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Urban Planning: Some Issues and Lessons Learnt from Master Plan of Jaipur City

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Urbanisation

Increasing urbanization is a reality creating enormous pressures on the modern day planners. "Urbanization" is increase in the proportion of people living in cities. It grows because people move from rural areas to urban areas as part of the development process. Some times rural areas in the periphery of big cities become part of the city with its expansion or are developed as satellite towns. Rural to urban migration is happening on a massive scale in the 3rd world countries including India due to population pressures and lack of resources in the rural areas, i.e., the "push factor". People living in rural areas are also "pulled" to the city in the hope that the standard of living in urban areas will be much better there.

Globally, the human population of the planet is rising at the rate of 74.2 million per year or 141 people every minute. The growth of the urban population is itself 75 million people every year. The 3.4 billion urban population recorded in 2008 is expected to become 6.4 billion by 2050. Urban areas will account for two thirds of the human population.[1]

Urban scenario in India

Only 28% of India's population was urban in 2001. The urban population is likely to be around 32% in 2011 and India's urban population is likely to reach 41% by 2030. India's cities have become the gateways to the country's economic growth and opportunities-cities occupy 2% of the landmass of the country while contributing 65% to its GDP – and the waves of urbanization

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1. ICLEI "Global Re-design of Urban Governance 20090830"

have become larger and stronger. At the turn of the millennium 305 million Indians lived in over 3,700 towns and cities, spread across the length and breadth of the country. This comprised 30% of its population, in sharp contrast to only 60 million (15%) who lived in urban areas in 1947 when the country won its independence.

During the last fifty years the population of India has grown two and half times, but urban India has grown nearly five times. In numerical terms, India's urban population is second largest in the world after China, and is higher than the total urban population of all countries put together barring China, USA and Russia.[2]

Beyond numbers, the trend of urbanization can be analysed by the three contributing factors: organic growth of urban areas, in-migration, and re-classification of villages to towns based on population growth. The Census data indicate that between 1991 and 2001 in-migration contributed 46.2% of population growth in 45 of the major cities. Of these the three top reasons were work, household and marriage. Migration for work of these 45 cities was 32.6%.

Challenges of Urbanisation

As the city grows beyond its natural carrying capacity, it suffers from deteriorating infrastructure and services. To reduce the adverse effects of urbanization, urban planning becomes the basic need to minimize these ill effects. Urban planning can be defined as the design and regulations of the use of space that focus on the physical form, economic functions and social impacts of the urban environment and on the location of different activities within it. Urban planning has to ensure sustainable development in the midst of increasing population and growing pollution by utilization the present resources keeping in mind the future needs of the society so as not to exhaust the limited resources. It also has to preserve the ecological balance.

However, now a days, urban planning takes all aspects of a city into consideration and has become more complex. It includes plans for safety, aesthetics and common sense placement of everything e.g., housing, industrial areas, commercial areas and recreational areas etc. Now goods for attractive architecture for city buildings are put into place and pleasing green spaces are planned. Good urban planning gets utilities like schools in

2. "Jaipur Master Plan 2025" by Swati Ramanathan

the neighborhood, hospitals in central locations, electric supply, sewerages, drainage etc, which have all become integral part of present day urban planning. Good urban planning is also reflected in terms of good high way planning, ring roads to avoid congestion in the town, traffic management, finding parking spaces, etc. Because so many disciplines make up the larger concept of urban planning, a group of urban planners is required now which includes, civil engineers, architects, landscape designers .electric engineers, business administrators and so on.[3]

Critical Issues

Urbanization is an integral part of the process of economic growth. Similar to most countries, India's towns and cities make a major contribution to the country's economy. With less than 1/3 of India's population its urban areas generate over 2/3 of the country's GDP and account for 90% of government revenues. Meeting the needs of India's soaring urban population is and will therefore continue to be a strategic policy matter. Critical issues that need to the addressed are:

- **Poor Local Governance**
  Decentralization is undoubtedly essential for improving the urban management by addressing local needs as directly as possible and to mobilize local resources to finance urban development regularly and speedily. However, most of the local bodies lack a modern planning framework. Building up these technical skills is major difficulty encountered by local authorities. The multiplicity of them also obstructs efficient planning and land use.
- **Weak Finances**
  Inadequate mobilization of local resources is a major obstacle in the satisfactory performance of their tasks. Local tax levying capacities are poor owing to the lack of organized collection and control system. House and land taxation legislations tend to be un-productive. Since traditionally, most of the ULBs are given grants from the State, people in these areas have also become used to such subsidies/grants and are not willing to pay the user charges for the utilities. This further puts the local governing bodies at the mercy of the State/Central Governments endangering their autonomy.

[3] http://www.wisegeek.com

- Inappropriate planning leads to high cost of housing and office space. Limitations of land and resources bind the ULBs as looking to the high prices of land, acquisition of it is opposed tooth and nail which delays the process of availability of land for various land uses, this further leads to slums where heavy population lives with sub-standard housing under poor living conditions. These slum dwellers are under constant fear of getting evicted also.
- **Critical Infrastructure Shortages**
  Lack of sanitation and service deficiencies include erratic water and power supply, sewerage disposal and solid waste management and woefully inadequate public transportation system.
- Though people migrate from rural areas to urban areas with growing changes, yet people do not get regular and permanent employment putting them in the vicious cycle of poverty and this also poses people to work at an early age rather than sending the kids to schools. Increasing crime in slum areas is one of the ill effects of urbanization.
- **Rapidly Deteriorating Environment**
  Global warming, air pollution, water scarcity and pollution and decline in forest cover, agricultural land and decline of wild life has resulted into a serious threat to the environment.

These critical features also pose challenges to urban planning to adopt to modern planning practices. India has rigid master plans and restrictive zoning regulations which limit the availability of land for buildings. There are building regulations also that limit urban density such as Floor Area Ratio (FAR) thereby reducing the number of houses available and pushing up property prices.

There are out dated Rent Control Regulations which reduce the number of houses on rent – a critical option for the poor. Such archaic laws put a fear in the minds of a house owner to give their house on rent as he is not sure of getting it vacated once he wants that.

Poor accessibility to Micro finance and mortgage finance limit the ability of low income group to buy or improve their homes.

Most of the services are delivered by the city Government with un-clear lines of accountability. Private players are not provided adequate opportunities to participate and provide these services or the environment is not conducive to service providers to recover the operation and maintenance cost.

Concept of user charges recovery is missing and independent regulatory authorities that set tariffs, decide on subsidies and enforce service quality are generally absent. Therefore most urban local bodies do not generate the revenues required to renew infrastructure nor do they have the credit worthiness to access capital market for funds. With change of the political parties with elections, policies also change and as such there is no stability. There is a need to decentralize the urban management to improve urban living conditions by addressing needs as directly as possible and enable city dwellers to participate in the city affairs.[4]

But it is also a political choice that involves re-organization of the political and administration responsibilities between the central and local authorities. There is often clash of interest between the Members of Parliament as well as of Legislative Assemblies with the elected people from the local Government. Most often they do not want to give more powers to the local authorities so that they do not become a threat for their future political ambitions. Therefore, there is a need to have a consensus at least on macro economic issues like land use plan, financial policy, credit regulations, education and health policy, land and tax legislations etc.

Urban reforms for good urban governance will have to take the following features into action :-

- Decentralization
- Municipal accounting reforms
- Model municipal laws
- Private sector participation guidelines
- National urban information system
- Urban environment
- Transparency in urban management
- Capacity building of ULBs

Learnings from the exercise of preparing the Master Plan of Jaipur City

In this backdrop now I will draw some of the lessons learnt from the exercise which we undertook in 2008 when I was posted as Commissioner, Jaipur Development Authority initially and then as Principal Commissioner, Urban

[4] http://go.worldbank.org

Development in Government of Rajasthan. Besides the assistance from the regular town planning wing in JDA, the drafting of the Master Plan document was done by **Mrs. Swati Ramanathan** which was later published in form of a book titled ***"Jaipur Master Plan 2025"***. I have drawn heavily from this book with consent of the author as most of the work was done during my time after lot of consultations amongst core team members at every stage.

Jaipur city and its surrounding region, reflects the demographic transition that is occurring in the rest of the country. Between the years 1961 to 2001, the population of Jaipur District grew from 1.5 million to over 5 million. In this period, the urban growth has been 1.8 to 2.5 times that of the rural growth. While in 1961, the rural population was little over one million people, the urban population was less than half a million people. Between 1991 and 2001, Jaipur recorded the highest urban growth of 59.35%. Currently the district population is estimated to be evenly split between rural and urban at about three million each.

By 2025 the Jaipur Development Authority (JDA) projections show that the current demographic distribution in the district in fact reverses, with the urban population becoming more than twice the size of rural population.

Jaipur's unique geography, positions it within the National Capital Region (NCR) area, benefiting from large national infrastructure projects and national economic development initiatives. It is serendipitously situated on the corridor between the national capital city of Delhi and the financial heart of the country-Mumbai and is en route to the emerging economy of Ahmedabad. Rajasthan has a historic opportunity to put its hat decisively into the ring of the NCR economic growth and investment pie.

The previous two master plans (1971-91 and 1991-2011) were mainly exercises on paper and viewed the city in isolation from the larger region that it is located in. There was no integration of Departmental Plans, no focus on spatial planning, land use conversions were very easy and there was lack of enabling statutes and policies. These master plans were limited to regulatory controls while they should be spatial plans that integrate political, cultural, social, economic and environmental plans with the planning of space.

The challenges to producing good master plans are not trivial. The process is highly technical, data driven exercise on one hand, and on the other, translates a lofty vision for the city on to physical space. Master Plans need to be done differently in order to build cities that respond to the needs of its residents.

- What will be urban region – rural and urban – be like in a reasonable time frame, say twenty years, without planning?
- What will urban region-rural urban-be like in twenty years with planning?
- What is the anticipated urban growth? Where will we grow? How much urban land will we need? How much housing will we need? What will be the economic activity to sustain us? How many jobs will we need? How will we connect people and places? What environment and heritage will we protect/promote? Will we have enough water and power supply?
- What will it take to implement and enforce the master plan on the ground? In order to answer these questions as well as to create a plan vision for any city, what is useful is a Planning Paradigm - a methodology that will guide the process of preparation, implementation, enforcement of the master plan. Such a Planning Paradigm must have certain characteristics- it must be comprehensive in nature, address the needs of multiple stakeholders, have a sustainable view for the future, and address issues of implementation and enforcement.
- To what extent should urbanization be planned and directive and to what

Demographic Features of Jaipur District Rural and Urban Population Projections for 2025

		2001	2011	2021	2025
Rural	Village	26,59,004	29,78,897	33,76,590	35,35,638
Urban	Jaipur UA	23,22,575	35,80,688	55,19,208	64,95,000
	Other Towns	2,69,792	3,50,116	4,42,830	4,83,705
Total		52,51,071	69,09,701	93,38,628	1,05,14,343

extent spontaneous?

As can be seen from the table the District population will have doubled from 2001 to 2025. What can also be seen is that the urban population will be twice the size of the rural population. The key question is where will this new urban population of 22 lakh people live. Answering this question is the strategic

core of the MMDP 2025.

Jaipur's Urban Sprawl

In taking a regional approach, Jaipur's development can not be isolated from the development of the larger footprint of the district. The current urban development of Jaipur has been leap-frog in nature and in defiance of past planning boundaries. The plan area has continuously expanded in all directions to include more township proposals and economic developments in the rural periphery of the city boundary.

The JDA footprint has been increasing with more and more villages notified under the JDA region, primarily because of the far-flung nature of development taking place. This is an outcome of spiraling land prices in the city. As more urbanized land area is added, the density will reduce even more. The walled city has the highest density (average. 60000 persons per sq.km). The rest of the city (within the developed area of the city) averages a population density between 4000-12500. The peripheral area averages a low density of less than 4000 persons per sq.km. With the addition of additional land approved for development, the density has gone down further.

The expected population is 65 lakhs by 2025. At this level of growth, even at the lower range of the recommended density of 12,500, the total land area required is 520 sq.km. Adding larger public amenities of parks, universities, special economic zones, the further requirement can still be met within the current urbanisable land available.

This kind of growth has implications on both Jaipur city itself and on the district as a whole. In Jaipur, there are two key implications : first, to the cost of infrastructure delivery. Allocation for more urbanisable land will only increase the development burden on the state. as the city spreads in footprint, the density reduces. It is already at alarmingly low levels. For a current estimated population of 32 lakhs the city needs to service 600 sq. km of developed land with all network infrastructure-roads, water sewerage, power- and social infrastructure- schools, hospitals, banks, etc. At density of 5000 per sq.km as versus the desired 12,500 per sq. km, this is more than twice the cost. Key infrastructure projects such as the BRTS, Metro rail, which are dependent on high ridership, will not have the adequate catchments density to make them financially viable. The draft MDP 2025 proposes 1500 sq.km of urban area for an anticipated population of 55 to 65 lakh by year 2025. This will bring down the density even further to 4000 pa/ha as a best case scenario.

Based on population projections, there will be a growth of 57 new urban areas by 2025, in addition to existing 11 in the district, which will dramatically reduce the efficiencies of the density and scale increasing multi-fold the cost in providing social and physical infrastructure while increasing the risk to agricultural land and sensitive environments. The result will be significant variations in the quality of life that the 68 towns will offer, each with competing claims on the state coffer.

The unplanned growth will permanently erode the distinction between rural and urban areas and fabric of each. It will also fail on all three planning principles of the master plan viz.,economies, equity and environment. Having chosen the district as the regional plan footprint, the question that remains is where urban growth should be planned for. The three choices in this instance are:

- that Jaipur remain the single dominant economic engine and urban magnet in the district, with its continued growth over shadowing all other urban areas.
- that Jaipur would grow but so would other existing towns in the district that would act as counter magnets to Jaipur.
- that rather than focusing on existing satellite towns, brand new towns would be created in the district.

After lot of discussions we reached a consensus to have a blend of choice no. 2 and 3 and the overall strategy for our MMPD -2025 focused upon "creating a plan for the district development and encouraging distributed urban growth in a hub-and-spoke manner".

Parameters for Selecting the Proposed Satellite Cities

Having embraced the two planning imperatives, the first step in the plan preparations was identifying the new urban nodes which would be the counter-magnets to Jaipur City. The 12 proposed satellite cities (PSCs), viz., Bagru, Phagi, Achrol, Dudu, Narayana, Bassi, Phulera, Kishangarh Renwal, Chaksu, Shahpura, Kotputli and Chomu for focused urban development were selected on the basis of six parameters:

- Potential for economic sustainability
- Existing road networks
- Existing and anticipated physical infrastructure
- Strategic location for rural access

- Existing social infrastructure
- Low environment impact

Infrastructure Financing

It was also recommended that the availability of local governments to pay for the capital costs required to build urban infrastructure in Jaipur Metropolitan District will require a mix of the following:

- Own revenue of urban local bodies
- Debt financing from the market
- Private sector investment
- Unlocking land values

Urban Housing and Land Projections

Governments invariably attempt to address these through attempts at rehabilitation and relocation of the existing urban poor who live in informal housing that is located in public land around railways, drains, banks of water bodies etc. These efforts however have two short-comings: one the focus is on projects without defining an overall strategy to address the housing, services and livelihood needs-current and future-of the urban poor; and two, the provision of alternate housing does not recognize importance of access to jobs, schools, health clinics. Advocates of the urban poor and policy makers alike have ignored the importance of the master plan in addressing both. The continuing growth of slums and the associated urban degradation are in large measure the result of planning that fails to respond to the needs of the urban poor.

Therefore, the following recommendations were made:

- Provide adequate land for housing needs of all
- Provide good quality affordable housing with secure title
- Ensure affordable land availability
- Ensure affordable housing that has access to jobs
- Provide adequate infrastructure and services

Change in Land Use

The change in land use – legal or illegal- has been the bane of the past plans of Jaipur. And the land use pattern shows that the city has expanded beyond the 2011 plan boundary by another 69 square kilometers. This implies that master plan development.

controls are easily overturned, enforcement is lacking and the land markets are inefficient. With this unwanted urban sprawl the Public Sector has to pay a big price in terms of difficulty and costs associated in providing infrastructure provisions to these areas.

There is a section 90-B in the Rajasthan Land Revenue Act, 1956 whose Clause 3 warped the original intent, by allowing prospective use through surrender to government. In addition, 90-B sanction by JDA does not consider master plan land use prescribed in master plan by JDA. By law, any property owner can apply for a 90-B conversion and by law the JDA is required to approve a change in land use, irrespective of any contradiction to the master plan regulations. This is one of the most bizarre contradiction in government, where one arm of the department opposes the rules set by another arm of the same department.

These changes to land use have created rampant violations of development controls around valuable assets of the city that are now impossible to reverse and legalizing the violations is the only option. The impact has been considerable degradation of the public realm and to the quality of life in the city.

Policy Recommendations

(A) Plan Enforcement

Change in Land Use

- **Stipulate 90B sanctions in accordance to planned development prescribed in the Master Plan.**
- **Change in land use from Agricultural to non-Agricultural**
  Currently, the powers are given to the Revenue Authorities for authorizing conversion from agricultural land to non agricultural use in the Metropolitan Areas. This should be changed by amending the Rajasthan Land Revenue Act,1956, to provide that no permission of the Collector (i.e. Revenue Authorities) shall be required for change of use of agricultural land located within municipal boundaries (of a Municipal Council/Corporation). The power to permit such change of land use shall appropriately vest in the respective municipal authority (ULB i.e. Chief Executive Officer/Municipal Commissioner), which shall grant such permission only if the proposed change is in consonance with the provisions of the approved land use zoning and development control regulations framed under the sanctioned Development Plan of the

concerned ULB.

Clarify JDA Act

Section 25 (Clauses 1,2,3) of the Act allows "subsequent modifications of plans." This clause needs clarity about the modifications allowed. It was recommended to disallow modifications beyond the urbanisable boundary of the plan and stipulate higher bar for CLU that impacts four categories of public land:

- heritage zones
- environment and ecological zones
- agricultural land
- consequential changes to public amenities such as parks, playgrounds, shops etc.

Address the existing situation of illegal construction and building violations

These must be identified and classified in the following three categories: illegalities that have a significant larger public impact; illegalities that impact the immediate area but not beyond, illegalities that have little impact on public. Each must be dealt with differing degree of punitive measures. Only once the slate is wiped clean can plans be credibly enforced going forward.

Land Acquisition for Development

Equitable compensation policies should be defined to enable protection of heritage, agriculture and eco-sensitive land, and for any acquisition for new developments and for existing areas to provide for road networks and essential civic amenities. In the case of acquisition, a fair and transparent process should be incorporated for making the case of using such power in the interest of larger public good.

Compensation for Development Controls that Restrict Profitable Land Use

Prime urban land is going to be under restrictive zoning to protect heritage, environment and agricultural assets and even to control urban growth on corridors. Private owners will need to be provided incentives to adhere to the development controls. This is a policy that requires innovation and is of great significance to the entire country.

Resolving the Territorial Overlap

The roles of Jaipur Municipal Corporation and JDA are conflicting and at odds with the 74th Amendment to the Constitution of India which stipulates that the function of planning must be with the local government. Not only is the JDA holding this function, the JMC's territory does not extend to the newer planning sectors. This area is under the administration of the state through the JDA. Hence JDA play the role of planner, enforcer and developer in some areas and in other the JMC plays the role of enforcer without having any say in the planning.

Implementing plans on the ground and notification of Land in New Planning Areas

The only visible option is to introduce a clear policy for land acquisition for infrastructure development that will be fair, transparent, participatory and equitable. It is also proposed to have Economic Development Zones (EDZs) along Jaipur's five radial corridors of connectivity, viz., Tonk Road-Shivdaspura Greenfield International Airport and Aerotropolis Cluster; Ajmer Road Services Cluster; Sikar Road Urban Agriculture Sector; Delhi Road Hospitality and Tourism Cluster and Agra Road Institutional Area. The EDZs proposed are in the form of related economy clusters based upon the "economic" planning principle and planning imperative of "network efficiency". The economies of the 12 proposed new townships will also have a high dependency on Jaipur.

(B) Plan Implementation

Establish Guaranteed Land Title System in Rajasthan

Rajasthan is a front runner in this reform of national importance that is also one of the mandatory reforms under JNNURM that the state has agreed to. It has developed the model law, process map and technology map for putting in place a guaranteed land title system that is voluntary, with incentives, so that over time, it emerges as the singular system of land records as a preferred option by land holders, much like the demat system in the share market. This will require:

- A special Titling Authority (Metropolitan Land Title Authority) for the Metropolitan Area to be established, housed either in Stamps and Registration Department or in Urban Development Department.

- Transfer all revenue records to MLTA.
- Provide incentives to people to transact their conveyances via such a title system. These recommendations on moving land management and registration closer to local governments are consistent with the recommendations of the 2nd Administrative Reforms Committee (ARC report, section 3.3.17)

Slum Upgradation Policy

The data provided by the Rajasthan Housing Board on the existing slums in Jaipur, indicate need for relieving congestion, upgrading the physical aspects of the slums such as roads, drains, sewerage lines, toilets, baths, kitchens. Access to water, power, health care and education is also poor. Hence up-gradation is undoubtedly needed. The policy will need to clarify the decision making involved in relocation, rehabilitation and up-gradation based on capital costs, labour, impediments and upgradation, clarification of ownership etc.

Affordable Housing Policy

While the market functions without any prodding on the higher income housing demands, the affordable housing requires entitlements for encouraging home ownership and subsidies in order to encourage market participation. The intent of the government policy should be to encourage market innovation in housing technologies and efficiencies of scale, provide entitlements for incentivizing home ownership, and construction quality. The three types of entitlements are : capital subsidies, interest subsidies and risk mitigation subsidies. Each has its advantages and short-falls that must be examined and adequately addressed in the final policy.

Discourage Speculative Land Holding, Land Market Value Distortions

Create incentives and dis-incentives for holding infill sites and developed land without use. Artificial shortage of land has created a significant distortion in land prices in and around Jaipur, while a large number of homes and developed land lies vacant. This has resulted in developers going after cheaper Greenfield land, selling it and then leaving the JDA with the task of regularizing these developments and to provide the necessary civic infrastructure.

Use of existing Government owned Land Banks to provide Affordable Housing

While there is limited supply of land left with the state departments in Jaipur, it is recommended that public land banks in Jaipur and the 12 PSCs be first examined for the needs of affordable housing and civic amenities.

The master plan draft must be reviewed by all relevant state and local governments and their departments, and the notified master plan must become a guiding document whose project priorities are adhered to by all concerned. Priorities can be revisited collectively on an annual basis to accommodate changing circumstances. This will integrate efforts while reducing left arm right arm confusion.

Strengthen the Unified Metropolitan Transport Authority

Jaipur already has established a Unified Metropolitan Transport Authority(UMTA). However, the UMTA now needs to be given adequate authority. It can play two roles:

- as the technical agency that can help all planning bodies in the Metropolitan Area prepare integrated transport plans across all three tiers of government for the Metropolitan Area.
- as a regulator on two counts- first, of the transportation plan that have been approved in the Metropolitan Development Plan, and second, as the first level of conflict resolution for the MA, between agencies involved in transportation matters.

Effective use of the Spatial Data Centre

The Government of Rajasthan has set up a visionary Urban Spatial Data Centre (RSDC) recently which is a unique initiative in the country. Creating a Spatial Data Centre under Rajasthan Urban Information System (RUIS), RSDC provides, reliable and current spatial data which is a key requirement in the process of decision making both for preparing master plans and for urban management. On the latter, the value of GIS spans land management, municipal tax charges, monitoring services of such as water supply, roads, waste management etc. Government of Rajasthan has the opportunity to provide one of the best spatial and GIS support system for its major cities, with Jaipur being amongst the first to benefit with the use of spatial data for the creation of the master plans 2025.