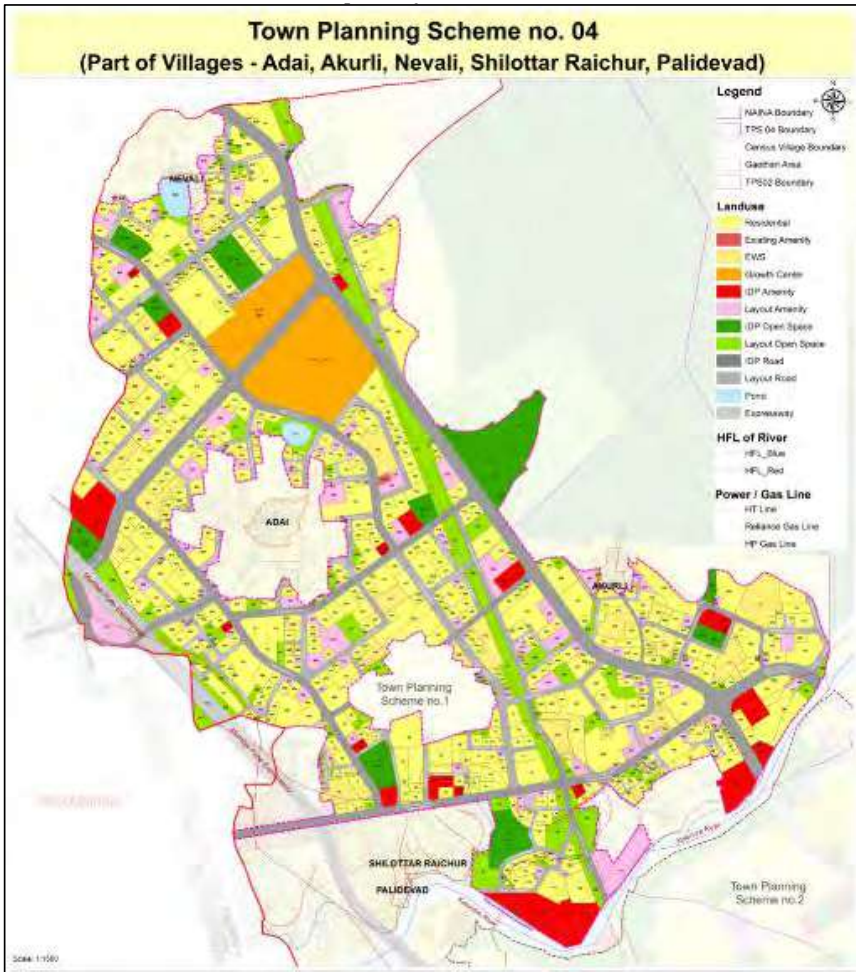
NAINA Sanctioned Interim Development Plan for 23 Villages



Source: NAINA Office Internal Data

Enclosure 03

Complete Layout Plan of TPS



Source: NAINA Office Internal Data

Enclosure 05

Glimpse of TPS Owners' Meet with Conventional Method



Source: Author

TPS Panels

संवादातून परियुक्ती

- सर्व विकासक व भूस्वाम्याच्या मालकांच्या मध्ये
- सर्व विकासक व भूस्वाम्याच्या मालकांच्या मध्ये
- सर्व विकासक व भूस्वाम्याच्या मालकांच्या मध्ये
- सर्व विकासक व भूस्वाम्याच्या मालकांच्या मध्ये
- सर्व विकासक व भूस्वाम्याच्या मालकांच्या मध्ये
- सर्व विकासक व भूस्वाम्याच्या मालकांच्या मध्ये
- सर्व विकासक व भूस्वाम्याच्या मालकांच्या मध्ये
- सर्व विकासक व भूस्वाम्याच्या मालकांच्या मध्ये
- सर्व विकासक व भूस्वाम्याच्या मालकांच्या मध्ये
- सर्व विकासक व भूस्वाम्याच्या मालकांच्या मध्ये

Coordination Meetings With Land Owners



Promises Made During Meetings

- Landowners to contribute legal percentage of land for development.
- Land owners to get 80% net final plot.
- As far as possible structures to be protected – (final plot around existing structures).
- All infrastructure shall be developed by CIDCO.
- Minimum road width of 45 feet.
- Final plots to be regular shape and buildable.
- As far as possible final plots anchored to original location.
- Unencumbered final plots will be given to land affected by gas pipe lines, between river and blue line, MSEB power corridor.
- 10% open space and 5% amenity to be utilized as common/public open space/amenity.
- Single/multiple owners with scattered land parcels can be combined for better FSI utilization.
- Utilization of full land potential in terms of FSI up to 2.5 on final plot.
- Relaxation in side and rear marginal open spaces for FSI consumptions.
- Internal open space, amenity and EWS are not necessary for final plots above 4000 sq. mt.

IMG-20200628-WA0012.jpg (1024 x 768)

Press Release for Digital Land Owners' Meet

'नैना' प्रकल्पाला गती देण्यासाठी सिडकोची धडपड

व.टा. प्लानिंग, नवी मुंबई

उत्पत्ती पद्धत सध्यासाठी सध्या अडलेल्या देशातील नगरपालिका क्षेत्रातील विकासकाला गती देण्यासाठी नैना प्रकल्पाला गती देण्यासाठी सिडकोची धडपड.

जमीनमालकांची 'डिजिटल' सभा

नैना प्रकल्पाला गती देण्यासाठी सिडकोची धडपड. उत्पत्ती पद्धत सध्यासाठी सध्या अडलेल्या देशातील नगरपालिका क्षेत्रातील विकासकाला गती देण्यासाठी नैना प्रकल्पाला गती देण्यासाठी सिडकोची धडपड.

नैना प्रकल्पाला गती देण्यासाठी सिडकोची धडपड. उत्पत्ती पद्धत सध्यासाठी सध्या अडलेल्या देशातील नगरपालिका क्षेत्रातील विकासकाला गती देण्यासाठी नैना प्रकल्पाला गती देण्यासाठी सिडकोची धडपड.

Cidco to use digital platform to hold meeting with stakeholders on Naina Project ...

7 days ago · Cidco to use digital platform to hold meeting with stakeholders on Naina Project. In the wake of the lockdown, Navi Mumbai town planning authority Cidco has decided to use digital platform for conducting meeting with stakeholders for public consultation on its sixth town planning scheme for Naina project.

CIDCO proposes public consultation of 6th town planning scheme to go digital on ...

7 days ago · In the wake of the ongoing nationwide lockdown for containing the spread of Corona or Covid-19 virus, CIDCO has decided to conduct the owners' meet planned in April, 2020 for the 6th Town Planning Scheme (TPS-6) of its Navi Mumbai Airport Affected Area (NAINA) Project.

CIDCO Proposes Digital PC Of 6th TPS Due to Lockdown. - News With Chai

6:13 PM · Apr 18, 2020 · Twitter for Android

Amid #lockdownindia #CIDCO goes digital to hold land owners meet for Town Planning Six of NAINA. Land owners will meet digitally on 24 April @CIDCO_Ltd @CMOMaharashtra @MCHI_President

TPS 6 Land Owner's Meet – Digital Public Interface



CIDCO
CITY & INDUSTRIAL DEVELOPMENT CORPORATION OF MAHARASHTRA LIMITED
(GOVERNMENT OF MAHARASHTRA UNDEERTAKING)

[HOME](#) / [ABOUT US](#) / [NAVI MUMBAI](#) / [NEW TOWNS](#) / [CONSULTANCY](#) / [CITIZEN/BUSINESS SERVICES](#) / [ONLINE PAYMENT](#) / [CONTACT US](#) / [EGG](#) / [EMPLOYEE LOGIN](#)



TPS-6 LAND OUT PLAN

LIST OF OP & FP

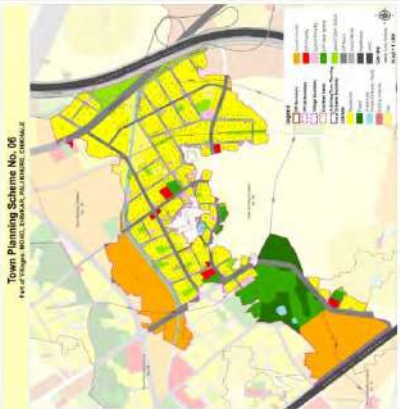
SUGGESTION / OBJECTION

CONTACT US

TOWN PLANNING SCHEME NO. 06 - DIGITAL OWNERS MEET

Town Planning Scheme No. 06

Part of Thane Municipal Corporation, Navi Mumbai - CHANDRABALL



Please Enter Details To View Final Plot

First Name *

Last Name *

Select Village

Select

Select Survey No.

Select

Email

phone number *

SUBMIT

Important Note:

- In case of any query in the Digital Public Meet website use or your final plot maps, you may contact at telephone number 7021069726 during office hours in between 10am to 5pm.
- Land owners are requested to send the suggestions/objections if any in the prescribed format as given on the website along with relevant copy of scanned documents mentioning their name, whatsapp no./hissa no./village, taluka as per their 7/12 extract on the e-mail id tps6.cidconline@gmail.com / whatsapp number 7021069726 till 04.05.2020. The last date of receipt of suggestion/objection is 04.05.2020. The services on this contact details will be available from 24.04.2020 to 04.05.2020 only.

Enclosure 08

TPS 6 Digital Land Owners' Meet - Final Plot Details in Regional Language

नगररचना परियोजना क्रमांक . ६



नकाशाची माहिती
गावाचे नाव
मोही
सर्वे क्रमांक
272/1, 102/2
जमीन मालकाचे नाव
सुनिल किसन पाटील, शिवसा किसन पाटील, माधव किसन पाटील, अरुण अश्विनी पारवी
अंतिम भूखंड क्रमांक
131, 166

महत्वपूर्ण सूचना:

- सदर डिजिटल खेमेच्या संकेत शब्दाच्या वापराप्रभे किंवा नमूदबद्ध काही अडचणी/ तक्रारी असल्यास ७०२९०६९७२६ या दूरध्वनी क्रमांकावर सकाळी ९ ते साय ५ या कालावधीत संपर्क साधावा.
- आपल्या सूचना व हरकती असल्यास आपण आपले नाव, व्हॉट्सअप क्रमांक, गावाचे नाव, सात बारा प्रमाणे जमिनीचा तपशील, इ. माहिती नमूद करून व संक्षिप्त दस्तऐवजांची स्कॅन प्रत अथवा फोटो जोडून tpsk.dcdonaina@gmail.com या पत्त्यावर ई मेल द्वारे किंवा ७०२९०६९७२६ या व क्रमांकावर व्हॉट्सअप द्वारे दि. ०४.०५.२०२० पर्यंत पाठवू शकता. सूचना व हरकती पाठविण्याची अंतिम तारीख ०४. ०५. २०२० आहे. सदर डिजिटल संपर्काची सुविधा दि. ०४. ०५. २०२० पर्यंत उपलब्ध राहील.

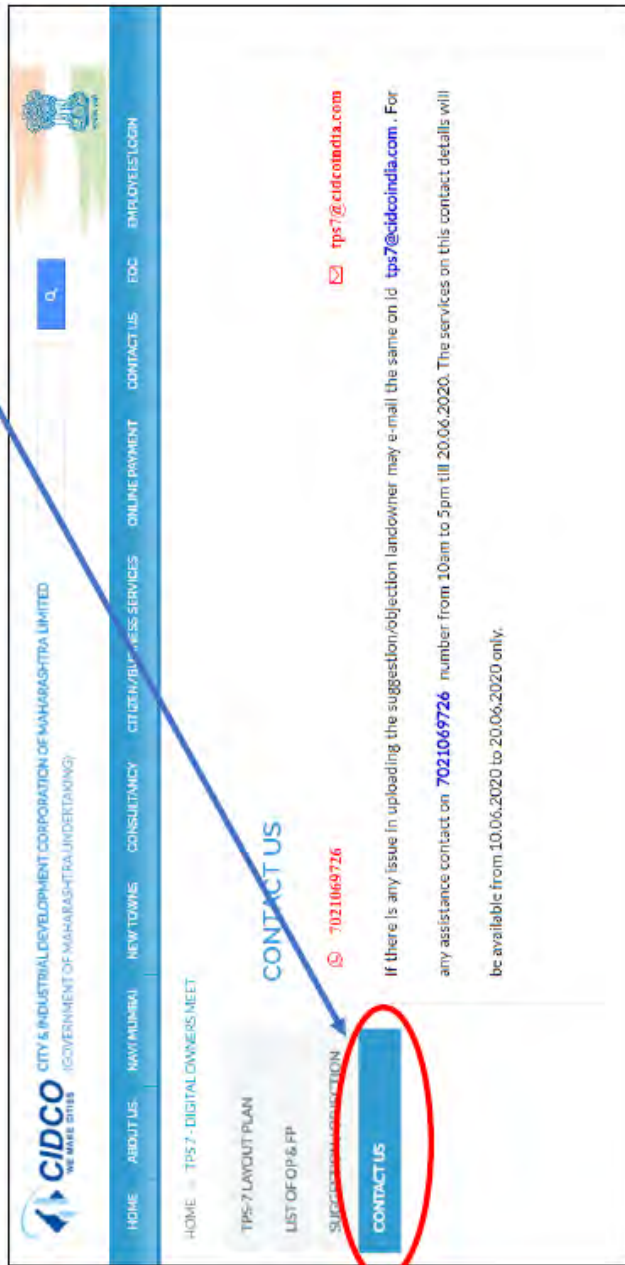
[illegible]

Enclosure 10

Digital Land Owners' Meet - Help Desk Details

Contact Details

For any assistance / information, please contact the details as shown in the link "**Contact Us**" as below.



Digital Land Owners' Meet - Suggestion-Objection Procedures

Landowners can provide any suggestions or objections using the link **"Suggestion/Objection"** To create a suggestion/objection, select the correct option as shown below.

The screenshot shows the CIDCO website interface. The header includes the CIDCO logo and navigation links. The main content area has a sidebar with 'SUGGESTION/OBJECTION' highlighted in a red circle. A blue arrow points from the text 'Suggestion/Objection' in the paragraph above to this link. The main content area displays 'TOWN PLANNING SCHEME NO. 7 - LAND OWNERS MEET' and a 'Form For Suggestion And Objection'.

To,
The Chief Planner,
CIDCO Navi Mumbai,
8th Floor, Tower 10, Belapur Railway Station Complex,
CBD Belapur, Navi Mumbai 400614

CIDCO had made declaration of making Town Planning Scheme No.6 at Village Chikhala, Moha, Shivkar and Palikhurd of Taluka Panvel, District Raigad as per provision in Section 60(1) of MR&TP Act, 1966 and published the same in the Extraordinary official Maharashtra Government Gazette (Part-2) dated 08.08.2019. Further, as per rule 4(1) of TPS Rules 1974, CIDCO conducted Land Owners Meet in the said scheme digitally dated 24.04.2020.

Now, CIDCO on the website has published notice inviting Suggestion/ Objection in Draft Layout Plan of Town Planning Scheme No. 6. We, the undersign land owners (Owners Name) Shri./Smt.

heraby submit our Suggestion/ Objection in respect of our Final Plot in Draft Layout Plan of Town Planning Scheme No.6.

Our Ownership and Land Details are as follows:

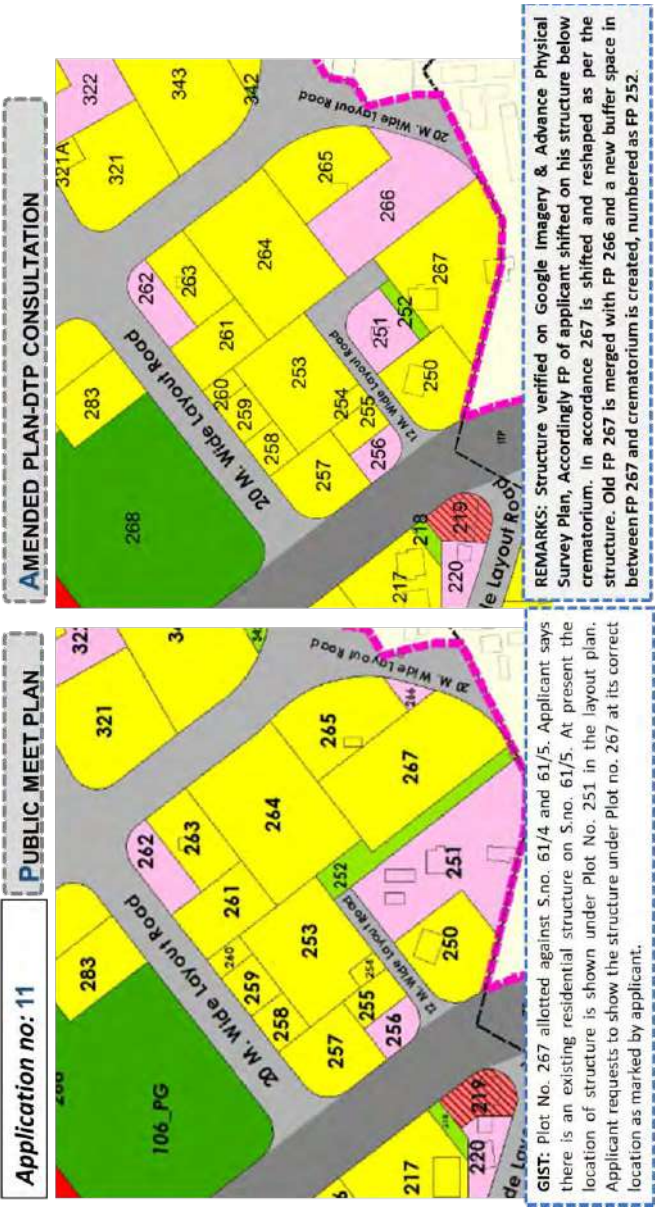
Land Owner/ Applicant's Name: अर्जदाराचे नाव:			
Address: पत्ता		Aadhar No. आधार नं.	
		Phone No: दूरधनी क्रमांक	
		E-mail id: ई-मेल	

Suggestion/ Objection in Brief: सुचना/इशकतीचे संक्षेपात वर्णन			
Village Name: गावाचे नाव			
Survey No./ Hissa No: सर्वे नं. / हिस्सा नं.		Final Plot No. अंतिम मूख्य क्र.	
Enclosures, if any सोबत जोडलेली कागदपत्रे:	1. 7/12 Extract, ☐ 2. Cut Book Map, ☐ 3. Permission documents if any ☐ 4. Others ☐		
Date: दिनांक :		Applicants Signature: अर्जदाराची स्वाक्षरी:	
Place: ठिकाण:			

Land owners are requested to submit the suggestions/objections along with relevant copy of scanned documents mentioning their name, whatsapp no., survey no./ hissa no., village, taluka as per their 7/12

Enclosure 12

Part Plans Showing Incorporation of Justified Suggestions



ABBREVIATIONS

AMRDA	<i>Amaravati Metropolitan Region Development Authority</i>
AMRUT	<i>Atal Mission For Rejuvenation And Urban Transformation</i>
AUDA	<i>Ahmedabad Urban Development Authority</i>
CIDCO	<i>City and Industrial Development Corporation Maharashtra Ltd</i>
DDA	<i>Delhi Development Authority</i>
DP	<i>Development Plan</i>
GoM	<i>Government of Maharashtra</i>
HRIDAY	<i>Heritage City Development and Augmentation Yojana.</i>
HUDA	<i>Haryana Urban Development Authority</i>
IDP	<i>Interim Development Plan</i>
MR&TP Act	<i>Maharashtra Regional and Town Planning Act, 1966</i>
NAINA	<i>Navi Mumbai Airport Influenced Notified Area</i>
NIT	<i>Nagpur Improvement Trust</i>
NMIA	<i>Navi Mumbai International Airport</i>
PMRDA	<i>Pune Metropolitan Region Development Authority</i>
SPA	<i>Special Planning Authority</i>
SUDA	<i>Surat Urban Development Authority</i>
TPS	<i>Town Planning Scheme</i>

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Government of Maharashtra, Law and Judiciary Department, The Maharashtra Regional and Town Planning Act, 1966, as modified upto 26th November 2015, printed in India by the Manager, Government Central Press, Mumbai and published by the Director, Government Printing, Stationery And Publications, Maharashtra State, Mumbai 400 004, Chapter V, section 59 to 112, pg.52-75.

The Maharashtra Town Planning Schemes Rules, 1974

CIDCO, August 2014, Draft Interim Development Plan - For Part of Navi Mumbai Airport Influence Notified Area (NAINA) (23 Villages in Panvel Taluka), pg.1-5

CIDCO, 2019-2020, Report on NAINA Town Planning Scheme No. 1 to 7 Digital India programme, <https://digitalindia.gov.in>

Urban News from States

SACHIN CHOWDHRY*

Parking spaces in cities have emerged as a major policy problem, especially in Metropolitan cities. Increasing population in urban areas and growing economic well being has put pressure on the parking infrastructure in most of the cities as people prefer owning personal vehicle rather than depending on the public transport, if they can afford. However, growth in vehicular population has meant that more space is needed for parking these vehicles. Studies have indicated that millions of barrels of oil are consumed everyday in the search for parking spaces. Parking is a stressful experience for drivers and consumes a lot of time as well. Governments world over have focused more on providing and managing parking spaces in commercial areas though parking in residential areas is equally problematic.

To solve this problem, the government works at two levels – first to create infrastructure for parking and secondly to impose prohibitive costs or encourage people to reduce the use of their vehicles. Primarily, parking is responsibility of the urban local governments (ULBs). Some of the cities across India have take initiatives to have policies or rules. Few of them are mentioned below:

1. Delhi

The Government of National Capital Territory of Delhi formulated 'Delhi Maintenance and Management of Parking Places Rules, 2019'. These rules apply to all public parking spaces within the National Capital Territory of Delhi, owned or managed by all public authorities. The rules also apply to parking places for the use of general public such as cinema halls, hospitals, malls, airports, etc. Delhi Development Authority, Delhi Cantonment Board and the four ULBs have been given the responsibility for making arrangements of parking in their respective jurisdiction. They are expected to prepare and implement local area specific/integrated parking plans as envisaged in the Master Plan for Delhi 2021.

Under the rules, the parking fees have to be determined by a Committee chaired by the Transport Commissioner. The policy is aimed at encouraging short duration parking, while extended time parking for long hours sees a rise in parking fees. The base

*Assistant Professor, (Public Administration)

fee as well is to be revised every year. On-street parking is priced twice the amount compared with off-street parking and the fee has a dynamic system where rates are higher during peak hours.

The civic agencies have been encouraged to utilise latest technology for setting up parking spaces, all street parking meters, Radio Frequency Identification Tags, automated boom barriers, computerised parking slips with timers, app based parking charging and monitoring system etc.

Currently two parking apps- Park+ and Parking Rhino- are being used in some of the parking places. These apps aim at making parking lots more transparent, efficient and accessible to the average urban consumer. There is provision of making cashless payments at the parking through credit cards, debit cards, and applications like Paytm, Amazon pay, PhonePe, Google Pay etc. Electric vehicle charging points are also being installed in some of the places.

2. Pune

Pune brought out its Public Parking Policy in 2016. The city was seeing a massive surge in the numbers of personal motor vehicles due to rising income levels. The government expected the total number of vehicles in the city to double in next 8 years, if no action was taken. The Traffic Management and Parking Policy gave high priority to parking control initiatives which encourages a shift from the use of personal mode of travel to public transport, walking or cycling. It also aims at accommodating new traffic management concepts and respond to traffic problems and appropriate use of land with promotion of environment-friendly measures.

The policy also notes that the creation of parking infrastructure requires not only funds and technology but also cooperation of the users. To effect this, it seeks involvement of market associations, resident associations and interest groups who are keen to make their city a good place to live in. It also contemplates concepts like car free day, congestion taxes, vehicle free zones, etc.

Pune also has parking apps like Parking Rhino, Park+ and Parkopedia, which provide real time solutions to the commuters looking for parking spots across major sports of the city. These apps facilitate cashless payments as well. The ULB has taken measures to control parking at private spaces like malls, cinema halls and offices etc. and install electric vehicle charging points in parking.

3. Bengaluru

As per Karnataka Municipal Corporations Act, the civic agency has the obligatory function to not only lay new roads but also construct, maintain, alter and improve all public streets. The Act also gives the Municipal Corporation the power to provide halting places or parking spaces while charging or levying fees for the same. The parking enforcement in Bengaluru is done by traffic police as per the provisions of the Karnataka Police Act of 1963. An initial parking policy was prepared for Bengaluru by the Directorate of Urban Land Transport and the policy was adopted by the Corporation in March 2012. The policy aimed at progressively reducing the demand for parking and facilitate organised parking for all types of vehicles through automated metered parking system.

However, since its adoption there have been several changes in the demand for parking. So, there was need to review the existing parking policy and accordingly it came up with Parking Policy 2.0 in December, 2020. The policy aims at moving from chaotic parking to well organised parking through inclusive planning of parking supply to support local business opportunities and facilitate people to access social infrastructure and recreational facilities. It also aims at moving from free parking to paid parking. The policy encourages exploring privately financed and market driven off-street parking regime in addition to public funded, government created, off-street parking regime. It also proposes to move from passive and weak enforcement of parking regulations to active management of parking demand. A distinct feature of the policy is to support and increase the patronage of public transport by cross subsidising transit and non-motorised transport infrastructure through parking revenue.

Along with Parking Rhino and Park+, Karnataka government has also provided Namma Bengaluru Smart Parking app which enables users to pay for parking from their mobile. Consumers can use their mobiles to book a parking as well cashless payment which is integral part of all these apps.

4. Mumbai

The city does not have a parking policy, despite the fact that there is serious crunch of parking space. Most of the people park their vehicles along footpaths and roadside, causing huge obstruction to pedestrians and other motorists. However, Brihanmumbai Municipal Corporation (BMC) brought out rules for illegal

parking in 2019. Under this, vehicles parked in the no parking zones attract heavy penalty. The civic body has identified 23 public parking lots across the city. Any vehicle found parked within 500 metres of public parking lots is slapped with a heavy fine.

At the same time, the apps like Mumbai Parking, Park+ and Parking Rhino are available which like everywhere else enable cashless payments.

5. Chennai

The greater Chennai Corporation has initiated steps for implementation of parking management system in Chennai city. The rules have been drafted but not finalised. In the meantime, the city is experiencing unorganised haphazard parking on the streets and invasion of pedestrian footpaths by parked cars. Most on-street parking is free and even when charged parking rules and fees are administered on an ad-hoc basis leading to a lack of clarity for users, inconsistent enforcement and significant revenue leakage. The city experiences localised shortage despite the overall availability of parking space.

While the policy is being framed, the city government is implementing an on-street parking project under which road margins have been earmarked for parking vehicles on pay and use basis along with the construction of one multi level parking facility. Similarly parking apps like Greater Chennai Corporation Smart Parking App, Parking Rhino and Park+ are available to find a parking spot. They also facilitate cashless payments.

From the above it is obvious that parking has not attracted adequate attention of the policy makers. Despite rapid growth in cities and increasing number of vehicles due to rising income levels, the governments both state and city, seem to be not sufficiently aware of the problem. It is time that adequate measures are taken through proper policy pronouncements. In fact, parking management ought to be integral part of the mobility plan of any city.

Rain Water Harvesting in Delhi-Role of Civil Society

AMIT KUMAR SINGH*

Declining ground water level is one of the major concerns of urban India. Among them, Delhi is one of the water-stressed cities of the world and is going to become a water scarce city in due course. This scarcity of water in the city gets accentuated by many factors. The growing population, coupled with ever-increasing pollution, increasing demand from industrial and commercial water along with the leakage in the supply systems and wasteful consumption practices pose major challenges for the City Administrators.

In the last 70 years, the population of city has grown by almost 12 times. In absolute terms, the population of city has increased from 14.61 lakh in 1951 to 1.68 crores in 2011 and as per the estimates of UN World Population Prospects; Delhi population in 2021 will be 3.05 crores. In case of water supply, the city is greatly dependent on external water resources, having little of its own. The total area of Delhi is only 1483 sq. km and except a small sub-basin of the Yamuna River, the city has very limited surface water resources (i.e., rivers, lakes, and canals). Hence Delhi is largely dependent on supplies from distant basins of Yamuna, Ganga, Bhakra Beas River. At present neighboring states are supplying nearly 50 per cent of Delhi's water needs. Consequently, the groundwater resource of Delhi is coming under immense pressure and it is adversely affecting Delhi's water supply condition. As per the Central Ground Water Board (CGWB) the annual groundwater extraction in Delhi was more than 100 per cent during 2017.

The annual rainfall in Delhi is about 62 cm. In the past this limited amount of rain water was able to pound on the forest floor, infiltrate into the soil and converted to groundwater, to be utilised by people. Since last few decades the area of impervious surfaces, like roads, and buildings has increased manifold in the city, which ultimately prevents rain water from infiltrating, or soaking, into the ground. Therefore, a large amount of rain water over Delhi translates into surface runoff and empties into the nearby storm drains. Point of concern is that the intensity of urbanisation in Delhi is increasing day by day and as a result the runoff generation will continue to increase in the years to come. Till now, Delhi is somehow managing its water demand, however, is

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likely to face increasing water crisis if the government doesn't take any concrete steps.

In view of that, Delhi has no options other than to look for multifaceted and a long-term water resource management planning in order to meet its future water demand. The efficient utilisation of water and rainwater harvesting is an important method to improve the ground water level in Delhi. A large amount of storm water runoff is being generated from a number of constructed zones including residential areas, commercial and industrial areas, roads, highways and bridges. So tapping of storm water from the localised catchment surfaces such as roofs of housing colonies, educational institutions, official buildings, and open areas surfaces, etc is a good option either to recharge the groundwater aquifers or storing it for direct use.

Basically, rainwater harvesting can be done at individual household level and at community level in both urban as well as rural areas. At household level, harvesting can be done through roof catchments, and at community level through ground catchments. In case of Delhi, there are a large number of housing societies, industrial premises, commercial and institutional establishments which have huge surface areas.

Realising the huge potential of Rain Water Harvesting (RWH), Ministry of Urban Development and Poverty Alleviation, Government of India has made Rain Water Harvesting mandatory for all new buildings on plots 100 sq m and above in 2001 and asked states governments to make modifications in building bye laws. Accordingly in 2002, the Delhi government had implemented a financial assistance scheme to support installation of RWH structures. Under the scheme, grants-in-aid up to 50 per cent of the total cost of RWH structure or INR 50,000, whichever is less, was given to eligible groups, such as registered Resident Welfare Associations (RWAs), Cooperative Group Housing Societies, recognised private and government schools, hospitals, charitable institutions, and NGOs.

Recently, Ministry of Housing and Urban Affairs, Government of India has issued new guidelines for Urban Water Conservation under Jal Shakti Abhiyan. Thrust areas include Rain Water Harvesting (RWH), Reuse of Treated Waste Water, Rejuvenation of Water Bodies and Plantation. As per the above guidelines it is the responsibility of Urban Local Bodies (ULBs) to ensure that all government buildings (Central/State/ULB) must have RWH structures as per building bye laws, and same should be checked before issuing Occupancy-cum-Completion Certificate (OCC).

Accordingly, the Delhi government has revised the building

byelaws for Delhi and Delhi Water & Sewer (Tariff and Metering) Regulations in 2019. It has made RWH mandatory in Delhi in new buildings for measuring at least 100 sq ft or more to improve the water table falling alarmingly across the city. To encourage and ensure installation of rooftop RWH in houses and buildings over 100 sq m, the Delhi Government now gives financial assistance of up to Rs. 50,000 depending on the size of the projects (Table 1) and a rebate of 10 per cent on water bills. However, provision has been made that if the RWH system is found non-functional, rebate for RWH may be withdrawn and those who fail to install the system will have to pay 1.5 times the bill amount. Recently, the last date for compulsory installation has also been extended to December, 2021. To facilitate this RWH scheme, the Delhi Jal Board has roped in its 12 Jal Shakti Kendras, located in every District.

TABLE 1: CRITERIA FOR DISBURSEMENT OF FINANCIAL ASSISTANCE

S. No.	Size of Plot	Financial Assistance
1.	100 sq m and above up to 199.99 sq m	50% of the total cost of RWH structure or Rs. 10,000 wherever is less
2.	200 sq m and above up to 299.99 sq m	50% of the total cost of RWH structure or Rs. 20,000 wherever is less
3.	300 sq m and above up to 399.99 sq m	50% of the total cost of RWH structure or Rs. 30,000 wherever is less
4.	400 sq m and above up to 499.99 sq m	50% of the total cost of RWH structure or Rs. 40,000 wherever is less
5.	500 sq m and above	50% of the total cost of RWH structure or Rs. 50,000 wherever is less

Source: Delhi Jal Board, 2021

To make the RWH system cost-effective, the Delhi Government has decided to adopt the Dungarpur model, also known as inline RWH system. This system does not require a complex setup. It channelises the rain water directly to a bore well, instead of a regular rainwater-harvesting pit. While setting up a conventional RWH system costs Rs 75,000-100 000, the Dungarpur model can be set up for as little as Rs 16,000.

CONCLUSION

Studies have shown that Rainwater Harvesting is one of a viable long-term strategy to tackle the increasing pressure on freshwater resources of our country. However its success is dependent on how scheme is well implemented on ground. In case of Delhi, the data from

Delhi Jal Board shows that till date, 4,124 schools and colleges of Delhi have installed RWH systems, while installation in the remaining 407 eligible institutions will be done in a phased manner. Similarly, 3,705 government buildings have installed RWH and in case of private buildings, RWH system has been implemented in just 1,869 buildings till date. It can be expected that with greater awareness among the people, more and more individuals, communities and institutions will be involved in RWH practices.

DEVELOPMENT OF URBAN CENTRES AND ITS STAKEHOLDERS

KUSUM LATA*

Railway Land Development Authority (RLDA)

The Planning Commission during its 9th Five-Year Plan highlighted the need for additional resource development for railways through non-tariff methods and stated “Railways being owners of vast tracks of lands, can supplement their financial resources by certain non-tariff measures like utilisation of land/air-space for commercial purposes”. Thus, the Railway Land Development Authority (RLDA) was constituted in 1989 by an amendment to the Railways Act. It is a statutory body under the Ministry of Railways that aims to develop land/air space entrusted to it on sound commercial principles for the generation of non-tariff revenue and creation of assets for the Indian Railways. The Indian Railways (IR) has approximately 43,000 hectares of vacant land. The zonal railways will identify the land which is not required for operational purposes in the foreseeable future and the details thereof would be advised to Railway Board. These identified plots will then be entrusted to RLDA for their commercial development in phases. The Railway Development Land Authority is working on four major projects, namely – Commercial and Residential Development, Multifunctional Complex, Colony Re-development and Station Development.

For commercial development, the sites that were found to be viable were leased out to transparent bidders after feasibility consultation studies by professional consultants. Around 21 Commercial Sites were leased out for 45/99 years to various developers with realised/expected revenue of approximately Rs. 1,700 crores for Railway. As of April 2021, almost 85 identified sites are at different phases of development (Invitation of e-Bids, completion of Architectural survey of the site, issuance of LoA, etc.). For Residential Development, the RLDA has to acquire prior permission from the Railway Board.

The responsibility for development of Multi-Functional Complexes (MFC) has been entrusted to PSUs (IRCON, RITES, RVNL) and private sector. These Multi-Functional Complexes would provide various

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facilities like ATMs, hotels, restaurants, food stalls, PCOs, dispensary, parking and various other similar facilities to rail users at the railway stations. Sites are being offered on 30-45 years lease on upfront lease premium or Revenue Sharing basis, through MoU to PSUs, and through open bidding process to the private sector. Ministry of Railways sanctioned 67 sites in 2009-10 and 93 MFC sites in 2010-11. As of 8th June, 2021 action (like site evaluation, commissioning of site, signing of agreements etc) has been taken on 123 sanctioned sites. Some of these sites have also been deferred by the Railway Board vide letter dated 11th March, 2021.

Most Railway stations and Railway colonies are located at the heart of the city and therefore hold immense potential to develop real estate to fund the railways. However, most of these Railway colonies are 50-60 years old and in abysmal condition. Even with best efforts by the railways to maintain these quarters, its residents are not satisfied with its condition. The former Railway Minister Pawan Kumar Bansal during the Budget Speech for 2013-14, stated that the development and construction of staff quarters have been hampered due to funding constraints. The feasibility studies were taken up and the report of the same submitted to the railways. As these colonies are located in prime locations of the cities and have unutilised FSI (Floor Space Index) therefore they are financially viable on PPP model. The redevelopment would be done according to the Development plan of the respective city.

Finally, one of the major projects undertaken by RLDA is the redevelopment of stations. Railway Board has entrusted RLDA with re-development of 10 Railway Stations through NBCC (Gomti Nagar Railway Station, Lucknow UP; Charbagh Railway Station, Lucknow UP; Tirupati Railway Station, Chittoor District A.P.; Nellore Railway Station, Nellore District, A.P.; Puducherry Railway Station; Ernakulam Railway Station, Kochi, Ernakulam District, Kerala; Kota Railway Station, Kota District, Rajasthan; Madgaon Railway Station, South Goa District, Goa; Delhi Sarai Rohilla and Thane Railway Station, Thane District, Maharashtra) and one station through IRCON (Delhi Safdarjung). The schemes under station re-development project will work with the Smart City Mission launched by the Government of India. The project will encompass congestion free non-conflicting entry exit to the station premises, segregation of arrival/departure of passengers, adequate concourse without overcrowding, integration of both sides of city wherever feasible, integration with other modes of transport system like Bus, Metro, etc. user friendly international signage etc. The cost of the entire project is to be met by leveraging commercial development of spare railway land/airspace in and around the station.

The RLDA also has the authority to set up Special Purpose Vehicles (SPVs) and Joint Ventures (JVs) for development projects after obtaining requisite approvals. As a result, on 12th April, 2012, a special purpose vehicle namely Indian Railway Stations Development Corporation Limited (IRSDC) was set up. It is a Joint Venture Company of Rail Land Development Authority and IRCON, with Rail India Technical and Economic Service (RITES) being recently added as the third promoter with 24 per cent equity stake. The enhanced paid up capital is held by IRLDA, IRCON and RITES in the ratio of 50:26:24. The IRSDC has to carry out functions such as the re-development of existing and new railway stations which would include improving passenger facilities by re-developing platforms, station building, circulating areas, etc., development of real estate on Railway/Government land, look after various aspects of projects (planning, designing, construction, improvement, commissioning, operation, maintenance and financing) and various services relating to it (marketing, collecting revenues etc.), and carry out railway infrastructure related projects using various PPP models – Build Operate Transfer (BOT), Build Own Operate Transfer (BOOT), Build Lease Transfer (BLT), etc. The IRSDC therefore serves as an important instrument to enable optimal utilisation of railway land, improve the performance of the existing assets, as well as tap the real-estate and economic potential for future developments. It holds the potential to generate new sources of revenue for the Railways by unlocking economic value of underdeveloped or un utilised/underutilised railway assets, making it a way of asset monetisation.

The National Monetisation Plan (NMP) unveiled in Union Budget 2021-22 and launched on 23rd August 2021 announced asset monetisation plans for railway stations, passenger train operations, hill railways, goods sheds, dedicated freight corridors, track infrastructure etc. The RLDA and IRSDC will look after the development of 400 railway stations, which have been divided in three categories; Tier 1 having 50 stations with capital expenditure around 500 crore per station, Tier 2 having 100 stations with capital expenditure of Rs 300 crore per station and Tier 3 having 250 stations having capital expenditure of around Rs 85 crore per station. The categorisation has been done based on their commercial potential and potential scale for development. This monetisation will happen in phases, with 44 stations being monetised in first year, and 120 stations each in subsequent three years. The IRSDC currently has 12 projects in the planning stage - Nagpur, Gwalior, Amritsar, Sabarmati, Shivaji Nagar, Surat, Baiyyappanahalli, Gandhinagar (Jaipur), Kanpur, Thakurli, Anand Vihar and Chandigarh stations. Nagpur, Gwalior, Amritsar, Sabarmati, Shivaji Nagar, Surat and Baiyyappanahalli will be implemented in PPP model while,

Gandhinagar (Jaipur), Kanpur, Thakurli, Anand Vihar and Chandigarh station will be developed under EPC model. The Bijwasan Station's Master Plan has been approved and the project is ongoing. Two projects, namely Habibgang Station and Gandhi Nagar Station in Gujarat (inaugrated on 16th July 2021) have been completed. Both Stations have been re developed to be a multi-modal transit hub and are equipped with world class amenities to make travel easy and safe for everyone, including the differently abled persons.

Urban Sector – National Events

K.K. PANDEY*

Urban Development Events at National Level during April – June 2021

“As India continues to urbanise at an exponential rate, where every two seconds, one of our fellow citizens is moving to a city in search of a better life, ensuring healthy and safe food for everyone in cities is of utmost importance...” – SHRI HS PURI MoS H&UA (April15)

“While Covid-19 may have proven to be a hiatus in our efforts of transforming Urban India, it has also provided us an opportunity to concentrate our attention on the need for good health and wellbeing of our cities and citizens.”

- MoS H&UA Hardeep Singh Puri April 15

As the public policy and initiatives are a dynamic process, several new initiatives were added in the urban Agenda of Government of India in the first quarter of 2021-22. These initiatives give due cognizance to urbanisation and its ability to contribute in the inclusive, productive and environment friendly growth along with more effective response to COVID-19. These includes:

Environment Friendly, Inclusive and Productive Urban Development

1. Fifteenth finance commission revised report submitted in the month of November 2020 for the period of 2021-2026 brings out couple of important components to deal with ambient air quality and climate change at municipal level more effectively. The report also takes up urban issues in a regional context and for the first time allocations are made to Urban Agglomerations (UAs). Important allocations are:
 - Allocation of Rs 38 000 crores for 44 urban agglomerations which is done for the first time to see urban development in a regional context. These UAs include 1115 towns and rural areas within UA with focus on ambient air quality

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Improvement (32% funds) and water and sanitation (68% funds).

- Eighty seven thousand crores for other statutory towns with less than 100000 population (including those covered in city challenge fund with a division of 40 per cent untied grant and 60 per cent devoted to water and sanitation (50% each).
 - Rs 24,000 crores for health and wellness
 - Rs 800 crores for common service centres and
 - Rs 8,000 crores for incubation of eight new towns to be developed through interstate competition to create a demonstration effect.
 - These initiatives will create models and synergy with similar programmes of GoI and States.
2. Beginning of measures announced in the Union budget 2021-22 with a particular reference to Swachh Bharat Mission (SBM) 02 and Jal Jeevan Mission –Urban component to be taken up as AMRUT 02. Recently on 1st October a sum of Rs 4.3 lakh crores has been allocated to SBM02 and AMRUT02 which is two and half time more than the Phase 1.
 3. These initiatives from NFC and Phase 02 will make a long term effect on pollution, carbon emissions and our efforts on climate change.
 4. Smart City Mission continues with Climate Smart Assessment Framework of green and Blue Infrastructure with 28 Indicators in five main areas namely 28 indicators under five areas: (i) urban planning; (ii) green cover/biodiversity; (iii) energy efficient green buildings; (iv) mobility and air quality; and (v) water and waste management (126 cities were assessed as part of Smart Cities Mission (SCM) under CSCAF out of which Ahmedabad, Pune, Indore, etc. were adjudged top performers).
 5. Water supply and management, energy efficiency and increased green spaces have been a part of the goal in 500 target cities of MoHUA. As of today, 1831 parks over 3700 acres have been developed, 85 lakh street lights have been replaced (11 June – MoHUA).
 6. It is estimated that initiatives under SBM-U can mitigate 17.42 million tonnes of CO₂ equivalent of greenhouse gas emissions by 2022 (June 11-MoHUA).

7. The Ministry has announced that there will be a standard uniform worn by all *Safaimitras* across the country. By providing them with uniforms, we will be ensuring the safety and dignity of our *Safaimitras* by allowing them to be recognised as cleanliness warriors (April 29 –MoHUA).
8. Swachh Bharat Urban has empowered *Swachhagrahis* across India. Over 84,000 ragpickers have been integrated into the mainstream and over 5.5 lakh sanitation workers have been linked to various welfare schemes as beneficiaries (June 16-MHUA).

Pradhan Mantri Avas Yojana

9. Pradhan Mantri Avas Yojana added Technology sub mission and Rental Housing scheme to improve quality of housing delivery under PMAY.
10. Pradhan Mantri Awas Yojana - Urban, Government of India has focused on new construction technologies that are innovative, environment friendly and disaster-resilient. Hon'ble Prime Minister, Narendra Modi launched six Light House Projects on January 1, 2021 which are already under construction.
11. Fifty four new technologies were also identified under GHTC-India. About 43.3 lakh houses are being constructed where fly ash bricks/blocks and concrete blocks are being used. PMAY Urban has the potential to mitigate around 12 million tonnes CO2 equivalent of GHG emissions by 2022 (June 11-MoHUA).
12. 'Skill, Speed & Scale'! LHPs are model housing projects built with shortlisted alternate innovative construction technologies suitable to geo-climatic conditions. This will demonstrate and deliver ready-to-live houses with speed and better quality of construction.
13. At the 54th CSMC meeting of Pradhan Mantri Awas Yojana - Urban, Government of India, 3.61 lakh new houses have been sanctioned. The Committee also accorded approval for revision of projects comprising 3.75 lakh houses. The total number of houses to be built under #HousingForAll is now 112.4 lakh (June 3 - MoHUA).
14. Cumulative Central Assistance release to beneficiaries has crossed Rs one lakh crore. Against assessed demand of 1.12 crore houses, 1.13 crore have been sanctioned, over 83 lakhs grounded for construction and more than 50 lakhs completed and delivered to happy beneficiaries across the country (June 25-MoHUA).

Urban Transport

MoS H&UA Hardeep Singh Puri inaugurated the flyover-cum-roadover bridge of Narela today via video conferencing. The ROB will provide smooth connectivity between Narela and Bawana. The 1680 metres long ROB has been built at a cost of Rs 389 crore. It has two separate carriage ways of 25.5 m each, consisting of three lane carriage way, dedicated bus lane, cycle track, utility corridor and footpath with patterned colour concrete. It has been constructed with RCC piers, pre-stressed girders, RCC slabs in 735 m length and 945 m long RE walls in approaches. Around 200 octagonal poles with energy savings LED lights illuminate the bridge uniformly in night. Indication boards on Overhead Gantries at both the approaches as well as side boards along the bridge have been provided to guide commuters and arrangements have been made for proper drainage and harvesting of Rainwater from the ROB through Rainwater Harvesting Structure (April 6, 2021 MoHUA).

Metro, an energy-efficient mass rapid transit system is operational in 18 cities with over 720 km constructed line. 1,055 km new lines are under construction in 27 cities. It is expected to mitigate around 21.58 million tonnes of CO₂ eq GHG from 2015-2022 (June 11-MOHUA).

India's first-ever driverless train service, the 37km Magenta line of Delhi Metro was flagged off on 28 December 2020. With this, the country entered the exclusive club of seven per cent metro network across the globe having driverless train operation (April 30-MoHUA).

PM SWANIDHI

#PMSVANidhi completes one year of launch!

The scheme was launched last year to help street vendors who were impacted by #COVID19 pandemic lockdown. Street vendors were given working capital loans to revive their business. The scheme has been a roaring success (June 1 -MoHUA).

So far, 41,90,310 applications have been received from across India. Out of these, 24,21,019 applications have been sanctioned and of these, 20,64,030 loan applications disbursed. April 7

स्वनिधि से समृद्धि!

SVANidhi Se Samridhhi camps are being organised across 125 cities for ensuring linkages of eligible #PMSVANidhi beneficiaries and their families to various Central Government Schemes.

#TransformingLives (June 7-MoHUA)

ABOUT CUS

In 1966, Centre for Training and Research in Municipal Administration (CTRMA) was established in IIPA with the support of Ministry of Health and Family Planning, Government of India, the then nodal ministry on urban local bodies. The Centre was created with specific objectives to operate as a knowledge centre and think tank on urban sector issues and an apex institution at national level. CTRMA was rechristened as CUS (Centre for Urban Studies) in 1974-75.

Director General, IIPA is the Director of CUS and chairperson of the Steering Committee. A faculty of CUS is nominated as Coordinator CUS, who becomes the Member-Secretary of the Steering committee. CUS has an interdisciplinary team of faculty members from Economics, Public Administration, Urban Planning and Civil Engineering background. In addition other faculty members of IIPA drawn from environment, disaster management, social development and e-governance background provide their professional input to CUS on case to case basis.

Objectives of CUS

The precise objectives of CUS are :

- (i) Organize suitable training courses for municipal and state officials concerned with Municipal Administration in order to improve the technical and professional character of municipal services;
- (ii) Hold seminars for the elected leaders of urban local authorities for the purpose of facilitating awareness of problems facing the local bodies and encouraging communication between the technical experts and the popular leaders;
- (iii) Arrange special conferences and study groups on contemporary problems of municipal administration,
- (iv) Help other States and regional training and research centres on municipal administration that might be established;
- (v) Promote research on various governmental problems of urban and metropolitan growth in India;
- (vi) Develop an efficient and up-to-date information centres and documentation services in municipal administration in India and abroad; and

- (vii) Provide suitable consultancy service to the various public bodies on municipal administration and to represent India in international conferences.

Outreach

In accordance with its objectives, the Centre during the last 55 years has carried out research, training and advisory services. The Centre has developed and strengthened its national and international outreach and coverage of stakeholders. CUS extends India's urban agenda to (a) Institutions and agencies of Government of India, (b) state government agencies, (c) ULBs (Urban Local Bodies) and para-municipal agencies dealing with specific services, programmes and schemes of Government of India and respective state governments.

Research

Recent Research activities include policy research to Government of India and states and major ULB's, Action research for functionaries at cutting edge level and evaluation of specific scheme and programmes. Research is also used to develop contents for capacity building programmes and disseminate information through a range of publications. CUS also carries out documentation of best practices on specific urban innovations.

Digital Training Initiatives

Since July 2020, CUS started first of its kind digital training programmes in the country to build capacities of middle and senior level urban functionaries through online training. These programmes also tend to seek lessons from Mission Karmayogi launched by the NDA government in September, 2020. Modules developed by CUS include.

- (i) Urban Governance and Administration
- (ii) Urban Finance and Revenue
- (iii) National Urban Livelihood Mission
- (iv) Integrated Urban Water Management System
- (v) Participatory Governance for Urban Management

The above programmes have a duration of 3 to 5 days and cover senior officers from urban local bodies and para-statal/para-municipal agencies dealing with various aspects of urban development.

(Refer CUS at iipa.org for its activities details)



PUBLICATIONS

The Institute disseminates information, analyses, viewpoints and knowledge related to public administration, governance, policy and development through its regular publications viz., monthly digital editions of IIPA e-Newsletters, quarterly editions of Indian Journal of Public Administration (IJPA) in association with Sage Publications, quarterly editions of Nagarlok, quarterly editions of Documentation in Public Administration (DPA), biannual editions of Lok Prashashan [Hindi Journal] and quarterly editions of IIPA Digest. So far IIPA has published more than 500 books, monographs, reports, working papers, and compendiums in spheres of governance and public administration. A few of the books authored by renowned authors including IIPA faculty members are also available for purchase.

INDIAN JOURNAL OF PUBLIC ADMINISTRATION (IJPA)

(Quarterly since 1955)

Flagship refereed UGC CARE listed journal of IIPA, IJPA in collaboration with SAGE Publications publishes manuscripts covering topics related to Public Administration, Public Policy, Good Governance, Bureaucracy, Leadership, Environment, Law, Social Welfare, etc. Research articles, case studies, book reviews, essays, notes and documents related to themes authored by experts are regularly featured in IJPA. The author of the best article every year is conferred with the prestigious late Shri TN Chaturvedi Award by the Hon'ble Vice President of India.

IIPA NEWSLETTER

(Monthly since 1955)

Now only available as an e-newsletter, it features news related to events and programmes conducted in the Institute. To read more visit our site iipa.org.in

NAGARLOK

(Quarterly since 1969)

The journal covers topics related to Urban Studies with a focus on Urban Life, Metropolitan System, Urban Economic Development, Urban Finances, etc.

DOCUMENTATION IN PUBLIC ADMINISTRATION (DPA)

(Quarterly since 1973)

DPA indexes articles/papers/reports/monographs on Public Administration covered by various periodicals.

LOK PRASHASAN (HINDI)

(Bi-annually since 2008)

Lok Prashasan is IIPA's only Hindi journal published with an aim to promote Hindi language and encourage Hindi literature in the field of public administration. Articles and research papers related to Public Administration, Public Policy, Good Governance, Bureaucracy, Leadership, Environment, Law, Social Welfare, etc., are regularly published in this journal.

IIPA DIGEST

(Quarterly since 2019)

The magazine covers news, stories and features related to latest initiatives and trends of government.

For contribution, subscription and advertisement related queries, please e-mail: chukkathmeghna@gmail.com

