

**‘A STUDY OF URBAN PLANNING AND ITS
IMPLICATIONS FOR IMPROVING LIVING
CONDITIONS IN MAHARASHTRA STATE’**

A Thesis submitted

To

Tilak Maharashtra Vidyapeeth, Pune

For the Degree of

Doctor of Philosophy (Ph.D.) in Sociology

Under the Faculty of Moral and Social Sciences

By

MR. RAMANATH JHA

Under the guidance of

Dr. V.V. Kulkarni

AUGUST, 2014

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FORM 'B'

I hereby declare that the thesis entitled “**A Study of Urban Planning and its implications for improving living conditions in Maharashtra State**” completed and written by me has not previously been formed as the basis for the award of any Degree or other similar title upon me of this or any other Vidyapeeth or examining body.

Mr. Ramanath Jha
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Place: Pune

Date 25 Aug 2014

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C E R T I F I C A T E

This is to certify that the thesis entitled “**A Study of Urban Planning and its implications for improving living conditions in Maharashtra State**” which is being submitted herewith for the award of the Degree of Vidyavachaspati (Ph.D.) in Sociology, of Tilak Maharashtra Vidyapeeth, Pune is the result of original research work completed by **Mr. Ramanath Jha** under my supervision and guidance. To the best of my knowledge and belief the work incorporated in this thesis has not formed the basis for the award of any Degree or similar title of this or any other University or examining body upon him.

Dr. V. V. Kulkarni
Research Guide

Place: Pune

ACKNOWLEDGEMENT

I wish to place on record my profound sense of gratitude to my research guide Dr. V. V. Kulkarni, Associate Professor, Social Science Centre, Bharati Vidyapeeth, Pune. His insights in the discipline of research, collection of material, interpretation of facts and constant exhortation and guidance were central to the completion of my research. I would unabashedly admit that without his watchful supervision, the attempt at this research may not have fructified.

A large number of officers and elected members from municipal bodies that I have covered for this research selflessly gave me their time and shared data important to this research. They took care to answer my questions and responded to clarifications that I sought. While it would be difficult to name all of them, I would like to profusely thank them. Without their co-operation and support I would have hugely struggled to get the material on which this thesis is substantially based.

In any effort of this order lasting over several years, the support of one's family is critical. My wife Bibha, as usual, was always encouraging, took care of my daily needs and was ready to offer any help that I sought. My doctor daughter Yogya, my lawyer daughter Pritha and my son-in-law Nitin were a perennial source of encouragement and devotion. Their youthfulness and energy and love provided the zest that life needs when you get on in years and which imparts vigour to one's efforts at a specific achievement.

I duly acknowledge the kind assistance of Dr. (Prof.) Deepak Tilak, Vice Chancellor of Tilak Maharashtra Vidyapeeth, Pune, Prof. Vijay Karekar, Dean of faculty of Moral and Social Sciences, Dr. Umesh Keskar, Registrar of Vidyapeeth, Prof. Anupama Keskar former HOD, Mrs. Kandhare, librarian and Mrs Purnima Wate, Incharge of Ph.D section, for their strong support and co-operation in completing this task.

Ramanath Jha

ABBREVIATIONS

AC	Accommodation Reservation
ACA	Additional Central Assistance
ADB	Asian Development Bank
BMC	Baramati Municipal Council
BOT	Build Operate Transfer
BMLTA	Bangalore Metropolitan Land Transport Authority
BRTS	Bus rapid Transit system
CCF	City Challenge Fund
CDP	City Development Plan
CDM	Clean Development Mechanism
CDS	City Development Strategy
CFC	Central Finance Commission
CRZ	Coastal Regulation Zone
CSO	Central Statistical Office
CRUPO	Central Regional and Urban Planning Organization
DALY	Disability Adjusted Life Years
DCR	Development Control Rules
DDA	Delhi Development Authority
DP	Development Plan
DPC	District Planning Committee

DTP	Director Town Planning
EIUS	Environmental Improvement of Urban Slums
ESR	Environmental Status Report
EWS	Economically Weaker sections
FAR	Floor Area Ratio
FDI	Foreign Direct Investment
FSI	Floor Space Index
GB	General Body
GDP	Gross Domestic Product
GEM	Generator of Economic Momentum
GIS	Geographic Information System
GOI	Government of India
GOM	Government of Maharashtra
HDI	Human Development Index
HIG	High Income Group
HUDCO	Housing & Urban Development Corporation
ICTSL	Indore City Transport services Limited
IDSMT	Integrated Development of Small & Medium Towns
IIR	India Infrastructure Report
ILO	International Labour office
IT	Information Technology
ITES	Information Technology Enabled Services
IUDP	Integrated Urban Development Programme
IUT	Institute of Urban Transport
JNNURM	Jawaharlal Nehru National Urban Renewal Mission

KMC	Kolhapur Municipal Corporation
KMT	Kolhapur Municipal transport
KUWAISP	Karnataka Water Supply and Drainage Board
LAQ	Land Acquisition Act
LIG	Lower Income Group
MC	Municipal Council/Municipal Corporation
MCGM	Mumbai Corporation of Greater Mumbai
MDG	Million Development Goals
MIG	Middle Income Group
MMDA	Madras Metropolitan Development Authority
MML	Model Municipal Law
MMR	Mumbai Metropolitan Region
MMRDA	Mumbai Metropolitan Regional Development Authority
MoHUPA	Ministry of Housing & Urban Poverty Alleviation
MoUD	Ministry of Urban development
MP	Master Plan/Madhya Pradesh
MPC	Metropolitan Planning Committee
MRTP	Mumbai Regional & Town Planning Act 1966
MRTS	Metro Rail Transit System
NBC	National Building Code
NCAER	National Council for Applied Economic Research
NCU	National Commission on Urbanization
NHP	National Housing Policy
NIUA	National Institute for Urban Affairs
NPC	National Priority Centres

PHC	Primary Health Centre
NGO	Non Government organization
NMC	Nashik Municipal Corporation
NREGS	National Rural Employment Guarantee Scheme
NRHM	National Rural Health Mission
NRY	Nehru Rozgar Yojana
NUTIC	National Urban Transport Information Centre
NUTP	National Urban Transport Policy
O&M	Operation & Maintenance
ORGI	Office of Registrar General of India
PCGSDP	Per capita Gross State Domestic product
PFDS	Pooled Finance Development Scheme
PMC	Pune Municipal Corporation
PMIUEP	Prime Minister's Integrated Urban Pov Eradication Pgm
PMGSY	Pradhan Mantri Gram Sadak Yojana
PPP	Public Private Partnership
RCUES	Regional Centre for Urban and Environmental studies
RGAEL	Rajiv Gandhi Academy of E Learning
RP	Regional Plan
RSPM	Respiratory Suspended Particulate Matter
SAP	Structural Adjustment Programme
SFC	State Finance Commission
SEEGUL	Scheme for Educated Unemployed of Employ Gen Progm
SGSY	Swarnajayanti Gram Swarozgar Yojana
SJSRY	Swarna Jayanti Shahari Rozgar Yojana

SPC	State Priority Centres
SRA	Slum Rehabilitation Authority
SRD	Slum Redevelopment Scheme
SUP	Slum Upgrading Programme
TCPD	Town & Country Planning Department
TDR	Transfer of Development Rights
TERI	The Energy & Research institute
TP	Town Planning
TPS	Town Planning Scheme
UBSP	Urban Services for Poor
UDD	Urban Development Department
UDF	Urban Development Fund
UIDSSMT	Urban Infra. Dev. Scheme for Small & Medium Towns
ULB	Urban Local Bodies
ULCRA	Urban Land (Ceiling & Regulation) Act
UMTA	Unified Metropolitan Transport Authority
UN	United Nations
UNDP	United Nations Development Programme
UNFCC	U. N. Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UN-HABITAT	United Nations Human Settlements Programme
UP	Uttar Pradesh
URIF	Urban Reform Incentive Fund
USEP	Urban Self Employment Programme
UWEP	Urban Wage Employment Programme

VAMBAY Valmiki Ambedkar Awas Yojana

WB West Bengal

WSP Water & Sanitation Programme

INDEX

List of Tables		ix - x
List of Graphs		xi
List of Charts		xii
List of Boxes		xii
Executive Summary		xiii - xxii
Chapter I	Urban Sociological Theoretical Framework and a Review of Indian Urban Policy	1 - 61
Chapter II	Research Methodology	62 - 84
Chapter III	Introduction to the Study, Urbanization Trends and Features of Urbanization in Study Areas	85 - 143
Chapter IV	Background to Urban Planning in Maharashtra	144 - 167
Chapter V	Principal Features and Benchmarks of the Development Plans and Development Control Regulations of Selected Cities	168 - 192
Chapter VI	Current Status of DPs and DCRs in Terms of the Urbanization of Poverty	193 - 215
Chapter VII	Operationalization of Development Plans and Development Control Regulations	216 - 234
Chapter VIII	Provision of Major Non-Social Municipal Infrastructure	235 - 259
Chapter IX	Deficits in Non-Social Municipal Infrastructure Planning	260 - 277
Chapter X	Deficits in Planning & Development Control Regulations	278 - 299
Chapter XI	New Strategies for Addressing Planning & Development Regulation Deficits	300 - 329
Chapter XII	Summary of Thesis, Testing of Hypotheses, Conclusions and Recommendations of the Study	330 - 362

LIST OF TABLES

- Table No.1.1 : Theory Snapshot
- Table No.2.1 : Details of the number of ULBs in Maharashtra
- Table No.2.2 : Brief description of study area
- Table No 3.1 : GDP Growth
- Table No 3.2 : Gross Increase Adjusted For Reclassification
- Table No 3.3 : Big Eight City Demography
- Table No 3.4 : Global Urbanization Levels
- Table No 3.5 : Top 10 Global Cities (By Demography)
- Table No 3.6 : Population of Cities with 10 Million Inhabitants or More, 1950, 1975, 2001 And 2015
- Table No 3.7 : Maharashtra Population Growth
- Table No 3.8 : Level of Urbanization in Maharashtra
- Table No 3.9 : Mumbai Demography
- Table No 3.10 : Pune Demography
- Table No 3.11 : Nashik Demography
- Table No 3.12 : Slum Population in Nashik
- Table No 3.13 : Kolhapur Population Growth
- Table No. 4.1 : Three tier planning process
- Table No. 4.2 : Assistance received from JNNURM: (Rs. Millions)
- Table No. 4.3 : Implementation of development plan
- Table No 5.1 : Use of different colours for different land uses.
- Table No 5.2 : Development Plan of Mumbai of land use plan
- Table No 5.3 : Details of land use of Mumbai
- Table No 5.4 : Details of land use of Mumbai in 1985
- Table No 5.5 : Details of prospective land use of Nashik
- Table No 5.6 : Details of prospective land use plan of Kolhapur
- Table No 6.1 : Estimates of Incidence of Poverty in India
- Table No 6.2 : Slum Population of Major Cities of India

Table No.7.1 : Public Purposes in the Development Plan Norms of Govt. Of Maharashtra

Table No 7.2 : Annual Budget 150 Cr

Table No 7.3 : Costs of developmental projects

Table No 8.1 : Water Supply Coverage in study area

Table No 8.2 : Availability of Water

Table No 8.3 : Details of water supply finances (Figures are in Lakhs)

Table No 8.4 : Water Tariff Structure - Flat Rate Tariff

Table No 8.5 : Coverage of Toilet

Table No 8.6 : Financial Information - Annual Operating Expenses (Lakh)

Table No 8.7 : Financial Information- Revenue Income

Table No 8.8 : Financial Information- Demand and collection

Table No 8.9 : Household Level Coverage of Solid Waste Management Services

Table No 8.10 : Waste collection and transportation.

Table No 8.11 : Status of Key Performance Indicators of Solid Waste Management

Table No 8.12 : City Roads

Table No 9.1 : Total Number of Motor Vehicles in India (1951-2004)

Table No 9.2 : Share of Buses in Total Motor Vehicles in India

Table No. 11.1: Proposed Institutional Structure

LIST OF GRAPHS

- Graph 2.1: GDP Growth at Constant Prices
- Graph 2.2: Trends in Investment
- Graph 2.3: Share of GDP by Sector
- Graph 2.4: Share of Employment by Sector 1972 to 2004-05
- Graph 2.5: Labour Productivity Urban and Rural
- Graph 2.6: Per Capita Income and Urbanization Levels: Urban & Rural 2008
- Graph 2.7 Per Capita Income and Urbanization Levels: states 2008
- Graph 2.8: Urbanization Ranking: Top 10 Major States of India 2011
- Graph 2.9: Metropolitan Cities: Number and Population
- Graph 2.10: Urban Share of GDP (per cent)
- Graph 2.11: Global Urbanization and human development levels
- Graph 2.12: Urban Population by Region 2000 and 2030
- Graph 2.13: Maharashtra Population Growth
- Graph 2.14: Mumbai Decadal Growth
- Graph 2.15: Pune Decadal Growth
- Graph 2.16: Nashik Decadal Growth
- Graph 2.17: Kolhapur Decadal Growth
- Graph 8.1: Coping Costs of Water Supply
- Graph 8.2: Baramati: Key Performance Indicators of Water Supply
- Graph 8.3: Pune: Key Performance Indicators of Water Supply
- Graph 8.4: Nashik: Key Performance Indicators of Water Supply
- Graph 8.5: Kolhapur: Key Performance Indicators of Water Supply
- Graph 8.6: Two Wheeler Ownership – India
- Graph 8.7: Two wheeler Ownership – Other than India
- Graph 9.1: Total Number of Motor vehicles in India 1951-2004
- Graph 9.2: Total Number of Two Wheelers
- Graph 9.3: Total Number of Cars, Jeeps and Taxis

LIST OF CHARTS

Chart 8.1: National Urban Transport Policy

Chart 9.1: Government of Western Australia, Department of Water

Chart 9.2: Deficits in Water Planning

Chart 9.3: Solid Waste Management Status of Services

Chart 9.4: Urban Transport Status of Services

Chart 9.5: City Roads: Status of Services

LIST OF BOXES

Box 3.1: Varying Definitions of Urban

Box 6.1: Minimum Basic Services for a Slum by GoI Norms

Box 8.1: State of Urban sewerage and sanitation

Box 8.2: State of Solid Waste Management

Box 8.3: Report Card Based on Municipal Solid Waste Rules 2000 in India

Box 8.4: Waste to Wealth in Rajkot

Box 8.5: State of Urban Transport and Roads

Box 8.6: City Bus Services in Indore and Surat

CHAPTER 1

THEORETICAL FRAMEWORK, A REVIEW OF INDIAN URBAN POLICY, HYPOTHESES AND OBJECTIVES OF THE STUDY

Introduction

Urban sociology is the study of causes that lead populations in an urban area to respond to their environment in the manner they do. It further studies how the dynamics of these reactions affect their lives, economics, structures and governmental processes of that specific area. It also embraces the consequential problems that arise from these interactions. The information acquired is vital in not only creating policies, but also in planning strategies for the growth of society in general. In other words, in the urban context, it is the sociological study of cities and their role in the development of society. Like most areas of sociology, urban sociologists use statistical analysis, observation, social theory, interviews, and other methods to study a range of topics, including migration and demographic trends, economics, poverty, race relations and economic trends. The following text explains social theoretical aspect of the study and a review of Indian urban policy is explained in second (B) section of the chapter.

1.1 Classical Theoretical Perspectives

Over the years, a number of urban sociology theories have been propounded. The classical theoretical perspectives that form the philosophical foundations of modern urban sociology were provided by such philosophers as Karl Marx, Friedrich Engels, Ferdinand Tonnies, Emile Durkheim, George Simmel, Max Weber and W.E.B. Du Bois. The reflections of the earlier sociologists throw light on these sociologists looking at urbanization in a highly negative light. They believed that the great city or a metropolis provided an inhuman, debasing social environment; that the money economy of the cities destroyed social life and mass urbanization nullified opportunities or political participation.

Marx (1818-1883) believed that people in pre-industrial and traditional societies were generic, tribal beings and the rise of the city happened as a shift from barbarism to civilization and through the realization of political and economic freedom and productive specialization. He believed that social evolution of humans is not complete until capitalism got transformed into socialism. The emphasis on economics was at the heart of his thinking along with problems of inequality and conflict. Marx condemned the

consequences of urbanization under capitalism. He viewed the concentration and misery of the mass of workers in the new urban agglomerations as a necessary stage in the creation of a revolutionary force. For him, pauperization and material degradation was one aspect of urbanization but equally important was the destruction of the social nexus of the traditional community and its replacement by the utilitarian world of the city. Both for theory and practice communism depended on urbanism.

In his book, *The Condition of the Working Class in England* (1845), **Engels**(1820-1895) offered a detailed analysis of the emerging industrial system in England that displayed an insatiable appetite for capital for profits at the expense of workers. He described living conditions, crowding, squalor, and deprivation. Engels offered an analysis of urbanization and the growth of towns and cities, based on the dynamics of factory production and the need for larger volumes of labour. He believed that "Industry and commerce attain their highest stage of development in the big towns, so that it is here that the effects of industrialisation on the wage earners can be most clearly seen." Engels observed that due to city layout and the working-class districts and the middle-class districts being quite distinct, it is quite possible for someone to live for years in a city, travel daily to and from his work without ever seeing a working-class quarter or coming into contact with an artisan.

Mumford in his book 'The City in History' sees cities as enlarging all dimensions of life as the scattered activities of society are brought together, thereby releasing the energies of mankind in a tremendous explosion of creativity. The city has augmented capabilities for participation and widened the basis of personal experience. Although he extols the immensity of experience that the metropolis has to offer, it is the cities of classical Greece and medieval Europe that govern his assessment of the city as a social container.

European sociologists were strongly influenced by an image of the pre-industrial world of small cities embedded in a matrix of village and region. Mass urbanization for them was neither progressive nor liberative, but signified a degeneration of social existence. Their writings reflect their concern about the eclipse of community in an urban locale and the arrival of mass society in which political life, culture and personality are faced with decay.

In the writings of Neo-Marxists like **Mills** and **Marcuse**, there is a consensus that urbanization has a propensity to damage human personality. It hampers community formation, works against social engagement or involvement and promotes indifference,

and alienation. Class consciousness is inhibited and diverted in mass movements, unreason and not reason typifies social response. Urbanization is no longer the sine qua non of a socialist transformation of society. If urbanization is progressively bankrupt in human terms, cities themselves are seen as instruments of capitalist or imperialist domination. The growth of cities depended on the effectiveness of their expropriation of the wealth of their satellites. Typically, the characteristic features of the cities is seen not as their economic specialization, but their role as centres of dominance.

Subsequent to the Marxist view of urbanization and urban life, sociologists in a long succession from Tonnies to Wirth developed a counter-theory of Marxism for the exposition of social change. This led to acceptance of a fundamental difference between rural and urban, tradition and modernism that was in sharp opposition to any variant on Marxist theories of development. The urban as a frame of reference and the urban society as a specific mode of social organization becomes the object of scientific study. Such an orientation of thought evolved over about half a century from 1887 to 1938 since it was called upon to deal with the after-effects of the ideological revolution crafted by Marxism and to explore the full implications of a sociological vocabulary for the study of urbanization.

The methodology of understanding metropolis and urbanism of the new generation of sociologists was sharply different from Marxist methodology of the dialectics of historical materialism. In the words of Tonnies, "In contradistinction to all historical theories deducting its findings from the past we take as an actual, even necessary starting point that moment in history when the present spectator enjoys the inestimable advantage of observing the occurring events in the light of his own experience." This changed view of the "real" in society became the touchstone of sociological explanation representing rejection of the metaphysical terms in which the Marxist analysed social change. The abstract categories of capitalism, class, social formation, forces of production, alienation are dismissed as metaphysical speculations. The ideal typical concepts introduced by Tonnies and Weber are means to give experience a more coherent and concise form. They developed a tendency to limit sociological discussion to the immediate context of experience. It has culminated in the extreme particularism of the Chicago School. This restriction of outlook is one of the most apparent differences between the sociologists and the neo-Marxists.

As important as the contrasts in methodology is the opposition by these sociologists to the analysis of history and society in economic terms. The rediscovery of concepts such as

“community”, “association”, “status”, “authority”, “legitimacy”, “culture”, marked a shift in focus away from the struggle with the material environment and resultant relations of production to the social bonds and forms of association as established between individuals. The resultant differences are very clearly seen in the discussions of community and alienation. To Marx community could never exist under conditions of alienated labour. “Species life, productive life, creating life, turns into a mere means of sustaining the worker’s individual existence and man is alienated from his fellow man.”

Ferdinand Tonnies(1855-1936), a German sociologist, dwelt on the social structure of the city. He explained the impact of the market economy on traditional forms of social association; the implications of urbanization and the development of the state for the conduct of social life and the mechanisms of social solidarity in an individuating society. He categorized basic organizing principles of human association into two. The first was what he called *Gemeinschaft* or community. This was characterized by a country village where people have an essential unity of purpose, work together for the common good and are united by ties of family and neighbourhood. The other was *Gesellschaft* or association. This was marked by a large city which is a mechanical aggregate with the attributes of disunity, unbridled individualism and selfishness and an emphasis on self as against the group.

While in both instances, there is peaceful co-existence, the unity in the former case is natural whereas in the latter case the unity is an artificial construct. He listed three kinds of relationships in *Gemeinschaft*. These were kinship, friendship and neighbourhood or locality. The first is family relationships where the father-child relationship is the first manifestation of authority. Kinship further develops and differentiates into locality that is based on a common habitat. Friendship is ensconced in the mind which requires a common mental community, such as religion.

Tonnies’ distinction between social groupings is founded on the assumption that there are only two basic forms of an actor's will, to approve of other men. Following his "essential will" ("*Wesenwille*"), an actor will see himself as a means to serve the goals of social grouping; very often it is an underlying, subconscious force. Groupings structured around an essential will are called a *Gemeinschaft*. The other will is the "arbitrary will" ("*Kürwille*"). An actor sees a social grouping as a means to further his individual goals; hence it is purposive and future-oriented. Groupings around the latter are called *Gesellschaft*. Whereas the membership in a *Gemeinschaft* is self-fulfilling, a *Gesellschaft* is instrumental for its members.

Tonnies describes the collapse of traditional forms of community life under the impact of a fully developed exchange economy. Production for sale and remuneration of labour in money strips labour of style, dignity and charm. The competition for markets leads to a growing impersonality and instrumentality of social life. The common culture disintegrates and the common people are drawn into *Gesellschaft* as members of the proletariat. Membership of trade unions and political parties signifies their full incorporation into the capitalist state. To Tonnies, the transition from an agrarian, parochial Europe to a commercial, cosmopolitan society had been a bigger break in human experience, than any that a socialist revolution could effect.

The account of urbanization found in Tonnies' book "Community and Society" forms the basis of the conventional social stereotype later developed by Wirth. The village and the town in which the physical real soil, the permanent location, the visible land, create the strongest ties and relations are compared with the city and metropolis where the continuity and intimacy provided by the neighbourhood is broken. The city represents the exaggeration of the principle of space. Localism is replaced by a restless cosmopolitanism, urban, national, even international interest that replaces those of home, village and town. In the city only the upper strata, the rich and the cultured set up the standards to which the lower strata have to conform. City life and *Gesellschaft* doom the common people to death and decay.

Urbanization leads in the direction of individuation, towards a situation in which each person is his own master; free to move where he will, associate with whom he pleases, for whatever ends he cares to name. Action is undertaken for predicted ends. The "self" of *gemeinschaft* is replaced by the "person" of *gesellschaft*. Instead of organic unity of the former we find an aggregate where independent individuals self-consciously maintain an artificial identity. Disassociation of community life in the aggregate of population necessitates new mechanisms of social control and integration in the cities. The law courts and the police enforce the will of the state and formal legislation, convention and the public opinion become the means of social control and integration.

The lengthy analysis of the economic relations underlying the new urbanization and the explicit references to class and class domination set Tonnies apart from much subsequent sociological discussion of cities and urbanization. The influence of Tonnies on the Chicago School of urban sociologists is considerable. However, while the School accepts the direction of social change brought out by urbanization, it does not subscribe to Tonnies' exchange economy of capitalism and the resultant class structure as the base line

of analysis. Urbanization for Tonnies entails the acquiescence of the broad mass of the people in the life styles of the dominant class, while for the Americans (Chicago School) it was considered to bring about assimilation into society. The city's land market, not its exchange economy was considered to be the great leveller.

Emile Durkheim(1858-1917), a French sociologist, is considered by some as the principal architect of modern social science and father of sociology. Much of Durkheim's work was concerned with how societies could maintain their integrity and coherence in modernity; an era in which traditional social and religious ties are no longer assumed, and in which new social institutions have come into being. Durkheim was also profoundly concerned with the acceptance of sociology as a legitimate science. For him, sociology was the science of institutions and its objective was to discover structural social facts. Durkheim was a major proponent of structural functionalism, a foundational perspective in both sociology and anthropology. In his view, social science should be purely holistic, that is, sociology should study phenomena attributed to society at large, rather than being limited to the specific actions of individuals

Durkheim considered the social structure of the city and social solidarity, the bond between all individuals within a society. He developed the model of contrasting social order types. The first was mechanical solidarity. This refers to social bonds constructed on likeness and largely dependent upon common belief, custom, ritual, routines, and symbols. Here people are identical in major ways and are therefore united automatically. This was common among prehistoric and pre-agricultural societies, and lessened in predominance as modernity progressed.

The second was organic solidarity. This social order was based on social differences, complex division of labour founded on specialization and greater freedom and choice for city inhabitants despite acknowledged impersonality, alienation, disagreement and conflict. There was a new kind of social cohesion that stood on mutual interdependence that individuals in more advanced societies have on each other where their interdependence is on account of each performing his specific task.

George Simmel(1858-1918) considered the importance of urban experience or urbanism rather than urbanization. The essay that most closely relates to his exploration of the consequences of large cities for personal life is that entitled "On the Significance of Number of Social Life." Smaller groups have qualities, including type of social interaction among their members, which inevitably disappear when the groups grow larger. In the larger city, estrangement of the individual from society built up on his social

relationships could be found. This sense of estrangement is due to the size of society. The larger group gains its unity only at the price of a great distance between all the structures of social integration and the individual members of the group. Alienation is an effect of the large scale characteristics of modern society and as such is inevitable. Formal administrative bodies, impersonal symbols of identity, the separation of the citizen from the city as a political community can all be related to the sheer size of urban agglomerate.

"The Metropolis and Mental Life" is an essay detailing his views on life in the city focussing largely on social psychology. Simmel tried to expound on three themes; first the consequences of a money economy for social relationships, second the significance of numbers for social life and lastly the scope for the maintenance of independence and individuality against the sovereign powers of society. He believed that the unique trait of modern city is intensification of nervous stimuli with which the city dweller must cope with unlike the rural setting where the rhythm of life and sensory imagery is more slow and habitual.

The city dweller develops a blasé attitude that is matter-of-fact and detached. Urbanites get highly attuned to time; and rationality is expressed in advanced economic division of labour and the use of money on account of the need of a universal means of exchange. But money being impersonal, unlike barter, promotes rational calculation in human affairs and replaces personal ties by impersonal ones that are limited to specific purposes. Money also increases personal freedom and fosters social differentiation. Simmel acknowledged the freedom felt in the urban locale and that new heights of personal and spiritual development could be attained; but he also feared that this could be overtaken by a sense of alienation. He advised that with a view to maintain a sense of individuality and dissipate the mood of despondency arising out of the awareness that one is a cog in the machine, there was a necessity to do something different.

There are several themes running through the discussion of individual life in metropolitan city. One of these is that of arousal in face of physiological and socio-psychological stimuli deriving from the turmoil of the urban environment. In consequence thenonchalant attitude that gets developed is a consequence of the failure to react to surrounding self. The resultant strategy is that of reserve in face of the superficial and fleeting contact of the crowd. A second major theme is that of the money economy which is intimately associated with the intellectualism already attributed to the urban environment. Money had an impact on the urban personality in establishing the matter of factness of urban social relations and the effect of blunting discrimination and furthering a false attitude. A third theme flows

from the first two - that of punctuality and precision. Money has turned the world into a mathematical problem and there is a calculative exactness to life which corresponds to the idea of natural science. Competition induces specialization and hence differentiation and individuality. The essential feature of urbanization, therefore, was the freedom it provided for individualization.

Max Weber (1868-1920) in his 'The City' has defined the city on the basis of political and administrative conception. He considered the social structure of the city and its ecological and demographic characteristics. For this purpose, he undertook the survey of various cities throughout the world unlike previous theorists who limited themselves merely to European cities. To constitute a full urban community a settlement must display a relative predominance of trade- commercial relations with the settlement as a whole displaying the following features:

- fortification
- market
- a court of its own and at least partially autonomous law
- a related form of association
- partial autonomy and voting rights.

According to Weber, the city was a relatively closed and dense settlement. A typical city required trade/commercial relations such as a market. It had a court and law of its own and a degree of political autonomy. It was militarily self-sufficient for self-defence and could display a fort-like formation. It had forms of association or social participation whereby individuals engage in social relationships and organizations. He suggested that cities stand linked to larger processes such as economic or political orientations and different cultural and historical conditions could result in different types of cities.

Weber rejected cities governed by religious groups or where the authority is enforced on personal rather than universalistic basis. He recounts a process in which the development of the rational-legal institutions that characterize the modern city enabled the individual to be free from the traditional groups and therefore develop his individuality. He emphasized the closure, autonomy and separateness of the urban community and stressed that the historical peculiarities of the medieval city were due to the location of the city within the total medieval political and social organization.

Weber's treatment of the city has limitations in application to contemporary society. It delineates too perfect a conception of urban existence to demonstrate how imperfect

the present urban settlements are. Its usefulness rests in first, its methodology and second, in its outline of the essential features of social association in the cities of capitalism.

A more removed theorization in the context of urbanization came from **Du Bois (1868-1963)**. This theorist was more interested with the centrality of “race” (racialized power dimensions) in the analysis of social structure. Du Bois (along with Woodson) presented strong arguments for considering race as the central construct for understanding inequality. For Du Bois, race and property create an analytical tool through which we can understand social and urban inequity. In this context, the “critical race theory” is pressed into service. This theory attempts to examine the human interactions both in their historical context and as part of the social and political relations that characterize the dominant society. Central to this analysis are firstly a challenge to the traditional claims of legal neutrality, objectivity, colour-blindness, and meritocracy as camouflages for the self-interest of dominant groups in society, and secondly an insistence on subjectivity and the reformulation of social life to reflect the perspectives of those who have experienced and been victimized by racism firsthand. Critical race theory today is analogous to feminist theory of the late 1970s and attempts to provide a starting point for understanding contemporary urban problems and issues.

1.2 The Social Pathology Period

Early American sociologists were preoccupied with solving social problems resulting from industrialization and urban migration around the turn of the century. They were directly confronted with an urban life that clashed significantly with the values of their rural, middle-class origins. Although appalled by the poverty and slums, these early sociologists also had a religious commitment to moral reform. For them, sociology was a science dedicated to human progress and amelioration of degrading conditions of urban life. In this regard, the writings of **Auguste Comte (1788-1857)** were highly influential through the second half of 19th century. Comte argued that civilization was constantly evolving in a progressive direction that was especially apparent in the forward advance of scientific knowledge. He believed that knowledge in physical and natural sciences had reached a stage of development where it would be possible to apply the combined resources of all the sciences to the study of society itself.

1.3. The Chicago School and the Social Disorganization Period

Urban sociology rose to prominence through a group of sociologists and theorists at the University of Chicago from 1915 to 1940 in what became known as the Chicago School of Sociology. The Chicago school is the name given to the work conducted at the

University of Chicago since the 1890s. The school emerged at a time when the city was experiencing rapid social changes owing to a swift increase in population as a result of great migration. These massive social changes caused problems regarding housing, poverty and a strain on institutions and these interested sociologists.

The Chicago School combined sociological and anthropological theory with ethnographic fieldwork in order to understand how individuals interact within urban social systems. Unlike the primarily macro-based sociology that had marked earlier subfields, members of the Chicago School placed greater emphasis on micro-scale social interactions that sought to provide subjective meaning to how humans interact under structural, cultural and social conditions.

The dominant theories in Criminology preceding the Chicago school were classical criminological and positivist theories of crime. The Chicago School shared with the social pathologists an interest in urban problems. But whereas earlier sociologists attacked the city as the ultimate symbol of pathology, Chicago sociologists were fascinated by their urban environment. They viewed the rapidly changing, diverse city of Chicago as an ideal natural laboratory for scientific research on important sociological questions. Among the major goals of research by the Chicago School was its attempt to describe the nature and consequences of social disorganization in urban areas.

This concept was introduced by Chicago sociologists **W. I. Thomas (1863-1947)**, and his collaborator, **Florian Znaniecki (1882-1958)**. They defined social disorganization as a decrease of the influence of existing social rules of behaviour upon individual members of the group. Urban ethnography was the second form of case study employed. These ethnographic techniques involved direct observation of individuals in their natural settings. Sociologists observed and recorded in detail the daily existence of persons living in "disorganized" areas or engaged in unconventional occupations. These two case study techniques were designed to obtain a view of the effects of social disorganization on the lives of individuals in the urban setting.

The ecological research of the Chicago School was mainly inspired by the teachings of **Robert E. Park (1864-1944)** and **Ernest W. Burgess (1886-1966)**, the most influential sociologists at Chicago University during the social disorganization period. Burgess proposed a systematic application of this general ecological theorizing in his *concentric zone model* of urban growth (Burgess, 1925). This was the first model to demonstrate how urban land was used. This essentially meant that cities developed inside-out in concentric circles. Jobs, industry, entertainment, and administrative offices got located at the centre in

the Central Business District. Hefelt that locational preferences within the city unleashed competitive processes resulting in the final location of activities in particular urban areas. Burgess used Chicago as a concrete illustration of his graphic model. He divided urban areas into five concentric zones based on patterns of land use for commercial or residential purposes. Zone I, the central business district in Chicago is restricted to commercial uses, whereas Zones III-V are residential areas. Zone II, the Zone in Transition, is a mixed area, where low-rent, slum residences are being replaced by businesses and factories. Burgess believed that his model was most useful for understanding the process of ecological change in the city. As the central business district (Zone I) expands, commercial uses increasingly invade the residential areas in the Zone in Transition (Zone II). Because residential properties in Zone II will eventually be sold for commercial purposes, landlords allow them to deteriorate. This, in turn, leads to an expansion of the transitional, slum area into Zone III and so on. As a result of the ecological competition for space which originates in Zone I, all of the zones in Burgess' model steadily expand outward over time. The model demonstrated that there was a correlation in distance from the central business zone depending on class.

1.4. Contemporary Theoretical Perspectives

Patrick Geddes (1854-1932) was a pioneering thinker in the area of urban planning and sociology. He is credited with the introduction of the concept of "region" to architecture and planning and coined the term 'conurbation'. Geddes championed a mode of planning that sought to consider "primary human needs" in every intervention, engaging in "constructive and conservative surgery". Geddes consciously worked against the tradition of the 19th century style of the "gridiron plan". Geddes disliked its "dreary conventionality" and for being unkind to old homes and to the neighbourhood life of the area. Geddes was a votary of civic survey in urban planning that included the geology, geography, climate, economic life and social institutions of the city and region. He was particularly critical of that form of planning which relied overwhelmingly on design and effect, neglecting to consider "the surrounding quarter and constructed without reference to local needs or potentialities".

Among the contemporary theoretical perspectives, **Robert Ezra Park** is an important name. He coined the concept of human ecology that attempts to apply biological processes to the social world. He maintains that the natural environment is an instrumental force in determining city characteristics. He believed the city to be a social organism with distinct parts bound together by internal processes, not chaos and disorder. The city was

also a moral as well as a physical organization suggesting evaluative judgment. In his own words, he saw the city as “man’s most successful attempt to remake the world he lives in more after his heart’s desire. But, if the city is the world which man created, it is the world in which he is henceforth condemned to live. Thus, indirectly, and without any clear sense of the nature of his task, in making the city man has remade himself”.

In 1945 **Chauncy O. Harris** and **Edward L. Ullman** wrote a scientific piece in the *Annals of the American Academy of Political and Social Sciences* called "The Nature of Cities". Their approach came to be known as the Multiple Nuclei Theory, which claims that cities have multiple centres (Nuclei) that yield influence on the growth and nature of an urban area. These scientists argued that a city’s growth and development can be universally predictable. Many other scientists since then have attempted to establish that some commonalities can be predicted, but each city has its own unique history, culture, geography, and resources.

Louis Wirth(1897-1952) developed the first urban theory in the United States with a focus on urbanism rather than on structure. His social-psychological theory investigates the human behaviour in an urban environment. He defined the city as a large, dense and permanent settlement with a socially and culturally homogeneous people. He indicated that size, density and heterogeneity – regarded as the principal traits in defining cities – are conducive to specific behavioural patterns and moral attitudes (Wirth, 1938).According to him, population size enlarged diversity and ‘social segmentalization’. Similarly, population density fostered separateness and population heterogeneity, broke down caste rigidities and enhanced social mobility.While Burgess, as cited earlier,deliberated on urban structure, Wirth chose to look at urbanism. According to him, urbanism is that complex of traits that makes up the characteristic mode of life in cities. Urbanism, as a way of life, may be approached empirically from three interrelated perspectives:(1) as a physical structure comprising a population base, a technology, and an ecological order; (2) as a system of social organization involving a characteristic social structure, a series of social institutions, and a typical pattern of social relationships; and (3) as a set of attitudes and ideas, and a constellation of personalities engaging in typical forms of collective behaviour and subject to characteristic mechanisms of social control.Louis Wirth shows two kinds of forces operating in urban society: the force of segregation and the melting pot effect; which has many unifying aspects like uniform system of administration etc. However, he concludes that urban society is based on a means-to-end rationality, which is exploitative and where the individual is isolated through anonymity. Wirth’s theory is important for its recognition that urbanism is not

just part of a society, but expresses and influences the wider social system. However, Wirth's observations are based on American cities, which are generalized to urban centres everywhere, where situations could be different.

Flinders Petrie came up with what is known as central Place Location Theory which assumed that the only or the main reason for the existence of a city is its function at a storage centre. Geographers still display a tendency to explain the location of urban site in terms of their functions as service centres. An elaborate scheme of this type was offered by a German geographer **Walter Christaller**. His basic assumption was that a given rural area supports an urban centre which in turn serves the surrounding countryside. **Mackenzie** was inclined to accept a similar view point when remarking that during this period of population dispersion the city was for the most part, the child and servant of expanding rural settlement. Christaller's view was introduced in America by Mann with modifications. This theory, however, is considered at variance with facts. Whether we examine the distance between larger cities or the general distribution of urban settlement we find no regularity in spacing. Perhaps the theorists were mainly influenced by the fact of the growth of towns in the beginning as market centres.

Mann admits the vulnerability of the scheme for larger places. In highly industrialized areas, the central place scheme is generally so distorted by industrial concentration in response to resources and transportation that it may be said to have little significance as an explanation for urban location and distribution. But he claims that the theoretical ideal appears to be most nearly self contained. The central place hypothesis is the only existing theory which employs a single principle. Actually, contemporary cities and their location depends upon a multiplicity of factors. Hence, the central place location theory of cities fails to account for the location of contemporary cities.

Homer Hoyt (1895-1984), unlike Burgess, held that the city developed not in concentric circles, but in sectors. Each sector was marked by different economic activities. If the entire city were treated as a circle, then various neighbourhoods were sectors radiating out from the centre of that structure. Hoyt's main contentions were as follows:

1. Industrial areas do not develop around the central business district but along railroad lines and water fronts, or more recently, on the outskirts of a city. Industrial areas thus expand not in circles but in star-like patterns.
2. High class areas are not located in the last concentric zone on the periphery but only in one or more sectors. As the city grows the upper classes keep moving from the centre, abandoning areas to the lower classes which extend their habitats

from the centre towards the outskirts in areas of triangular rather than circular shape.

3. High grade residential areas originate near the retail and office centre but tend to proceed along established lines of travel or towards another existing nucleus and buildings or trading centre preferably toward high ground or a lake, bay, river or ocean front.
4. The high priced residential neighbourhood tends to grow towards the homes of the leaders of the community.

As Hoyt's theory is based on the study of a few cities, it suffers from its own drawbacks. It cannot supply us anymore with a universal pattern of the growth of cities. As Hoyt wrongly contends, high class residential areas do not proceed along transportation lines, as high class people prefer to live away from the din of urban traffic. Hoyt's theory does not explain the growth of suburban or satellite townships. It also cannot account for the concept of 'twin cities'. Moreover, city growth depends upon its location and one cannot expect every other city to be located near high grounds or a water front.

But the sector is definitely a welcome development over the concentric zone theory as it makes room for the modern concept of location of industries also for the growth of a variety of cities wherein the areas of concentric zone are located alongside in various sectors. Moreover it gives importance to city growth around transportation lines which is akin to the modern concept of convenient location of ecological areas of a city.

In the urban context, **Henri Lefebvre (1901-1991)** is known for introducing the concepts of the right to the city and the production of social space. Deeply Marxist in his philosophy, Lefebvre introduced the intertwined concepts of production of space and the right to the city. Lefebvre's central argument is that space is a social product, or a complex social construction which affects spatial practices and perceptions. Lefebvre argues that this social production of urban space is fundamental to the reproduction of society, hence of capitalism itself. The social production of space is commanded by a hegemonic class as a tool to reproduce its dominance.

Manuel Castells worked on the information society, communication and globalization and shaped our understanding of the political dynamics of urban and global economies in the network society. Castells maintains that the Information Age can "unleash the power of the mind, which would dramatically increase the productivity of individuals and lead to greater leisure and would cause resource consumption to decrease. Castells was a key developer of urban sociology that emphasises the role of social movements in the

conflictive transformation of the city. He introduced the concept of 'collective consumption' such as public transport and public housing and dwelt upon the role of new technologies in the restructuring of an economy. He introduced the concept of the "space of flows", the material and immaterial components of global information networks used for the real-time, long-distance co-ordination of the economy.

Anthony Giddens is credited with the theory of structuration and his holistic view of modern societies. The most recent stage concerns modernity, globalization and politics, especially the impact of modernity on social and personal life. He explores the question of whether it is individuals or social forces that shape our social reality. For Giddens, urbanization is a unique feature of all societies characterized by far-reaching time-space distanciation. The city is the main locus of the state, an essential hub for the creation of power and a place for elites for securing and consolidating their rule. Giddens holds that the study of the city is inseparable from the social whole and that urbanization associated with capitalism is quite unlike the pre-capitalist cities, which were more of political and military centres than hubs of economic activity. Capitalism impacted the nature of the city as migration to urban areas by immigrants in search of work destroyed the city as a distinctive social form. As city walls disappeared, space became increasingly commodified and created space became the norm in capitalist cities. Environment in such cities was manufactured environment as capital tended to rework the very constitution of urban life according to its needs.

Giddens concentrates on a contrast between traditional (pre-modern) culture and post-traditional (modern) culture. In traditional societies, individual actions need not be extensively thought about, because available choices are already determined (by the customs, traditions, etc.). In contrast, in post-traditional society people (actors, agents) are much less concerned with the precedents set by earlier generations, and they have more choices, due to flexibility of law and public opinion. This, however, means that individual actions now require more analysis and thought before they are taken. Society is more reflexive and aware, something Giddens is fascinated with, illustrating it with examples ranging from state governance to intimate relationships. Giddens examines three realms in particular: the experience of identity, connections of intimacy and political institutions.

The most defining property of modernity, according to Giddens, is that we are disembedded from time and space. In pre-modern societies, space was the area in which one moved and time was the experience one had while moving. In modern societies, however, the social space is no longer confined by the boundaries set by the space in

which one moves. One can now imagine what other spaces look like, even if he has never been there. In this regard, Giddens talks about virtual space and virtual time. Another distinctive property of modernity lies in the field of knowledge.

In pre-modern societies, it was the elders who possessed the knowledge: they were definable in time and space. In modern societies we must rely on expert systems. These are not present in time and space, but we must trust them. Even if we trust them, we know that something could go wrong: there's always a risk we have to take. Also the technologies which we use, and which transform constraints into means, hold risks. Consequently, there is always a heightened sense of uncertainty in contemporary societies. It is also in this regard that Giddens uses the image of a 'juggernaut': modernity is said to be like an unsteerable juggernaut travelling through space.

In **David Harvey's** explorations of the right to the city, he believes that the astonishing pace and scale of urbanization over the last hundred years has had a very adverse impact on a sizeable number of urban dwellers. He contends that the right to the city is far more than the individual liberty to access urban resources. It is a right to change ourselves by changing the city. It is, moreover, a common rather than an individual right since this transformation inevitably depends upon the exercise of a collective power to reshape the processes of urbanization. According to Harvey, from their inception, cities have arisen through geographical and social concentrations of a surplus product. Urbanization has always been, therefore, a class phenomenon, since surpluses are extracted from somewhere and from somebody, while the control over their disbursement typically lies in a few hands. Since urbanization depends on the mobilization of a surplus product, an intimate connection emerges between the development of capitalism and urbanization. Capitalists have to produce a surplus product in order to produce surplus value; this in turn must be reinvested in order to generate more surplus value. The result of such continued reinvestment is the expansion of surplus production at a compound rate.

In his examination of urbanization, from the 19th century onwards, Harvey finds urbanization as a primary stabilizer of capitalism, and of recent, of global capitalism. As in all the preceding phases, this most recent radical expansion of the urban process has brought with it great changes in lifestyle. Quality of urban life has become a commodity. So has the city itself, in a world where consumerism, tourism, cultural and knowledge-based industries have become major aspects of the urban political economy. Surplus absorption through urban transformation has an even darker aspect. It has entailed repeated bouts of urban restructuring through 'creative destruction', which nearly always

has a class dimension since it is the poor, the underprivileged and those marginalized from political power that suffer first and foremost from this process. Urbanization, he concludes, has played a crucial role in the absorption of capital surpluses, at ever increasing geographical scales, but at the price of escalating processes of creative destruction that have dispossessed the masses of any right to the city whatsoever. As a solution, he advocates greater democratic control over the production and utilization of the surplus. Since the urban process is a major channel of surplus use, establishing democratic management over its urban deployment constitutes the right to the city.

In terms of urbanism, it would be apposite to state that Harvey along with Castells saw urbanism as not an autonomous process, but as part of a larger political and economic process and change. Harvey believes that in modern urbanism, space is continually restructured. The process is determined by large firms, who decide where they should open their businesses, factories etc and by policies, controls and initiatives asserted by governments which can change the landscape of a city. Like Harvey, Castells stresses that spatial form of a city is very much related to the larger process of the society. Castells further adds the dimension of the struggles and conflicts of various groups who make up the cities. He gives the example of gay community who have reorganized the structure of San Francisco city. He believes that it is not only big corporations, businesses and government which influence the shape of a city but also the communities and groups who live in cities.

1.5. Evolution of Urban Sociology

The evolution and transition of sociological theory from the Chicago School began to emerge in the 1970s with the publication of **Claude Fischer's** (1975) "Toward a Theory of Subculture Urbanism" which incorporated Bourdieu's theories on social capital and symbolic capital within the invasion and succession framework of the Chicago School in explaining how cultural groups form, expand and solidify a neighbourhood. The theme of transition by subcultures and groups within the city was further expanded by **Barry Wellman's** (1979) "The Community Question: The Intimate Networks of East Yorkers" which determined the function and position of the individual, institution and community in the urban landscape in relation to their community. Wellman's categorization and incorporation of community focused theories as "Community Lost", "Community Saved", and "Community Liberated" which centre on the structure of the urban community in shaping interactions between individuals and facilitating active participation in the local community.

The 'community lost' concept was developed in the late 19th century to account for the rapid development of industrial patterns that seemingly caused rifts between the individual and their local community. Urbanites were claimed to hold networks that were "impersonal, transitory and segmental", maintaining ties in multiple social networks while at the same time lacking the strong ties that bound them to any specific group. The 'community saved' concept suggests that multi-stranded ties often emerge in sparsely-knit communities as time goes on, and that urban communities often possess these strong ties, albeit in different forms. Especially among low-income communities, individuals have a tendency to adapt to their environment and pool resources in order to protect themselves collectively against structural changes. Over time, therefore, urban communities have tendencies to become "urban villages".

The 'community liberated' concept suggests that the separation of workplace, residence and familial kinship groups has caused urbanites to maintain weak ties in multiple community groups that are further weakened by high rates of residential mobility. However, the concentrated numbers of environments present in the city for interaction increase the likelihood of individuals developing secondary ties, even if they simultaneously maintain distance from tightly-knit communities.

Along with the development of these theories, urban sociologists began to study the differences between the urban, rural and suburban environment. Researchers discovered that urban residents tend to maintain more spatially-dispersed networks of ties than rural or suburban residents. Among lower-income urban residents, the lack of mobility and communal space within the city often disrupted the formation of social ties and lent itself to creating an un-integrated and distant community space. In the 1970s and onwards, research into social networks focused primarily on the types of ties developed within residential environments. Bonding ties among tightly-knit neighbourhoods consisted of connections that provided an individual with primary support, such as access to income or upward mobility among a neighbourhood organization. Bridging ties, in contrast, were ties that weakly connected strong networks of individuals together.

However, as theory surrounding social networks has developed, sociologists such as **Alejandro Portes** and the **Wisconsin model** of sociological research began placing increased leverage on the importance of these weak ties. While strong ties are necessary for providing residents with primary services and a sense of community, weak ties bring together elements of different cultural and economic landscapes in solving problems affecting a great number of individuals. As theorist Eric Oliver notes, neighbourhoods

with vast social networks are also those that most commonly rely on heterogeneous support in problem solving, and are also the most politically active.

As the suburban landscape developed during the 20th century and the outer city became a refuge for the wealthy and, later, the burgeoning middle class, sociologists and urban geographers such as **Harvey Molotch**, **David Harvey** and **Neil Smith** began to study the structure and revitalization of the most impoverished areas of the inner city. In their research, impoverished neighbourhoods, which often rely on tightly-knit local ties for economic and social support, were found to be targeted by developers for gentrification which displaced residents living within these communities. Research covering the social impact of forced movement among these residents noted the difficulties individuals often faced with maintaining a level of economic comfort, which was spurred by rising land values and inter-urban competition between cities as a means to attract capital investment. The interaction between inner-city dwellers and middle class passersby in such settings has also been a topic of study for urban sociologists.

Some of the cited theories have been subjected to criticism, particularly the ethnocentric approaches taken by many early theorists that lay groundwork for urban studies throughout the 20th century. Early theories that sought to frame the city as an adaptable “superorganism” often disregarded the intricate roles of social ties within local communities, suggesting that the urban environment itself rather than the individuals living within it controlled the spread and shape of the city. For impoverished inner-city residents, the role of highway planning policies and other government-spurred initiatives instituted by the planner **Robert Moses** and others have been criticized as unsightly and unresponsive to residential needs. Some modern social theorists have also been critical toward the apparent shortsightedness that urban sociologists have shown toward the role of culture in the inner city. **William Julius Wilson** has criticized theories developed in the middle of the twentieth century as relying primarily on structural roles of institutions, and not how culture itself affects common aspects of inner-city life such as poverty. The distance shown toward this topic, he argues, presents an incomplete picture of inner-city life.

1.6. Rural-Urban Continuum Perspectives

Some sociologists have used the concept of rural-urban continuum to stress the idea that there are no sharp breaking points to be found in the degree or quantity of rural-urban differences. **Robert Redfield** gave the concept of rural -urban continuum on the basis of his study of Mexican peasants of Tepoztlain. He believed that the rapid progress of

urbanization through the establishment of industries, urban traits and facilities have decreased the differences between villages and cities. Other sociologists, on the other hand, stress the dichotomies between the two and emphasize differences such as occupational differences, environmental differences, differences in the sizes of communities, differences in the density of population, differences in social mobility and direction of migration, differences in social stratification and in the systems of social interaction.

Redfield also studied four communities through field work in the Yucatan peninsula from 1927 to 1936. He arrived at certain conclusions on the basis of his studies and combined these observed characteristics into three major categories of urban change: (a) the increase in cultural disorganization, (b) the increase in secularization, and (c) the increase in individualization. He saw cultural disorganization as a concomitant of urbanization because he believed that the strong ties that integrated the individual into the fold or peasant community were inevitably loosened or destroyed by the growth of urban society. "Folk society in which the same kind of people are doing the same kind of thing" created an unambiguous, monolithic social structure which was destroyed by the growth of the city. The single social fabric of meanings typical of folk communities are torn and replaced by that of the numerous goals, actions and meanings of urban society. The wholeness of folk culture in which all cultural elements were related, became a cultural patch work in urban society. As a result, conflict and disorganization were the marks of urban culture.

Cities and towns were more secular in their values than were villages. Secularization lessened the importance of the Church and of the religion in society and emphasized rational and practical judgements. The individual was free from traditional control. Collective functions disappeared and individual activity increased in the urban society. The extended family with its widespread network of obligations was reduced to a small, nuclear and self-contained unit. Decline of religion and its control gave the individual more freedom from social ties of the folk society. Urbanization increased individualization. Redfield's folk-urban continuum explains the process of evolutionary change which describes how little communities give way to larger, urban secular society.

A third view regarding rural and urban communities has been given by **Pocock** who believed that both village and city are elements of the same civilization and hence neither rural urban dichotomy, nor continuum is meaningful. **M.S.A. Rao** points out in the Indian context that although both village and town formed part of the same civilization

characterized by institution of kinship and caste system in pre-British India, there were certain specific institutional forms and organizational ways distinguishing social and cultural life in towns from those in villages. Thus, according to Rao, rural urban continuum makes more sense.

Maclver remarks that though the communities are normally divided into rural and urban, the line of demarcation is not always clear between these two types of communities. There is no sharp demarcation to tell where the city ends and country begins. Every village possesses some elements of the city and every city carries some features of the village. **R.K Mukherjee**, however, prefers the continuum model by talking of the degree of urbanization as a useful conceptual tool for understanding rural-urban relations. **P.A Sorokin and Zimmerman** in 'Principles of Rural-Urban sociology has stated that the factors distinguishing rural from urban communities include occupation, size and density of population as well as mobility, differentiation and stratification.

Walter Christaller explained the location of cities in terms of their functions as service centres. The basic assumption was that a given rural area supports an urban centre which in turn serves the surrounding countryside. There are smaller towns for smaller areas and bigger cities for larger regions. This concept permitted Christaller to build up an integrated system of cities according to their size. His views conceiving a city as a central place within a rural area was elaborated by **Edward L.Ullman** with considerable modifications. He admits the vulnerability of the scheme for larger places. In highly industrialized areas the central place scheme is generally so distorted by industrial concentration in response to resources and transportation that it may be said to have little significance.

1.7. Theory Snapshot

The various theoretical sociological perspectives, for the sake of a sharper and briefer understanding can be looked at through the 'Theory Snapshot Table' below:

Table 1.1 Theory Snapshot

Theoretical perspective	Major assumptions
Functionalism	Cities serve many important functions for society but also have their dysfunctions. Functionalist theorists differ on the relative merits and disadvantages of urban life, and in particular on the degree to which a sense of community and social bonding exists within cities.
Conflict theory	Cities are run by political and economic elites that use their resources to enrich their positions and to take resources from the poor and people of colour. The diversity of social backgrounds found in cities contributes to conflict over norms and values.
Symbolic interactionism	City residents differ in their types of interaction and perceptions of urban life. Cities are not chaotic places but rather locations in which strong norms and values exist.

In the following paragraphs, an attempt has been made to provide a concise explanation of each theoretical perspective and their key assumptions.

Functionalism: A basic debate within the functionalist perspective centres on the relative merits of cities and urbanization: In what ways and to what extent are cities useful (functional) for society, and in what ways and to what extent are cities disadvantageous and even harmful (dysfunctional) for society? Put more simply, are cities good or bad? In essence, there is no one answer to this question, because cities are too complex for a simple answer. Cities are both good and bad. They are sites of culture, population diversity, and creativity.

Conflict Theory: While functionalism has mixed views about the benefits and disadvantages of cities and urban life and thus of urbanization, the views of conflict theory are uniformly critical. It assumes a basic conflict between society's "haves" and "have-nots," or between the economic and political elites and the poor and people of colour. This type of conflict, says the conflict theory, manifests itself especially in the nation's cities, in which the "haves" and "have-nots" live very different lives. On the one hand, the rich live in luxurious apartments and work in high-rise corporate buildings, and they dine at the finest restaurants and shop at the most expensive stores. On the other hand, the poor and people of colour live in dilapidated housing and can often barely make ends meet.

Beyond this basic disparity of city life, conflict theorists add that the diverse backgrounds and interests of city residents often lead to conflict because some residents' beliefs and practices clash with those of other residents. More recent applications of conflict theory to urbanization emphasize the importance of political economy, or the interaction of political and economic institutions and processes. In this way of thinking, political and economic elites in a city (bankers, real estate investors, politicians, and others) collaborate to advance their respective interests. Thus urban development often takes the form of displacing poor urban residents from their homes so that condominiums, high-rise banks and other corporate buildings, posh shopping malls, or other buildings favouring the rich can be built. More generally, these elites treat cities as settings for the growth of their wealth and power, rather than as settings where real people live, go to school, work at a job, and have friends and acquaintances.

Symbolic Interactionism: Symbolic interactionism is a view that focuses on the nature of urban residents' interaction with each other, the reasons for their patterns of interaction, and their perceptions of various aspects of urban life. Their work has yielded many rich, vivid descriptions of the urban life. Many and probably most of these accounts have concerned the lives of the poor and of people of colour. This view depicts cities as places where various norms and values prevail, in contrast to views of cities that depict them as wild, chaotic places. Building on these more positive accounts, recent work by sociologist Elijah Anderson emphasizes that most poor urban residents are decent, law-abiding people. He also emphasizes that cities are filled with parks and other public settings in which people from different racial and socioeconomic backgrounds gather every day and interact in various ways that help foster interracial understanding. Anderson calls these settings "cosmopolitan canopies," and says they "offer a respite from the lingering tensions of urban life and an opportunity for diverse peoples to come together... Through personal observation, they may come casually to appreciate one another's differences and empathize with the other in a spirit of humanity" (Anderson, 2011).

Other work in the symbolic interactionist tradition seeks to understand the different lifestyles of city residents. Sociologist Herbert Gans (1982) authored a classic typology of urban residents based on their differing lifestyles and experiences. Gans identified five types of city residents.

The first type is *cosmopolites*. These are people who live in a city because of its cultural attractions, restaurants, and other features of the best that a city has to offer. Cosmopolites include students, writers, musicians, and intellectuals. *Unmarried and childless* individuals

and couples are the second type; they live in a city to be near their jobs and to enjoy the various kinds of entertainment found in most cities. If and when they marry or have children, respectively, many migrate to the suburbs to raise their families. The third type is *ethnic villagers*, who are recent immigrants and members of various ethnic groups who live among each other in certain neighbourhoods. These neighbourhoods tend to have strong social bonds and more generally a strong sense of community. Gans wrote that all these three types generally find the city inviting rather than alienating and have positive experiences far more often than negative ones.

In contrast, two final types of residents find the city alienating and experience a low quality of life. The first of these two types, and the fourth overall, is the *deprived*. These are people with low levels of formal education who live in poverty or near poverty and are unemployed, are underemployed, or work at low wages. They live in neighbourhoods filled with trash, broken windows, and other signs of disorder. They commit high rates of crime and also have high rates of victimization by crime. The final type is the *trapped*. These are residents who, as their name implies, might wish to leave their neighbourhoods but are unable to do so for several reasons: they may be alcoholics or drug addicts, they may be elderly and disabled, or they may be jobless and cannot afford to move to a better area.

1.8. India and Indian Sociologists related to urbanization

M.S.A. Rao (1970) analyzes urbanization and urbanism keeping in mind the larger social structures of Indian society. For him, urbanism is a heterogeneous process and hence there can be many forms of urbanisms giving rise to many types of urbanization. Rao states that the dichotomy between cities and villages is incorrect as both have the same structural features of caste and kinship and are parts of the same civilization. Moreover, urbanization and westernization are not identical and should not be confused. Urbanization does not lead to the breakdown of traditional structures of caste and joint family. The traditional and modern structures coexist in the urban milieu because of which various types of urbanisms exist – post-industrial, preindustrial, western, non-western etc. Further, urbanization is seen in relation to social change and no real social transformation is associated with it. However, due to urbanization new forms of social organization and association have emerged. Thus, for Rao, urbanization is a complex, multifaceted process comprising ideological, cultural, historical, demographic and traditional sociological elements. Rao defines a city as a centre of urbanization and urban way of life. Urbanization is a two way process. Urbanization in India is not a uniform

process but occurs along different axes - administrative, political, commercial, religious and educational - giving rise to several types of urbanisms. These different axes give rise to different types of contact which the city has with the villagers leading to distinct patterns of urbanization.

He distinguishes three kinds of situations of social change in rural areas resulting from urbanization: villages near an industrial town, villages with a sizable number of emigrants working in towns and cities, and villages on the metropolitan fringe. Rao believed that through the study of migration, one could observe the similarities, dissimilarities and continuity between villages and towns. Rao's sociological approach is the most complete approach to the study of urbanization because he tries to examine them in all their different facets and relate these facets to one another and to a sociological understanding of urbanism and urbanization.

Ashish Bose's demographic classification emphasizes quantitative factors like demography rather than qualitative factors in defining urbanization. For him, urbanization, in the demographic sense, is an increase in the proportion of the urban population (U) to the total population (T) over a period of time. As long as U/T increases there is urbanization. The process of urbanization is a continuing process which is not merely a concomitant of industrialization but a concomitant of the whole gamut of factors underlying the process of economic growth and social change.

Bose outlines the characteristic features of urbanization in India. He made a decade-wise differentiation in terms of percentage of urbanization. Here urbanization is affected by trends in migration. He recognizes the push-back and turn-over factors of migration. He considered four variables affecting urban growth:

- a) Proportion of new towns to total urban population;
- b) Proportion of declassified towns to the total population;
- c) Proportion of declining towns to the total population;
- d) Proportion of rapidly growing towns to the total urban population.

Bose believes that only when these are combined will it be possible to analyze the process of urbanization in India. Bose uses the concepts of towns and cities interchangeably.

1.9. Social Effects of Urbanization in India

The impact of urbanisation on larger societal processes and structures has been the subject of interest of urban sociologists who have studied this country.

Family and kinship: Urbanization has been seen to affect not only the family structure but also intra and inter family relations, including the functions the family performs. With urbanization, there is a disruption of the bonds of community and the migrant faces problems of replacing old relationships with new ones and to find a satisfactory means of continuing relationship with those left behind. Several empirical studies of urban families conducted by scholars like **I.P. Desai, Kapadia** and **Aileen Ross**, have pointed out that urban joint family is being gradually replaced by nuclear family. The size of the family is shrinking, and kinship relationship is confined to two or three generations only. In his study of 423 families in Mahuva town in Gujrat, I.P. Desai (1964) showed that though the structure of urban family is changing, the spirit of individualism is not growing in the families. He found that 74 percent families were residentially nuclear but functionally and in property joint, and 21 percent were joint in residence and functioning as well as in property and 5 percent families were nuclear. Kapadia (1959) in his study of 1,162 families in rural and urban (Navsari) areas in Gujrat found that while in rural areas, for every two nuclear families there were three joint families; in urban areas, nuclear families were 10 percent more than joint families.

Aileen Ross (1962) in her study of 157 Hindu families belonging to middle and upper classes in Bangalore found that

1. about 60 percent of the families are nuclear
2. today's trend is a break with traditional joint family into the nuclearfamily unit.
3. Small joint family is now the most typical form of family life in urban India.
4. Relations with one's distant kin are weakening or breaking.

Though intra-family and inter-family relations are changing, it does not mean that youngsters no longer respect their elders, or children completely ignore their obligations to their parents and siblings, or wives challenge the authority of their husbands. One important change is that 'husband-dominant' family is being replaced by 'egalitarian family' where wife is given a share in the decision-making process. I.P. Desai maintains that 'in spite of strains between the younger and older generations, the attachment of the children to their families is seldom weakened'.

Sylvia Vatuk maintains that the ideal of family "jointness" is still upheld although living separate. The extended family acts as a ceremonial unit and close ties with the members of extended family are maintained. Also, larger kinship clusters including groups of bilaterally related household within the same or closely adjacent mohallas exist. There is a

tendency towards bilateral kinship in urban areas. In her study of Rayapur in 1974-1976, Vatak mentions the increasing tendencies toward individualizing the marital bond and decline of practices such as widow inheritance, widow remarriage, marriage by exchange, polygyny etc. The impact of urbanization is also seen in the urban pattern of increasingly homogenized values and ways of behaviour.

Thus, gradual modification of the family structure in urban India is taking place such as diminishing size of the family, reduction in functions of family, emphasis on conjugal relationship etc. Kinship is an important principle of social organisation in cities and there is structural congruity between joint family on the one hand and requirements of industrial and urban life on the other. In his study of nineteen families of outstanding business leaders in Madras, **Milton Singer**(1968) argues that a modified version of traditional Indian joint family is consistent with urban and industrial setting.

Urbanization and Caste: It is generally held that caste is a rural phenomenon whereas class is urban and that with urbanization, caste transforms itself into class. But it is necessary to note that the caste system exists in cities as much as it does in villages although there are significant organisational differences. Caste identity tends to diminish with urbanization, education and the development of an orientation towards individual achievement and modern status symbols. **Andre Beteille** (1966) has pointed out that among the westernized elite, class ties are much more important than caste ties.

A noticeable change today is the fusion of sub-castes and fusion of castes. **Kolenda** (1984) has identified three kinds of fusion: (i) on the job and in newer neighbourhood in the city, persons of different sub-castes and of different castes meet; (ii) inter-sub-caste marriages take place, promoting a fusion of sub-castes; (iii) democratic politics also fosters the fusion of sub-castes. Studies of many sociologists like **Srinivas** (1962), **Ghurye**(1962), Gore (1970), **D'Souza** (1974), **Rao** (1974), have shown that caste system continues to persist and exert its influence in some sectors of urban social life while it has changed its form in some other sectors. Caste solidarity is not as strong in urban areas as in the rural areas. Caste panchayats are very weak in cities. There exists a dichotomy between workplace and domestic situation and both caste and class situations co-exist.

In respect to the change in the distribution of power, we find that in pre-British India, upper caste was also the upper class. But with education and new types of occupations, this correlation of caste and class is no longer true. Beteille (1971) pointed out that higher

caste does not always imply higher class. This disharmony is most often found in the Indian cities where new job opportunities have developed.

In many ways the vitality of caste system seems to hold. The most powerful role that caste identity is playing is in politics which governs the power dimension. Caste acts as a 'vote bank' in both rural and urban areas. Caste also becomes a basis for organising trade union like associations, which serves as interest groups that protect the rights and interest of its caste members. Certain aspects of behaviour associated with caste ideology have now almost disappeared in cities. Rules of inter-dining among castes have little meaning and the frequency of inter-caste marriages has increased.

Neighbourhood interaction in urban settlements is marked by a high degree of informality and caste and kinship are major basis of such participation. **Lynch's** (1967) study of an untouchable caste, Jatavs, in Agra showed that Jatavs had well-knit mohalla (ward) organization which resembled a village community in many respects. **Doshi's** (1968) study of two caste wards in the city of Ahmedabad also refers to the traditional community organization.

Urbanization and Status of Women: Women constitute an important section of rural urban migrants. They migrate at the time of marriage and also when they are potential workers in the place of destination (Rao). While middle class women get employed in white collar jobs and professions, lower class women find jobs in the informal sector. Women are also found in the formal sector as industrial workers. The onslaught of forces of rapid industrialization in a patriarchal social system led men to move out in order to qualify for the labour market by acquiring specialized skills. Women were traditionally relegated to the informal and family setting.

But many positive developments took place in the socio-economic lives of women as a result of increasing urbanization. Increasing number of women have taken to white-collar jobs and entered different professions. These professions were instrumental in enhancing the social and economic status of women, thereby meaning increased and rigorous hours of work, professional loyalty along with increased autonomy. The traditional and cultural institutions remaining the same, crises of values and a confusion of norms have finally resulted. The personally and socially enlightened woman is forced to perform dual roles - the social and the professional roles **Gore** (1968), **Kapur** (1970), **Ross** (1983).

In the cities of India, high level education among girls is significantly associated with the smaller family size. Though education of women has risen the age of marriage and lowered the birth rate, it has not brought about any radical change in the traditional pattern of arranged marriages with dowry. **Margaret Cormack** (1961) found in her study of 500 university students that girls were ready to go to college and mix with boys but they wanted their parents to arrange their marriage. Women want new opportunities but demand old securities as well. The status of urban women, because of being comparatively educated and liberal, is higher than that of rural women. However, in the labour market, women are still in a disadvantaged situation. **D'Souza** (1963) reveals the psychological, household and social problems to which they are exposed.

Urbanization and Rural Life: Urbanization through migration to urban centres is a global phenomenon. Many migrate to cities because of the availability of jobs there. Migration has become a continuous process affecting the social, economic and cultural lives of the villagers. Rao (1974) examined the social changes in a metropolitan fringe village (Yadavpur). He distinguished three kinds of situations of social change in rural areas resulting from urbanization:

1. In villages from where a large number of people have sought employment in far off cities, urban employment becomes a symbol of higher social prestige.
2. In villages that are situated near an industrial town with a sizable number of migrants working in towns and cities, such persons face the problems of housing, marketing and social ordering.
3. The growth of metropolitan cities accounts for the third type of urban impact on the surrounding villages. As the city expands, some villages become rural pockets in the city areas. Hence the villagers participate directly in the economic, political and social activities, and cultural life of the city.

Srinivas (1962) outlined the general impact of both industrialisation and urbanization on villages. He showed how the different areas of social life are being affected by urban influences. He pointed out that migration in South India has had a caste component as it was the Brahmins who first left their villages for towns and took advantage of western education and modern professions. At the same time as they retained their ancestral lands and they continued to be at the top of the rural socio-economic hierarchy. Again, in the urban areas they had a near monopoly of all non-manual posts.

Majumdar(1958) in his study of Mohana village near Lucknow, noted that the village economy is influenced by the urban market, although in an indirect way. **Eames'** (1954)

study of a village in U.P. showed that many emigrants have left their families behind, and they regularly send money home. Such a 'money-order economy' has enabled the dependents to clear off loans, build houses and educate their children. **R.D. Lambert** (1962) in his extensive review of studies concerning the impact of urban society upon village life, points out different degrees of urban influence on the rural life. Social changes are maximal in areas where displacement is sudden and substantial due to urbanization.

Thus migration is a key process underlying the growth of urbanization. Far from being a mechanical process, it is governed by economic, social and cultural factors. This culture contact initiates certain processes of interaction and different modes of social adjustment in urban areas. Migration has acquired a special significance in the context of commercialization of agriculture; it has major implications for urbanization, slums and social change; it has notable feed-back effects on the place of origin, as the migrants maintain different kinds and degrees of contact, thus increasing the continuity between rural and urban areas. Many cultural traits are diffused from one area to another. Also, new thoughts, ideologies are diffused from the cities to the rural areas due to increase in communication via radio, television, newspaper etc.

Urban Politics: Rao (1974) has identified four problem areas in the study of political institutions, organization and processes in the urban context: 1) Formal political structure 2) Informal political organizations, 3) Small town politics and 4) Violence.

There is the formal political structure, municipal or corporation government where national, regional and local political parties compete for positions of power. **Lloyd Rudolph's** (1961) essay on Populist Government in Madras outlines the struggle for power in the Madras Corporation and shows the decisive dominance of the D.M.K, a regional political party. It also reveals the control exercised by the party leaders in the context of the anti-Brahmin movement and the populist support the party has acquired. The study brings out clearly the relationship between urbanization and the changing power structure.

Besides formal structures of power, informal political organisations operate through caste, religious and sectarian groups, and occupational categories. Associations formed on these lines acquire political dimensions in so far as they act as pressure groups, and in some cases they even form part of organized political parties. Lynch's (1968) study of the Politics of Untouchability describes the processes by which the Jatavs became a

politically viable group in Agra city. It is significant to note that they form part of the Republican Party to compete for positions of power at the city, state and national levels.

A third aspect of politics in the urban context refers to the small town politics where elites, factions or ethnic groups, more than political parties, are significant in understanding the power structure. Ethnic groups get politicized and act as vote banks and pressure groups articulating their interests, and compete for various benefits of urban life. This results in a situation of conflict between ethnic groups and between the migrant ethnic groups and the locals. **A.C. Mayer** (1953) in his study of municipal elections in Devas in Madhya Pradesh analysed the networks and 'action-sets' of influential leaders. **R.G. Fox** (1969) showed that a Muslim-Bania conflict characterizes the politics in a small town in Uttar Pradesh. There has been a shift in the authority from the Muslim zamindars to enterprising banias (merchants).

Another important feature of urban politics is violence resulting from communal conflict, political disturbance, student strikes and regional armies such as the Shiv Sena in Bombay. Besides these problems of urban violence, **Tangri** (1962) and **Kothari** (1970) have drawn attention to the political implications of urbanization. Different conflict situations have arisen with the growth of urbanization such as unemployment and slums which contribute to political instability.

Owen M Lynch (1980) studied the political mobilization and ethnicity among the Adi-Dravidas in a Bombay slum, who are a low-ranking caste from southern India and who have migrated to Bombay. Here, different political parties compete for their votes. One party calls on them to identify as 'untouchables' on all-India basis; another party bids them to remember their South Indian roots. The way in which the Adi-Dravidas define themselves politically is thus related both to their position in Bombay as rural migrants from another region and to their caste.

In summation, it could be stated in broad terms that the process of urbanization is bringing about certain sociological changes that need to be further studied. While caste and kinship still matter in cities, there is a degree of weakness witnessed and there is additionally the emergence of class as a strong force. The family is undergoing change and though some forms of a modified joint family system still holds, the nuclear family is increasingly becoming the norm. Women in cities have greater education and are moving up the job ladder. Inter-caste marriages are happening and a number of social changes are taking place in the peripheral villages.

1.10. Urban Sociology in the 21st Century

The twenty-first century mega cities are being marked by the manifestation of some novel developments. Saskia Sassen in her paper 'Urban sociology in the 21st century' states as follows: "Most of social life in cities probably still corresponds to older continuing and familiar trends. That is why much of urban sociology's traditions and well-established subfields will remain important and continue to constitute the heart of this discipline. At the same time, if one were confined to traditional concepts of urban sociology, one would overlook or underestimate critical aspects of major new trends coming together in a growing number of cities."

One major trend is that 'multiple globalization processes assume tangible localized forms; electronic networks intersect with thick environments, and new subjectivities arise from encounters of people from all around the world. Thus today's large cities have emerged as a strategic site for a whole range of operations, particularly pertaining to the global economy. This trend is accompanied by "a major shift among state policy toward targeting particular sub-national spaces for development and resource allocation— and away from the promotion of convergence in national territorial development. Particular types of cities and advanced high-tech industrial districts are two of the main targets, with global cities and "silicon valleys" the most extreme instances. This shift toward privileging particular subnational spaces partly arises from globalization and the new information technologies."

"To this we can add a second critical trend associated and enabled by globalization and the expanding presence of the new information technologies in all domains of social life: the emergence of new cultural forms that cannot be contained exclusively within national framings, such as global imaginaries and cultural transnationalisms..... While these trends today may hold especially for major cities, they are directly or indirectly affecting a rapidly growing range of diverse types of cities. These are having the effect of partly denationalizing urban space. What gets revealed to sociologists through these conditions is that cities are now nodes, where a variety of economic, political and subjective processes intersect in particularly pronounced concentrations. A large city is becoming one of the spaces of the global, and it engages the global directly and there is therefore the emergence of a global civil society." These developments are preponderant in the cities of the developed world but are also present in the developing world.

The growth of information industries and telecommunications led some people to argue the demise of cities as firms and workers could remain connected and work from any place. This was because there was visible dispersal of economic activities outside the cities. At the same time, quite the opposite trend of concentrated specialized professional activities and top-level management and control operations within cities was also visible. This was on account of place-centred processes that needed to happen within cities. Many cities witnessed their highest growth rate in decades through the concentration of high-end offices, shopping, hotel and entertainment and residential apartments. This seems to have happened on account of complexities of economic transactions thrown up by globalization and cities emerging as key sites for the production of services. There is the formation of a new urban economic core of high-level management and specialized service activities replacing the older, typically manufacturing-oriented office core. At the same time, these cities compete with each other and service each other on the global scale.

At the same time, rather surprisingly, there was witnessed “the multiplication of low-wage jobs and low-profit economic sectors. This whole new workforce, often increasingly immigrant and minoritized citizens, who take on the functions once performed by the mother or wife of the older middle classes.” These poorer economic sectors have had to compete for space and have experienced displacement.

A growing service intensity has also been seen in the organization of all industries. This development “has contributed to a massive growth in the demand for services by firms in all industries, from mining and manufacturing to finance and consumer services. Cities are key sites for the production of services for firms. Hence, the increase in service intensity in the organization of all industries has had a significant growth effect on cities beginning in the 1980s. It is important to recognize that this growth in services for firms is evident in cities at different levels of a nation’s urban system. Some of these cities cater to regional or subnational markets, others cater to national markets, and yet others cater to global markets.”

The “implantation of global processes and markets has meant that the internationalized sector of the economy has expanded sharply and has imposed a new valorization dynamic—that is, a new set of criteria for valuing or pricing various economic activities and outcomes. This has had devastating effects on large sectors of the urban economy. High prices and profit levels in the internationalized sector and its ancillary activities, such as top-of-the-line restaurants and hotels, have made it increasingly difficult for other sectors to compete for space and investments. Many of these other sectors have experienced considerable downgrading and/or displacement; for example, neighborhood shops

tailored to local needs are replaced by upscale boutiques and restaurants catering to the new high-income urban elite.

A related question in urbanization is the one of primate cities, especially in the context of Latin America and the Caribbean. Primacy is not simply a matter of absolute size, nor is large size a marker of primacy. “Primacy is a relative condition that holds within a national urban system. The disintegration of rural economies, including the displacement of small landholders by expanding large-scale commercial agriculture, and the continuing inequalities in the spatial distribution of institutional resources are generally recognized as key factors strengthening primacy.” In terms of the impact of economic globalization on cities there has been a contribution “to the development of new growth poles outside the major urban agglomerations. In others, it has actually raised the weight of primate urban agglomerations, in that the new growth poles were developed in these areas. The implantation of global processes seems to have contributed to sharpening the separation between cities, or sectors within cities, that are articulated with the global economy and those that are not. This is a new type of interurban inequality, one not predicated on old hierarchies of city size. The new inequality differs from the long-standing forms of inequality present in cities and national urban systems because of the extent to which it results from the *implantation* of a global dynamic, be it the internationalization of production and finance or international tourism”.

It is also interesting to note that both globalization and the international human rights regime have contributed to create operational and legal openings for non-state actors to enter international arenas once exclusive to national states. “Various, often as yet very minor developments, signal that the state is no longer the exclusive subject for international law or the only actor in international relations. Other actors—from non-governmental organizations and First-Nation peoples to immigrants and refugees who become subjects of adjudication in human rights decisions—are increasingly emerging as subjects of international law and actors in international relations. That is to say, these nonstate actors can gain visibility as individuals and as collectivities, and come out of the invisibility of aggregate membership in a nation-state exclusively represented by the state.”

In summary, three broad outcomes can be listed as outcomes of twenty-first century urban dynamics that are leading to an emergent scholarship in urban sociology that has been focusing on these issues through the lens of global and world cities. Firstly, while urban systems are meant to be national, they have in reality become strategic sites in the global

economy and in some ways disengage themselves from their region and their national urban systems, thereby undermining a key proposition in traditional scholarship about urban systems. Secondly, certain propensities are contributing to new forms of inequality among cities and within cities. While these types of inequality have been part of the character of cities since their inception, they are now getting sharpened due to the impact of advanced economic sectors and high-level professional classes. of an increasing number of cities. Thirdly, there is the emergence of a broad set of cross-border networks involving the poor, challenging the hypothesis that the urban poor are not part of larger networks. These are among the several challenges that urban sociology confronts as we enter the twenty-first century.

Based on the above social theoretical perspectives, extensive review of literature was undertaken. The text provides a concise **review** of Indian urban policies especially during post independence era.

1.B. A REVIEW OF INDIAN URBAN POLICY

1B.1. Urban Policy in India

While dealing with an analysis of urban policy at the national level, it is pertinent to point out that urban development, housing, urban policy and urban planning in India are state subjects under the Constitution. The Centre could “issue directives, provide advisory services, set up model legislation and fund programmes which the states can follow at will” (Shaw, 1996). However, as Ramchandran (1989) points out, despite the fact that states have been empowered to make urban policy, they have rarely done so. State urban policies largely flow from the national five year plans and other policies and programmes of the central government.

1B.2. The First Phase: 1951–1966

In the wake of partition in 1947–48, millions of refugees arrived in North India from present day Pakistan seeking shelter and livelihood in cities. This was coupled with employment opportunities created in cities during the Second World War due to the setting up of war production plants. Both resulted in substantial increase in the urban population between 1941 and 1951. The result was a phenomenal increase in sub-standard housing and slums “...containing insanitary mud-huts of flimsy construction, poorly ventilated, over-congested and often lacking in essential amenities such as water and light” in urban areas (Dwivedi, 2007). The Environmental Hygiene Committee put

the shortage in urban housing at 18.4 lakh houses in addition to the 10 lakh houses estimated to be required to rehabilitate refugees from Pakistan.

As a response to the problems created by the sudden increase in urban population, the **1st Five Year Plan (1951–56)** was mainly concerned with housing and rehabilitation of refugees. The Ministry of Works and Housing was set up to ensure speedy spatial and occupational rehabilitation of refugees. A large number of rehabilitation colonies and sub-towns were set up in Delhi, Bombay, Ahmedabad, Uttar Pradesh, Haryana, Punjab and Calcutta. The city of Chandigarh was created in the same period as a symbol of ‘modern’ India. In the same plan period the National Buildings Organisation and the **School of Planning and Architecture** were set up in order to improve the quality and efficiency of built environment building, development of housing technologies, research and the creation of a cadre of trained town planners. Furthermore, the Central Government also set up the **Town and Country Planning Organisation** to provide guidance and assistance to central and state governments on urban problems and also to prepare the Delhi Master Plan which was conceived as the model plan which was subsequently to provide a framework for master plans to be prepared for other cities.

The Plan was categorical about the need for slum clearance. Terming slums a ‘national problem’ and a ‘disgrace to the country’ it stated that “it is better to pay for the cost of clearing than to... suffer their destructive effects upon human lives and property indefinitely” (Dwivedi, op cit., pp. 51). It is be noted however that the use of the term ‘slum’ in the First Plan refers exclusively to dilapidated and over-congested areas such as the Walled City in Delhi.

The 2nd Plan (1956–61) identified “rise in land values, speculative buying of lands in the proximity of growing towns, high rentals and the development of slum areas” (GoI, 2nd FYP) as features common to most large towns and cities. It also predicted an escalation in these problems given the trends in industrialization. The Plan thus introduced the theme of regional planning and emphasized the importance of preparing master plans. Thus Town and Country Planning legislation was enacted and in many states institutions were set up for the preparation of master plans.

In 1956, the *Slums Areas (Improvement and Clearance) Act* was passed. The Act defined slums as:

“any area (where) buildings...(a) are in any respect unfit for human habitation, or (b) are by reason of dilapidation, over-crowding, faulty arrangement and design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation, light or sanitation, or any combination of these factors, are detrimental, to safety, health or morals” (GoI, Slum Act).

For preventing the growth of slums, the Plan recommended strengthening local authorities and mobilizing “the support of enlightened public opinion” in enforcing the implementation of building codes and municipal by-laws. However, it clearly stated that the resettlement of slum residents is to be based on the principles of ‘minimum dislocation’, entailing re-housing “as far as possible at or near the existing sites of slums, so that they may not be uprooted from their field of employment” and provision of only “minimum standards of environmental hygiene and essential civic amenities” so as to “keep rents within the paying capacity of the slum dwellers”.

In the **3rd Plan period (1961–66)** master plans for various cities were prepared and the need to strengthen urban local governments, especially their financial and administrative aspects, was recognized. In order to guide and enforce the planned development of cities through the implementation of master plans, para-statal development authorities, such as Delhi Development Authority (**DDA**), Mumbai Metropolitan Regional Development Authority (**MMRDA**), Madras Metropolitan Development Authority (**MMDA**), were set up. The important features of these master plans were

- “a) designing of land use with a future perspective;
 - b) a city without slums, or in other words, a standard ‘decent’ housing for everyone;
 - c) detailed modernized Central Business District;
 - d) division of major land use into zones;
 - e) an efficient highway and transportation system, and
 - f) adequate community facilities with residential areas divided into neighbourhoods”
- (Das, 1981).

The master plans give pre-eminence to the planned and orderly development of cities through a strict spatial segregation of functions such as housing, commerce, industries etc. in mono-use zones. This approach was completely incongruent with the existing morphology of Indian cities where mixed-land use was the norm. Furthermore, given the statutory nature of these plans, much of what existed as ‘cities’ was rendered illegal because the geographies did not conform to the idealized form of the city enshrined in the master plans.

The 3rd Plan also emphasized the need for balanced spatial and demographic development through locating new industries far away from cities, adopting the concept of the 'region' in the planning of large industries and strengthening rural-urban linkages. The Plan expressed concern about increase in land prices in cities and the growth of slums. The concept of urban community development was introduced to tackle problems of urban slums. Earlier the central government had introduced a scheme in 1959 to "give loans to state governments for a period of ten years acquisition and development of land in order to make available building sites in sufficient numbers" (GoI, HUPI).

Moreover, "various measures such as freezing of land prices, acquisition and development of land and taxation of vacant land were suggested to control and regulate the urban lands" (Gnaneshwar, 1998). The Plan period also saw significant dispersal of urban planning and development activities from the centre to the states with massive amounts of investment poured into developing state capitals and new cities such as Gandhinagar in Gujarat and Bhuvaneshwar in Orissa.

The first phase of urban policy was characterized by the lack of a comprehensive vision on urbanization or urban process in India. The Plans prepared during this period largely had an ad hoc and piecemeal approach towards urban issues and problems. Though from the second plan onwards, planned development of cities became a major theme, there was little attempt to reconcile the technocratic blueprint of master plans with the complex realities of a predominantly poor, newly independent, postcolonial country. Thus while urban poverty rose rapidly between 1960 and 1966, adding 15 million people to officially designated population of the poor in cities, the plans made during the same period were seized with the fetish to build leisurely, low density, spread out cities, such as Chandigarh, which are highly expensive for people to live in and municipalities to maintain. It is not surprising then that master plans in almost all Indian cities have been followed more in violation than in compliance.

The obsession with removal of slums is a theme that runs across the first three five year plans. The plans sought to achieve this goal by construction of low income housing at a large scale. Consequently, the master plans prepared during this period routinely talk about creating slum free cities through massive housing construction. In some cities, like Delhi, the development authorities were given almost unfettered power to acquire land, plan cities and build housing for different segments of the society, particularly for economically weaker sections. However, it soon became clear that the housing agencies

and development authorities were“...busy in enhancing their profit by constructing luxury housing units and selling them to higher income groups” (Das, 59). For instance in the case of Delhi, it was found that between 1961–62 to 1970–71, “the allotment of land acquired by Delhi Development Authority mainly for low income groups went heavily in favour of the high income groups” (Das, 59).

While there was limited availability of housing for the poor in big cities the latter nevertheless continued to attract migrants due to their high growth rates and expansion in employment opportunities. The result was a proliferation of slums in almost all major cities. In the next couple of decades the national plans that followed, significantly reduced the rhetoric of ‘removal’ and ‘clearance’ and instead started talking about ‘improvement’ and ‘up-gradation’ of slums. This was quite clearly on account of a failure to keep pace with population growth and production of low-cost housing.

1B.3. The Second Phase: 1969–1984

Achieving balanced urban growth through dispersing populations in smaller urban centres was the overriding thrust of the **4th Plan (1969–74)**. The creation of small towns and ensuring the spatial location of economic activity in a planned manner consistent with the objectives of the Plan was underscored. The Plan articulated the need for urban land policy at the state level and provided specific guidelines for the formulation of the same. It recommended that the state level urban policies should aim at

- (a) the optimum use of land;
- (b) making land available to weaker sections;
- (c) checking the concentration of land ownership, rising land values and speculation of land; and
- (d) allowing land to be used as a resource for financing the implementation of city development plans (Gnaneshwar and Ramchandran).

In 1970, the Housing and Urban Development Corporation (**HUDCO**) was set up to provide loans to urban development authorities and state housing boards for housing and other development projects such as infrastructure development, land acquisition and essential services. One of the main goals of the HUDCO was the “promotion of housing for the persons belonging to low income groups and economically weaker sections” (Routray, 1993). The impetus for the setting up of HUDCO came from the realization that “the provision of housing through private or cooperative effort is usually directed to affluent or middle classes” and that “the experience of public housing so far is that its unit

costs are high and that with the constraint of resources it is not possible for public operations to touch even the fringe of the problem” (GoI, 4th FYP).

However the development of adequate housing stock, (which would resultantly discourage the growth of slums) through cheap loans from HUDCO was a strategy envisaged only for smaller and growing cities and towns. For cities which already had large slum populations, the plan underlined the unfeasibility of the blanket strategy of slum removal and instead recommended the amelioration of the living conditions of slum dwellers through provision of basic services and “reconditioning of slums”. In view of this new understanding, the central government launched the **Environmental Improvement of Urban Slums (EIUS)** scheme in 1972–73 to provide a minimum level of services, such as, water supply, sewerage, drainage, pavements in 11 cities with a population of 8 lakhs and above.

Government of India launched the Environmental Improvement of Urban Slums (EIUS) scheme in 1972–73 to provide a minimum level of services, such as water supply, sewerage, drainage, pavements in 11 cities with a population of 8 lakhs and above. The scheme was later extended to 9 more cities. In 1973, towards the end of the fourth plan, the World Bank started its urban sector operations in India with the launching of the Calcutta Urban Development Project.

The **5th Plan (1974–79)** was mainly concerned with introducing measures to control land prices in cities; providing a framework for the development of small and medium towns, augmenting basic services in cities and towns, addressing the problems of metropolitan cities with a regional perspective and assist development projects having national significance in metropolitan cities. The priorities expressed in the Plan were based partly on the National Urbanisation Policy Resolution of the Town and Country Planning Organisation.

In order to evolve a framework for the development of small and medium towns the Central Government constituted a Task Force on Planning and Development of Small and Medium Towns in 1975. The main objectives of the Task Force, headed by Prof. Bijit Ghose, were to “examine laws relating to local administration and urban development, and to suggest suitable modifications of these laws, keeping in view the need to assist in the planned growth of small and medium towns, and to formulate guidelines and regulations in the matters such as zoning, setbacks, building control and such other relevant matters” (Routray). The report of the Task Force was published in

1977 and recommendations included giving priority to the development of existing towns and cities within a population range of 50,000–3,00,000. The Plan also emphasized the need for infrastructural development of cities with population over 300,000.

The framework for the selection and consequent development of small and medium towns consisted of the following recommendations:(GoI, 1977)

- (a) formulation of a national urban policy;
- (b) urban land policy to ensure proper use of land;
- (c) development of small and medium towns, cities and metropolises with organic linkages to their immediate areas;
- (d) identification of growth points in the region that may be delineated;
- (e) evolution of location policies in the context of regional development;
- (f) provision of inviolable greenbelts around settlements of certain sizes;
- (g) working out of rational and feasible norms and standards of urban development; and
- (h) creation of appropriate statutory local government agencies at various levels.

The Plan also emphasized the need for infrastructural development of cities with population over 300,000. To achieve this goal a scheme called **Integrated Urban Development Programme (IUDP)** was launched. Also, the Sites and Services Scheme for making serviced land available to the poor was launched in this Plan period.

One of the most important steps that were taken to check land prices and speculation in land during the fifth plan period was the promulgation of the **Urban Land (Ceiling and Regulation) Act (ULCRA), 1976**. The ULCRA aimed at preventing concentration of urban land in the hands of a few thereby checking speculation in and profiteering from land. It enabled the socialization of urban land to ensure equitable distribution amongst various social classes and orderly development of urban built environment. The Act provided for fixing a ceiling on the possession and ownership of vacant land in urban areas and acquisition of excess land for creating housing stock for the poor. The ceiling in Class I cities like Mumbai and Delhi was fixed at 500 sq. mts. vacant land per owner. The ceiling in other cities was progressively higher according to the size class of cities going up to 2000 sq. mts. The total estimated vacant land in excess of ceiling limit at the time of the enactment of the ULCRA ranged between 1,66,162 hectares to 2,20,000 hectares (CCS, 2007).

The focus of the **6th Plan (1980–85)** was largely on the development of small and medium towns and provision of basic services in urban slums. Though the Plan

underlined the need to improve environmental conditions in slums through improvement in drainage, sewerage and sanitation the urban component of the 6th Plan is remembered primarily for the introduction of a centrally sponsored scheme called the Integrated Development of Small and Medium Towns (IDSMT) with the objective of promoting growth in towns with less than 100,000 population through provision of infrastructure and basic services (GoI: 6th FYP).

The components eligible for central assistance under the IDSMT included land acquisition and services, construction of new markets, provision of industrial estates, provision of other services and processing facilities for the benefit of agricultural and rural development in the hinterland and low cost sanitation (which was added to this list later). The state components included slum improvement, small-scale employment generation, low-cost water supply schemes, drainage and sanitation, sewerage, preventive medical facilities, parks and playgrounds (Routray). To begin with, the scheme included 231 towns in various states and union territories, selected on the basis of the ratio of urban population in the state to the total urban population in the country Later on a few additional towns were added to this list.

The 6th Plan was prepared in the backdrop of Emergency and the massive slum evictions that were carried out during the period. Anxious to erase the memory of Turkman Gate and reclaim a pro-poor image for the government, the plan categorically proposed to give up “the strategy of attempting massive relocation of slums in urban areas” and instead, envisaged increased investment in environmental improvement of slums, particularly in provision of low cost sanitation and drainage. All the plans during this period spoke against summary evictions of slums and argued for providing slum dwellers with access to civic amenities.

1B.4. The Third Phase: 1986–2007

The 7th Plan heralded a shift in urban policy by initiating a process of opening up avenues for private sector participation in urban development. The Plan called for “radical (re)orientation of all policies related to housing” and entrusted the main responsibility of housing construction to the private sector. The government’s role was sought to be reduced to “mobilization of resources for housing, provision for subsidized housing for the poor and acquisition and development of land” (GoI: 7th Plan). In 1988 the first ever **National Housing Policy (NHP)** was announced. The Policy conceived the role of the government as “a provider for the poorest and vulnerable sections and as a facilitator for

other income groups and private sector by the removal of constraints and the increased supply of land and services”.

In the same year, the **National Commission on Urbanisation** (NCU), under the chairmanship of Charles Correa, submitted its report. The Commission was entrusted with the task of making a detailed investigation into the process, pattern, trends and issues of urban development and planning and suggesting appropriate framework and guidelines for urban policies and programmes in the coming years. The NCU emphasized close link between urbanization and economic development. The NCU marked a significant departure from the policy pronouncements of earlier government policies and plans as it abandoned the concept of backward area because “it was felt that instead of forcefully inducing investments in areas which are backward and have little infrastructure and in which the concessions are likely to be misused, the identified existing and potential urban centres at intermediate levels could be developed to attract the migrants as they are located in closely related regions” (Gnaneshwar, op cit.).

Consequently, the Commission identified 329 cities called GEMs (Generator of Economic Momentum) which were further divided into NPCs (National Priority Centres) and SPC (State Priority Centres). Apart from GEMs, National and State Priority Centres, the Commission also identified 49 Spatial Priority Urban Regions (SPURs). The future growth in urbanisation was expected to take place along these nodes and corridors. The NCU also made 78 detailed recommendations mostly in the areas of land, housing, water and sanitation, transport, urban poverty, urban form, and urban governance.

In 1991, following the balance of payment crisis a far reaching program of economic liberalisation, known as the Structural Adjustment Programme (SAP), was launched which put the country firmly on the path of, what many commentators have called as the ‘neo-liberal globalisation’. **The Eighth Plan (1992–97)** was the first plan after the launch of the SAP and was thus heavily influenced by the radical changes in economic policy at the national level. It also carried the imprint of the recommendations of the National Commission on Urbanisation. The Plan expressed the need to link urban growth with economic development and advanced the following policy directives (Ibid):

- a. Consolidation and operationalisation of spatial and economic dimensions of planning by:
 - involving an integrated hierarchy of rural and urban settlements based upon primary economic functions;

- linking the urban development plans with respective district level planning processes including the programmes of various state level and central departments like agriculture, rural development, environment, telecommunications, industries and other such organizations.
- b. Convergence of all related programmes, i.e. IDSMT, housing and infrastructure development programmes of HUDCO, NRY and UBSP to create the desired impact in small and medium towns beyond the threshold level.
 - c. Taking legal, organizational and financial measures for enhanced and equitable supply of urban land and promotion of housing, including review of master plan standards, amendments to Land Acquisition Act, Urban Land Ceiling and Regulation Act, Transfer of Property Act and Rent Control Laws.
 - d. Promoting public-private partnerships in the urban development sector.
 - e. Developing appropriate specialized institutional support at the central and state levels to deal with financing and development of urban infrastructure.

In terms of action, the Plan continued with the schemes and programmes initiated in earlier periods but also introduced a new scheme called **Scheme for Educated Unemployed of Employment Generation in Urban Localities (SEEGUL)**. The scheme was geared towards creation of self employment opportunities for the educated unemployed in towns with a population of over one lakh and entailed providing technical training for skill enhancement. In the same Plan period, in 1995, another programme called **Prime Minister's Integrated Urban Poverty Eradication Programme (PMIUEP)** was launched. The PMIUEP was a five year long scheme applicable to all class II cities with a population ranging between 50,000 to 1,00,00 subject to the condition that elections to local bodies had been held.

In 1992, the Town and Country Planning Organisation prepared a **draft National Urban Policy**. The main objectives of the draft NUP were to

- a) evolve a spatial pattern of economic activities and population distribution based on regional development and planning considerations;
- b) secure a balanced distribution of population among the urban centres of various sizes, so as to maximize economic gain and minimize social costs of urbanization;
- c) control further growth of metropolitan cities by dispersal of economic activities in the new growth centres;
- d) prioritise development of those urban centres which have been identified as prime economic movers in national economic development, such as the National Priority

- Cities (NPCs), State Priority Cities (SPCs) and Spatial priority Urbanisation Regions (SPURs); and,
- e) improve the efficiency of the urbanisation process by removing bottlenecks and breakdowns in the supply of urban services.

At the beginning of the 8th Plan period, in 1992, the **74th Constitutional Amendment Act** was promulgated. It was a landmark Act which sought to decentralize decision making in cities and towns through creation of elected urban local bodies (ULBs) as institutions of democratic self governance and devolution of essential functions related to city planning and service provision to these bodies. The salient features of the 74th CAA are: introduction of the Twelfth Schedule which lists the functions of the ULBs, establishment of ward committees in areas having a population of over 3 lakhs, periodic and timely elections of ULBs, and devolution of finances to ULBs as per the suggestions of the State Finance Commissions (SFSs).

The Mega City Scheme a centrally sponsored scheme launched in five cities, namely, Mumbai, Kolkata, Chennai, Hyderabad and Bangalore during the 8th Plan had the express purpose of preparing municipalities to use institutional finance and eventually market instruments like municipal bonds for capital investment requirements. One of the highlights of the 8th Plan period was the publication of the India infrastructure report, discussed in detail in the following.

India Infrastructure Report: In October 1994, the Ministry of Finance, GoI, set up an Expert Group on Commercialization of Infrastructure Projects under the leadership of Rakesh Mohan. The Group submitted its report titled The India Infrastructure Report: Policy Imperatives for Growth and Welfare (IIR) in June 1996 which is widely considered a landmark document in the push towards privatization and commercialization of infrastructure creation and management, service provision and regulatory and governance systems. A clear imprint of the IIR can be seen in various policy and legislative measures that central and state governments have adopted in infrastructure and urban sectors.

The India Infrastructure Report projected a requirement of Rs.2,803.5 billion over the next 10 years, that is, Rs. 282.97 billion per year, at 1994 prices if all the infrastructure needs of the cities were to be met. Against this, “in 1995, only Rs. 50 billion were available per year from all the sources put together” (Mahadevia, 2003). This, according to the Expert Group, necessitated opening up urban infrastructure to private capital and exploring ‘innovative’ forms of financing such as municipal bonds because it was

assumed to be beyond the capacity of the government to mobilize those kinds of resources for the urban sector. It was also argued that to make cities better prepared for attracting private investment in infrastructure and service delivery it is crucial to bring about a major overhauling of the governance, legislative and administrative framework of cities.

The IIR considers privatization and deregulation of infrastructure sectors as “bold new approaches (that) promote improvement in efficiency and service quality”. It asserts that promotion of privatization and commercialization is not a matter of political or ideological choice but is instead rooted in “pragmatic and non-ideology related factors” because “there is, today, considerable doubt about government’s ability to supply infrastructure services efficiently.”

The IIR admits that given the monopolistic nature of infrastructure services, high initial investment, long gestation period in terms of returns and the existence of externalities, it was perhaps necessary for the public sector to assume a predominant role in the provision of infrastructure in the post-Independence period. However, given the assumed efficiency and new-found capability of the private sector to raise large funds from the capital market and availability of technological choices allowing unbundling of services, it was no longer necessary or desirable for the public sector to continue playing a dominant role in the provision of infrastructure services. The IIR goes on to make projections of required infrastructure investments and necessary accompanying changes in financial, regulatory and governance systems in six sectors, viz. urban development, power, telecommunications, roads, industrial parks and roads. Here we’ll deal only with the Group’s recommendations with regard to infrastructure and service provision and governance reforms in urban settlements.

The IIR lays the blame for the ‘grim’ situation with regard to the spread and quality of urban infrastructure on the ‘supply orientation’ in infrastructure policy. It instead calls for adopting a ‘demand orientation’ to “improve cost recovery and financial viability of such projects”. The basic tenet of the commercial approach with a demand orientation should be that “services should be supplied in response to demand rather than in anticipation of demand”. Accordingly, the Report defines the *raison d’être* of commercialization of infrastructure as “efficient provision of service to the consumers’ satisfaction on cost recovery basis”.

Recognizing that wholesale privatization may not be politically feasible, at least in the short run, it advocates public-private partnerships in water supply projects. However, it

also recommends that pricing of water should be on the basis of cost recovery in the long run. For solid waste, low cost sanitation and road maintenance projects though, it recommends full privatization. The Expert Group also recommends delinking property tax from the Rent Control Act.

On the issue of governance and financing of urban services, the Report recommends:

- The Urban Local Bodies (ULBs) be made responsible for provision of infrastructure and entrusted with the task of planning, coordination and policy for supply of services.
- Setting up of a state-level Nodal Infrastructure Financing Corporation to channelize funds available from various sources to smaller municipalities.
- Setting up an Infrastructure Fund for the transition period till the time the debt market is adequately developed. This might include a facility to provide guarantee to private sector investment with the government providing the seed money for the facility.
- Setting up a state-level regulatory body to monitor quality of services and prices.

The IIR thus overturns the principle of access to basic urban services as a matter of citizen's right regardless of the ability to pay to one of "consumer satisfaction" determined by the ability to pay. The IIR has been criticized on grounds of making faulty assumptions about the required infrastructure investment, skewed priorities, and uncritical faith in the ability and efficiency of private capital, especially foreign capital (Ghosh et al, 1997). Nevertheless, it is only with the publication of the IIR that infrastructure became such an important issue in India. Infrastructure augmentation has been arguably the most important agenda in almost all the government plans and policies in the urban sector after 1996.

Mahadevia (2003) notes that the **9th Plan (1997–2002)** was greatly influenced by the India Infrastructure Report. The 9th Plan reiterated its commitment towards reducing regional disparities; however, the primary responsibility for achieving the same was now with the state governments who were urged to raise resources for their activities from outside the Plan, specifically from financial institutions and capital markets (GoI: 9th Plan). Similarly, the infrastructural deficiencies that the IIR found in cities were also to be overcome by private sector involvement and borrowings from the market by state governments and urban local bodies. To achieve this, the Plan sought to make ULBs and parastatal agencies accountable and financially viable by cutting down on budgetary allocations for urban infrastructural development. It proposed to create an '**Urban Development Fund**' based on the principle of '**pooled finance**' to help smaller towns realize commercial borrowings.

In terms of focus, the Plan recommended streamlining of employment generation programmes and creating housing stock for economically weaker sections and lower income groups through rationalisation of existing centrally sponsored urban poverty alleviation programmes. The sectoral objectives of the Ninth Plan were:

- (a) development of urban areas as economically efficient, socially equitable and environmentally sustainable entities;
- (b) accelerated development of housing, particularly for the low income groups and other disadvantaged groups;
- (c) development and upgradation of urban infrastructure services to meet the needs of a growing population;
- (d) Alleviation of urban poverty and unemployment;
- (e) promoting accessibility and affordability of the poor to housing and basic services;
- (f) improvement of urban environment;
- (g) promoting private sector participation in the provision of public infrastructure and of the community and NGOs in urban planning and management of specific component of urban services; and
- (h) democratic decentralization and strengthening of municipal governance.

The **SJSRY** had two sub-schemes, namely,

- (a) Urban Self Employment Programme and
- (b) Urban Wage Employment Programme.

The SJSRY sought to “provide gainful employment to the urban unemployed or underemployed poor by encouraging the setting up of self-employment ventures or provision of wage employment” (GoI, 9th FYP). The implementation of the scheme was to be done through the setting up of community organizations like Neighbourhood groups, Neighbourhood Societies and Community Development Societies. The responsibility of identifying beneficiaries, viable projects suitable for the area, preparation of applications, monitoring of recovery and general support was entrusted to the Community Development Societies.

The **Urban Self Employment Programme** included schemes on Self Employment through setting up Micro-enterprises and Skill Development, confined to BPL beneficiaries who have education upto the 9th standard, and Development of Women and Children in Urban Areas for poor women who decide to set up self-employment ventures on a group basis. The **Urban Wage Employment Programme** was conceived to provide

employment to persons Below Poverty Line in urban local bodies with a population of less than 5 lakhs.

The Plan also suggested that the responsibility of distribution of water in urban areas should be given over to local bodies or to the private sector. It encouraged private sector participation in construction and maintenance of water supply and sanitation schemes. On the housing front, the 9th Plan decided to focus on the lower end of the housing market encompassing the needs of priority groups such as people below poverty line, SC/ST, disabled, slum dwellers, women headed households, freed bonded labourers etc. It delineated the role of the government generally as a facilitator of housing construction and as a direct intervener in the case of the lower segment of the housing market. It also advocated 'packages' and 'concessions' to the private sector to create housing stock for the poor. Additionally it set up a target of 7 lakh housing units annually for urban areas and recommended speedy amendments to all such acts and regulation which hamper the use of land as a resource. The Plan agreed with the Expert Group on Commercialization of Infrastructure on the need to explore new, market-based forms of financing such as municipal bonds, municipal financial reforms etc.

In 1998, the **National Housing and Habitat Policy** (NHHP) was announced which specifically emphasized that housing construction in both rural and urban areas should be left in the hands of the private sector and that the government should restrict itself to the role of a facilitator. The Policy promised "Shelter to All" by the year 2001 but this promise was to be realized through the invisible hand of the market which was supposed to ensure affordable housing to all if all impediments to its efficient functioning were removed. As a follow up to the recommendations of the NHHP 1998, the Two Million Housing Programme was launched in 1998–99. It was a loan based scheme promoting the construction of 20 lakh additional housing units every year (13 lakh for rural areas and 7 lakh for urban areas). Out of this HUDCO was to meet the target of 4 lakh dwelling units in urban areas and 6 lakh in rural areas annually.

In 1999, the **Draft National Slum Policy** was announced which proposed the integration of slum dwellers in the mainstream of urban life through in-situ up-gradation. The Draft Policy included all underserviced settlements in its definition of slums and proposed their upgradation and improvement as opposed to eviction. It also spoke about granting tenure to slum dwellers inhabiting government land apart from providing them with basic civic amenities. The Draft National slum Policy was never adopted.

In 2001, a Rs. 20 billion subsidy based scheme called the **ValmikiAmbedkarAwasYojana (VAMBAY)** was started with the aim to provide/upgrade shelter to urban slum dwellers. The goal of the scheme was to provide or upgrade 16.7 million households in urban areas over a period of ten years covering slum dwellers and urban poor in 5,161 cities and towns. It was expected that HUDCO alone will complete at least 0.4 million additional houses for the poor in urban areas. The average cost for a plinth area of 150 sq. ft. was to be around Rs. 40,000 to Rs. 60,000; fifty percent of which was to be grant and the rest would be loan, to be repaid by the beneficiary in 15 years time. Out of the total VAMBAY allocation of Rs. 20 billion, 20 percent was earmarked for providing toilet facilities in slums under the scheme called **Nirmal Bharat Abhiyan**.

In the 9th Plan period two other major steps were taken to further the process of liberalization of land and real estate markets. The first step was the repeal of the Urban Land (Ceiling and Regulation) Act in 1999. It was claimed that the ULCRA had not only failed to meet its objectives but in fact exacerbated the problems it set out to solve—namely, keeping land prices in check and increasing the supply to land for housing the poor. This was in contravention to the recommendations of the National Commission on Urbanisation which had advised the government to plug loopholes in the Act to make its implementation effective. The second major step was taken in 2002 when the government allowed 100 percent Foreign Direct Investment (FDI) in integrated townships, including housing, commercial premises, hotels and resorts. FDI was also permitted in infrastructure projects such as roads, bridges, mass rapid transit systems and for the manufacturing of building materials. The minimum area to be developed was fixed at 100 acres.

The 2001 Census had shown that contrary to the expectations and predictions of a wide array of actors, the rate of growth of urban population was steadily declining. This has been attributed to cities becoming inhospitable to poor migrants due to the promulgation of neo-liberal urban policies (Kundu). The 10th Plan attributed this to “the success of rural development programmes along with the limited availability of land for squatting in central urban areas” (GoI: 10th Plan). The 10th Plan identified urbanization as “a key determinant of the economic growth in the 1980s and 1990s, boosted by economic liberalization”. The overriding thrust of the 10th Plan was to promote overhauling of the legislative, governance and administrative structure of cities through a set of market-friendly urban reforms and promotion of PPPs in urban infrastructure and services. The 10th Plan said it in no uncertain terms that urban infrastructure could not be funded by budgetary support alone. A lot of emphasis was thus placed on making urban local bodies

financially strong so that they have to rely less and less on state transfers. To enable ULBs to raise their own resources the Plan advocated reform in property tax, levying of user charges, increasing non-tax revenues, controlling establishment costs, better utilization of municipal assets and overhauling municipal accounting systems.

These reforms, it was suggested, would enhance the credit-worthiness of ULBs and make them capable to mobilising funds from capital market and investors. The Plan also spoke about substantially increasing investment in upgradation of urban infrastructure and services but made it clear that central assistance in this regard would be made conditional upon states and ULBs carrying out sector reforms, in particular better standard of services and levying of user charges.

The 2002–03 Budget had announced a plethora of schemes and programmes to give a big push to urban reforms. One of the schemes was *Urban Reform Incentive Fund (URIF)* which sought to incentivize urban reforms in the following areas:

- a) repeal of Urban Land Ceiling Acts and reform of Rent Control Acts;
- b) reduction in stamp duty;
- c) revision of bye-laws to streamline the approval process for construction of buildings, development of sites etc.;
- d) levy of realistic user charges and resource mobilization by urban local bodies;
- e) public-private partnership in the provision of civic services;
- f) revision of municipal laws in line with the model legislation prepared by Ministry of Urban Development and Poverty Alleviation; and
- g) simplification of legal and procedural framework for conversion of agricultural land for non-agricultural purposes.

The budget document also proposed to set up a *Pooled Finance Development Scheme (PFDS)* to provide credit enhancement grants “to access market borrowings through Pooled Financing Bonds on behalf of identified ULBs for investment in urban infrastructure projects”(GoI, MoUD Programmes). The rationale of introducing the PFDC was that, unlike large municipalities, ULBs in small and medium towns lack financial muscle, technical and organizational capacity, in short, ‘creditworthiness’ to directly access funds for infrastructure from the capital market. It was though made clear that access to PFD funds will be “subject to small and medium ULBs agreeing to a specific reform agenda, which may include: accounting reforms, financial management reforms, pricing and tariff reforms and environmental management and water conservation.

The 2002–03 budget not only advocated moving away from state grants, transfers and subsidy based urban infrastructure financing regime to market based financing regime, it also proposed to set up a special vehicle, called the *City Challenge Fund (CCF)* to finance ‘transactional costs’ of this transition. The Fund was meant to cover the expenses incurred by the cities to develop a reform programme and its implementation and catalyzing economic reform programmes for cities with population over 5 lakhs”

In 2005, the government further liberalised norms for Foreign Direct Investment in real estate by reducing the minimum area for development of townships to 30 acres and allowing FDI in other construction and development projects. Further, the FDI in real estate was permitted through automatic route, i.e. without prior approval from the government or the Reserve Bank of India(GoI, MoUDProgrammes). This move seems to have paid handsomely with the FDI in real estate as a proportion to total FDI inflows shooting up from 4.5 percent in 2003–04 to an estimated 26.5 percent in 2006–07(ASSOCHAM, 2006).

A very important component of urban reforms is change in municipal laws. To this affect, Times Research Foundation, Kolkata with technical and financial assistance from the Indo-US financial Institutions reform and expansion FIRE (D) project prepared a *Model Municipal Law (MML)* in 2003. All the states were urged to adopt the MML through amendments to their own Corporation and Municipalities Act. The salient features of the MML are:

- a) a unified law for three levels of ULBs;
- b) executive power of a ULB to be exercised by the empowered standing Committee;
- c) municipal fund with separate accounts for various services;
- d) indirect election of mayor/chairperson with five years term;
- e) constitution of wards and ward committees;
- f) state level municipal establishment audit commission;
- g) ULBs to prepare an annual balance sheet of the assets and the liabilities;
- h) appointment of a municipal accounts Committee;
- i) ULBs to prepare an inventory of their properties each year;
- j) participation of private sector and NGOs in construction, financing and delivery of services including billing and collection;
- k) setting up of state municipal regulatory commissions that will determine user charges and standard of services, suggest avenues of private sector participation etc.;
- l) ULBs to prepare annual environmental and subsidy reports.

In December 2005 the Prime Minister launched the *Jawaharlal Nehru National Urban renewal Mission (JNNURM)*. The JNNURM (GoI: JNNURM) is basically a reform linked incentive scheme for providing assistance to state governments and urban local bodies (ULBs) in selected 63 cities, comprising all cities with over one million population, state capitals and a few other cities of religious and tourist importance for the purpose of reforming urban governance, facilitating urban infrastructure and providing basic services to the urban poor. It was till date the single largest initiative of the Central Government in the urban sector.

The broad framework of the Mission is as follows:

- Preparation of City Development Plans (CDPs) by respective cities with a 20–25 years perspective.
- Sector-wise detailed project reports to be prepared by identified cities listing projects along with their financial plans.
- A Memorandum of Agreement (MoA) to be signed between the central government, state governments and ULBs containing the time bound commitment on the part of states/ULBs to carry out reforms in order to access central funds under the Mission.
- Funding pattern in terms of percentages would be 35:15:50 (between Centre, States and Urban Local Bodies) for cities with over 4 million population, 50:20:30 for cities with populations between one and four million, and 80:10:10 for other cities.
- Assistance under the Mission to be given directly to nominated State Level Nodal Agencies, who in turn would give the same to state government/ ULB in the form of soft loan or grantcumloan or grant.
- The assistance thus provided would act as seed money to leverage additional funds from financial institutions/capital markets.
- Public Private Partnership (PPP) to be the preferred mode of implementing projects

The Mission is comprised of two sub missions, namely, *Sub- Mission for Urban Infrastructure and Governance* and *Sub-Mission on Basic Services to the Urban Poor*. The admissible components under both these sub-missions together include urban renewal, water supply and sanitation, sewerage and solid waste management, urban transport, slum improvement and rehabilitation, housing for urban poor, civic amenities in slums and so on. But the Mission document clearly states that

- (a) funds accessed cannot be used to create wage employment
- (b) land costs will not be financed
- (c) housing to the poor cannot be given free of cost

- (d) privatisation or Public Private Partnership (PPP) will be the preferred mode of implementing projects
- (e) a 'reasonable' user fee will be charged from the urban poor for services so as to recover at least 25% of the project cost and
- (f) theonus of minimizing risks for the private investor would be on state governments/ULBs.

Mandatory Reforms: State Level: The state governments seeking assistance under the JNNURM would be obliged to carry out the following mandatory reforms:

- a) effective implementation of decentralization initiatives as envisaged in the Constitution (seventy-fourth) Amendment Act, 1992;
- b) repeal of Urban Land (Ceiling and Regulation) Act, 1976;
- c) reform of rent control laws;
- d) rationalisation of stamp duty to bring it down to no more than 5 percent within seven years;
- e) enactment of a public disclosure law;
- f) enactment of a community participation law, so as to institutionalize citizens' participation in local decision making; and
- g) association of elected municipalities with the city planning function.

Mandatory Reforms: Municipal Level

Municipal bodies are a similarly obliged to carry out the following reforms:

- a) adoption of a modern, accrual-based, double entry system of accounting;
- b) introduction of a system of e-governance using IT applications, GIS and MIS for various urban services;
- c) reform of property tax so as to raise collection efficiency to 85 per cent;
- d) levy of user charges to recover full cost of operation and maintenance within seven years;
- e) internal earmarking of budgets for basic services to the urban poor; and
- f) provision of basic services to the urban poor, including security of tenure at affordable prices.

Apart from these there is a set of optional reforms common to both state governments and ULBs, any two of which they are supposed to implement each year. These include:

- a) revision of bye-laws to streamline the approval process for construction of buildings, development sites etc;

- b) simplification of legal and procedural frameworks for conversion of agricultural land for non-agricultural purposes;
- c) introduction of property title certification;
- d) earmarking of at least 20–25 per cent developed land in housing projects for economically weaker sections and low income groups with a system of cross-subsidisation;
- e) introduction of computerized registration of land and property;
- f) administrative reforms including reduction in establishment cost by introducing retirement schemes and surrender of posts falling vacant due to retirement;
- g) structural reforms; and
- h) encouraging public private partnership.

The JNNURM was accompanied by another scheme called the *Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT)* which is more or less the same in content except for the minor difference that towns under the UIDSSMT do not have to prepare City Development Plans. 5098 cities and towns which have a population of less than one million and are thus not covered under the JNNURM come under the UIDSSMT. Earlier schemes such as IDSMT and Accelerated Urban Water Supply Programme (AUWSP) have been merged with the UIDSSMT. Similarly the Mega City Scheme and the VAMBAY have been partially subsumed under the JNNURM.

The National Urban Housing and Habitat Policy (NUHHP), 2007 and the 11th Plan advocate for further liberalization of the land and housing sectors. The 11th Plan, for instance, is categorical about “increasing the efficiency and productivity of cities by deregulation and development of land” and “dismantling public sector monopoly over urban infrastructure and creating conducive atmosphere for the private sector to invest” (GoI, 11th FYP). The NUHHP recognizes that there is a need for the government to retain its role in social housing “so that affordable housing is made available to EWS and LIG of the population as they lack affordability and are hopelessly out priced in urban land markets” (NUHHP, 2007).

The urban reform agenda is geared towards forcing the ULBs to become financially self-reliant and not depend on plan or budgetary allocations from the state or central government. The implementation of JNNURM showed projects for Basic Services for Urban Poor (BSUP) were not given as much importance as for Urban Infrastructure and Governance (UIG). This has led to the criticism that the Mission ought to be seen in the context of dwindling livelihood opportunities in the cities (which the Mission does not

address) and the grossly iniquitous distribution of land in urban areas which the urban reform agenda may sharpen. . It is hardly surprising then that under the JNNURM, so far 735 projects have been sanctioned out of which 442 are for Urban Infrastructure and Governance (UIG) and only 293 for Basic Services for Urban Poor (BSUP).

A review of the reforms proposed under the Mission seems to suggest that this may exacerbate the inherent exclusionary and marginalizing tendencies of urban development in India. The price of land in almost all Indian cities continues to rise and not only the poor but the lower middle class also has been pushed out of the land market forcing them to find shelter in the numerous unauthorized colonies on the fringes of cities like Delhi and Mumbai. It is estimated that in Delhi alone over 4 million people are now living in these under-serviced colonies without security of tenure in addition to about 3 million people living in slums in Delhi. Similarly, more than half of Mumbai's people are slum dwellers. On the other hand, there is excess capacity in the upper segment of the housing built by the private sector that finds little interest in providing shelter for the poor.

The NUHHP recognizes that there is a need for the government to retain its role in social housing “so that affordable housing is made available to EWS and LIG of the population as they lack affordability and are hopelessly out priced in urban land markets” (NUHHP, 2007). It also recognizes that 99 percent of the housing shortage in the country currently is for poor and low income groups. However, the policy recommends adopting a “demand driven approach” and moving away from “subsidy based housing schemes to cost-recovery-cum-subsidy schemes for housing through a proactive financial policy” (NUHHP, 2007). It remains silent on the quantum of cost sought to be recovered from the ‘beneficiary’ despite the fact that it is clearly one of the most crucial elements of affordability.

Based on the above mentioned theoretical framework and extensive review of literature, the following research problem emerges which needs to be considered for research on urbanization.

1.C.1. Statement of the Research Problem

- Though the State has adopted urban planning benchmarks for spatial division of activities and services and reservations for the provision of public services, have these benchmarks been able to answer the needs of the cities? And what amendments are needed in the new benchmarks?

- The State is witnessing substantial urbanization of poverty, especially in its larger cities. The poor have their own employment and living needs. Has the State's urban planning methodologies been able to integrate them into the city and if not, what have been the consequences of the failure?
- While the development plans have a time frame for implementation, have the cities been able to substantially implement their development plans in the given time frame? If not, what are the causes and how could these be redressed?
- How have the development control rules of cities responded to development as well as regulation of cities? What have been the major areas of shortfall, if any? If there are such areas, what alternate strategies and amendments need to be made to be more responsive to city needs?

The proposed research is expected to provide insights into the issues of urban planning in Maharashtra. As the lead urbanized State, these insights are expected to prove useful even in the larger Indian context, it would offer findings on how cities are affected by their current planning processes and benchmarks, and what rectifying measures need to be adopted to plan cities better. It is also expected to reveal the peculiar nature of the socio-economic context of this country and why we need to see them in different light from the planning benchmarks of the Western world. It is imperative that we take up such research in good time, because India is yet to substantially urbanize. It would, therefore, be extremely relevant and useful to understand what has happened in the past and how better planning of cities could emerge by drawing lessons for the future. In the final analysis, the proposed research should serve as a pioneering work in terms of delivering better planned cities and more livable urban settlements in Maharashtra and India.

1.C.2. Conceptual framework of study

A city development plan is probably the most vital planning and envisioning instrument of any city. The plan captures the essence of what a city intends to be in the coming twenty years and beyond, and has an impact on its emerging economic profile and the quality of life that it intends to provide. The development control regulations are almost equally critical since they provide a framework in which development would take place. The adequacy of the framework is critical, failing which a number of developments may get awry and affect the quality of life of cities. It is, therefore, imperative that the city gets the plan as close to the emerging state and Indian urban socio-economic dynamics. Some of the most important forces that are impacting cities are the forces of globalization on the one hand and the urbanization of poverty on the other. The forces of globalization are in many ways leading to the 'commodification' of urban land and the urbanization of poverty

is 'informalizing' the city. The spectacular growth of the Indian economy is also putting greater money power into the hands of a section of citizens that is translating into certain heightened infrastructure demands on the cities.

Given these developments, we need to study whether cities are responding to these challenges and do they have the strategies and answers to deal with these challenges. Accordingly following hypotheses were kept in view for study.

1.C.3. Hypotheses

For convenience and ready reference, it would be apposite to state the hypotheses that this research wishes to test. They are as follows:

1. The current urban planning benchmarks will not sufficiently respond to the unfolding urban dynamics in the State.
2. The conceptual backdrop to current urban planning glosses over the emerging urbanization of poverty that will continue to 'unplan' cities through 'informalization' and growth outside plan.
3. The execution of urban plans in the given time frame will remain highly improbable through current methodologies and practices.
4. The present development control regulations of cities are hugely inadequate to deliver livable cities.

To test these hypotheses following objectives were derived for the study.

1.C.4. Objectives of the study

1. To study the current urban planning benchmarks in relation to urban dynamics.
2. 'To study the consequences of failure of present urban planning methodologies and to suggest the corrective measures consistent with the present rate of urbanization.
3. To study the implications of growth of unplanned cities in relation to quality of urban life.
4. To critically analyze the present development control regulations and their implications for improving quality of life in cities.
5. To work out appropriate methodology and strategy to bring the urban poor in the main stream of urban life.

To achieve these objectives of the study, the methodology adopted is explained in Chapter 2.

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CHAPTER 2

RESEARCH METHODOLOGY

Introduction

Methodology is a body of knowledge that enables researchers to explain and analyze methods – indicating their limitations and resources, identifying their presuppositions and consequences, and relating their potentialities to research advances (Miller 1983). The choice of data types and their collection methods have significant implications upon the research findings. Hence the issue of research methodology is important to any study. In this research a scientific investigation and a systematized efforts were made to gain new knowledge in the realm of India's ongoing urbanization. The thesis attempts to use the knowledge garnered by the deployment of a specific methodology in creating a fresh construct that could aid in the identification of planning deficits and the application of correctives to the process of India's urbanization and the better planning of Indian cities. In this view this chapter states the geographical area in which the study was conducted. It also states the research methods employed in the conduct of the study. The researcher's intention is to explain the manner in which data and information was assembled and analyzed to address the research objectives and to test the hypotheses.

2.1 Operational Definitions

It would be apposite that some of the terms frequently used in the present study are understood with clarity. From that view point, therefore, operational definitions of these terms are provided upfront.

a. Urban planning is a multi-tiered and multi-disciplinary process that concerns itself with the use of land, its balanced apportionment for several uses comprising, inter alia, economic, environmental, and social infrastructure designed to ensure a desired productivity and quality of life. Modern urban planning originated in the aftermath of industrial cities that grew in a highly disorderly, unhygienic and chaotic fashion in the 19th century that caused huge distress, squalour, disease and death. Governments stepped to stem in such rot. From there, urban planning followed a learning process and evolved

to the current stage. The complexities and of urban life and urban dynamics have made urban learning a continuous process and the discipline continues to change and evolve.

b. Urban dynamics denotes the processes and factors that constantly shape and reshape urban spaces through their use and subsequent modifications. This, inter alia, comprises suburbanization, ex-urbanization, counter-urbanization, green-field and brown-field development, urban decay, urban renewal and spatial exclusion. Sub-urbanization refers to growth of certain areas as units away from the centre. Ex-urbanization stands for a process whereby generally affluent sections of people move away from the city to the rural areas, but with an enhanced quality of life. Counter-urbanization refers to a significant decline in a city's population and the growth of other smaller settlements at the expense of the main city. Greenfield development refers to fresh construction within a city's virgin land hitherto left undeveloped or fresh outlying areas merged into the city and their development. Brown-field development refers to redevelopment of old structures in the city that are either dysfunctional or have outlived their lives. Additionally, such structures, even before the end of their lifespan are demolished and rebuilt to get

c. Urbanization is a process by which a human settlement acquires the characteristics of a town. It is also understood generally as an increase in the population of towns in relation to a slower growth in rural areas. The urban population means the total population living in urban areas, as defined by the country. The census of India considers urban areas on the triple criteria of population, non-agricultural working population and density. A town should have a minimum population of 5000. At least 75 % of its male working population should be engaged in non-agricultural work. Its density of population must be at least 400 per sq km.

d. The second measure, **rate of urbanization**, describes the projected average rate of change of the size of the urban population over the given period of time. This is the increase in the proportion of urban population over time, calculated as the rate of growth of the urban population minus that of the total population. Positive rates of urbanization result when the urban population grows at a faster rate than the total population. This is especially true in Asia, home to the most rapidly urbanizing nations today.

e. Unplanned cities are cities that have still not been brought within the fold of an urban plan. They could also be large urban areas within planned cities but have grown in a manner not prescribed by planning norms within that city. While the planned city obeys urban laws and carries out development with approvals from the authorities according development control regulations, the unplanned city often displays a bottom-up approach

where people construct without permission and without observing the planning yardsticks mandated for the city.

f. Quality of life (QOL) is used worldwide to describe the general well-being of societies and people. This is measured on the basis of a basket of indicators thought to be comprehensive and conclusive enough to establish the quality of life in a particular country, region or individual settlement. In general, a similar formulation would be applicable to cities. We could, therefore, state that ‘quality of urban life’ refers to the capacity of a city to deliver to its citizens a basket of conditions and services for living life. These would comprise conditions and services related to economy, politics, environment, society, recreation, culture, safety and security. The QOL concept, however, has remained mainly theoretical as it contains a large element of subjectivity. The determining factors taken as criteria in these studies are far from being standard. Very often, economic indicators outshine all other criteria for evaluating well-being in cities. This approach, however, is very restrictive, since such indicators have been proved inadequate in expressing the real needs, preferences and priorities of citizens. For these reasons, the definition and the adequate measurement of QOL in a given society still remains inefficient.

g. Development Control Regulations are that component of urban planning that regulate the use of land and built space through permits for layouts, subdivisions and buildings. In simple terms they lay down the details and the working tools of how development and construction would be permitted and controlled. They stipulate the manner in which permissions can be obtained, and prescribe access, layouts, open spaces, area and height limitations, lifts, fire protection, exits and parking requirements. These rules could be city specific, approved by the planning authority and finally sanctioned by the state government. These originated from public health considerations. These subsequently have expanded to encompass environmental, demographic safety and aesthetic concerns and the prevention of nuisance and hazard.

h. Urbanism stands for the way of life of people who live in a city. It is additionally understood to mean the characteristic way of interaction of inhabitants of urban

areas with the built environment. A sociologically significant definition of the city seeks to select those elements of urbanism which mark it as a distinctive mode of human group life. While commonly urban areas are judged urban on the basis of demographic size, the characterization of a community as urban on the basis of size alone is considered from a sociological viewpoint inaccurate. A sociological definition seeks to be inclusive enough to comprise whatever essential characteristics urban areas possess. Despite differences that would exist in types of cities, they will have similarities as social entities.

2.2. Universe of the study

The universe of the study comprises all urban local bodies in the Maharashtra from which sample were drawn. The details of the number of ULBs in Maharashtra is given in table No. 2.1

Table No. 2.1 details of the number of ULBs in Maharashtra

No. of ULBs in Maharashtra	Corporations	Municipal Councils	Nagar Panchayats
Maharashtra	26	222	6
No. of Selected ULBs	4	1	-

Justification for selection

While the study in its broader scope comprises the state of Maharashtra, it specifically looks at the municipal corporations of Mumbai, Pune, Nashik and Kolhapur and the municipal council of Baramati. The justification for such a selection was to select a mix of urban local bodies from the very large cities to smaller ones. This was to afford a fair idea of plans and their impact in a cross section of cities. Mumbai is the most populated city in the country and Pune is one of the largest ten in India. Nashik is demographically a rapidly growing metropolitan city just above a million. Kolhapur, on the other hand, is a smaller city around half a million with modest population growth rate. Baramati is comparatively a small city with its own set of issues.

Criteria of selection of the ULBs

As cited above, the prime criterion was to pick up cities on the basis of their demographic profile. Hence, on the one side we have Mumbai with over 10 million population. On the other side we have Baramati that is a small council with less than 100,000 population. The size of the city allows a comparative study of the strengths and weaknesses of the cities and the implementation of the planning process in them. It would give us a fair idea of whether the planning deficits are peculiar to a particular size and type of urban local

body or spread over the entire sample. It also tells us that if correctives were to be applied, what would be the degree of correctives that would vary from one size to the other.

Map No. 2.1 Map of Maharashtra indicating the ULBs selected for study



2.3. Sampling design

A sample is a group in a research study from which information is sought and obtained, or a population selected for observation and analysis. Sampling is “the selection of a fraction of the total number of units of interest to decision makers for the ultimate purpose of being able to draw general conclusions about the entire body of units (Parasuraman *et al.* 2004). It comprises elements selected with the intention of finding out something about the total population from which they are taken (Mouton, 1996). A convenient sample consists of subjects included in the study because they happen to be in the right place at the right time. A conclusion can thereby be made from the sample about the population to achieve the research objective. (Saunders *et al.* 2007). It is, therefore, uncommon for a research to survey the entire population due to time and financial constraints, especially, when the population is very large.

2.3.1. Judgmental Sampling

Judgmental sampling is a non-probability sampling technique based on the researcher's judgment. Such a sampling happens in a situation where the researcher selects

participants who would be most representative in regard to the research subject. For the sake of this research, the researcher chose the participants who were considered as the best source of information pertaining to the cities under study and inferentially to the subject of this research as explained in previous paragraphs.

Justification

Judgmental sampling guarantees optimum use of time and resources since information is sought from those people who are in possession of valuable information and knowledge of the cities and the subject under study. This also leads to richness of information despite the sample being small because of the quality of the participants, their rank and importance in the organization that makes them privy to privileged information and their close proximity to the subject under study.

2.3.2. Research Sample Size

As earlier indicated, a total of 15 participants were selected. Nine were from the five urban local bodies - two each from Mumbai, Pune, Nashik and Kolhapur and one from Baramati, two from the Directorate of Town Planning, two from academics and one from the State Urban Development Department.

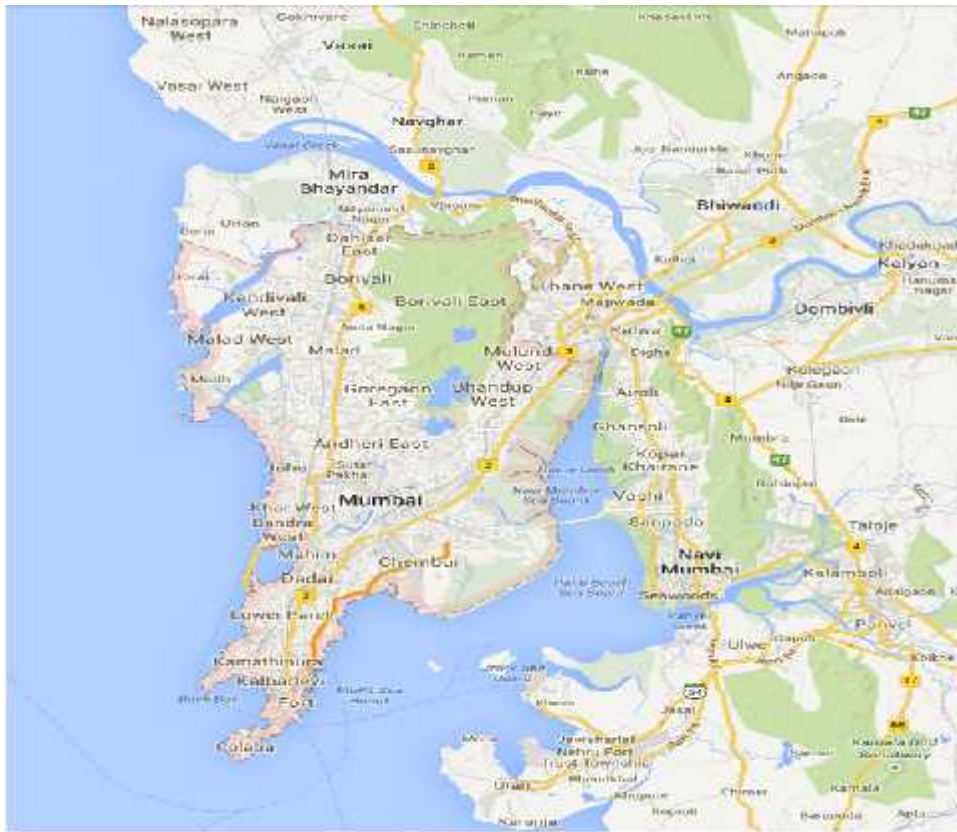
Justification

Deciding on a sample size for such a research enquiry was not difficult since the cities were identified and attempt was made to get to the most knowledgeable group that had complete access to information. For this reason, the researcher was without any option other than keeping the sample very small.

a. Table No. 2. 2 Brief description of study area

	Mumbai,	Pune	Nasik	Kolhapur	Baramati.
Population	1,24,78,447	37,60,636	11,52,000	5,79,281	55,342
Yr of Estb	1865	1950	1982	1962	1865
Wards	227	144	108	72	7
Area	438 sq km	244 sq km	259 sq km	67 sq km	5
Features	Largest City	8 th largest	Grape city	Sugar city	Industry, education
Development status	DP under revision	DP under revision	DP under revision	DP under revision	DP under revision

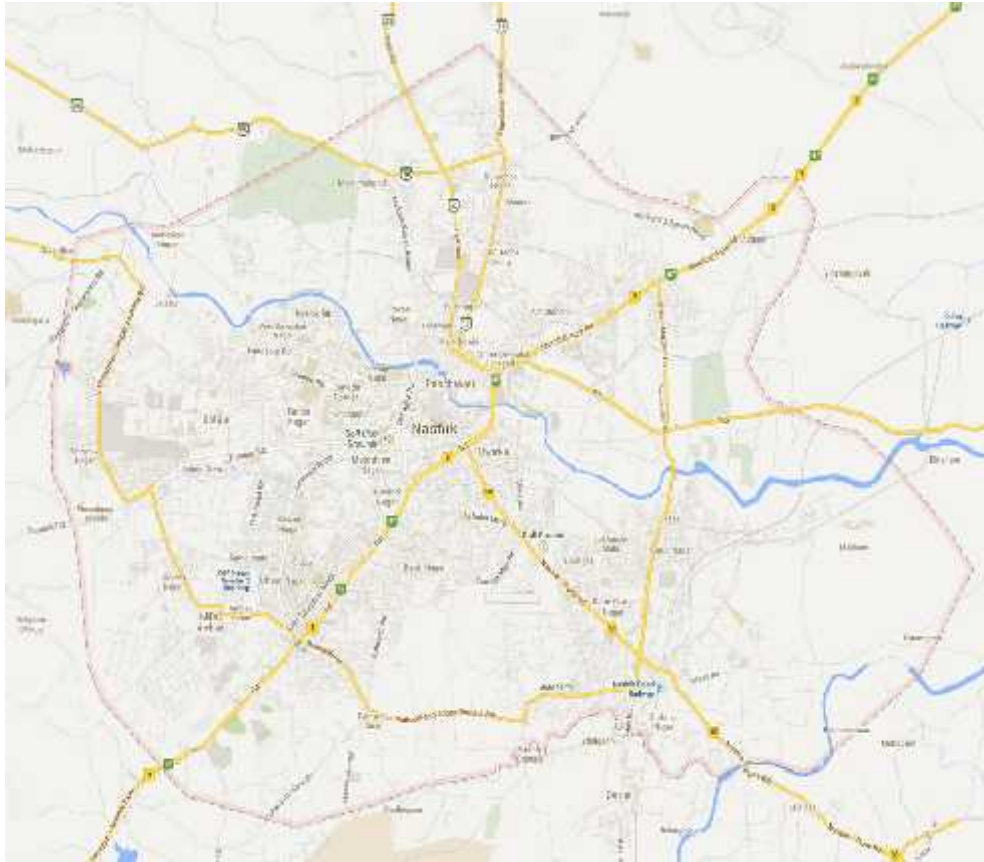
Map 2.2 Map of Mumbai



Map 2.3 Map of Pune



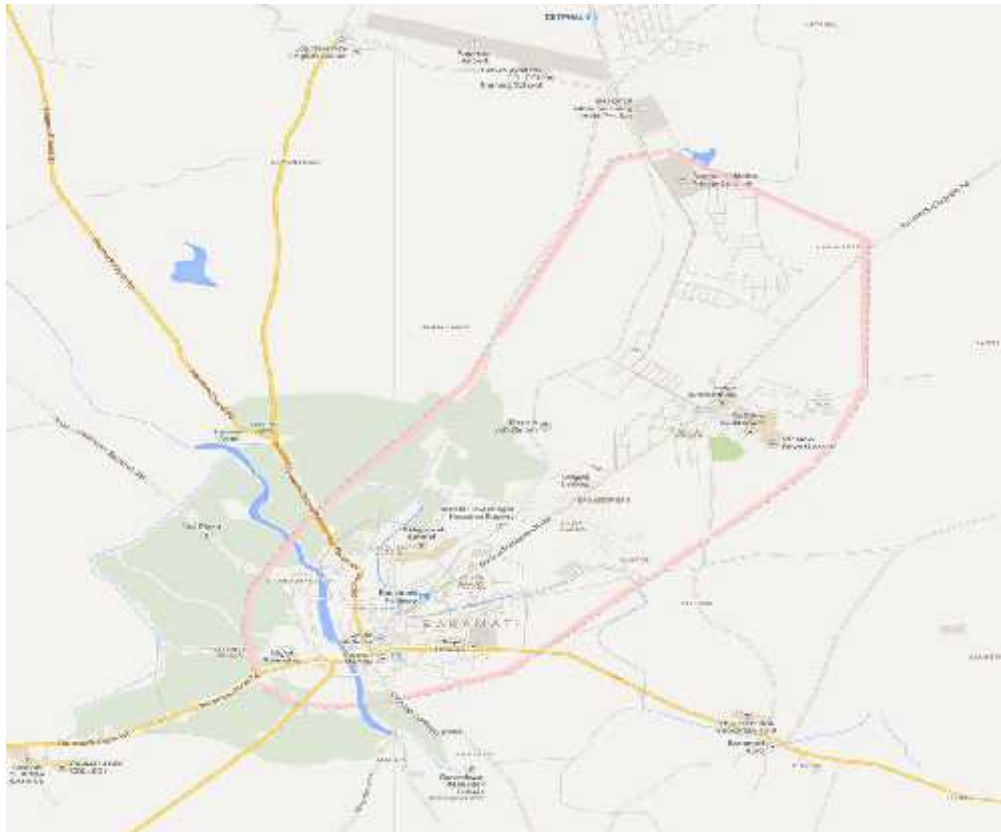
Map 2.4 Map of Nasik



Map 2.5 Map of Kolhapur



Map 2.6 Map of Baramati.



2.4. Research Design

A research design is a structure crafted for the purpose of investigation. In urban planning parlance, one could say that it is a master plan detailing the strategy for conducting a research that comprises processes employed for collecting and analyzing data relevant to the research purpose. Research design, therefore, provides an overall guidance for the collection and analysis of data of a study (Churchill 1979). A choice of research design reflects decisions about the priority being given to a range of dimensions of the research process (Bryman and Bell 2007, p. 40), and this of course will have considerably influence on lower-level methodological procedures such as sampling. It is therefore a blueprint that enables researchers to find answers to the questions being studied for any research project. Along with clear research plan it provides, constraints and ethical issues that a study will inevitably encounter must also be taken into account (Saunders *et al.* 2007).

2.5.1. Descriptive Research Design

In this study, the descriptive research method was employed. A descriptive research design is a method that looks with intensity at the prevailing phenomena and then accurately describes what the researcher perceives. It thereby concerns itself with a description of the characteristics of a problem. The design, as innate to its nature, relies primarily on secondary data. Such data has been aided by a questionnaire and interviews with those highly relevant to the situation of the research.

Many scientific disciplines, especially social science and psychology, use this method to obtain a general overview of the subject. It is also useful where it is not possible to test and measure a large number of samples needed for more quantitative types of experimentation. These types of experiments are often used by anthropologists, psychologists and social scientists to observe natural behaviours without affecting them in any way. It is also used by market researchers to judge the habits of customers. The results from a descriptive research can in no way be used as a definitive answer. However, they have great utility in the testing of hypotheses.

Descriptive studies allow both implicit and explicit hypotheses to be tested depending on the research problem. As opposed to exploratory research, descriptive research is undertaken with defined questions, people surveyed, and a method of analysis determined prior to beginning data collection. Such preparation allows the opportunity to make any required changes before the costly process of data collection has begun. There are two basic types of descriptive research A) **Longitudinal Studies** : Longitudinal studies are time series analyses that make repeated measurements of the same individuals, thus allowing you to monitor behavior such as brand switching. However, longitudinal studies are not necessarily representative since many people may refuse to participate because of the commitment required and B) **Cross-sectional Studies**: Cross-sectional studies sample the population to make measurements at a specific point in time. In the present research, the latter has been of use.

Descriptive research can be either quantitative or qualitative. It involves collections of quantitative information that can be tabulated along a continuum in numerical form, or it can describe categories of information. Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). When in-depth, narrative descriptions of small numbers of cases are involved, the research uses description as a tool to organize data into patterns that emerge during

analysis. Those patterns aid the mind in comprehending a qualitative study and its implications.

Justification

Descriptive research design is also a valid method for researching specific subjects and as a precursor to more quantitative studies. Descriptive research designs help provide answers to the questions of who, what, when, where, and how associated with a particular research problem. It is used to obtain information concerning the current status of the phenomena and to describe "what exists" with respect to variables or conditions in a situation. Descriptive design studies tell us about the condition being observed in a completely natural and unchanged environment. Descriptive research is often used as a pre-cursor to more quantitative research designs, the general overview giving some valuable pointers as to what variables are worth testing quantitatively.

The descriptive research method allows the generation of factual information in regard to the study and a comprehensive analysis of an existing situation in a highly economical way. The method provides an accurate account of the characteristics of a situation. By producing large amounts of accurate data from reliable archival sources, it enables an in-depth analysis of material at hand. It is thereby an ideal method to employ in the given kind of research study.

2.5.2. Types of Data

For this research, two types of data were gathered. These included both primary and secondary data.

Primary Data

Primary data refers to data collected for the first time in the field. It has been defined as data that has been collected for the purpose for which it is originally used. The primary data for this particular research were derived from the answers the participants gave during their response to the questionnaire. In certain cases the responses were written and in other instances they were oral. Most of those interviewed were working professionals inside the urban local bodies or directly dealing with their issues, either at the local level or at the state level.

Justification

Primary data collection as cited above was given very high value for the purposes of this research as these answers afforded greater insight into the working processes of plans and their implementation within the urban local bodies. There is not much published material available on this subject and very little knowledge outside on actual implementation problems relating to development plans and development control regulations; hence these interactions with real actors in the field had great significance.

Secondary Data

Secondary data is data that is collected for purposes other than the original use. It is an analysis of data that has already been collected for some other purpose. In the current instance, secondary data were obtained from published documents and literatures that were relevant to the subject of research. These included survey data and documentary data, many of them unpublished and prepared by urban local bodies or state organizations for internal use. These were requested for sharing directly from these sources.

Justification

The use of secondary data was central to this research as these had already been collected and were available directly from the most reliable source - the ULBs, State organizations and world organizations. Many of the reports used were commissioned directly by these organizations. Many of the details were also easily cross-verifiable. With the use of questionnaire and published literatures, this study took on the combined quantitative and qualitative approach of research. By means of employing this combined approach, the researcher was able to obtain the advantages of both quantitative and qualitative approaches.

2.5.3. Quantitative and Qualitative Data

A quantitative approach is a formal, objective, systematic process to describe and test relationships and examine cause and effect interactions among variables. Numerical data and statistics are the main substance of quantitative instruments. With these instruments, a generalization of the gathered data with tentative synthesized interpretations was possible. Quantitative approach is useful as it helps the researcher to avoid individual perceptions and viewpoints and prevents bias in gathering and presenting research data. In other

words, subjectivity of judgment, which is not needed in a thesis discussion, can be avoided through quantitative methods. Contrary to the quantitative method, qualitative approach generates verbal information rather than numerical values (Polgar & Thomas, 1995)⁵. Instead of using statistical analysis, the qualitative approach utilizes content or holistic analysis; to explain and comprehend the research findings, inductive and not deductive reasoning is used. The researcher opted to integrate the qualitative approach in this study (due to its significant advantages that are not obtainable from statistical analysis garnered through quantitative method) with the qualitative method (that allows the presentation of the phenomenon being investigated in a more holistic view).

2.6. Sources of Data

The research as cited above has primarily relied on secondary data. But before we get into the details of data sources, it would be appropriate to state the overview of the study.

2.6.1. Geographical Spread of the Research

The study begins with a broad understanding of the global urbanization trends and trends in India and Maharashtra. The study's scope in specific, however, is the state of Maharashtra and it applies its hypotheses to the state. For this purpose the researcher picked up five representative cities of the State.

2.6.2. Selection of Cities

These cities represent a cross section of cities in Maharashtra. These comprise Mumbai, Pune, Nasik, Kolhapur and Baramati. The objective of selecting a mix of cities was to test the hypotheses across cities of various demographic compositions and to see whether they hold true in all of them. Mumbai is the most populated city in the country and Pune is among the largest ten cities in the country and the second largest in Maharashtra. Nasik is demographically a fast growing metropolitan city just above a million and Kolhapur is a smaller city around half a million with more modest population growth rate. Baramati, on the other hand, is comparatively a very small city. The cities vary not merely in size and characteristics of urbanization, but also are in many ways dissimilar in their economic profile, population densities and pace of demographic growth, poverty features as well as associated urban attributes. .

2.6.3. City Specific Data

Apart from the literature review, secondary data specific to cities in question were collected. Since this is an analytical research, the use of secondary data and their analysis and evaluation was mandatory. As stated earlier, this type of data refers to data that is collected for purposes other than the current one. These were the Development Plans of the five cities and their development control regulations. These afforded an overview as well as the details of the land use plan and the degree to which tools were identified for their implementation. A list of questions was also prepared and was shared with the Municipal Corporations and answers sought. Publications of the Municipal Corporations themselves provided valuable secondary data. These included the Annual Budget, City Development Plans, the Human Development Report, the Environment Status Report and studies regarding slums. Several other periodic reports prepared for briefing and consumption of State officials also came in handy.

2.7. The Questionnaire and Interviews

The researcher prepared a questionnaire that was circulated to a select group of knowledgeable respondents who could add value to the research with their insightful replies. They either answered the questions in writing listed in the Questionnaire or gave answers in person or over the telephone.

2.7.1. The Study Population: Participants

A population is defined as all elements (individuals, objects and events) that meet the sample criteria for inclusion in the study (Burns and Grove, 1993)⁶. For this research, the study population comprised a total of 15 respondents. In order to get informed and quality responses and insights, certain inclusion criteria were imposed. The participants had to be willing to participate; they had to be such professionals who had worked or were working in the municipalities that were the subject matter of study. These would be at the higher administrative levels of the municipality, such as the deputy municipal commissioners, chief officer or engineers/town planners handling development plans. Since the questions were technical in nature and needed deeper ability to comprehend, this qualification ensured that the participants were able to respond with insights useful to advance the objectives of the research. They also helped with the latest data. Officers of the transport department were contacted to help with the latest vehicular data. Apart from

municipal employees, those working in the town planning department of the State under the Directorate of Town Planning were the other group since they primarily deal with the preparation of town plans and play an important advisory role to the State Government's nodal department for municipal matters - the Urban Development Department.

Justification

The use of interviews was important to this research because some of the questions listed in the questionnaire needed to be discussed to elicit opinion, or if opinions had been given they needed further clarification. Such clarity can be achieved only through a dialogue between the interviewee and the researcher (interviewer). The subject of the research makes it amply unambiguous that development plan preparation, implementation, gaps in development control regulations are complex subjects and need a detailed dialogue for comprehension and analysis. This process was further facilitated by the researcher travelling to cities where participants found it difficult to extricate themselves from their onerous duties that they carry in the urban local bodies or state organizations.

2.7.2. The Questionnaire

The survey questionnaire was used as the main data-collection instrument for this study. A questionnaire was prepared by the researcher in advance and was designed to elicit information in writing. This was personally distributed by the researcher or mailed to the participants via e mail. The data here was collected over a period of six months. Before administering the questions, the questionnaire was pre-tested through a trial administration to two very knowledgeable persons. This helped identifying flaws, weeding out questions unnecessary to the purpose of research and in making the questionnaire more comprehensive. Additionally, it was necessary to determine whether questions and directions were clear to subjects and whether they would mean the same thing to them what they meant to the researcher. Thus the pre-test aimed to reduce wording ambiguity and potential confusion of each question. No question was changed or no question added after the pre-test. The Questionnaire circulated is appended at the end. (see Appendix A). The questionnaire was placed under three broad headings: Planning Benchmarks, Development Plan and Urban Poverty. Most of these sought the latest data in regard to the urban local bodies. In other words most of these questions were quantitative in nature and were close-ended questions. But some of them were more in the nature of seeking their opinions and their understanding of what had happened and why they had happened. These were qualitative in their content and were open-ended questions. Close-ended questions were included as they are easy to answer and the

researcher sought latest statistics through them. Open-ended questions sought more detailed and analytical replies that reflected their own perceptions. In certain cases, written responses were received from the participants even to some open-ended questions. However, many of them were not willing to go into quantitative commenting on the implementation aspects of the Development Plan in writing, but all of them shared their views on condition of anonymity.

Justification

The questionnaire technique firstly afforded uniformity of enquiry as the same standardized questions were provided to all the participants. Such uniformity was important for the function of a proper comparison. Secondly, it permitted enough time (several weeks in some cases) to give well considered and researched replies by discussing the issues with colleagues within their local bodies and by referring to documents. The element of anonymity associated with the questionnaire survey technique greatly enhanced candid and honest replies from the participants.

2.7.3. Consent, Anonymity and Confidentiality

Anonymity is achieved when subjects cannot be linked, even by the researcher, with his or her individual responses. When subjects are promised confidentiality, it means that the information they provide will not be publicly reported in a way which identifies them. In the course of data collection for this research, every participant without fail did not want their identities to be revealed nor wanted any of the answers attributed to them. It was clear that as serving officers, they did not wish to comment on policy and implementation aspects that could be identified and attributed to them. In view of the fact that the consent of the participants was based on the assurance of anonymity and confidentiality, their names or personal information are not disclosed in any part of the research. Anonymity has been ensured by not disclosing the subjects' names and confidentiality was similarly ensured by not revealing the subject's identities when reporting or publishing the study. This is even if their replies were received on e mail and are recorded. However, their answers have been of assistance in testing the hypotheses and in furthering the objective of the research and hence have been used.

2.8. Reliability and Validity

Reliability is the degree of consistency with which an instrument measures the attribute it is designed to measure. Reliability can be ensured by minimizing sources of measurement

error like data collector bias. This was doubly done in the present research by the data collectors being in direct possession of data and by the researcher being the only one to administer the questionnaire. Sufficient time was given, confidentiality was assured and participants could answer the questionnaire in parts and as and when they found answers and after they had formulated their reasoned responses.

2.8.1. Validity

The validity of an instrument is the degree to which an instrument measures what it is intended to measure. Content validity refers to the extent to which an instrument represents the factors under study. External validity on the other hand refers to the extent to which study findings can be generalized beyond the sample used. In regard to content validity, this was ensured by its preparation in line with the hypotheses, consistency in administering the questions and through personal administration by the researcher. External validity got ensured as all participants agreed to participate and answered all questions, either in writing or orally. Generalizing the findings to all members of the population is therefore justified.

2.8.2. Data Processing, Analysis and Presentation

As stated earlier, data was collected both from primary and secondary sources. It was then processed, analyzed and presented. The written responses of the participants, wherever they were quantitative were, as far as possible, cross-checked with other data available. Wherever this was not possible, the data, since coming from a reliable source, was used. The qualitative inputs have been assimilated after analysis and have been taken into account in the final conclusions drawn. It needs to be stated that these pointed overwhelmingly in the direction of the hypotheses.

3. 8.3. Data Presentation Techniques

Appropriate ways of presenting data were selected. These comprised the narrative; wherever possible tables, pie charts and bar graphs were used in this research.

Justification

Narratives allowed better mental comprehension. Tables, pie charts and bar graphs were pressed into service with a view to enhance ease of appreciation, comparison and simpler visualization and quality interpretation.

2.8.4. Data Analysis Techniques

The data collected by the researcher was analyzed using both the inductive analysis and deductive analysis techniques.

Inductive analysis and Deductive analysis

Analytical induction is an approach whereby the analysis moves from specific observations to broader generalizations and theories. This analysis is also known as the "bottom up approach". Deductive analysis represents the commonest of the nature of the relationship between theory and research. This is also referred to as the "top down approach". Close-ended questions were statistical and were used as provided in sections dealing with their urban local bodies. Open-ended questions were analyzed through quantitative content analysis by the researcher with the aim of qualifying emerging characteristics and concepts. Concept analysis is the process of analyzing verbal or written communications in a systematic way to measure variables quantitatively.

Justification

The researcher used inductive analysis technique because it does not construct a rigid methodology. Instead it permits the researcher to explore alternative explanations and get a feel of the situation on the ground and so understand the nature of the problem much better. Deductive analysis was used because it reconciles theory and research.

2.9. Process

In summary, it could be said that the research followed a four-stage process. The first stage devoted itself partly to an overall literature survey to get to the context of urbanization, globally, within the country, in Maharashtra and in research-specific cities. It partly devoted itself to the use of a questionnaire (primary data) and use of secondary data to provide the context of the research. The secondary data collection included the development plans of cities, their development control regulations and data on slums and major services. The data will be sourced from Government agencies, primarily from the Directorate of Town Planning, the Municipal Corporations and the Department of Urban Development, Government of Maharashtra.

The second stage attempted a detailed study of the 'operationalization' of the development plans and the development control regulations of cities on ground. It looked

at what has happened to these plans and development control regulations, how far have the former been implemented, what have been their financial implications, and how much have they been subject to amendments. The third stage analyzed their content, consequences and the deficits that they contained or created. It was in effect a critical analysis of the operationalization as well as non-operationalization and the identification of deficits. The fourth devoted itself to possible strategies that could help provide solutions for bridging the deficits. It thereby sought to suggest certain improvements to the planning process and its benchmarks so that future cities as well as the existing ones could possibly emerge as better and more livable and equitable products.

2.10 Presentation

The study is presented in the following chapters. Data is presented in the form of graphs, tables, charts and boxes. Maps are given at appropriate places.

Chapter 1 presents the theoretical framework, a review of Indian urban policy, hypothesis and objectives of study

Chapter 2 explains the research methodology employed in the conduct of the study.

Chapter 3 deals with urbanization trends and features of urbanization in study areas. This chapter highlights the linkages between economic growth and urbanization.

Chapter 4 explains the background to urban planning in Maharashtra.

Chapter 5 is one of the critical chapters of the study. It provides a detailed account of the principal features and benchmarks of the development plans and development control regulations of selected cities.

Chapter 6 deals with current status of development plans and development control regulations in terms of the urbanization of poverty.

Chapter 7 is concerned about the operationalization of development plans and development control regulations.

Chapter 8 is about provision of major non-social municipal infrastructure. It deals with water supply, costs of water supply and key performance indicators for water and sewerage, the state of this service and sanitation and toilet facilities etc.

Chapter 9 explains the deficits in non-social municipal infrastructure planning i.e. deficits in water planning, in sewerage and sanitation, in solid waste and in urban transport and city roads.

Chapter 10 talks about the deficits in planning and development regulations.

Chapter 11 explains new strategies for addressing planning and development regulation deficits and

Chapter 12 is devoted to hypothesis testing and conclusion drawn from the data. A summary and recommendations are also given in this chapter.

Bibliography is given in the last part of the thesis.

QUESTIONNAIRE

CITIES: MUMBAI, PUNE, NASIK, KOLHAPUR, BARAMATI

1. PLANNING BENCHMARKS

1. What are the current planning benchmarks applied to the planning of cities in Maharashtra, with specific reference to cities listed above?
2. What are these benchmarks with regard to
 - i. urban poverty planning,
 - ii. solid waste,
 - iii. water and sewerage systems,
 - iv. norms of water availability per person per day,
 - v. water recycling,
 - vi. open spaces,
 - vii. tree plantation,
 - viii. air and noise pollution levels,
 - ix. traffic and transportation,
 - x. public transport,
 - xi. population densities in the cities,
 - xii. FSI and
 - xiii. TDR
 - xiv. Education
 - xv. Health
3. Have these planning benchmarks undergone changes, especially in the last five years?
4. What are those changes and why were they made?
5. Are planning benchmarks different for different classes of cities? In other words, do physical and demographic sizes of cities impose customization of planning benchmarks?
6. How do Maharashtra planning benchmarks compare with other Indian States and other countries?
7. In terms of implementation of Development Plans, is there a time frame?
8. Is this time frame backed by an analysis of how the DP would be financed in that time frame?
9. What are the felt inadequacies in the planning benchmarks?
10. Which of these deficits are most significant?
11. Why have these deficits remained?
12. What should be done to redress them?

2. DEVELOPMENT PLAN

1. When was the city's DP framed and sent to GoM ?
2. When was it sanctioned?
3. Was it sanctioned in full or in parts?
4. What is the total number of reservations for public purposes?

5. What is their sectoral break-up?
6. What percentage of plan in physical terms has been implemented since its sanction?
7. What are the significant areas of implementation?
 - a. urban poverty planning,
 - b. solid waste, water and sewerage systems, norms of water availability per person per day, water recycling, open spaces, tree plantation, air and noise pollution levels, raffic and transportation, public transport, population densities in the cities, FSI and TDR ,Education, Health
8. In the annual budgeting process, is the DP kept as a primary target for allocation and implementation?
9. What financial resources have been given to the implementation of the DP?
10. How much of the DP has been allowed to be implemented by the private sector, NGOs, Government departments, parastatals, other than the Municipal Body itself?
11. Since the sanction of the DP, how many amendments have been made to reservations?
12. Which are those?
13. What was the thought process behind those amendments?
14. Since the sanction of the DP, how many deletions of reservations have taken place?
15. Which are those?
16. What was the thought process behind those deletions?
17. What is your overall impression about the formulation of the DP?
18. What is your overall impression about the implementation of the DP?

3. URBAN POVERTY

1. What is the total slum population of the city?
2. What is the total number of slums?
3. How many of them are treated as authorized?
4. How many of the slums are unauthorized?
5. What has been the growth pattern of slums in the city over the last five censuses?
6. What is the total budget spent on slums in the last five years?
7. What percentage of the total budget is spent on slums in the last five years ?
8. What schemes have been taken up for slums?
9. What is the status of the following in regard to slums:
 - i. one toilet seat for what population ?
 - ii. one water stand post for what population ?
 - iii. literacy rate in the slums ?

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CHAPTER 3

INTRODUCTION TO THE STUDY, URBANIZATION TRENDS AND FEATURES OF URBANIZATION IN STUDY AREAS

3A. INTRODUCTION TO THE STUDY

This chapter states the contextual framework of this study and the research problem. It affirms the conceptual framework, the hypotheses and the objectives of the study. The literature scan and the presentation of chapters are then outlined. The chapter further looks at some aspects of India's economic growth, issues of migration and GDP contribution in the context of India's urbanization. This is because of the close relationship that appears between certain patterns of economic growth and urbanization and the planning of urbanization.

Operational Definitions

It would be apposite that some of the terms frequently used in the present study are understood with clarity. From that view point, therefore, operational definitions of these terms are provided upfront.

Urban planning is a multi-tiered and multi-disciplinary process that concerns itself with the use of land, its balanced apportionment for several uses comprising, inter alia, economic, environmental, and social infrastructure designed to ensure a desired productivity and quality of life.

Modern urban planning originated in the aftermath of industrial cities that grew in a highly disorderly, unhygienic and chaotic fashion in the 19th century that caused huge distress, squalour, disease and death. Governments stepped to stem in such rot. From there, urban planning followed a learning process and evolved to the current stage. The complexities and of urban life and urban dynamics have made urban learning a continuous process and the discipline continues to change and evolve.

Urban planning is made up of several disciplines, from land use planning to architecture to engineering to social science. Its ultimate objective is to guide and ensure the orderly development of cities settlements according to certain development benchmarks and rules of development. There are various terms used to denote aspects of urban planning, such as regional plans, development plans, town plans strategic plans, comprehensive plans, neighbourhood plans, heritage plans. Over the years such several newer concepts have entered the urban planning field such as sustainable urban development, reconstruction and renewal planning, transportation planning and participatory planning.

Urban dynamics denotes the processes and factors that constantly shape and reshape urban spaces through their use and subsequent modifications. This, inter alia, comprises suburbanization, ex-urbanization, counter-urbanization, green-field and brown-field development, urban decay, urban renewal and spatial exclusion. Sub-urbanization refers to growth of certain areas as units away from the centre. Ex-urbanization stands for a process whereby generally affluent sections of people move away from the city to the rural areas, but with an enhanced quality of life. Counter-urbanization refers to a significant decline in a city's population and the growth of other smaller settlements at the expense of the main city. Greenfield development refers to fresh construction within a city's virgin land hitherto left undeveloped or fresh outlying areas merged into the city and their development. Brown-field development refers to redevelopment of old structures in the city that are either dysfunctional or have outlived their lives. Additionally, such structures, even before the end of their lifespan are demolished and rebuilt to get more value out of the land.

Cities across the world are continuously going through such a process of constructional transformation. Because of a city's comparative longevity and on account of the in-migration and out-migration of populations, the impact of changes in global and local economy, physical, technological and environmental changes, cities per force are required to change and respond to the altering factors in the external environment that they cannot control, but to which they must respond in order to survive.

Urbanization is a process by which a human settlement acquires the characteristics of a town. It is also understood generally as an increase in the population of towns in relation to a slower growth in rural areas. The urban population means the total population living in urban areas, as defined by the country. The census of India considers urban areas on the triple criteria of population, non-agricultural working population and density. A town should have a

minimum population of 5000. At least 75 % of its male working population should be engaged in non-agricultural work. Its density of population must be at least 400 per sq km.

The second measure, **rate of urbanization**, describes the projected average rate of change of the size of the urban population over the given period of time. This is the increase in the proportion of urban population over time, calculated as the rate of growth of the urban population minus that of the total population. Positive rates of urbanization result when the urban population grows at a faster rate than the total population. This is especially true in Asia, home to the most rapidly urbanizing nations today.

Unplanned cities are cities that have still not been brought within the fold of an urban plan. They could also be large urban areas within planned cities but have grown in a manner not prescribed by planning norms within that city. While the planned city obeys urban laws and carries out development with approvals from the authorities according development control regulations, the unplanned city often displays a bottom-up approach where people construct without permission and without observing the planning yardsticks mandated for the city.

Many of such unplanned areas are also referred to as informal settlements. They connote the same constituents of unplanned, unauthorized structures and beyond urban laws and regulations. Slums fit this categorization very closely. So would the hawking markets on parts of roads and footpaths or other lands not earmarked for the cited purpose. These unplanned areas are generally occupied by the poor, since the planned city is not affordable either for their residential needs or for their enterprise. They therefore per force resort to informal settlements and informal enterprise, recognized as the informal sector.

Quality of life (QOL) is used worldwide to describe the general well-being of societies and people. This is measured on the basis of a basket of indicators thought to be comprehensive and conclusive enough to establish the quality of life in a particular country, region or individual settlement. In general, a similar formulation would be applicable to cities.

We could, therefore, state that 'quality of urban life' refers to the capacity of a city to deliver to its citizens a basket of conditions and services for living life. These would comprise conditions and services related to economy, politics, environment, society, recreation, culture, safety and security.

The QOL concept, however, has remained mainly theoretical as it contains a large element of subjectivity. The determining factors taken as criteria in these studies are far from being standard. Very often, economic indicators outshine all other criteria for evaluating well-being in cities. This approach, however, is very restrictive, since such indicators have been proved inadequate in expressing the real needs, preferences and priorities of citizens. For these reasons, the definition and the adequate measurement of QOL in a given society still remains inefficient.

Because of the relativity of the concept in relation to a country's stage of development, it would be inappropriate to rely on any international benchmark that would not be representative of India and its cities. For this study, therefore, we have relied on certain service benchmarks set by Government of India, the annual studies made by the cities themselves and a general trend on how, based on the indigenous norms has quality of life moved in the research cities.

Development Control Regulations are that component of urban planning that regulate the use of land and built space through permits for layouts, subdivisions and buildings. In simple terms they lay down the details and the working tools of how development and construction would be permitted and controlled. They stipulate the manner in which permissions can be obtained, and prescribe access, layouts, open spaces, area and height limitations, lifts ,fire protection, exits and parking requirements. These rules could be city specific, approved by the planning authority and finally sanctioned by the state government. These originated from public health considerations. These subsequently have expanded to encompass environmental, demographic safety and aesthetic concerns and the prevention of nuisance and hazard.

Urbanism stands for the way of life of people who live in a city. It is additionally understood to mean the characteristic way of interaction of inhabitants of urban areas with the built environment. A sociologically significant definition of the city seeks to select those elements of urbanism which mark it as a distinctive mode of human group life. While commonly urban areas are judged urban on the basis of demographic size, the characterization of a community as urban on the basis of size alone is considered from a sociological viewpoint inaccurate. A sociological definition seeks to be inclusive enough to comprise whatever essential

characteristics urban areas possess. Despite differences that would exist in types of cities, they will have similarities as social entities.

The central problem of the sociologist of the city is to discover the forms of social action and organization that typically emerge in relatively permanent, compact settlements of large numbers of heterogeneous individuals. It follows that urbanism will assume its most characteristic and extreme form in the measure in which the conditions with which it is congruent are present. Thus the larger, the more densely populated, and the more heterogeneous a community, the more accentuated the characteristics associated with urbanism will be.

There is also a manner of city planning that has found itself associated with urbanism. New Urbanism is seeking to redefine the nature of the city by reintroducing traditional notions of neighbourhood design and fitting those ideas into a variety of urban and suburban settings. These comprise walkable neighbourhoods, primary orientation around public transit systems, and greater integration of different types of land uses at the neighbourhood level. In addition, it claims commitment to the concepts of strong citizen participation, affordable housing, and social and economic diversity. New Urbanism focuses on a community's physical infrastructure in the belief that community design can create or influence particular social patterns.

3A.1 Contextual framework

The second half of the twentieth century has witnessed spectacular growth of the urban population in the developing world. India has experienced rapid urbanization and the emergence of metropolises. According to the United Nations (1993-1995) by the year 2015, ten of the world's 15 largest cities will be in Asia and 3 of these will be in India. This projection suggests that demographic growth in India's large cities will be high, partly due to natural in-city population growth, partly on account of merger of additional areas and partly due to migration. The logistic model used by the United Nations, World Bank and other International Agencies for the projection of the urban population worldwide suggests that India is poised for rapid urbanization along with several other countries in South and East Asia (Champion 1989).

Urbanization is usually associated with increase in employment, higher income, improved health and higher literacy. However, concentration of urban population in bigger cities has not only increased environmental and social ills but has put severe pressure on the infrastructure and basic amenities available to city dwellers, leading to degradation of the quality of city life. The problem posed by this situation is a major threat to the survival of human beings and the developmental resources. It is not so that efforts have not been made to solve these problems. For instance, the 74th Constitutional Amendment is a milestone in this regard. However, the anticipated results have not been achieved so far. Two main reasons have been advanced to explain this underachievement. One - there is a considerably large gap between the rate of growth and planning of development of cities and second — despite the budgetary provision made for urban development, these resources are too inadequate for achieving the expected goals of development. In all cities, the problem of quality of life is becoming more complex which is grossly affecting the overall process of human development. The Census of India 2001 indicates that India comprises 27.44% urban population but the numerical figures do not show the levels of human development.

Various attempts have been made to find out the deficit in planning that has created several social problems. In spite of its significance for economic change the process (urbanization) is not uniformly spread. The regional disparities have further aggravated the problems in urban areas. The studies of Davis and Golden (1954), Sovani (1966), Bose (1978), Mills and Becker (1986) Bala (1986) and National Institute of Urban Affairs (1988) have showed that large scale regional disparities have invited several problems and concluded that inadequate and appropriate planning has further made it more complex. Mohan and Pant (1982) and Reissman's (1964) study has concluded that regional disparities are the main reasons for the problems in urban areas. Many research scholars have studied trends of urbanization in India. Raza and Habeeb (1981), Habeeb (1987), Puri (1991) have examined the trends and pointed out the lopsided nature of urban planning. These authors have concluded through their studies that the nature of urbanization is in favour of big cities, which is due to rural urban migration. Bose (1980) showed that much of urban population growth had occurred in big cities. According to him "the urbanization is the process of migration to big cities while there has been stagnation of small towns".

On this background, in the context of urbanization in Maharashtra State the norms and processes hitherto adopted in urban planning and mechanism adopted for achieving the

expected goals are not far encouraging. Therefore it is proposed to study the group of cities in the state with a view to identify the major problem areas.

3A.2. Statement of the Research Problem

- Though the State has adopted urban planning benchmarks for spatial division of activities and services and reservations for the provision of public services, have these benchmarks been able to answer the needs of the cities? And what amendments are needed in the new benchmarks?
- The State is witnessing substantial urbanization of poverty, especially in its larger cities. The poor have their own employment and living needs. Has the State's urban planning methodologies been able to integrate them into the city and if not, what have been the consequences of the failure?
- While the development plans have a time frame for implementation, have the cities been able to substantially implement their development plans in the given time frame? If not, what are the causes and how could these be redressed?
- How have the development control rules of cities responded to development as well as regulation of cities? What have been the major areas of shortfall, if any? If there are such areas, what alternate strategies and amendments need to be made to be more responsive to city needs?

The proposed research is expected to provide insights into the issues of urban planning in Maharashtra. As the lead urbanized State, these insights are expected to prove useful even in the larger Indian context, it would offer findings on how cities are affected by their current planning processes and benchmarks, and what rectifying measures need to be adopted to plan cities better. It is also expected to reveal the peculiar nature of the socio-economic context of this country and why we need to see them in different light from the planning benchmarks of the Western world. It is imperative that we take up such research in good time, because India is yet to substantially urbanize. It would, therefore, be extremely relevant and useful to understand what has happened in the past and how better planning of cities could emerge by drawing lessons for the future. In the final analysis, the proposed research should serve as a pioneering work in terms of delivering better planned cities and more livable urban settlements in Maharashtra and India.

3A.3. Conceptual framework

A city development plan is probably the most vital planning and envisioning instrument of any city. The plan captures the essence of what a city intends to be in the coming twenty years and beyond, and has an impact on its emerging economic profile and the quality of life that it intends to provide. The development control regulations are almost equally critical since they provide a framework in which development would take place. The adequacy of the framework is critical, failing which a number of developments may get awry and affect the quality of life of cities. It is, therefore, imperative that the city gets the plan as close to the emerging state and Indian urban socio-economic dynamics. Some of the most important forces that are impacting cities are the forces of globalization on the one hand and the urbanization of poverty on the other. The forces of globalization are in many ways leading to the 'commodification' of urban land and the urbanization of poverty is 'informalizing' the city. The spectacular growth of the Indian economy is also putting greater money power into the hands of a section of citizens that is translating into certain heightened infrastructure demands on the cities.

Given these developments, we need to study whether cities are responding to these challenges and do they have the strategies and answers to deal with these challenges. Accordingly following hypotheses were kept in view for study.

3A.4. Hypotheses

For convenience and ready reference, it would be apposite to state the hypotheses that this research wishes to test. They are as follows:

1. The current urban planning benchmarks will not sufficiently respond to the unfolding urban dynamics in the State.
2. The conceptual backdrop to current urban planning glosses over the emerging urbanization of poverty that will continue to 'unplan' cities through 'informalization' and growth outside plan.
3. The execution of urban plans in the given time frame will remain highly improbable through current methodologies and practices.
4. The present development control regulations of cities are hugely inadequate to deliver livable cities.

To test these hypotheses following objectives were derived for the study.

3A.5. Objectives of the study

1. To study the current urban planning benchmarks in relation to urban dynamics.
2. 'To study the consequences of failure of present urban planning methodologies and to suggest the corrective measures consistent with the present rate of urbanization.
3. To study the implications of growth of unplanned cities in relation to quality of urban life.
4. To critically analyze the present development control regulations and their implications for improving quality of life in cities.
5. To work out appropriate methodology and strategy to bring the urban poor in the main stream of urban life.

3A.6. Literature Scan

The researcher began by scanning the available body of literature knowledge pertaining to urbanization and its trends. This was with a view to understand the subject area better and to conceptualize the research problem clearly and precisely. It also helped to understand the correlation between the research problem and the body of knowledge in the area. These comprised studies by UN-HABITAT, the urban agency of the United States, studies of UNFPA regarding demography, books and articles on urbanization (see bibliography) and studies specific to India and Maharashtra such as the decennial Census conducted by Government of India, studies commissioned by the Ministry of Urban Development and Poverty Alleviation, Government of India. Journals published by Regional Centre for Urban Environment (RCUES), Yashada and some others were also referred to. The above literature was used to pull together themes and issues that are associated and knowledge relevant to the theoretical framework of the research. An attempt was made to examine the extent to which the findings could be generalized.

3A.7. Presentation

The study is presented in following chapters. Data is presented in form of graphs, tables, charts and boxes. Maps are given at appropriate places.

CHAPTER 1 presents **the Urban Sociological Theoretical Framework and a Review of Indian Urban Policy**. It traces the framework from the classical theoretical perspectives of Marx and Engels, down to the 21st century with special reference to Tonnies, Durkenheim, Simmel, Weber and the Chicago School. It deals with the contemporary theoretical perspectives of Geddes, Park, Wirth, Hoyt, Castells, Giddens, Harvey and others. It also gives an account of Indian sociologist, social effects of urbanization and urbanization in 21st century. In regard to urban policy in post independent India, it traces the main policy landmarks during each five-year Plan, the enactments in regard to urban issues, the JNNURM and a review of these initiatives.

RESEARCH METHODOLOGY is explained in **Chapter 3** in detail. **In the introductory part of the chapter the overall view of the research methodology used in social sciences is given.** This Chapter states the geographical area in which the study was conducted. It also states the precise research methods employed in the conduct of the study. The researcher's intention is to explain the manner in which data and information was assembled and analyzed to address the research objectives and test the hypotheses. Wherever necessary, reasons and justifications accompany the choice of research design, data sources, data collection techniques and analytical techniques applied. This chapter contains **Contextual framework, Statement of the research problem, Conceptual framework, Hypotheses, Objectives of the study Universe of the study, Sampling, Judgmental Sampling, Research sample size, Research Design, Types of Data-Primary Data and Secondary Data, Quantitative and Qualitative Data, Sources of Data, Geographical Spread of the Research, Selection of Cities, Literature Scan, City Specific Data, Study Population, Participants, and tools of data collection. The Questionnaire and Presentation of study** are included as the final part.

CHAPTER 3 deals with **Introduction to the Study, Urbanization Trends and features of Urbanization in Study Areas**. This chapter highlights the linkages between Economic Growth and Urbanization, Economic Growth and Structural Transformation, Contribution of Migration from Rural Areas, Urbanization across the States of India, Agglomeration, Economic Geography and Development Synergy, Agglomeration, Reshaping Economic Geography, Creating Synergy with Rural Development and Planning for Urbanization. The account on **urbanization trends** includes Global Urbanization Trends, Asian Urbanization Trends, National Urbanization Trends and Urban Maharashtra Urbanization Trends. It then discusses the urbanization features of Mumbai, Pune, Nashik, Kolhapur and Baramati. These are cities that comprise the core study cities. A comparison of Urbanization Trends in

Research Cities is also given in this chapter. Overall Conclusions are given at the end of the chapter.

CHAPTER 4 explains BACKGROUND TO URBAN PLANNING IN MAHARASHTRA. The chapter includes discussion on The Significance of Urban Planning, The Significance of Towns, Global Examples of Urban Planning, Urban Planning In India, Urban Planning in Maharashtra, Process of Urban Planning in the State, DCRs as Regulating Instrument, Urban Poverty and Infrastructure Planning for Quality of Life in Urban Maharashtra, Challenges Countenanced by Maharashtra Cities. REFERENCES are given at the end of the chapter.

CHAPTER 5 is one of the critical chapters of the study. It provides detailed account of the principal features and benchmarks of the development plans and development control regulations of selected cities. It talks of Development Plans and City Development Plans, Purpose of Preparing Development Plan, Composition of Development Plan, Statutory Process of Plan Preparation and Colour Coding in Development Plan. It outlines the Mumbai Development Plan, Land Use in Development Plan, Building Bye Laws and Development Control Rules, Pune Development Plan, Land Use, Plan Implementation, Nashik Development Plan and Land Use, Kolhapur Development Plan and Land Use Plan and Baramati Development Plan and Development Control Regulations. It attempts an analysis of DPs and DCRs. Relevant REFERENCES are given at the end of the chapter.

CHAPTER 6 deals with CURRENT STATUS OF DEVELOPMENT PLANS AND DEVELOPMENT CONTROL REGULATIONS IN TERMS OF THE URBANIZATION OF POVERTY. In this chapter the concept of poverty and its impact on overall development is discussed. This chapter also explains Urbanization of Poverty, Informalization of Urban Poverty, Rural and Urban Poverty, Slums, Slums in India and Maharashtra, Slums in Research Cities, Basic Services in Slums, the Shelter Scenario in India, Informal Sector, Development Plans vis a vis the Urban Poor, DCRs vis a vis the Urban Poor. REFERENCES are given at the end of the chapter.

OPERATIONALIZATION OF DEVELOPMENT PLANS AND DEVELOPMENT CONTROL REGULATIONS are discussed in Chapter 7. It includes a discussion on the Significance and Preparation of Development Plans and DCRs, Future City Growth and DP, Integration of Development Plan with Other Plans, Operationalization of DPs and DCRs,

Municipal Empowerment, Land Acquisition for DPs and Costs of Acquisition, Land Acquisition and TDR, Structures and Encroachments, Institutional and Legal matters, Technical Manpower and Financial Support to Operationalization of DPs at the municipal, State and Central levels. The chapter analyzes costs of providing basic services and municipal ability. It looks at ways to bridge the gap by use of land instruments, PPPs the need to abandon municipal monopoly over service provisioning and strategic changes required.

CHAPTER 8 is about PROVISION OF MAJOR NON-SOCIAL MUNICIPAL INFRASTRUCTURE. It deals with Water Supply, costs of water supply and key performance indicators for water. Sewerage and Sanitation, the state of this service and sanitation and toilet facilities figure next. An analysis of Solid Waste Management in ULBs, Urban Transportation, National Urban Transport Policy and City Roads are the other key infrastructure areas dealt with.

CHAPTER 9 explains the DEFICITS IN NON-SOCIAL MUNICIPAL INFRASTRUCTURE PLANNING. It discusses the Deficits in Water Planning, in Sewerage and Sanitation, in Solid Waste and in Urban Transport and City Roads. The serious implications of these deficits are detailed. REFERENCES are given in last part.

CHAPTER 10 talks of the DEFICITS IN PLANNING AND DEVELOPMENT REGULATIONS. It details the lack of well-rounded development through Development Plans, Overall Failure of DPs/DCRs, Delays in Plan Preparation, poor Approval Process of Development Plans, Limited Use of Technology and Modern Techniques in Plan Preparation and DP Preparation and Lack of Transparency. There is No Fixation on Expansion of Municipal Limits; there is Lack of Emphasis on Planning People and City Activities get frozen in many ways through Development Plan. Issues such as the difficult Amendment Process, Limitations of Merely Physical Land Use Approach, Extraneous Influences in Planning, Planning Gaps, Little Emphasis on Poverty Planning,

Inadequate Treatment of Housing, Inadequate Road Space, DP and Impracticable Applications, perfunctory Central and State Financial Support, Limited Use of TP Schemes and Land Instruments, Development Plan Implementation and Municipal Monopoly, Lack of Municipal Empowerment, the inability of ULBs to Plan, Weak Laws on Encroachment and such issues of significance are also discussed.

CHAPTER 11 explains NEW STRATEGIES FOR ADDRESSING PLANNING AND DEVELOPMENT REGULATION DEFICITS. This chapter explains Key DP Deficiencies and Remedial Measures, Three-Fold Planning Process and Institutional Planning Framework, DP Implementation Plan and Suggestions with respect to DCRs. It outlines suggestions of Report on Indian Infrastructure and Services, Dovetailing State Plans with Central Infrastructure Plans, Metropolitan Planning Committees, Unified Metropolitan Transport Authority, Conversion of Agricultural Land, Peri-urban Growth, Town Planning Schemes, Planning FSI, Inclusion and focus on the Poor and Public Private Partnerships, City Development Strategy. It also outlines suggestions on city road planning and urban transport planning in their various facets.

In conclusion, **CHAPTER 12** affirms that the hypotheses with which the research began stand more than adequately vindicated. A summary and recommendations are given in this chapter. Bibliography is given in the last part of the thesis.

3A.8 Economic Growth and Urbanization

It appears that as the Indian economy moves up the growth trajectory with greater trade and investment, there would be a resultant decline in the dependence of population on agriculture. This would suggest that migration from rural to urban areas is likely to be an important factor contributing to the process of urbanization of the Indian economy.

In her book, *Cities and the Wealth of Nations*, Jane Jacobs (1984) provides evidence from across the globe to argue that the real growth engines and generators of national wealth are cities which nurture the fundamental processes leading to economic expansion or stagnation. Her analysis suggests that the wealth of nations is actually the wealth of its cities, and the roots of ailments that plague nations can be traced to the state of their cities.

The linkages between economic growth and urbanization are further explained in a volume prepared for the Growth Commission (2009) titled “Urbanization and Growth”. Here Annez and Buckley summarize the international experience on urbanization and growth. Citing a study by the National Research Council (2003), they report that between 1980 and 1998, 86 per cent of the growth in value-added in developing countries came from the manufacturing and services sectors. In the initial phase of the evolution of these economies, productivity increases reflected shifting resources away from lower-productivity rural activities to the

industry and services sectors. Beyond a point, rapid productivity gains mainly reflected improvements in the industry and services sectors.

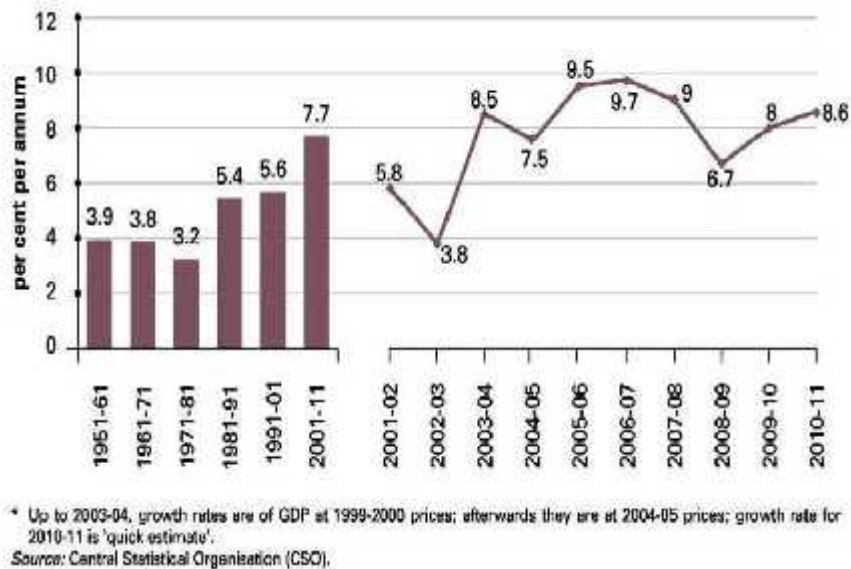
The evidence suggests that in China, growth and urbanization have occurred at very rapid rates in the past 30 years. However, a mutually reinforcing pattern of urbanization and economic growth in China has been attained by investing in infrastructure and managing' the pace of urbanization through policies such as the hukou' system of registration. Brazil's experience seems to be an exception in that urbanization continued to increase steadily from about 60 per cent at the end of the 1960s to 83 per cent in 2003 even though rapid growth occurred only in the 1970s and the Brazilian economy slipped into a long period of stagnation after that. Some African countries have also experienced urbanization without growth.

It would be reasonable to argue in the light of this evidence that urbanization in the sense of simply having people move to cities does not guarantee growth. The latter depends on the nature of urbanization and the manner in which it is managed, i.e. on the absolute quality of urban opportunities. People move to the cities to seek better opportunities relative to rural ones, but it is the absolute quality of the opportunities in urban areas that determines the outcome in terms of growth.**Source: (Urbanization and Growth 2009).**

3A.9 Economic Growth and Structural Transformation

Despite the evidence of global economic downturn during the last half a decade, India remains one of the fastest growing economies in the world today. After recording a growth rate of 5.5 per cent per annum during 1981-2001, there was acceleration in GDP growth to 7.7 per cent per annum during 2001-11. The economy has weathered the impact of the global slowdown of 2008 much better than most and is striving to resume its journey towards a higher GDP growth (**Graph2.1**).

Graph No 2.1 GDP Growth At Constant Prices*



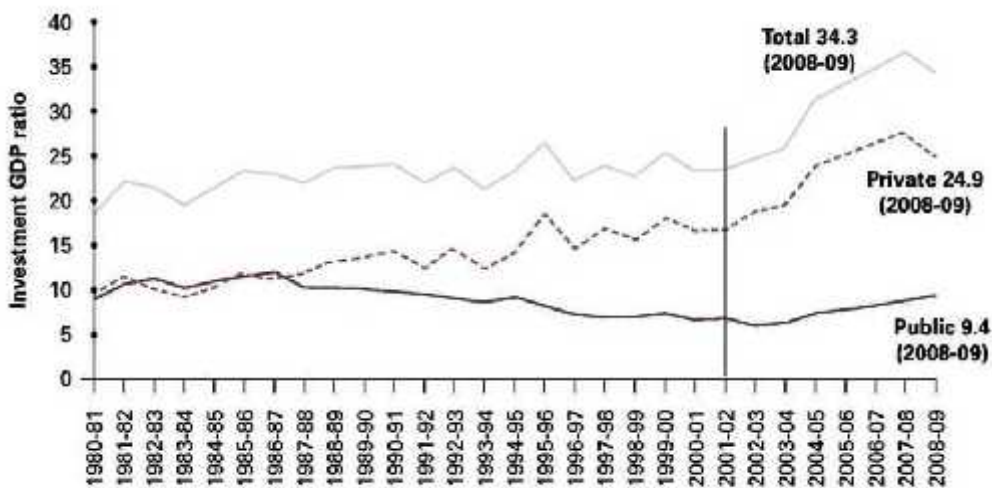
India's heavily protectionist trade policy regime before 1991 had encouraged capital-intensive industrialization. Rigid labour laws and reservation for small scale units in production also militated against labour-intensive industrialization. Growth in industrial output was therefore associated with much slower growth in employment. A gradual process of dismantling the highly restrictive trade policy regime was begun in 1991 and implemented over a decade. While economic growth responded reasonably well to the market-oriented reforms that were set in motion in the 1990s, it was not until after 2001 that larger response of the economy to the reforms became evident. The gradualist nature of the reforms, structural rigidities in the economy, and the time taken to establish the credibility of the new policy regime meant that a strong pick-up in private investment came only after some years (**Graph 2.2**).

The acceleration in GDP growth in the non-agricultural sectors after 2001 was predominantly driven by the private sector, particularly in some states which led the process of market orientation and built the necessary infrastructure and supportive investment environment in their urban areas.

GDP in the industry and services sectors grew at 6.9 and 9.4 per cent per annum during 2001-11, compared with 5.7 and 7.3 per cent per annum respectively in the 1990s. GDP in agriculture grew at 3.1 per cent per annum in 2001-11 compared with 2.8 per cent per annum

in 1991-2001, indicating that agricultural growth continued to be much slower than growth in the non-agricultural sectors (Table 2.1).

Graph No 2.2 Trends In Investment



Source: CSO.

The rapid economic growth has brought about a considerable structural transformation in the economy. This has resulted in the share of agriculture in the GDP declining from 34 per cent in 1983-84 to about 15 per cent in 2009-10. There has been a pointed increase in the share of services in the GDP from 40 per cent to 57 per cent and some increase in the share of construction, while the share of industry has remained relatively unvarying at 20 per cent (Graph 3.3).

Structural transformation is typically associated with reduced dependence of the population on agriculture and increased migration from low-productivity agriculture to high-productivity sectors of industry and services in search of employment. Since these sectors are based in urban areas, rapid economic growth is normally associated with urbanization. The Indian experience of economic growth and structural transformation in the period 1980-2005 (for which employment data are also available by sector), however, is associated with only a moderate decline in the share of agriculture in total employment in the economy (Graph 2.4).

Table 3.1: GDP GROWTH

Year	Agriculture	Industry	Construction	Services	GDP
1951-61	3.1	6.1	6.8	4.2	3.9
1961-71	2.5	5.4	5.6	4.8	3.8
1971-81	1.8	4.4	3.3	4.4	3.2

1981-91	3.5	6.7	4.7	6.6	5.4
1991-01	2.8	5.7	5.1	7.3	5.6
2001-11	3.1	6.9	10	9.4	7.7
2001-02	6.3	2.4	4	7.2	5.8
2002-03	-7.2	6.8	7.9	7.5	3.8
2003-04	10	6	12	8.5	8.5
2004-05	0	8.5	16.1	9.1	7.5
2005-06	5.8	8.1	16.2	10.6	9.5
2006-07	4	10.7	11.8	11.2	9.7
2007-08	4.9	7.4	10.1	10.9	9
2008-09	1.6	2.6	7.2	9.7	6.7
2009-10	0.4	8.3	7	10.1	8
2010-11	5.4	8.2	8	9.6	8.6
Source: CSO					

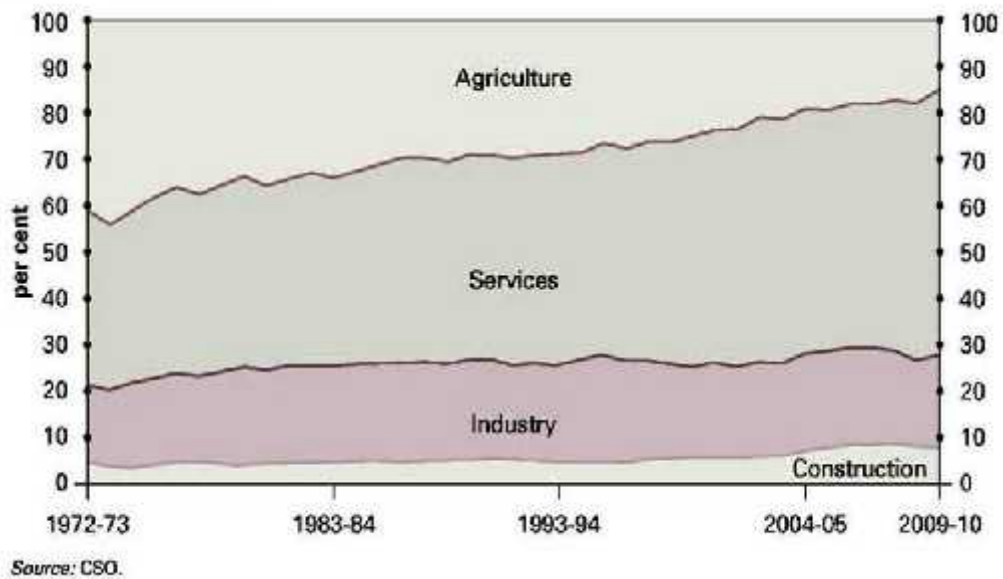
The decline in the agricultural sector's share in employment in the 1980s was small, and even in the decade from 1993-94 to 2004-05 when it was faster, the share only fell from 64 per cent to 52 per cent. The industrial sector failed to draw an increased share from agriculture as industry's share in total employment in the economy actually decreased, contrary to the normal process of economic growth. Services were the principal sector recording a sharp increase in the share of total employment. Since GDP growth was coming from highly skilled services such as information technology (IT), telecom, and banking, or from sophisticated manufacturing industries like engineered goods and pharmaceuticals, it did not draw much labour from rural areas. Overall, growth of urban population which had already decelerated from 3.9 per cent per annum in the 1970s to 3.2 per cent per annum in the 1980s, further slowed down to 2.8 per cent per annum in the 1990s (**Table 2.2**).

The transformed growth scenario in the economy in the 2000s and the expected acceleration in the growth of GDP, increasingly moving towards labour-intensive manufacturing, construction, and services, should augur well for migration in the years ahead. As more states join the fray of improving their investment environment through economic reforms, this should increase opportunities for non-agricultural employment. As the faster growth is expected to occur in the context of a more open economy, employment elasticity of the growth should increase. This should lead to greater employment opportunities in the industry

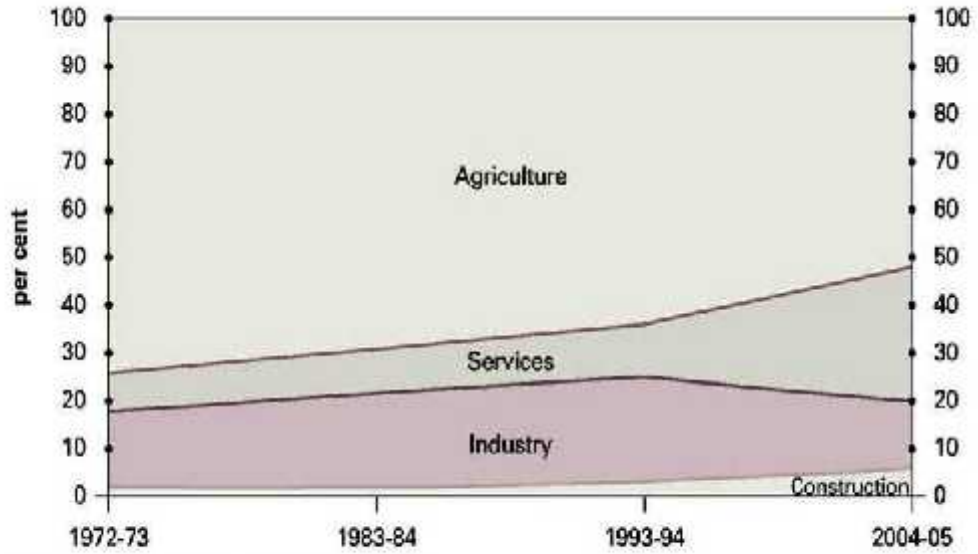
and services sectors, and larger migration from rural to urban areas. Other forces contributing to urban growth would be expansion of city boundaries, large villages growing into towns in situ, and emergence of new towns either planned or the result of market forces possibly along the transport and growth corridors.

However, flexibility in the use of labour in the industrial sector in India is severely constrained by the Industrial Disputes Act of 1947 which requires a firm with more than 100 workers to obtain written permission from the State Government for lay-off, retrenchment, and closure. Reservation for the small-scale sector for certain products has also stood in the way of large-scale labour-intensive manufacturing units exploiting export opportunities, although this policy is being slowly phased out.

Graph No 2.3 Share of GDP by Sector



Graph No 2.4 Share of Employment by Sector 1972 To 2004-05



Source: National Sample Survey Organisation (NSSO).

Table 3.2: Gross Increase Adjusted For Reclassification

	1971- 1981	1981- 1991	1991- 2001	2001- 2011	1971- 1981	1981- 1991	1991- 2001
Cities	4.4	3.7	3.5	2.7	3.7	3.2	2.9
Metropolitan Cities	4.2	4.9	4.2	3.5	2.8	3.8	2.9
Class IA	5.5	4.3	4.8	3.3	2.7	3.4	2.8
Class IB	2.7	5.7	3.5	3.8	3.4	4	3.1
Other Cities (Class IC)	2.6	2.6	1.7	4.2	3.1	3.3	
Towns	2.7	2.4	1.5	1.6	3.4	3.2	2.3
Class II	4.1	2.8	1.6	1.6	4.8	3.7	2.5
Class III	2.4	3	1.9	1.6	2.7	3.4	2.3
Class IV+	1.9	1.3	1	1.6	2.3	2.4	2.2
Memo:							

Urban Population	3.9	3.2	2.8	2.4			
Rural Population	1.8	1.8	1.7	1.2			
Total Population	2.2	2.1	2	1.5			

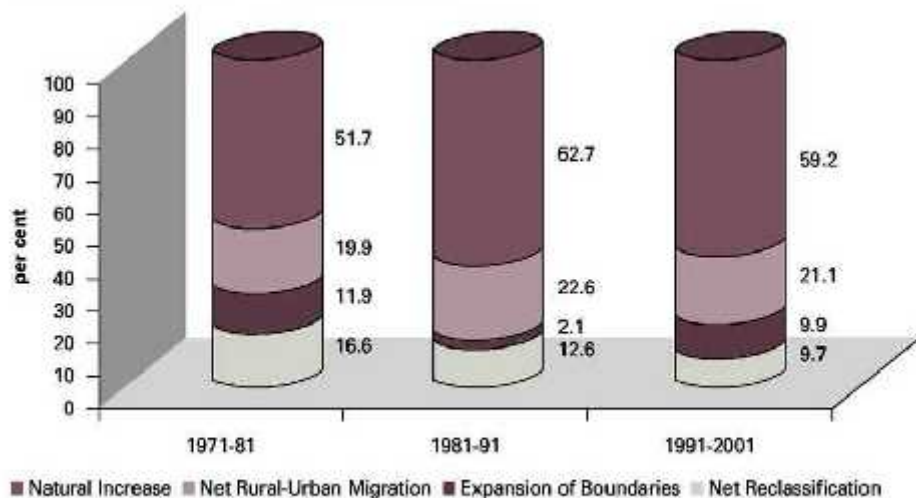
(Source: Census of India).

Some turnaround from a decelerating trend of urbanization may be expected in the decades ahead and a larger response of migration to the acceleration in economic growth as also expansion of city boundaries may occur in the years ahead. Available estimates suggest that by 2031, the urban population of India would be 598 million, or just short of 40 per cent of the total population. The UN population projections estimate that the urban population of India will be larger than its rural population by 2045.

3A.10. Contribution of Migration from rural areas

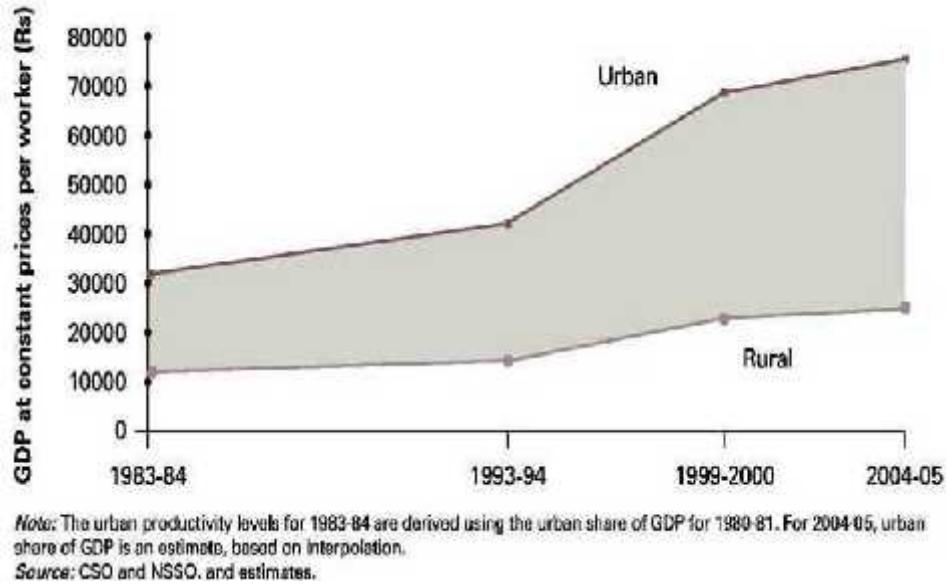
An important feature of urbanization in India during the period 1981-2001 was the relatively small contribution of migration to the increase in urban population in India. As Chart 1.5 shows, net migration from rural areas contributed about 21 per cent to the increase in urban population in the 1990s, a little smaller than its contribution of 22.6 per cent in the 1980s. These figures, however, do not include seasonal migration. Natural increase has been by far the largest source of increase in urban population (62.7 per cent in the 1980s and 59.2 per cent in the 1990s). A recent survey carried out by National Council for Applied Economic Research (NCAER) and Future Capital Research (2008) suggests a much larger in-state migration in Coimbatore, Hyderabad, and Chennai compared with cities like Surat, Mumbai and Bangalore.

Graph No.2.5 Labour Productivity: Urban and Rural



Source: Census of India.

Graph No 2.6: Per Capita Income and Urbanization Levels: Urban & Rural 2008

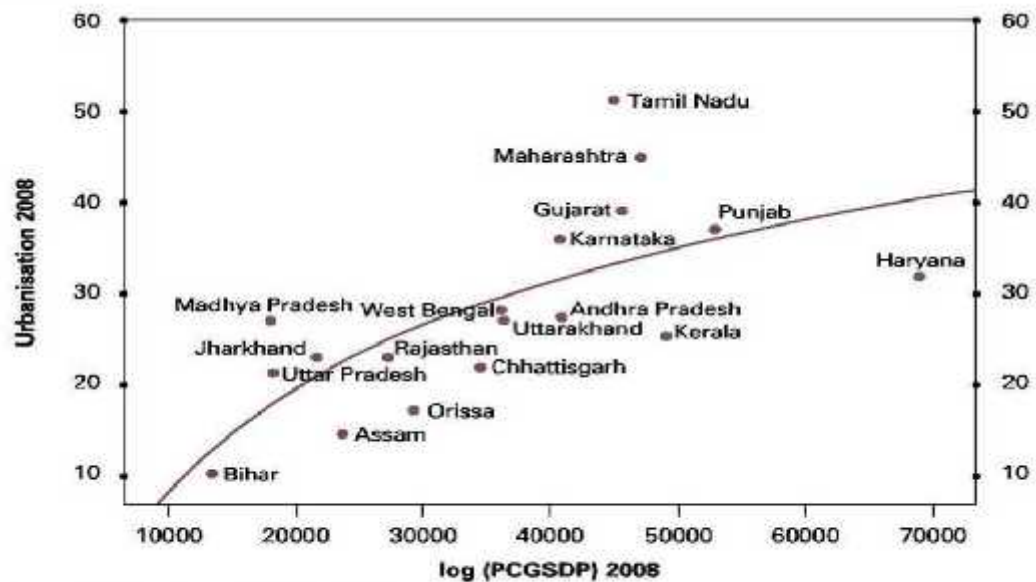


Unlike what would be predicted by the standard theories on rural-urban migration like Lewis (1954) and Harris-Todaro (1970), the evidence in India suggests that the rural-urban differentials in productivity have widened since 1993-94, indicating that there is considerable scope for migrants to take advantage of the higher-productivity non-agricultural sectors if they can be equipped with the skills and education relevant for employment in urban areas. The economy seems to be far from reaching saturation point in migration and it is reasonable to expect a hastening in the pace of urbanization (**Graph 1.6**). The McKinsey Report (2010) on India's urbanization prospects estimates that over the period 2010-2030, urban India will create 70 per cent of all new jobs in India and these urban jobs will be twice as productive as equivalent jobs in the rural sector.

3A.11. Urbanization across the States of India

The relationship between urbanization and income levels across the states of India is depicted in **Graph 2.7** which shows higher levels of per capita income with higher levels of urbanization. Some relatively higher-income states such as Tamil Nadu, Maharashtra, Gujarat, Karnataka, and, to some extent, Punjab have higher urbanization levels than would be predicted by their income levels, given the equation. Interestingly, states such as Uttar Pradesh and Madhya Pradesh are also more urbanized by the same token. West Bengal and Rajasthan appear to be somewhat less urbanized than expected. Haryana and Andhra Pradesh show significant urbanization deficits, given their per capita incomes, as do the relatively lower income states such as Assam, Bihar, and Orissa.

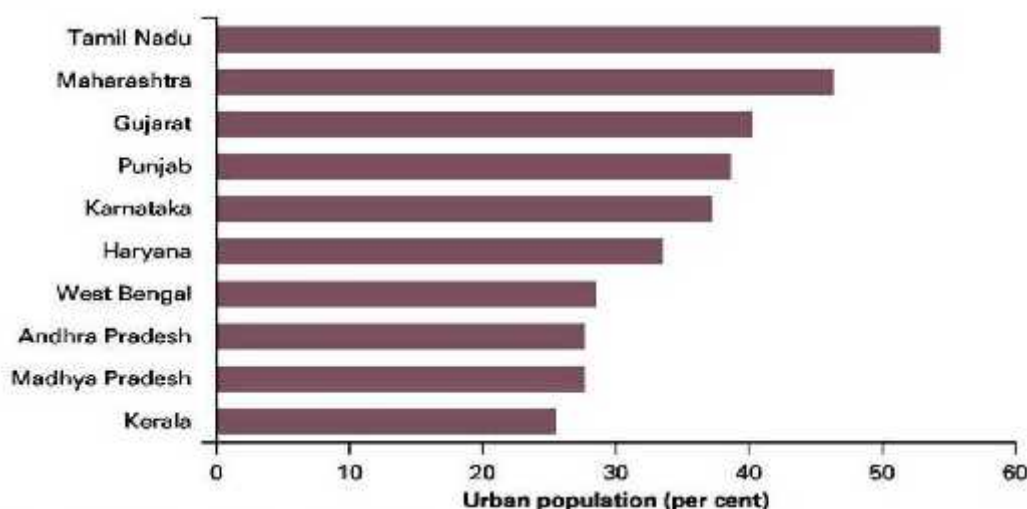
Graph No 2.7: Per Capita Income and Urbanization Levels: States 2008



Note: PCGSDP stands for per capita gross state domestic product.
Source: Estimates based on Census of India data and CSO.

Among the major states, Tamil Nadu is the most urbanized state of India with 54.4 per cent of its population living in urban areas, followed by Maharashtra (46.2 per cent) and Gujarat (40.3 per cent) (**Graph 2.8**). The seven states of Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Tamil Nadu, Uttar Pradesh, and Maharashtra are expected to account for 62 per cent of India's urban population in 2011. Trends in urbanization in India have necessarily to be seen in the context of overall trends in population growth. India is experiencing a significant slowing down of population growth in the period 2001-11. As **Table 2.2** shows, growth of population went down from 2.1 per cent per annum in the 1980s to 2 per cent per annum in the 1990s. It is estimated to decelerate to 1.5 per cent per annum in the decade 2001-11.

Graph No 2.8: Urbanization Ranking: Top 10 Major States of India 2011



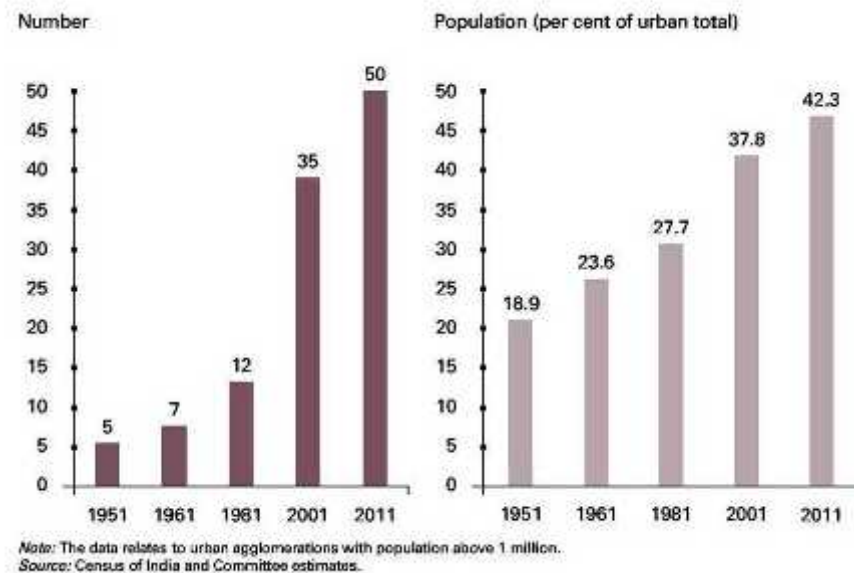
Source: Estimates based on Census of India data.

⁹ Tamil Nadu got ahead of Maharashtra and Gujarat in the race to urbanisation in the Census of 2001 when more than 1000 rural settlements were classified as urban in all states of India, of which nearly 400 were in Tamil Nadu.

An important characteristic of India's urbanization is the 'metropolization' of cities. In 1951, there were only five metropolitan cities (with population of over 1 million), i.e., Kolkata, Mumbai, Chennai, Hyderabad, and Delhi. Their number increased to 12 in 1981 and 35 in 2001 (**Graph 2.9**). Their share in urban population increased from 18.9 per cent in 1951 to 27.7 per cent in 1981 and 37.8 per cent in 2001. By 2001, all the original five metropolitan cities had grown to population of over 5 million, and Bangalore had joined their ranks (**Table 2.3**). The 29 cities which had population between 1 million and 5 million in 2001 included four state capitals, i.e. Jaipur, Lucknow, Bhopal, and Patna, and other cities such as Meerut,

Faridabad, Pune, Surat, Nagpur, Kanpur, and Ludhiana. In 2011, the number of such cities has touched 50 and their population accounts for 42.3 per cent of the total urban population. Ahmedabad and Pune join the rank of cities with population over 5 million.

Graph No 2.9 Metropolitan Cities: Number and Population



Within the metropolitan cities, the 'Big Eight' (Mumbai, Delhi, Kolkata, Chennai, Hyderabad, Bangalore, Ahmedabad, and Pune) with population exceeding 5 million (50 lakh) may have grown at a slower rate than others, but the sheer magnitude of their numbers and their importance in generating agglomeration economies and economic growth call for urgent attention to their urban infrastructure deficits and the state of service delivery. Some of the big metros like Hyderabad and Bangalore have experienced peripheral expansion with smaller municipalities and large villages surrounding the core city becoming part of the larger metropolitan area.

The bulk of the increase in population share of large cities has come about as a result of the moving up of cities and towns from the lower size categories to higher ones. As cities and towns became larger, a phenomenon commonly known as 'size-class jumping' or 'graduation' of lower order settlements occurred.

Table 3.3: Big Eight City Demography

Population (in million) Cities				
CITY	1981	1991	2001	2011
Mumbai	9.4	12.6	16.4	22.7
Kolkata	9.2	11	13.2	18.3
Delhi	5.8	8.5	12.9	17.9
Chennai	4.2	5.3	6.6	9.1
Hyderabad	2.6	4.3	5.7	7.9
Bangalore	2.9	4.1	5.7	7.9
Ahmedabad	2.6	3.4	4.5	6.3
Pune	1.7	2.5	3.8	5.4

* The 'Big Eight' metropolitan cities have been defined as those with population above 5 million. (Source: Census of India and Committee Estimates.)

A similar phenomenon of peripheral expansion is beginning to emerge in smaller metros like Indore, Surat, and Nagpur. The proliferation of slums is also not limited to big metros like Mumbai and Kolkata, but has afflicted smaller metropolitan cities like Meerut, Faridabad, and Nagpur as well. The group of smaller metropolitan cities (Class IB) are expected to continue to grow faster than the 'Big Eight' (Table 2.2). Cities such as Faridabad, Kanpur, Lucknow, Patna, Amritsar, and Ludhiana would need urgent attention before the challenges facing them acquire the scale and proportion of those facing the big metros.

The fastest growth in the 1990s has been of Nashik and Faridabad, which were non-metropolitan cities, i.e. cities with population between 0.1 million and 1 million, to begin with, but crossed the threshold to become metropolitan cities in 2001. Other non-metropolitan cities, i.e. cities with population less than 1 million that have grown very rapidly are Jamnagar, Junagad, Mangalore, Gulbarga, Aurangabad, Solapur, and Nanded-Waghala.

It is worth noting that population growth of Indian towns has been slowing down, particularly in the 1990s. Their population growth decelerated from 3.4 per cent per annum in the 1970s to 3.2 per cent per annum in the 1980s and 2.3 per cent per annum in the 1990s. Migration

from villages has been largely to the metropolitan cities, and the small and medium towns have languished for want of an economic base.

The lower share of urban population in smaller towns, and the relatively slower growth of these towns compared to larger urban centres, has implications for how the urbanization challenge needs to be managed. The 3984 Class II and smaller towns with population of less than 100,000 in India also have very different levels of managerial and governance systems compared to larger Class I and metropolitan cities. Hence, interventions for preparing our cities will need to distinguish between the challenges and capacities of larger cities versus the smaller towns in the country.

Notwithstanding the growing and disproportionate importance of the 'big' cities, public policy needs to take note of the smaller urban centres particularly because of their weak economic base, high incidence of poverty, and lack of access to benefits which are available to rural areas. Besides their large number, often the smaller centres are very different from their 'bigger' counterparts in their problems and hence in the solutions to these problems. For example, the internal capacities of the smaller urban local bodies (ULBs) are likely to be much less than of the bigger Corporations. Similarly, the economies of scale argument in service provision that works for big ULBs may not be equally applicable for many smaller ULBs. Hence policy interventions need to be differentiated to address these challenges.

A large number of well-endowed centrally sponsored schemes targeted at the rural sector, e.g. Bharat Nirman, the National Rural Health Mission (NRHM), National Rural Employment Guarantee Scheme (NREGS), Swarnajayanti Gram Swarozgar Yojana (SGSY), and Pradhan Mantri Gram Sadak Yojana (PMGSY) have also contributed to holding back migration from rural areas. It is important to recognize that some of the rural areas are future candidates for urban centres. There were 18,760 villages with more than 5000 population each in 2001. The development of these villages needs to be nurtured through proper planning so that they do not annex to urban India as unplanned and haphazard settlements or slums. Their spatial and functional linkages to growing cities and own hinterlands need to be secured so that they become centres of agglomeration economies.

3A.12 Agglomeration, Economic Geography and Development Synergy

3A.12.1 Agglomeration

As economies move to a more mature phase of development, they become more knowledge-based and service-oriented. Notwithstanding the IT revolution and death of distance' arguments, there are aspects of agglomeration and the resultant spatial concentration which remain intrinsic to the industry and services sectors.

Cities tend to be the reservoirs of skill and capital and centres of knowledge and innovation. The proximity of firms, individuals, and institutions gives rise to agglomeration economies that play an important role in lowering the costs of new firms as they enter the manufacturing and services sectors. Agglomeration economies arise from localization and urbanization.

3A.12.2 Reshaping Economic Geography

Cities, migration, and trade have been major catalysts of progress in the developed world over the past two centuries. These stories are now being repeated in the developing world's most dynamic economies. Growing cities, ever more mobile people, and increasingly specialized products are integral to development. These changes have been most noticeable in North America, Western Europe, and Northeast Asia. But countries in East and South Asia and Eastern Europe are now experiencing changes that are similar in their scope and speed.

Just as a primary city forms the core of a country's metropolitan area with adjacent cities, other large urban centres or secondary cities act as regional foci for both the economy and society. For example, they are the local centres for the financial sector, which serve the areas around them. Smaller cities within these areas constitute more specialized urban centres, typically focusing on manufacturing and the production of traditional and standardized items. Symbiosis is the ruling order. The larger cities depend on the smaller ones for the daily provision of workers through commuting. Towns draw sustenance from the agricultural activity of rural areas, but their prosperity also spills over to villages by providing non-farm employment opportunities. Towns act as market centres for agricultural and rural output, as stimulators of rural non-farm activity, as places of seasonal job opportunities for farmers, and as providers of secondary education and health care services.

The World Development Report 2009 argues that some places are doing well because they have promoted transformations along the three dimensions of economic geography:

- Higher densities, as seen in the growth of cities;
- Shorter distances, as workers and businesses migrate closer to density;
- Fewer divisions, as countries thin their economic borders and enter world markets to take advantage of scale and specialization.

In places urbanizing rapidly, governments must put in place, in addition to institutions, connective infrastructure so that the benefits of rising economic density are more widely shared.

Localization economies arise from the advantages of locating firms of an industry in a neighbourhood so that when the scale of an activity expands, the production of many intermediate services becomes profitable. This improves access of co-located firms to specialized suppliers of intermediate inputs of goods and services and also to a pool of skilled workers. Clustering of firms also reduces the uncertainty in the adoption of new technology through smooth flow of information and technology spillovers. Intra-industry spillovers are localization externalities.

Urbanization economies accrue to all firms located in an urban area and result from the scale and diversity of the entire urban area. The larger and more diverse markets enable greater division of labour. A large concentration of firms and individuals results in reduction of transactions costs, sharing of risks, and better matching of skills to jobs. Ease of contact and informational spillovers between firms and individuals make cities the centres of technological innovation and diffusion. An additional feature of urbanization in developing economies is the creation of large urban informal sectors which are not captured by the standard sources of data.

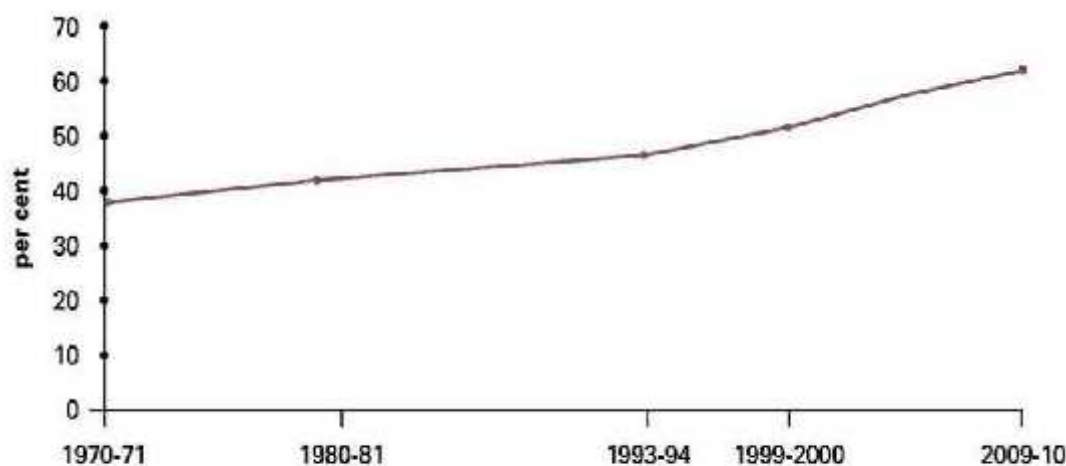
Agglomeration economies rely on provision of basic urban infrastructure services in general, and urban transport infrastructure in particular. In the absence of the latter, diseconomies could set in from traffic congestion, environmental degradation, deterioration in civic services, and air and water pollution. In order for cities to perform their role as engines of economic growth and innovation, it is very important to integrate the competing demands of commerce, transport including public transport, and housing including affordable housing for the poor. The challenge lies in augmenting the agglomeration advantages of cities while minimizing their congestion diseconomies.

3A.12.3 Creating Synergy with Rural Development

In industrialized economies, economic activity in urban areas accounts for as much as 80 per cent of GDP. The urban share of economic activity in less-developed economies is typically around 50 per cent. In India, in 1999-2000, cities and towns contributed 51.7 per cent to the GDP, and the share is estimated to be around 62 per cent in 2009-10 (**Graph 1.11**). By investing in urban infrastructure, putting in place systems of public service delivery which cater to the service norms for one and all, and planning for transport and housing with special attention to affordable housing for the poor, inclusive urbanization can replace parasitic urbanization which is otherwise inevitable. District Planning Committees (DPCs) can play a very important role in integrating rural and urban planning. Housing also acts as a source of agglomeration by its important role in generating economic activity through its multiple linkages with several sectors.

As the agglomeration economies in cities energize industrial growth in a new competitive environment, there will be synergetic linkages with agriculture. The revival of the agricultural sector itself is crucially linked to the manner in which growth in the industry and services sectors unfolds. While investments in agricultural R&D (research and development), soil and water management, and biodiversity in the wake of climate change are important to realize the potential of agriculture in India, the quantum and quality of value addition in agriculture will be increasingly determined by growth of the non-agricultural sector. For example, in the high value agricultural sector (including fruits and vegetables, livestock, fishery), which accounts for about half of the value of agricultural produce in India, more than half the value addition takes place after these products leave the farms.

Graph No 2.10: Urban Share of GDP (per cent)



Source: CSO and Eleventh Five Year Plan.

As urbanization grows, food budgets of households will be spent more on fruit, vegetables, milk, etc., and more food will have to be transported from rural hinterlands to urban demand centres. This will lead to more investments in infrastructure, logistics, processing, packaging, and organized retailing. These investments connect and build synergy between rural India and urban centres. They ensure not only efficient supply lines but also seamless flow of goods from rural to urban areas and substantially increased incomes for farmers (Gulati et al. 2011). People living in rural areas typically tap the opportunities that cities provide for employment, entrepreneurial avenues and learning. The boundaries of urban settlements are usually more blurred than may be portrayed by administrative delimitations. Technologies like mobile phones and satellite television have further blurred the rural-urban divide. Policies can play an important role in generating an urban-rural synergy rather than fearing a rural-urban divide.

Cities perform a critical role in generating resources for both urban and rural development by creating an agglomeration-related tax base. Funding of rural programmes would simply not happen unless cities develop and generate revenues of central, state, and local governments for both urban and rural development. This is the basic argument for urbanization as an engine of rural development and overall economic development.

Rising standards of living in India's urban areas in the post-reform period appear to have had significant distributional effects favoring the country's rural poor. **(Datt and Ravallion, 2009)** document that the non-farm sectors that use unskilled labour more intensively, notably trade, construction, and unorganized' manufacturing, have seen higher employment growth in the post-reform period, because the urban and rural sectors are now positively interlinked in a number of ways through trade, migration, and transfers. While the rural poor have benefited more from urban economic growth in the post-reform period, they are also likely to be more vulnerable in the future to urban-based economic shocks. The fortunes of the rural and urban populations will be increasingly linked in the years to come.

Whether it is through agglomeration economies in existing and expanding cities or through location of industry in Industrial Corridors or Special Economic Zones or through developing new towns in the rural periphery, urban settlements and cities will play a very important role in India's new dynamics of growth. India's policymakers and planners must ensure that cities

are provided with infrastructure and governance systems so that they can perform their new role effectively. At India's current stage of development, it is not only expected that there will be an increase in migration to cities in search of high-productivity jobs, but also that cities will act as engines of rural development.

3A.13 Planning for Urbanization

Preparing India's cities for a rapid growth scenario will require a paradigm shift in planning for urban infrastructure and reforming the institutions for service delivery. Regional and urban planning have an important role to play in generating new spaces and in rejuvenating existing city spaces so that a healthy socio-economic environment can be created in which the fast-growing urban population of India can live with higher standards of public service delivery and contribute to growth.

In view of the fact that the Indian strategy of industrialization was crucially anchored in a framework of centralized planning, it is ironic that there was no deep engagement with planning in the urban sector, and that socio-economic planning was not linked to spatial planning. Instead of exploiting agglomeration economies' to drive the efficiency of cities and thereby their growth potential and creativity, attention was focused on the rhetoric of diversion'. The Fourth and the Fifth Five Year Plans covering the period 1969-79 explicitly envisaged the creation of smaller towns in order to prevent further growth of population in large cities. The National Commission on Urbanization in its report in 1988 had stressed the need to reap the benefits of agglomeration economies. The Seventh Five Year Plan (1987-92) recognized that urbanization is a phenomenon which is part and parcel of economic development. Certain activities are best performed in, indeed require, agglomeration of people.' Subsequently, at the time that India launched market-oriented economic reforms in the early 1990s, the Eighth Five Year Plan (1992-97) identified the widening gap between the demand and supply of urban services, the rapid growth of urban population aggravating the accumulated backlog of shortages of housing and infrastructure, and high incidence of urban poverty. But even then, urban planning received inadequate attention.

A beginning was made with the 74 Constitutional Amendment Act of 1992, which mandated the setting up of elected municipalities as institutions of self-government' thereby creating political space for ULBs within India's federal framework, and recommended that state governments devolve a specified set of functions to the local governments. The concentration

of the Amendment, however, was more on the governance aspects of a city and less on its planning aspects. These are dealt with by the Town planning Acts. In the instance of Maharashtra, it is the Maharashtra Regional and Town Planning Act. This study deals with that aspect in detail in its future chapters.

It is quite evident that as the Indian economy engages in major structural transformation, planning for urbanization assumes enormous importance, because that is where the future of India lies. The study delves into the current status of such planning and derives on the basis of the emerging urbanizing scene, the inadequacies in the planning process.

Summary

An important feature of urbanization has been the 'metropolization' of cities. However, rural migration's contribution to urbanization has been modest. Studies reveal that there are positive linkages between economic growth and urbanization. But the quality of opportunities provided in the process of urbanization is significant. There is also evidence that cities are critical in generating resources for urban and rural development. In view of this, cities need to be kept well oiled through the provision of infrastructure and governance. Planning for urbanization assumes huge significance and a paradigm shift is required for crafting urban infrastructure and service delivery.

3B. URBANIZATION TRENDS AND FEATURES OF URBANIZATION IN STUDY AREAS

This chapter outlines the global, Asian and Indian urbanization trends and the definitional variations of the term urbanization across countries. It then briefly recounts contours of urbanization in Maharashtra and its select cities including those that are the focus of this research and makes a brief comparative analysis of the key attributes of such urbanization.

3B.1. Global Urbanization Trends

"Urbanization, the spatial concentration of people and economic activity, is arguably the most important social transformation in the history of civilization". It has been no secret that countries of the world have been urbanizing at different speeds for the last several centuries. This trend, however, strengthened over the last hundred years and more so in the last fifty years. In view of the massive urbanization that happened in the course of the twentieth century, humanity for the first time began living more in towns than in villages. Hence the twenty-first century has widely been recognized and labeled as the "Century of the City".

In 1950, some 733 million people, or 29% of the world's population, lived in urban areas. By 2005, the urban population had grown to an estimated 3,172 million or 49% of the population. By 2030, it is estimated that 4,945 million people, almost 61% of the world's population, will be urban. The urban population is set to increase by more than 55%, or 1,770 million, in the next 25 years while the rural population is estimated to decline by 3% or 96 million. Between 1950 and 2030, the population of the world is set to change from about 70% rural to 60% urban. (UN World Urbanization Prospect, 2000) UNDP, however, cautions that the data are based on national definitions of what constitutes a city or metropolitan area. These definitions may vary leading to some complication about global comparisons. (Box 1.1)

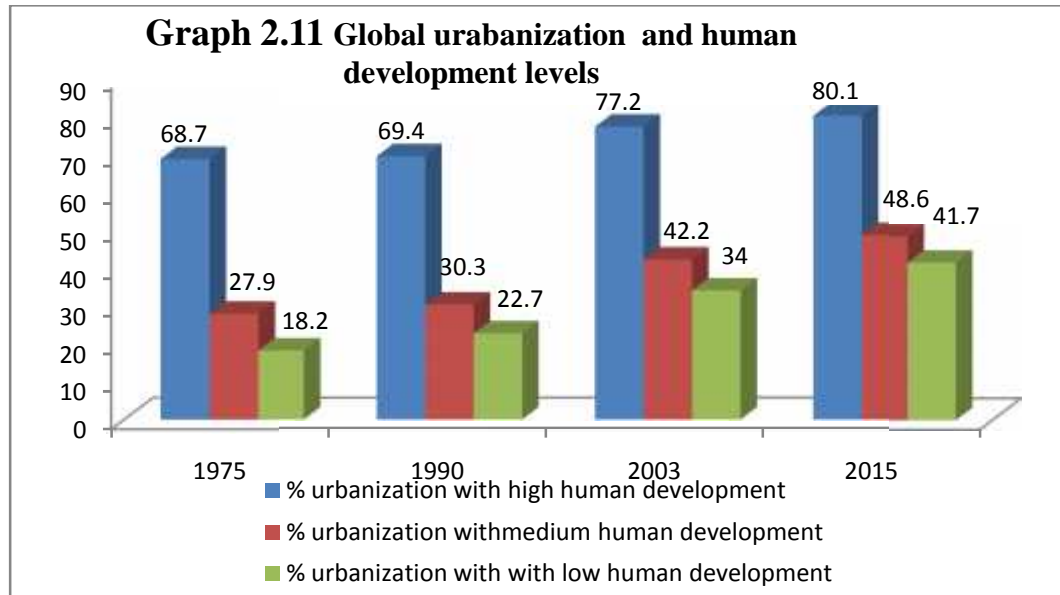
To begin with, the developed world displayed the first and heaviest signs of urbanization, primarily in the 1950s and 1960s. Sometime before the end of the twentieth century, the process of urbanization in these countries had already and substantially run its course and their city populations had generally stabilized. By 1975 they were well past the half way mark and between 1975 and 2003 their urban population rose only about 8 per cent. These

countries also broadly happen to be countries with the highest GDP per capita, mostly in Europe, North America and Latin America. A demographic analysis of cities such as New York, London bears this out. New York's population has been hovering between 7.7 million and 8.2 million between 1960 and 2010. Similarly, London has been demographically stagnant in numbers between 1960 and 2010, at around 7 million. Urban demographic data globally collected by the United Nations Development Programme (UNDP) over several decades reveals the following data. A country's human development level is based on the human development index. The HDI (human development index) is a summary measure of human development. It measures the average achievements in a country in three basic dimensions of human development: a long and healthy life, as measured by life expectancy at birth; knowledge as measured by the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio; a decent standard of living, as measured by GDP per capita.

Table No 3.4: Global Urbanization Levels

HUMAN DEVELOPMENT LEVELS	1975	1990	2003	2015
Per cent urbanization in countries with high human development	68.7	69.4	77.2	80.1
Per cent urbanization in countries with medium human development	27.9	30.3	42.2	48.6
Per cent urbanization in countries with low human development	18.2	22.7	34.0	41.7

(Human Development Report 2005 & 2009, UNDP)



The cited Table clearly indicates that countries with high human development are the most highly urbanized. Countries with medium human development come next. They are credited to have added, during the same cited period about 14 per cent to their urban population. However, in the developing world, the growth of cities has picked up greater speed during the past few decades leading to a cumulative process of transition of the world from predominantly rural to largely urban settlements. These countries, mostly in Asia and Africa added about 16 per cent to the urban population.

This remarkable urban revolution is recorded in the following words: “The 21st century is the Century of the City. Half of the world’s population already lives in urban areas and by the middle of this century, most regions of the developing world will be predominantly urban. ” **(UN-HABITAT, 2008)**

The ongoing urbanization percentages for the three groups of countries between 2003 and 2015 are expected to be 2.9, 6.4 and 7.7 per cent. Quite clearly, urban growth rates are highest in the developing world and are likely to be so over several coming decades. The UN-HABITAT Report on the State of The World's Cities, 2009 states that the developing world "absorbs an average of 5 million new urban residents every month and is responsible for 95 per cent of the world's urban growth". It further states that by 2050, “the urban population of the developing world will be 5.3 billion; Asia alone will host 63 per cent of the world's urban

population, or 3.3 billion people, while Africa, with an urban population of 1.2 billion, will host nearly a quarter of the world's urban population." (UN-HABITAT, 2008)

Apart from the overall reality that urbanization has been a historical trend and a natural concomitant of economic development, there are many other underlying causes of this phenomenon that reveal large variations in what has propelled and is propelling urbanization and in the manner in which urbanization has manifested in different countries. We have known that geography has played an important part in the urbanization of the past and coastal zones and areas along river banks have a natural propensity to urbanize. Data reveals that fourteen of the world's 19 largest cities are port cities. However, there is evidence now that cities of late have grown faster in other eco systems. Clearly technological progress and state policy in regard to economic development through pro-urban thrusts and industrialization have been important catalysts in this transformation.

Governments take major decisions in regard to public and private investment and lay the road map for the creation of green-field infrastructure. They pump in resources for such construction, as well as for up gradation and refurbishment, operation and maintenance. "A preliminary UN-HABITAT analysis of the fastest growing cities in the developing world shows that more than 40 per cent benefited from the diversification, expansion or improvement of regional or national transport systems, including roads, airports, urban and inter-urban railway lines and ports." (UN-HABITAT, 2008)

One of the most remarkable ways in which Governments have impacted urbanization has been through the creation of special economic zones. These special areas are blessed by Government with tax exemptions and other modes of facilitation with the objectives of attracting investment, promoting employment, generating exports and supporting these growths through creation of infrastructure. In Asia, in particular, SEZs have fuelled rapid urbanization and the most startling example is that of Shenzhen in China. "It experienced a phenomenal growth rate of 20.8 per cent, slightly more than the city's economic growth rate of 16.3 per cent in the 1990s. Shenzhen's population grew from fewer than 1 million inhabitants in 1990 to 7 million by 2000." By 2025, UN-HABITAT suggests that it would be the 25th largest city in the world.

Migration, particularly rural to urban, for a considerable period of time was a major urbanization factor. But there are several other nuances to migration in this process of urbanization. Natural population multiplication from within cities now accounts for almost 60 per cent of urban growth. The remaining 40 per cent of urban growth is on account of migration, either rural to urban in some cases, or urban to urban in other cases and international in some other. What is now fairly clearly observed is that the pattern of migration is impacted by levels of national development. "In countries with low levels of urbanization, migration is often the primary engine driving economic growth, as in the case of various countries in Asia and Africa. In many other countries, the largest movements of population are taking place between cities and not from rural to urban areas. In Latin America and the Caribbean ...where almost 80 per cent of the population lives in cities ...half of all migrations originate and end in cities and natural growth accounted for less than 20 per cent of urban growth." **(UN-HABITAT, 2008)**

In Africa, both positive economic growth and negativities such as conflict and disaster have been contributing factors. Drought, famine and ethnic conflicts have driven people away from the unprotected rural regions to the safer urban centres. "The region's most distinguishing urban characteristic is the presence of high concentration of people and investments in the single largest city of its countries, in most cases, the capital. This phenomenon, known as 'urban primacy', characterizes urbanization in Africa today, as it did in Latin America and the Caribbean in past decades." **(UN-HABITAT, 2008)**

In Asia, metropolitan growth has been a prominent urban feature. "In 2000, the region contained 227 cities with 1 million or more residents with 21 cities with 5 million or more inhabitants.....Moreover, of the 100 fastest growing cities with populations of more than 1 million inhabitants in the world, 66 are in Asia..... among these fastest growing cities, 33 are Chinese. In fact, China hosts half of the urban population of the developing world." **(UN-HABITAT, 2008)**

It is interesting to see the following table on the world's mega cities as they ranked in 2007 and would, in all probability, rank in 2025. As demonstrated by the figures, there is a lot of rank movement among the cities and only Tokyo, Sao Paulo and Kolkata maintain their positions at 1, 5 and 8. Mexico City, New York, Shanghai and Buenos Aires move down while Mumbai, Delhi and Dhaka, all three South Asian cities, move up.

Table No 3.5: Top 10 Global Cities (By Demography)

City	Population 2007 (Thousands)	Rank	Projected Population 2025 (Thousands)	Projected Rank
TOKYO	35,676	1	36,400	1
MEXICO CITY	19,028	2	21,009	6
NEW YORK- NEWARK	19,040	3	20,628	7
MUMBAI	18,978	4	26,385	2
SAO PAULO	18,845	5	21,428	5
DELHI	15,926	6	22,498	3
SHANGHAI	14,987	7	19,412	9
KOLKATA	14,787	8	20,560	8
DHAKA	13,485	9	22,015	4
BUENOS AIRES	12,795	10	13,768	16

(UN-HABITAT 2008/2009)

Improvement in the quality of life in cities such as public amenities, more open spaces and better transport and water, better education and health has been a significant driver. Among these, transport communication is the most important driver of city growth. Such connectivity underlies the opening up of a region to economic growth coupled with demographic growth. This is especially significant for cities in close proximity to large urban centres. Information technology and financial service sectors has been another important economic driver. It would, however, be wrong to predict that all cities around the world are growing. The overall urbanization figures do conceal more micro truths within nations.

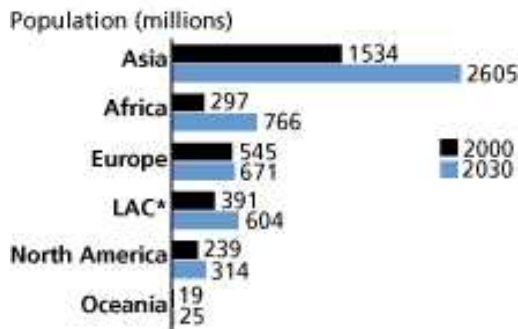
What is also significant about urbanization is the huge social challenges that are emerging. Cities are becoming more unequal and more prone to sudden social crises. The most notable phenomenon is the unbridled growth of slums in cities. This phenomenon has serious dimensions of spatial inequality. Along with social challenges cities are increasingly faced with environmental challenges. Both would require serious attention if cities were to continue to be human settlements worth living and working.

3B.2. Asian Urbanization Trends

Of the many intense changes which have impacted Asia during the last half-century, none have been so deep and far reaching as the doubling of its urban population. This has involved adding around 44 million people to the population of cities every year and 120,000 people every day. In Asia in 1950, some 232 million people, or 17% of the population, lived in urban areas. Over the following 55 years to 2005, the urban population grew nearly sevenfold to an estimated 1,562 million, clocking 40% of the population. By 2030, it is estimated that 2,664 million people, or almost 55% of the population in the Asia region, will be urban, representing an increase of over 70% or 1,100 million in the next 25 years. Over this same period, the rural population is expected to decline by 6%, or 133 million. Almost all future population growth in Asia will be in towns and cities. **(Urbanization and Sustainability in Asia 2006)**

According to a United Nation's study, more than 60 percent of the increase in the world's urban population over the next three decades will occur in Asia, particularly in China and India. Other countries that would swell the urban ranks would be Pakistan, Bangladesh, the Philippines and Vietnam. Despite revealing a lower overall level of urbanization in 2030 (53 percent), as against Africa's 55 percent urbanization and Latin America's 83 percent, Asia's total urban population will exceed 2.6 billion in 2030, compared with 604 million in Latin America and 766 million in Africa. The following chart encapsulates these details:

Graph 2.12: Urban Population by Region: 2000 and 2030



Source: UN, *World Urbanization Prospect, 2000*

Unlike other continents, Asia has five countries, each with more than 100 million people that dominate the demographic landscape — China, India, Bangladesh, Pakistan, and Indonesia.

These five constitute 75 percent of the Asian population. By 2030, it is predicted that Iran, the Philippines and Vietnam would join the other five. These eight together will constitute 81 percent of Asia's population. The combined urban population of these eight countries will increase by about one billion people by 2030, making up roughly four-fifths of the total urban increment in Asia.

Along with such colossal urbanization, Asia will dominate the list of world's largest cities. 16 of the world's 24 megacities (cities with more than 10 million people) will be located in Asia, according to the UN's World Urbanization Prospects, cited above. Many of these megacities will be located in China and South Asia. The following table further illustrates the dominance of Asia's largest cities with the passage of decades.

Table No 3.6: Population of Cities with 10 Million Inhabitants or More, 1950, 1975, 2001 and 2015

1950		1975		2001		2015	
City	Population	City	Population	City	Population	City	Population
1 New York	12.3	1 Tokyo	19.8	1 Tokyo	26.5	1 Tokyo	27.2
		2 New York	15.9	2 São Paulo	18.3	2 Dhaka	22.8
		3 Shanghai	11.4	3 Mexico City	18.3	3 Mumbai	22.6
		4 Mexico City	10.7	4 New York	16.8	4 São Paulo	21.2
		5 São Paulo	10.3	5 Mumbai	16.5	5 Delhi	20.9
				6 Los Angeles	13.3	6 Mexico City	20.4
				7 Calcutta	13.3	7 New York	17.9
				8 Dhaka	13.2	8 Jakarta	17.3
				9 Delhi	13.0	9 Calcutta	16.7
				10 Shanghai	12.8	10 Karachi	16.2
				11 Buenos Aires	12.1	11 Lagos	16.0
				12 Jakarta	11.4	12 Los Angeles	14.5
				13 Osaka	11.0	13 Shanghai	13.6
				14 Beijing	10.8	14 Buenos Aires	13.2
				15 Rio de Janeiro	10.8	15 Metro Manila	12.6
				16 Karachi	10.4	16 Beijing	11.7
				17 Metro Manila	10.1	17 Rio de Janeiro	11.5
						18 Cairo	11.5
						19 Istanbul	11.4
						20 Osaka	11.0
						21 Tianjin	10.3

Source: United Nations 2002, 8

Within Asia, however, there are large variations between individual countries and regions. South-Central Asia is the least urbanized part of the region with less than a third (29.8

percent) of its population living in urban areas while Eastern Asia is the most urbanized (41.6 percent). By 2030, two in three residents in East Asia will live in urban areas while the urban proportion will be 44 percent in South Central Asia and 56.5 percent in South-east Asia. **(Urbanization in Asia, 2003)**

In view of such massive urbanization, Asian cities shall have to contend with the provision of employment, infrastructure, environment and issue of equity. Asian cities would require the construction of more than 20,000 new dwellings, 250 kilometers of new roads, and additional infrastructure to supply more than six mega litres of potable water. Traffic congestion and pollution would continue to grow and so would densities and overcrowding. Urban poverty, associated with unemployment and the lack of access to adequate housing and services, would be an increasing social problem. Urban governance, the institutions and arrangements for the planning, provision, and financing of urban infrastructure and services would be no less critical in tackling this magnitude of urbanization.

3B.3. Urban Areas, Census 2001 and the Indian Constitution

One of the most important documents that have attempted to define urban and rural is the Census of India. In 2001, it defined all urban areas as 'town' and rural areas as 'village'. The Census further elaborated that towns are statutory places with a municipality, corporation, cantonment board, notified town area committee and such others so declared by State law. The Census towns were also to simultaneously satisfy the three criteria of a minimum population of 5,000, at least 75 per cent of male working population engaged in non-agricultural pursuits and a population density of at least 400 persons per sq km. In addition, some areas falling in the vicinity of city or town are also considered as urban area if they are treated as out growths (OGs) of the main urban unit. Such OGs are shown as urban agglomerations. As per the Census definition, urban agglomeration is a continuous urban spread constituting a town and its adjoining urban outgrowths (OGs) or two or more physically contiguous towns together and any adjoining urban out growths of such towns. The same Census definition has been adopted in Census 2011.

The Constitution (seventy-fourth) Amendment Act categorized urban areas into *nagarpanchayat* (an area in transition from a rural area to an urban area), *municipality* (institution of self- government constituted under article 243Q) and *municipal corporation* (for a larger urban area). The designation of such areas would be done with

regard to the population of the area, the density of the population therein, the revenue generated for local administration, the percentage of employment in non-agricultural activities, their economic importance or such other factors.

At the other end, beyond a municipal corporation, an area with a population of one million or more, comprised in one or more districts and consisting of two or more Municipalities or Panchayats or other contiguous areas, was categorized as a *metropolitan* area. The Constitution stipulates that each city above 1 million would have a Metropolitan Planning Committee. This Committee will prepare a draft development plan for the Metropolitan area as a whole.

Globally, urban and rural settlements are defined in the national context and vary from country to country (**Box 1.1**). These various approaches could broadly be categorized as administrative (area actually administered by an urban local body), functional (area actually served by ULB), demographic (a prescribed minimum population threshold), economic (a minimum percentage of population engaged in non-agricultural activities) and approaches based on density (a prescribed minimum density of buildings or population) or brick and mortar (a contiguous built-up area). Despite these different approaches, it is possible to get a fair idea from data available, about the urbanization trends in different countries. We shall here deal with India alone.

3B.4. National Urbanization Trends

India was a very predominantly rural society at the turn of the last century. In 1901 it had 10.84 per cent urban population. Its urbanization progressed slowly and reached 19.91 per cent in 1971. In subsequent decades, as per national Census, it reached urban populations of 23.34 (1981), 25.72 (1991) and 27.78 (2001) per cent. The latest provisional census figures reveal that of India's 1.21 billion population, its urban population stood at 31.16 per cent (2011). **Census of India 1981, 1991, 2001 and 2011.**

As per the provisional Census Report 2011, this population accounted for world's 17.5 per cent population, comprising 623.7 million males and 586.5 million females. This was second only to China, the most populous nation on earth, accounting for 19.4 per cent of the global population. The Indian population saw an increase of more than 181 million during the decade 2001-2011. However, India's demographic growth rate fell in 2011 to 17.64 per cent

from 21.15 per cent in 2001. India's headcount now is almost equal to the combined population of the United States, Indonesia, Brazil, Pakistan, Bangladesh and Japan put together.

Box 3.1: Varying Definitions of Urban

China: City districts with an average population density of at least 1500 persons per sq. km; the population in sub-district units and township-level units meeting criteria such as 'contiguous built-up area', 'being the location of local government, having a street', or having a resident committee.

Indonesia: Municipalities (kotamadya), regency capitals (kabupaten), and other places with urban characteristics.

Argentina: Population centres with at least 2000 inhabitants.

Brazil: Urban and suburban zones of administrative centres of 'municipios' and districts.

Mexico: Localities with at least 2500 inhabitants.

South Africa: A classification based on dominant settlement type and land use. Cities, towns, townships, suburbs, etc., are typical urban settlements. Enumeration areas (Census units) comprising informal settlements, hostels, institutions, industrial and recreational areas, and small holdings within or adjacent to any formal urban settlement are classified as urban.

United Kingdom: Localities with at least 1500 people in England and Wales, at least 1000 inhabitants in Northern Ireland, and all settlements/localities in Scotland as per 2001 Census.

United States: Areas with minimum population density requirements and encompassing a population of at least 2500 inhabitants.

Source: (United Nations 2007)

This process of urbanization has been contributed by four factors – natural multiplication of existing urban population, the emergence of new towns, expansion of jurisdiction of existing towns through merger of peripheral areas and migration. Data collected by a study reveals that of these, internal urban population increase has contributed 60 per cent. The share of new towns fell from 13.8 per cent to 6.2 per cent during 1961-2001 and the share of old towns through jurisdictional expansion rose to 13 per cent. Migration contributed 18.7 per cent to

21.7 per cent over the period 1961-91. (K.C. Sivaramakrishnan, Amitabh Kundu, B.N.Singh, 2005)

During the earlier part of the twentieth century, Indians were generally immobile and migration was a trickle. The total intercensal migration in percentage terms was 15 per cent for 1961, 12.4 per cent for 1971, 12.2 per cent for 1981 and 9.7 per cent for 1991. Migration, therefore as a factor of urbanization has been clearly declining. (K.C. Sivaramakrishnan, Amitabh Kundu, B.N.Singh, 2005)

India displays significant regional variation in the distribution of urban population. Among the large states and in the highest bracket fall Tamil Nadu, Kerala and Maharashtra and Gujarat that are more than 40 per cent urbanized as per Census 2011, and Karnataka that is more than 30 per cent urbanized. West Bengal too has a larger urban percentage than the national, above the average Indian figure of 31.16 per cent. Among the smaller states and union territories, Delhi's population is more than 90 per cent urban, Chandigarh more than 80 per cent, Pondicherry and Goa more than 60 per cent, Lakhshadweep above 40 per cent, and Daman & Diu, Punjab, Haryana, Andhra Pradesh, Manipur and Andaman & Nicobar Islands above 30 per cent. The other States are less urbanized than the Indian average with the least urbanization reported in Arunachal Pradesh and Himachal Pradesh at less than 10 per cent.

In the case of cities, the Census of India classifies towns into six categories based on their population. Class 1 are towns with 100,000 persons or more, class 2 are towns with 50,000 persons up to 99,999; class 3 are towns with 20,000 persons up to 49,999; class 4 are towns with 10,000 persons up to 19,999; class 5 are towns with 5,000 persons up to 9,999 and class 6 are towns below 5,000 persons.

Data on urbanization in India also discloses that class 1 cities dominate India's urban demography. "In 1901, the share of class 1 cities in India was 26.00 per cent, but rose to 68.67 per cent by 2001. The class 2 and 3 towns remained demographically more or less dormant with a slight drop over the century from 11 to 9 and 15 to 12 respectively. The class 4, 5 and 6 towns, however, have seen a sharp drop over the century, from 21, 20 and 6 per cent to 7, 2 and 0.2 per cent respectively. The most significant cause of such demographic changes has not been because of loss of populations but on account of the upward movement

of towns to a higher category or class. Class 1 towns were only 24 in 1901 but went up to 393 in 2001. A similar factor is noticeable in other classes as well.

A significant factor in urban growth is the growth of metro cities, or cities with more than one million population. Between 1981 and 2001, “the demographic growth in metro cities is higher than that in common towns or class 1 cities”. They “claimed about 26.41 per cent of urban population in 1981. This has increased to 32.54 in 1991 and further to 37.81 in 2001”. This appears to be on account of “higher growth in their peripheries than in cores. Huge population, lack of infrastructure....cost of living..... may have decelerated the capacity of the core areas...This tendency in urbanization basically indicates an agglomerated trend.”

(K.C. Sivaramakrishnan, Amitabh Kundu, B.N.Singh, 2005)

The urbanization of poverty has been one of the principal trends in India’s urbanization. Unfortunately this has not been a much researched subject, as poverty studies in the country, to begin with, concentrated on rural poverty. While poverty levels were high in the less urbanized states, they were high in developed states as well, such as in Maharashtra, Tamil Nadu and Gujarat. Industrialization in these states did not significantly impact poverty and its decline. Based on NSS data, the poverty scenario has changed significantly in the mid 1990s. The percentage of people below poverty line in rural areas has increased by one percentage point in 1994-5 compared to that of the previous year. It remained at that level till 1997. Correspondingly, the figures have gone up by around two percentage points in urban areas. There is thus evidence that the poverty level increased during 1993-8 and the trend of decline was stalled in the mid-1990s.

The process of engaging with slums began through a nation-wide sample survey conducted by the NSSO and published in 1980. Comprehensive data on slums, however, only became available through Census 2001. The Census computed slum population data of all urban areas with 50,000 or more population. The total slum population aggregated to 40 million or 14.12 per cent of the total urban population. Maharashtra, Andhra Pradesh and Haryana were found with high slum population share” constituting 25.9 per cent, 25.1 per cent and 23 per cent of the urban population respectively. West Bengal and Delhi too have exhibited moderately higher shares of slum population than the national average.” **(K.C. Sivaramakrishnan, Amitabh Kundu, B.N.Singh, 2005)**

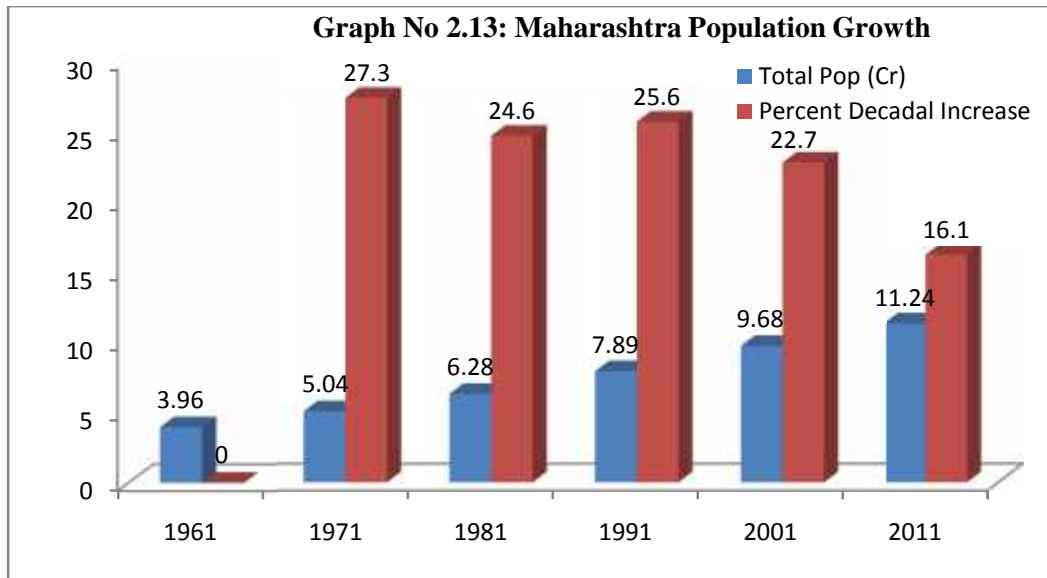
3B.5: Maharashtra Urbanization Trends

Maharashtra is the premier industrial state in the country and economically one of the most advanced. It attracted a sizeable chunk of FDI that flowed into India. It is, therefore, not surprising that the State has the largest urban population. At the point of the State's formation in 1960, it had a population of 3.96 crores. This doubled in the next three decades and now stands at 11.24 crores.

Table No 3.7: Maharashtra Population Growth

Year	Total Pop (Cr)	Percent Decadal Increase
1961	3.96	-
1971	5.04	27.3
1981	6.28	24.6
1991	7.89	25.6
2001	9.68	22.7
2011	11.24	16.1

HDR Maharashtra 2002 and Prov. Census Figures 2011



In terms of urban population, the following table summarizes the key figures:

Table No 3.8: Level of Urbanization in Maharashtra

YEAR	URBAN UNITS	URBAN POP (CRORE)	URBAN POP AS PERCENT OF TOTAL POP	DECADAL GROWTH RATE OF URBAN POP
1961	266	1.12	28.2	21.3
1971	289	1.57	31.2	40.08
1981	307	2.20	35.0	40.0
1991	336	3.05	38.7	38.9
2001	378	4.10	42.4	34.3
2011	NA	5.08	45.2	23.7

HDR Maharashtra 2002 and Prov. Census Figures 2011

Till 1991, Maharashtra ranked number one in terms of both urban population and in terms of the percentage of urban population. However, in 2001, in terms of percentages, Tamil Nadu became number one with its urban population standing at 43.4 % of its total population as against Maharashtra's 42.4 %. Yet in absolute terms, Maharashtra's 41 million urban population far exceeded Tamil Nadu's 27 million. Maharashtra's urban population grew by around 97 lakhs between 2001-2011, taking its number of city dwellers to 5.08crore (out of a total of 11.24 crores). This accounted for 62.8 % of the total population growth in Maharashtra. While its total urban population remained the highest for any state in the country, in percentage terms it slipped to the third position (45.23 %), behind Tamil Nadu (48.45 %) and Kerala (47.72 %). Tamil Nadu's total urban population stood at 3.49 crores. The steep rise in urban population percentage in Tamil Nadu and Kerala appear to be on account of redesignating a number of villages as nagarpanchayats.

As per Census 2011, while Maharashtra's population grew at 16 percent, its urban population jumped up by 23.7 percent, whereas its rural population crawled up by 10.3 percent. Thane district grew by 77 percent, Nagpur by 68 percent, and Pune by 61 percent. The Mumbai Metropolitan region held 25 percent of the total State population. There were some startling growth stories revealed by Census 2011. For instance, Kharghar showed 1117 percent growth

over 2001, Vasai Virar 221 percent, New Panvel 113 percent, Kalyan, Mira Bhainder 50 percent, Thane 43 percent, Pen 33 percent, Uran 30 percent, Ambernath 28 percent and Khopoli 21 percent.

Some factors seem to be constant if one analyzes census figures of 2001 and earlier and figures of 2011. In terms of regions, Konkan division comprising Mumbai, Mumbai Suburban, Thane, Raigad, Ratnagiri and Sindhudrg districts is the most urbanized. Konkan is followed by Western Maharashtra and Vidarbha. The Marathwada division emerges as the least urbanized region. **(HDR Maharashtra 2002)**

Maharashtra's inter-district urban population distribution continued to have large variations, similar to the inter-state disparities in urbanization. In 2001, at one end of the spectrum were the districts of Mumbai, Thane, Nagpur and Pune with urban populations standing at 100 per cent, 72.58 per cent, 64.36 per cent and 58.07 per cent respectively. At the other end were districts of Gadchiroli, Sindhudurg, Ratnagiri and Gondia with 6.93 per cent, 9.56 per cent, 11.33 per cent and 11.95 per cent respectively. These facts were not much different in 2011. Mumbai, Thane, Nagpur and Pune emerged as the most urbanized districts in the State. Gadchiroli, Sindhudurg and Hingoli, on the other hand, were the least urbanized. Most of Maharashtra's urbanization was, during the decade driven by Mumbai, Thane, Pune and Nagpur.

The class 1 cities in Maharashtra housed 75.24 of the state's urban population in 1981. "This figure has gone up to 77.8 per cent and 79.7 per cent in 1991 and 2001 respectively." On the other hand, class iv, v and vi towns "have lost their share over time, viz., from 7.9 per cent in 1981 to 5.3 per cent in 1991 and 4.2 per cent in 2001." **(K.C. Sivaramakrishnan, Amitabh Kundu, B. N. Singh 2005)**

As of 31 March 2010, Maharashtra had a total of 1,57,68,421 registered motor vehicles. This was the highest for any state, followed by Tamil Nadu and Uttar Pradesh. This was up from 99.36 lakhs as on 31 March 2005.

The growth of slums in Maharashtra has gone hand in hand with the process of urbanization. The UN-HABITAT defines a slum as a run-down area of a city characterized by substandard housing and squalor and lacking in tenure security. The State considers a slum as a compact

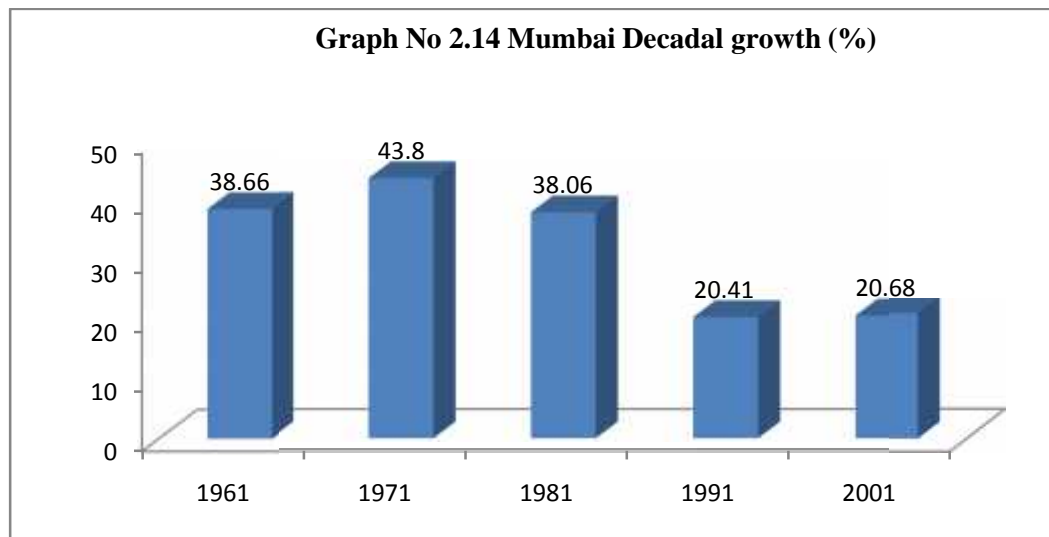
area of at least 300 souls, or some 70 households of poorly built congested quarters, often illegally on lands not belonging to the owner/occupant of tenements. As per Census 2001, Maharashtra had 1.06 croreslumdwellers, with Mumbai sharing 58.2 lakhs, Nagpur 7.3 lakhs, Pune 5.3 lakhs and Nashik 1.4 lakhs.

3B.6: Mumbai Urbanization Trends

Mumbai is India's largest city, the country's financial capital with administrative jurisdiction over 437.71 sq km. Its decadal population since 1951 is as follows:

Table No 3.9: Mumbai Demography

YEAR	POPULATION	INCREASE	DECADAL GROWTH (%)
1951	29,94,444	-	-
1961	41,52,056	11,57,612	38.66
1971	59,70,575	18,18,519	43.80
1981	82,43,405	22,72,830	38.06
1991	99,25,891	16,82,486	20.41
2001	1,19,78,450	20,52,559	20.68
2011	1,24,78,447	4,99,997	4.17



These figures clearly reveal the huge demographic growth of the city. The Human Development Report of Mumbai 2009 predicts that by 2031 its population is projected to grow somewhere between 1.5 crores and 2.1 crores. The city currently ranks as the fifth largest in the world and with the kind of predicted growth, it is destined to become the second largest city on the globe after Tokyo. Since its boundaries during the period have not

expanded, the city has grown denser and now ranks as the densest city in the world with a population of 28,508 persons per sq km.

As per Census 2001, 54.1 percent of the population lived in slums in just about "6 percent of all land in Mumbai explaining the horrific levels of congestion." (**Human Development Report Mumbai, 2009**).

According to a survey conducted by YUVA, a non-governmental organization, and Montgomery Watson Consultants in 2001, there were 1959 slums holding 57.2 lakhs of slum dwellers. The urbanization of poverty appeared in its most virulent form in the city. The provisional figures released by Census 2011 show that the number of people living in slums and slum-like areas has gone up by a staggering 30 lakhs since the last Census. The projections showed that about 90 lakh Mumbai residents now live in slums as against 60 lakh recorded in 2001 census. This would mean that about 60 per cent of Mumbai is staying in slums-shanties built in unplanned manner with limited access to civic amenities.

Mumbai's vehicular population has also witnessed a steep rise. Mumbai had 12.94 lakh motor vehicles in 2005, 13.94 lakhs in 2006, 15.03 lakhs in 2007, 16.05 lakhs in 2008, 16.74 lakhs in 2009. In 2010, its vehicular population was 17.68 lakhs out of which car population was 5.15 lakhs and two-wheeler population 9.67 lakhs. The vehicular population in Mumbai as of March 2011 was 19.38 lakhs. About 400 vehicles are registered every day in the city and the vehicular population is growing at an average of 7 percent per annum. (**Motor Transport Statistics of Maharashtra 2009-2010**)

3B.7: Pune Urbanization Trends

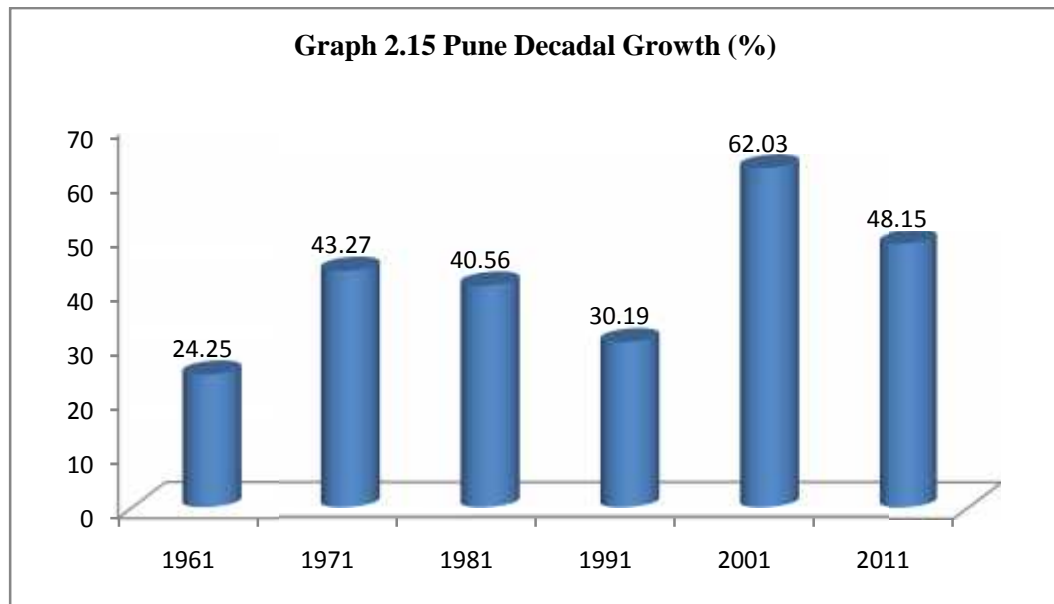
Pune is situated on the leeward side of the Sahyadri ranges and Western Ghats, 560 metres above sea level, at the confluence of the Mula and Mutha rivers. Two more rivers, Pavana and Indrayani, traverse the north-western outskirts of the urban area. The Sinhagad-Katraj-Dive Ghats form the southern boundary of the urban area. The city is located at the confluence of the National Highways viz., NH-4 leading to Mumbai in the north and Bangalore in the south, NH-50 to Nasik and NH-9 to Sholapur.

Pune is India's eighth largest city and the second largest of Maharashtra. Also known as the cultural capital of the State, it has administrative jurisdiction over an area of 243.84 sq km, up

from its original administrative boundaries of 146 sq km. The following table shows its decadal population since 1951:

Table No 3.10: Pune Demography

Year	Population	Increase	Decadal Growth (%)
1951	4,80,942	-	-
1961	5,97,562	1,16,620	24.25
1971	8,56,105	2,58,543	43.27
1981	12,03,363	3,47,258	40.56
1991	15,66,651	3,63,288	30.19
2001	25,38,473	9,71,822	62.03
2011	37,60,636	12,22,163	48.15



From a traditional city with an agro-based economy, Pune has steadily metamorphosed into an industrial and educational centre, crowned with labels like the Detroit of India and the Oxford of the East. The industrial efflorescence of Pune began with the entry of the Kirloskar Oil Engine Ltd in 1946. In 1960, MIDC set up a huge industrial estate on 4000 acres of land at Bhosari, leading to a spate of engineering and ancillary industries. Later, the city witnessed the entry of auto majors such as Tata Motors, Bajaj Auto and Bharat Forge Ltd. Today, the city is home to Kinetic Engineering, Force Motors (previously known as Bajaj Tempo), Daimler Chrysler and Cummins Engines Co Ltd. Education has been another stronghold of Pune. Starting with the establishment of the Deccan Education Society in 1880, the city has

nurtured six universities, which have 600 functional colleges and PG departments in their fold. The student population of Pune exceeds five lakhs. Also, in recent years, Pune has attracted about 8000 foreign students from over 62 countries. Moreover, a number of established educational institutions have introduced new courses and research areas.

Quite like Mumbai, Pune's growth has been very rapid. This has especially been assisted by the connectivity provided by the Mumbai-Pune Expressway and the widened national Highway No. 4. Because of the ongoing urbanization happening on its boundaries, it has had to merge within its fold 23 villages. Its educational institutions and its emergence as an IT hub have further fuelled its growth. At the same time the slum population in Pune has also grown. In 2001, a total of 13.75 lakh persons were slum dwellers forming 57.83 percent of the total population. This was only 7.64 percent in 1951.

The Environmental Status Report 2010-2011 states that Pune generates about 1300 to 1400 metric tonnes of solid waste every day and the number of its registered motorized vehicles stand at approximately 20 lakhs, up from 6.73 lakhs in 1995 and 6,423 in 1960. However, it has been able to maintain a forest cover of 35 percent. The city supplies 194 litres of water per person per day and this is about 1.5 times the normal average water supply to cities.

Pune's vehicular population as of 31 March 2005 was 12.24 lakhs. It rose to 12.53 lakhs in 2006, 15.07 lakhs in 2007, 16.05 lakhs in 2008, 16.74 lakhs in 2009, 17.68 lakhs in 2010. Of this there were 2.14 lakh cars and 14.19 lakh two-wheelers. **(Motor Transport Statistics of Maharashtra 2009-2010)**

3B.8: Nashik Urbanization Trends

Nashik is situated in the northwest of Maharashtra, in the western ghats and on the banks of river Godavari. The Godavari River flows through the city from its source in the holy place of Trimbakeshwar, cutting the city into two. Nashik is connected by road to Mumbai (180 km) and to Pune (200 km). Rail connectivity is through the Central railway, with direct connection to Mumbai. Air link is with Mumbai, though the air service is not consistent and a proper Airport does not exist. Nashik is the administrative headquarters of Nashik District and Nashik Division. It is popularly known as the "Grape City" and for its twelve yearly 'SinhastaKumbhMela'. The city is known for its picturesque surroundings and pleasant climate. Of recent, it has also been christened as India's 'wine capital'.

Nashik is among the fastest growing cities in the State and in India. Its transformation from a small pilgrimage town in the 70s to a bustling industrial city was when the State consciously promoted industries around the city. It now has a total area of 264.23 sq km; is one of the most industrialized cities in the State and has become a metropolitan city with a population above one million. Geographical proximity to Mumbai and its location within the golden triangle of Mumbai, Pune and Nashik has accelerated its growth. The natural benefits of geography and climate and abundant availability of water have further catalyzed this expansion. The developments of the past two decades have completely transformed this traditional pilgrimage center into a vibrant modern city, and it is poised to become a metropolis with global links.

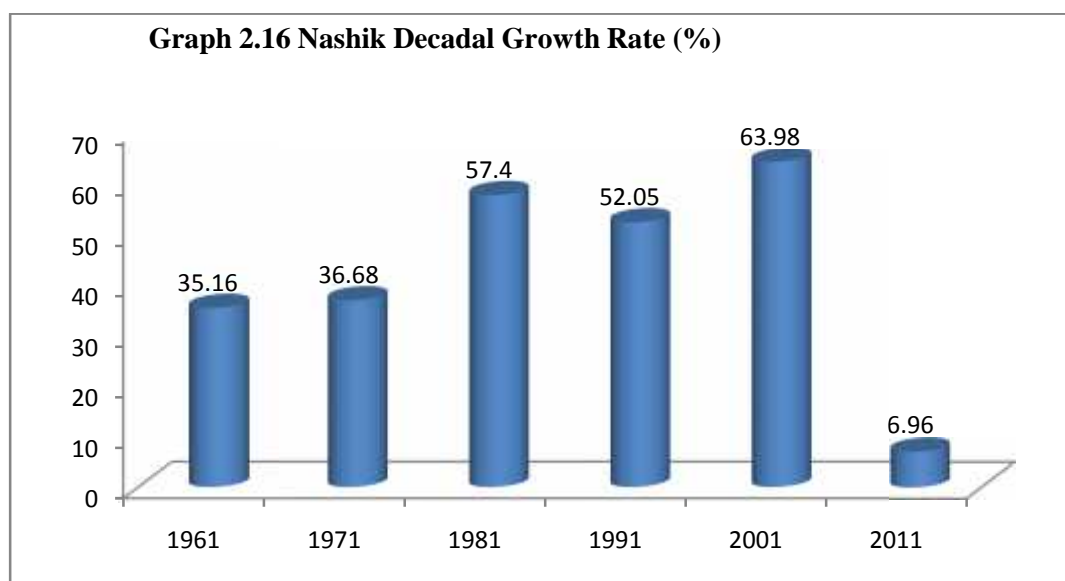
The city's economy is driven chiefly by the engineering and manufacturing industry as well as the progressive agriculture in area surrounding the city. Auto majors such as Mahindra & Mahindra and Original Equipment Manufacturers (OEMs) such as VIP, Samsonite and CEAT have their plants here and have spawned a huge network of auto component suppliers and engineering ancillary services. It is also a pharmaceutical hub with presence of GlaxoSmithKline and Fem. In recent years, as the wine capital, Nasik has also carved a niche for itself as India's and locally established wine brands such as 'Sula' and 'Zampa'. Modern efforts are on to promote the growth of an export-oriented rose farming and wine industry in the district.

The population of the city grew from 6.56 lakhs to 10.77 lakhs during 1991-2001, recording 64% decadal growth rate. The growth rate has been very rapid during the past three decades (50% +). According to the Census of India, 2001, Nashik had a population of 1,076,967. Population growth rate started rising steadily after 1961 and Nashik recorded more than the average growth rate for India in two decades, between 1971. In 1982 the city limit was expanded and Nashik acquired the status of Municipal Corporation with a population of 432,000 souls. Growth rate of 63% for the decade 1971-81 continued in the decade 1981-91. In 2001 Nashik became one of the 35 metropolitan cities. Nashik has grown from a population 21,940 in 1901 to 10,77,236 in 2001. It took Mumbai 157 years to grow from a base population of 70000 in 1744 to a million in 1901. Nashik has achieved this within a short period of 55 years, from 1945 to 2000. Nashik was the seventh largest city in 1947 in Maharashtra. Now it is the fourth largest.

Table No 3.11: Nashik Demography

Year	Population (L)	Increase (L)	Decadal Growth Rate (%)
1951	1.49	-	-
1961	2.01	0.52	35.16
1971	2.74	0.73	36.68
1981	4.32	1.58	57.40
1991	6,56,925	2.25	52.05
2001	10,76,967	4.20	63.98
2011	11.52		06.96

Source: Census of India



The slum population in Nashik is surprising low. The Nashik Municipal Corporation conducted a survey of slums in 2007. The survey also revealed that there were a total of 42,742 slum dwellings with a total population of 2,14,769.

Table No 3.12: Slum Population in Nashik

Type	Notified	Unauthorized	Total
On Government Land	13	20	33
On NMC Land	11	5	16
On Private Land	32	87	119
Total	56	112	168

The vehicular population in Nasik rose from 5.23 lakhs in 2005 to 5.71 lakhs in 2006, 6.22 lakhs in 2007, 6.70 lakhs in 2008, 7.20 lakhs in 2009 and 7.81 lakhs in 2010. Of these 2.72 lakhs were two-wheelers and 29,791 cars. (**Motor Transport Statistics of Maharashtra 2009-2010**)

3B.9: Kolhapur Urbanization Trends

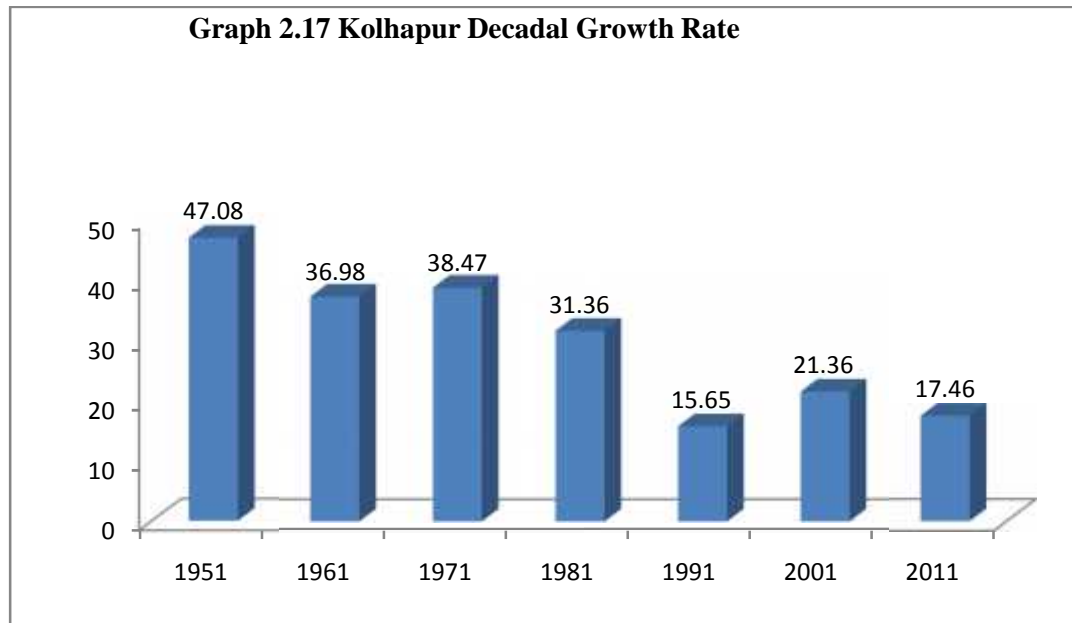
Kolhapur, widely recognized as the DakshinKashi, is situated on the banks of the river Panchganga, in the south-west part of Maharashtra and is the headquarters of Kolhapur district. Located at the gateway of Konkan, Kolhapur enjoys the status of a traditional, beautiful and economically developed city. Kolhapur city has the Sahyadri hills on the west, the Waranariver on the north and Belgaum district on the south. The approximate area of the city is 66.82 sq. kms. Agriculture is the main contributor for the economy of Kolhapur. Its sugarcane industry contributes to over 5% of the sugarcane produced in the country and accounts for a significant share of sugar, jaggery and baggase produced. Kolhapur is fast becoming a highly industrialized city and is already a front-runner in agro-based industries.

It is one of the growing cities in Maharashtra, in keeping with the overall trend of urbanization in the State. The demographic growth of Kolhapur is depicted in the following table. The table clearly shows that while the population of the city has moved up in absolute numbers, its decadal growth rate has considerably slowed down. This appears to be on account of faster peri-urban growth and availability of land outside city, especially since the municipal boundaries have remained frozen since the inception of the municipal corporation. The population density of the city stood at 7261 persons/sq.kms. and that has now marginally gone up to 7565 persons per sq km.

Table No 3.13: Kolhapur Population Growth

Year	Population	Increase	Decadal Growth Rate
1951	1,36,835	56,351	47.08
1961	1,93,186	50,607	36.98
1971	2,67,513	74,327	38.47
1981	3,51,392	83,879	31.36
1991	4,06,370	54,978	15.65
2001	4,93,167	86,797	21.36
2011	5,79,281	86,114	17.46

Source: Census of India



The city of Kolhapur gets a raw water supply of 128 MLD, of which the Corporation supplies 120 MLD and 8 MLD is obtained through ground water sources. The total quantity of waste generated is in the order of 170 tonnes per day (TPD) at a per capita generation of 342 grams per day. The percentage of waste collected and disposed is 86% of the generation.

There are 54 slums in Kolhapur, of which 44 are declared and 10 undeclared. The total slum population was approximately 56,235 as on 01-01-1995, which is 11.60% of the city's total population. Of the 44 declared slums, 10 are located on municipal land, 22 on government land and the rest 12 on private land.

The vehicular traffic in Kolhapur has increased during the period 1997- 2006 with a Compounded Annual Growth Rate of 34%. According to RTO Kolhapur, the vehicular population rose from 76,645 in 1997 to 1,10,266 in 2000, to 1,50,468 in 2003 and to 4,52,197 in 2007. In 2010, this stood at 6.36 lakhs of which 1.47 lakhs were two-wheelers and 19,581 were cars. **(Motor Transport Statistics of Maharashtra 2009-2010)**. The city runs its own bus fleet through the Kolhapur Municipal Transport Undertaking. It has a fleet of 119 buses and 15 other buses on contract.

This has put tremendous pressure on the existing infrastructure. The city has currently four parking spaces, which are located at Shahapuri, Kapilteerth market, Shivaji market and near Mahalaxmi temple. These lots are insufficient given the inflow of traffic in the city and the increasing floating population.

3B.10: Baramati Urbanization Trends

Baramati is a 'B' class municipal council located in the Pune district of western Maharashtra, situated at a distance of about 109 km from Pune on the banks of the river Karha. The council was established in 1865 and has an area of 4.94 sq km. This place is 99 Km by road and 120 km by rail from Pune, which is connected by daily air services to Mumbai and Aurangabad. Agriculture is the main occupation of the people of Baramati. The land in the region is fertile and the Neera canal provides irrigation facility to farms. The main food crops grown include sugarcane, grapes and cotton. Some of its products are marketed in the Middle East and Europe.

However, Baramati has moved simultaneously towards industrialization industries located in Baramati range from Steel Processing to Wine making. Baramati is also home to the three wheeler plant of the Italian company Piaggio. Baramati uses 800 hectares of land as MIDC (Maharashtra Industrial Development Corporation) Industrial Area along Baramati-Bhigwan Road, 5 km outside Baramati town's municipal limits. Baramati has an airstrip near MIDC.

The city had a population of 44,515 in 2001 and has currently a population of 55,342 as per Census 2011. Its vehicular population was 0.53 lakhs in 2005 and rose to 0.71 lakhs in 2006, 0.91 lakhs in 2007, 1.10 lakh in 2008, 1.28 lakh in 2009 and 1.51 lakhs in 2010. Of these 1.04 lakhs were two wheelers and 9,877 cars. **(Motor Transport Statistics of Maharashtra 2009-2010).**

3B.11: A Comparison of Urbanization Trends in Research Cities

A comparison of research studies reveals that Mumbai showed very high decadal demographic growth from 51 to 81. These were close to 40 or above 40 percent. Subsequent decades show more modest growth rates of around 20 per cent. Pune, on the other hand, had modest growth in the fifties up to early seventies. But from the late seventies to the current decade, the growth rates have been very high, between 40 to 60 per cent, except the thirty per cent revealed in 1991 census. The growth of Nashik has been even more phenomenal. While

in the 60s, the city grew at around 35 per cent, in the subsequent decades Nashik has clocked around 37, 57, 52 and 63 per cent. Kolhapur grew fastest between the decades 1951 and 1981, at 47, 36, 38 and 31 per cent. However, its demographic growth has comparatively slowed down to 15, 21 and 17 percent in the last three decades. Baramati, however, has had a more modest growth in terms of numbers.

It appears that a city's ability to grow is facilitated when it reaches a critical mass of between 5 to 8 lakhs. This gets coupled with the growth of urbanization witnessed outwards of Mumbai, both on Pune and Nashik axis. As cities move further away from this axis, their growth gets more modest.

3B.12: Overall Conclusions

It is also evident that the crisis of planned growth and governance of planning is a larger concern of the larger cities and the bigger in size it is, the more acute its problems are. In Mumbai, for instance, there are huge issues of informal settlements, of people living in very high densities, of immense traffic and transportation bottlenecks, of parking, of collection and disposal of solid waste and of general city order and security. The smaller cities face similar problems but with lesser intensity. However, as they increase in size, the intensity of these issues appears to be rising.

Some of these issues clearly appear to be arising out of planning deficits. In subsequent chapters, we shall get into these issues in greater detail.

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CHAPTER 4

BACKGROUND TO URBAN PLANNING IN MAHARASHTRA

This Chapter provides a contextual background on the subject of Maharashtra's urban planning. It begins with a look at the significance of urban planning and outlines how the subject was dealt with globally, nationally and in the State. It specifically looks at urban poverty and urban infrastructure issues and the challenges that the cities shall face.

4.1. The Significance of Urban Planning

Planning is a central prerequisite to all human activity designed to be done with precision and order. Absence of such forethought before actual execution is most likely to lead to errors of several dimensions and end up in the possible creation of an inefficient product, further compounded by greater expenditure and a larger implementation time-frame. Hence all that we undertake to do needs some kind of planning.

Urban planning, however, is more complex since urban living involves organizing many lives and multiple activities in a highly compact land mass with high density. Rural societies live a more natural and simple existence and population densities are comparatively low. The transition to urban living imposes more compact living with a multiplicity of activities that need to be well organized to achieve high degrees of compatibility and productivity. Good urban planning allows doing urban activities and living urban lives with efficiency, health and well-being.

In its comprehensive form, urban planning comprises land use, socio-economic and environmental planning for economy, efficiency, sustainability and an acceptable quality of life. The planning processes would further embrace, inter alia, education, health, residence, commerce, infrastructure such as power, water, waste water, solid waste, transportation and recreation.

Since the dynamics of towns lead to an on-going expansion, urban planning cannot be a one-time activity, but needs to continuously respond to physical and demographic growth, technological innovation, socio-economic changes, competition, the availability of critical resources and community needs. Objectives, therefore, need to be revisited and planning formulations revised to meet the ever emerging challenges. Failure to work out a proper

response would build in infirmities in the city and adversely impact its livability and productivity and the ultimate erosion of its recognition as a city worthy of occupation.

4.2. The Significance of Towns

With the onset of the twenty-first century, towns have become the primary mode of living. The global population is now more urban than rural and this phenomenon may be expressed as the 'urban revolution' at least in demographic terms. In economic terms, the significance of urban centers is no less significant, as they house a predominantly large part of the economy. Culturally, as well, they largely reflect the nations' civilization. "The physical form of a town does in many ways reflect.... the social condition of the people who live in it, their cultural achievement, their economic status, the kind of government they possess. The town reflects these characteristics because it arises out of them" (Sharp (1945).

4.3. Global Examples of Urban Planning

India, in the modern era, has borrowed substantially from urban planning ideas of the west. This was natural, both on account of the country spending centuries under the imperial rule of the British and their more rapid urbanization in the nineteenth and twentieth centuries. Even for them, however, this underwent a learning process. There was a time that western cities were poorly planned and quality of life was dismal. In a sketch titled *Nottingham and the Mining Countryside*, English towns were described by one of the foremost British writers D H Lawrence in about 1929 as "a great scabble of ugly pettiness over the face of the land" (Sharp 1945). He further wrote, in the same vein, that " England has had towns for centuries. But they have never been real towns, only clusters of village streets. Never the real *urbs*." He further added, " The English are town birds through and through. Yet they don't know how to build a city, how to think of one, or how to live in one. They are all suburban, pseudo-cottagy, and not one of them knows how to be truly urban.... The English may be mentally and spiritually developed; but as citizens of splendid cities they are more ignominious than rabbits". (D H Lawrence, 1929).

Similarly, Paris, before 1850s, was far from being the great city it is today. It was a big city with poor sanitation, narrow, crooked streets and run-down houses, and did not qualify as a modern city for good collective living. It was between 1852 and 1870 that Haussmann comprehensively transformed Paris that gave the city its present form. His plan encompassed wide and straight streets and boulevards, regulations in regard to facades of buildings, public parks, overhaul of city water and sewerage systems, public

utilities, cafes and shops and monuments designed with architectural excellence. All these planning inputs, apart from the look of grandeur that they brought to the city, rid Paris of its disease and epidemics, improved remarkably traffic circulation and provided greater functional efficiency to buildings.

The problems faced by English towns in the mid 18th century (post industrial revolution) consisted of the growth of unsanitary slums in the industrial towns of London, Manchester and Glasgow. Vast numbers of rural immigrants, stripped of their pastoral and handicraft jobs migrated to the large cities to find jobs in the newly established industries; and having nowhere to live, constructed hastily built ramshackle structures.

The slums constituted a cost in many ways, not only to slum dwellers themselves but also to taxpayers. The cost to the slum dwellers (though not exactly in terms of money), was mainly in the form of health risks. The cost to residents of the non-slum areas manifested in the form of taxes that paid for health services to be used by both, slum dwellers and other residents. It was considered that this would be an avoidable cost only if the city governments could lay down a code for new houses to be constructed and ensure rigidly that the new housing strictly conformed to it.

The Public Health Act of 1875 in England marked the beginning of statutory interventions in the actions of private citizens resulting in town expansion. This act authorized municipalities to prescribe building regulations to ensure adequate daylight and sanitation for the new houses that were to be constructed. The new residential house blocks, which were erected under the influence of these byelaws, however, consisted of rows and rows of box type structures resulting in dull and monotonous residential areas. This period was called the byelaw era. Unwin said about these byelaws, "There is no doubt that much good work has been done in the matter of ample supply of pure water, in the matter of drainage and removal of waste matter, in the paving, lighting and the cleansing of streets. Probably our towns are as well served or even better than that elsewhere. By means of our much abused byelaws, the worst excesses of overcrowding have been restrained and a certain minimum standard of air, space, light and ventilation has been secured. And yet the remarkable fact remains, that there are growing up around our big towns vast districts under these very byelaws, which, for dreariness and sheer ugliness are difficult to match anywhere else, and compared with which many of the old unhealthy slums are, from the point of view of picture sequences and beauty infinitely more attractive." It was felt that for good town development health and hygiene considerations have to be supplemented by elements of beauty and aesthetics.

The Royal Institute of British Architects, the Royal Institute of Chartered Surveyors and the Association of Municipalities demanded the introduction of statutory town planning for this purpose (combining aesthetics with regulation) and this led to the first Town Planning Act in Britain, which was the Town Planning Act of 1909. The evolution of such modern town planning in the West, as stated above, establishes an unambiguous link between plans and socio-economic exigencies of the prevalent situation.

The Act provided for the preparation of Town planning Schemes' for areas in the course of development, which would ensure aesthetics as well as orderliness in the new developments. The Act also authorized municipalities to recover a betterment contribution from the owners of the land benefiting from the development. The draft bill initially provided for a 100% recovery of such betterment. The argument was that if the value increase was because of investments made by local authority, the entire amount of such increase should flow back to the authority making the investments. The House of Lords opposed this suggestion and argued that profiteering should not be the objective of public authorities. It suggested that the local authorities should recover only as much of the betterment as would enable them to recover costs. Ultimately, as a compromise, the Act provided for a recovery of 50% of the estimated betterment, which was expected to meet the costs of development by local authorities. Subsequent experience showed that recovery at 50% was not actually sufficient. The maximum recovery percentage was then increased to 75%. In subsequent decades the Act was amended a number of times, continuing however with piecemeal planning through the medium of Town Planning Schemes for portions of cities.

During the Great Depression of the 1930s, regional and national governments intervened more forcefully in town planning to foster economic development in depressed regions. In the United States, President Roosevelt under his New Deal programme established a Public Works Administration to deal with capital improvements, a National Planning Board to coordinate long-range development, and a programme that produced three greenbelt towns.

The extensive physical rebuilding of cities following World War II lent new urgency to town planning and in 1947, Britain enacted its significant Town and County Planning Act, which placed all development under regional control. Reconstruction and the building of new towns were encouraged not only in Britain, but also in the Netherlands, Germany and Finland. The new European towns in turn encouraged the planning and

construction of similar self-contained communities in other areas of the world, including Brasilia in Brazil, and Chandigarh in India.

The heretofore merely physical approach to planning broadened in the late 1960s to include social, economic, and political policy issues as well. Planners increasingly recognised that although cities are an arrangement of neighbourhoods, industry and commerce, their definitive characteristics are more intangible – the educational and work aspirations of their residents, their economic strengths and weaknesses, and their ability to make or influence the policy decisions that affect their daily lives. Thus, modern urban planning requires a more multi-disciplinary approach guided by a holism that ensures a just and equitable share of resources to all citizens and makes cities sustainable.

4.4. Urban Planning In India

It is ironical indeed, that in the land that invented systematic town planning in the Indus Valley, most modern cities have had an unplanned beginning, and continued to grow without any conscious efforts at planning. Villages outgrew their childhood and became young towns, and these in turn gathered girth and flab and became bigger towns. Some of the bigger ones could not stop growing and have mushroomed lately into awesome metros, much like ribbons of streams converting themselves into bouncy rivulets, swollen rivers and deep and seemingly unending oceans.

Urbanisation is a twentieth century phenomenon in India and so are urban laws, as we know them today. While cities have existed for centuries, laws governing town planning found their genesis in the problems created by the era of colonial capitalism. The Industrial Revolution provided momentum to industrialisation, which in turn fuelled migration, which became easier and faster in the age of the railway and automobile. Large numbers thereby congregated at select industrial locations to participate in the generation of goods and services and in earning wages. Such congested settlements now needed to have stricter controls to survive in an orderly fashion, and thus began the enactment of town planning laws.

In effect, these laws were instruments of intervention in the private rights of citizens for the larger good of the community.

History of Planning Laws

Inspired by the British Housing and Town Planning Act of 1909, the former Presidency of Bombay was the first in India to enact the Bombay Town Planning Act in 1915. It

provided for the preparation of Town Planning Schemes for city areas potentially ready for development. Conceptually, the Town Planning Scheme was a big improvement on the earlier Improvement Trust scheme. This was a project prepared by the municipal body on behalf of the owners without acquisition of any land. A self contained neighbourhood, complete with community facilities could be developed by owners of adjoining lands by sharing costs as well as benefits through the twin concepts of compensation and betterment, in proportion to the value of lands contributed or gained by them for such development.

After more than three decades of experience and experimentation, the British Town Planning Act was found to be inadequate, and was replaced by the Town and Country Planning Act of 1947. While its earlier version had looked at Town Planning Schemes as the primary instrument of planning, the latter moved on to comprehensive Development Plans for an entire city. The lead was again taken by Bombay, and the earlier Town Planning Act was amended in 1954 to provide for the preparation of comprehensive Development Plans comprising the entire area within the limits of a town.

Town planning, unlike earlier, was now no longer a discretionary function to be taken up at the will of the local body, but was made a mandatory duty. However, while the new British Act discarded the concept of Town Planning Schemes of the earlier version, the 1954 Indian Act retained it as a tool for the implementation of the Development Plan. This meant that while a Development Plan would encompass the entire physical area of a city and would be prepared up front, Town Planning Schemes could follow as a methodology to implement the Plan for parts of the city.

The Act also provided a time frame in which the Development Plan was to be prepared and sent to Government for approval – and if the local body failed to beat the clock, the State Government retained the power to prepare the Plan itself.

While Bombay and Madras Presidencies pioneered in the introduction of an exclusive legislation for ‘Town Planning’, many states in India did not have an exclusive law for the same for a long time. In due course of time after independence, the Town and Country Planning Organization set up by the Government of India framed a model town planning law for states that did not have such an exclusive law for governing town planning and planned town development. The Central Regional and Urban Planning Organization (CRUPO) later merged in the Town and Country Planning Organization. Today, almost every state has an exclusive law for Town Planning/Urban Area Planning. Some of these

follow the guidelines of the Model Law while others have framed laws suiting the requirements of their own states.

The principle variations in the statutory provisions relating to Town Planning under the different State Acts are as follows:

- In some States, Town Planning is an automatic and obligatory duty of the elected Municipal Council, while in others it can be entrusted to the Municipality (as in case of Gujarat) by declaring the Municipality as an Area Development Authority. Karnataka provides for the setting up of a nominated Local Area Planning Authority with representation to the Municipality of the town/towns included in the Local Planning area designated as such.
- Some States have nominated Urban Area Development Authorities for undertaking planned development of lands falling outside Municipal limits which may also include lands within Municipal limits.
- Urban Development Authorities are expected to operate much on the same lines as private land development companies, rotating their seed capital.
- In non-UDA areas, the planning authority can meet development costs through the recovery of betterment contributions from the beneficiaries if they prepare a Town Planning Scheme.
- The preparation of a Town Planning Scheme (in these States) is however not compulsory, and the Municipality can opt to implement the Development Plan by acquiring the required lands under the Land Acquisition Act and meeting the development expenditure through its normal budget.
- Municipalities are authorized to levy a development charge at predetermined rates, the receipt of which is expected to provide part of the finance for the implementation of the plan.

While a transition in urban planning had been made, leading to the thinking that a town needs to be comprehensively looked at rather than in piecemeal fashion, realisation also dawned upon planners that the physical limits of towns are but imaginary lines that do not stop urbanisation beyond their periphery. Growth continues to take place beyond them, and there is a symbiotic relationship of the town with the countryside where each impacts upon the other. If this fact was ignored, especially in the case of metropolitan cities, and towns were planned in isolation, a substantial chunk of such internal planning would run the risk of being nullified by outside growth.

This issue was studied in depth by the Gadgil Committee while the draft Development Plan of Greater Bombay was under consideration of the Government of Maharashtra. The State was especially concerned about the unprecedented urbanisation of the metropolitan regions of Bombay and Pune outside the city limits and the dire necessity of balanced regional growth. The Committee suggested that there was a need for macro planning for a larger physical area beyond the limits of a town, and must include all such outside areas that constitute the direct influence area of the town. These would be the Regional Plans, and would define the broad outlines for socio-economic as well as physical development of the city and its region. Decisions regarding populations, jobs, services, amenities and utilities were to be planned on a regional basis. The city Development Plans would then follow, and would be in consonance with the Regional Plan.

The recommendations of the Gadgil Committee were accepted and led to the replacement of the Bombay Town Planning Act by the Maharashtra Regional and Town Planning Act 1966, which incorporated these recommendations. The enactment of this law was broadly followed elsewhere in the country and a number of Regional Plans were prepared – some of the prominent ones were the Regional Plan for the National Capital Region, Regional Plans for the Mumbai, Chennai and Calcutta metropolitan regions and several others.

Thus a three-tier planning process has now been established. At the apex of macro planning is the Regional Plan, which looks holistically at a city or a group of closely knit cities along with the hinterland, aiming at balanced regional growth. The Regional Plan is followed at the second level by the Development Plan treating an entire city as a unit and looking at it comprehensively. At the bottom is the Town Planning Scheme, which takes up part of a city for the purposes of micro-planning, and providing an implementation tool. For further clarity, this is represented in the table below:

Table No 4.1 THREE TIRER PLANNING PROCESS

TIER	NAME OF PLAN	AREA	REMARKS
TOP (TIER 1)	REGIONAL PLAN	ONE OR MORE DISTRICTS OR PART OF DISTRICT	A LARGE URBANIZABLE AREA
MIDDLE (TIER 2)	DEVELOPMENT PLAN	MUNICIPAL BOUNDARIES	DEVELOPMENT PLAN TO CONFORM TO REGIONAL PLAN
BOTTOM (TIER 3)	TOWN PLANNING SCHEME	PART OF A DEVELOPMENT PLAN	MICRO PLANNED FOR IMPLEMENTATION

4.4.1 Process of Regional Planning

For the Regional Plan, an area, generally a large area which may combine acreage of several districts or a substantial chunk of a particular district – and in any case a much larger area than that of a single local body – is designated by the State as a Region. However, it is sufficiently self-contained to form an economically viable planning unit. Subsequent alterations, deletions or additions are permissible by a notification in the official Gazette. For the planning, development and use of land in a particular region, Government constitutes a multidisciplinary Regional Planning Board comprising experts as well as officials and non-officials, with knowledge of regional planning. The Board is charged with the responsibility of carrying out a survey of the region, reporting on the surveys, preparing an existing land use map, and on the basis of information collected, drafting a Regional Plan. The Board is empowered to engage men and women of experience and knowledge for wider consultation.

The Regional Plan, *inter alia*, proposes land use for residential, industrial, agricultural, forest and mineral extraction; transport and communication routes; water supply and drainage; preservation of areas; and reservations of sites for new towns. While doing all this, it takes a long-term view of the social and economic development of the entire region. Its objectives are economic growth, improved patterns of human settlement and industrial location, employment opportunities for the human population, promotion of social and economic progress, and the evolution of legal, political, organisational and administrative patterns for carrying out the regional developmental effort.

A major aspect of the Regional Plan is metropolitan decentralisation, comprising the concepts of redistribution of the population, city functions and activities and restructuring of the Mother City. In all Regional Plans where very large cities and their surrounding areas are involved, the focal issues are related to evolving a hierarchy of growth centres, a balanced dispersal of functions and activities, transportation linkages to residential and employment centres, alternative growth centres, channelling public and private investment, and organising effective management through proactive intervention.

A draft Regional Plan is then published and a Regional Planning Committee hears suggestions and objections. Every Regional Plan is then submitted to the State Government, and in a prescribed period Government with notification, approves the Plan with or without modifications. The Government is also empowered to accord its approval

in whole or part to the Regional Plan. No individual can alter the proposed land use, in the period between the draft and the final Plan.

4.4.2 Development Plan: The Vision of the City

At the second level is the Development Plan. The Development Plan of a city is its vision. It sets the agenda of what the city wants to do with itself in the next two to three decades. It zones lands and determines their various uses. It takes into account the various public requirements of the city and reserves lands, whether public or private, for those purposes. The plan also proposes conservation and preservation of areas that have natural, historical or architectural importance. Indeed, the Development Plan spells out what the future of the city would be.

The Development Plan, while going deeper into planning at the city level must be in consonance with the Regional Plan. Thus zoning of lands in a Development Plan cannot be in violation of the Regional Plan stipulations. The idea is that urbanisation in an entire area should be balanced and strategically planned and the plan for part of the region cannot but be in harmony with the Plan for the entire region. As in the Regional Plan, so also in the Development Plan, zoning provides an instrument whereby compatible land uses are grouped together, and non-conforming uses are segregated from one another. This is supposed to help compatibility, synergy and enhanced efficiency. Most industries could be noisy and polluting and not compatible with residential, domestic activities, which is why industrial zones are often set apart from residential zones.

Reservations for public purposes include schools, colleges and educational institutions, medical and public health facilities, markets, social welfare and cultural institutions, theatres and places of public entertainment, religious buildings, government buildings, open spaces and playgrounds, natural reserves and sanctuaries, dairies, sites for public utilities such as water supply and sewerage, fire stations, other community sites, service industries and industrial estates. Areas for envisaged populations are calculated and carved out for reservation in the Development Plan as per space norms sanctioned by the State Government. The Development Plan also makes provisions for the city's transportation and communication system such as roads, railways, airways and waterways, and parking facilities.

The preparation of the Development Plan follows much the same pattern of formulation as the Regional Plan. Every planning authority is required to carry out a survey, prepare a

land use map and ready a draft Development Plan for the area within its jurisdiction. If the planning authority fails to get the plan ready within the prescribed period, the State Government may do so in consultation with the Director of Town Planning. The Draft Development Plan once prepared is notified in the official Gazette, and is available for sale as well as for the submission of objections and suggestions.

A Committee of the planning authority comprising three members of the Standing Committee of the local body, and a maximum of four other members with knowledge and experience of the subject, hears these objections. After hearing and consideration of the suggestions and objections by the said Committee, and after modifications, the draft development is published in the official gazette and is submitted to the State Government for sanction, which has the right to sanction the Development Plan within a year. It may, for such a purpose consult the Director Of Town Planning and make whatever modifications it considers necessary. Any subsequent modifications to the sanctioned Development Plan can be made by substantially following a similar procedure as for sanctioning a draft Development Plan.

4.4.3 Development Control Rules

Coupled with the Development Plan are the Development Control Rules adopted by the civic body, which lay down the details and the working tools of how development and construction would be permitted and controlled. The rules deal with the manner in which building permission can be obtained the general building requirements, and aspects of structural safety and services. Access, layouts, open spaces, area and height limitations, lifts, fire protection, exits and parking requirements are stipulated.

Similarly structural design, quality of material and workmanship, and inspections during construction are spelt out. The control of floor space use, tenement densities, and the Transfer of Development Rights are some of the most crucial issues dealt with by the rules. These rules are also framed by the planning authority and are sanctioned with suitable changes by the State Government.

4.4.4. Town Planning Schemes

At the bottom of the three tier system are the Town Planning Schemes for part areas of Development Plans, which are in the nature of micro plans. As stated earlier, these are plans that use the method of reconstitution of plots for the provision of infrastructure, and

sharing costs and benefits through the principles of compensation to those who lose land, and betterment levies on those who gain enhancement in land value.

The planning authority, for the purpose of implementing proposals in the final Development Plan, prepares one or more Town Planning Schemes for any part of the area of the Development Plan. A planning authority may resolve to declare its intention to prepare a Town Planning Scheme and may accordingly make a declaration in the official Gazette. The draft is then to be prepared within a year in consultation with the Director of Town Planning. The draft scheme comprises the ownership, area and tenure of each original plot; reservation, acquisition or allotment of land for the furtherance of the implementation of the Development Plan; proposals for plot reconstitution; total cost of the scheme; and the net cost to be borne by the planning authority etc. The draft scheme is then published, and objections and suggestions are called for.

After the draft scheme is sanctioned and published in the official Gazette, the Arbitrator deals with the determination of areas to be reserved for public purpose, outlines the final plots in the scheme, and fixes the values of the original and the final plots. He also estimates compensations payable to owners, and contributions to be levied on owners benefiting from the scheme, before drawing up the final scheme. The Tribunal of Appeal comprising judicial officers of the rank of District Judge is the Appellate body, and its decisions are final. After deciding on appeals, the Tribunal then sends this final scheme to the State Government for its sanction.

Summarising, the urban planning process in India has quite definitely been refined over the past few decades through a logical process of evolution from the bottom to the top. A beginning was made with Improvement Trusts and Town Planning Schemes, which were responses to improving the quality of life in the immediate vicinity, at the micro level. It led to the realisation that planning needed more comprehensive inputs and hence the canvas was enlarged and Development Plans for cities were thought of. An awareness of the linkages between cities and their hinterland necessitated the need to look holistically at entire regions rather than mere towns. A three tier planning methodology finally emerged. The process provided for expert advice and some public consultation to make planning broad-based and informed, clothing it in transparency.

4.4.5 The Planning Mechanism

The State Directorate of Town and Country Planning is the nodal organization in all the states which deals with the subject of city planning. In some states, for example, Madhya

Pradesh, Himachal Pradesh and Rajasthan, the Directorate is the sole planning agency responsible for preparing city plans of all urban settlements in the state. The Municipality is also a planning agency and, as in the case of Maharashtra, it is the municipality which is legally required to make city plans. A third genre of agency along with the Directorate of Planning and the Municipality has been developed, following upon the experience of the Delhi Development Authority, that is the Development Authority. The State Directorates and the Development Authorities are basically professional bodies appointed by the state, and whereas their plans have a degree of technical excellence, participation at local level are minimal. (Buch 1987)

4.5. Urban Planning in Maharashtra

Deriving inspiration from the British Act, the erstwhile Bombay president was the first to introduce town planning legislation in India through the Bombay Town Planning Act (1915). The Bombay Act, like its English counterpart, authorized Municipal Council in the state to undertake town planning schemes for portions of the town in course of development. Like the English act, the Bombay Act also provided for the recovery of betterment contribution from landowners who obtained a value increased for their lands due to the development works under the scheme.

The Bombay Act however went one step ahead of the English act. It provided for improving the shapes of the individual land parcels with irregular boundaries through the compulsory give and take of land from the adjoining plots. This was taken up from similar provisions in some towns in Germany. This feature is known as reconstitution of plots. A town planning scheme under the Bombay Act of 1915 proceeded through the following steps:

- A notional pooling of all individual holdings called original plots in the areas to be included in the scheme (notional because the land continued to remain in the possession of the original owners).
- Superimposing a layout of roads and sites, required for community needs of the eventual population of this area, on the notionally pooled land.
- Reconstituting all original plots with irregular boundaries into regular shaped plots called the final plots; the reconstitution being done so that:
 - a) The shapes of all plots are improved a) to make them more suitable for building purposes; and

- b) The ratio of the area of each final plot to the area of the corresponding plot is the same or nearly same as the ratio of total net area, after deducting area of the new roads and new public sites, to the total area included in the scheme.

In other words, the reconstitution has to be done in a way that the land loss of each owner is equal or nearly equal and that every landowner contributes to the requirement of land areas for roads and public sites. The land-loss-equalization aspect, though not expressly stated in the Act, has to be observed to ensure an equitable treatment to all owners of the original plots.

Three different sets of values are then estimated for the original and final plots:

- a) The value of each plot as it was before the introduction of the town planning scheme called the original value.
- b) The value of the final plot without reference to the improvements contemplated in the scheme called the semi-final value; and
- c) The value of the final plot on the assumption that the scheme with all the works contemplated therein has been completed called the final value.

Certain points to be kept in mind with respect to the above areas are as follows:

- The reference date for all these valuations is the commencement of the planning exercise.
- The difference between the original and the semi-final value is the compensation due to the owner for reduction of the area of his land (this compensation is the combined effect of reduction in area and improvement in shape).
- The difference between the final value and the semi-final value is the betterment in value, which is the betterment in value, which accrues to the plot. A part of this (up to a maximum of 50%) is recovered from the owners of his financial contribution for the execution of various works.
- The scheme operates on the basis of sharing both costs and benefits. In essence, it is a joint area development project undertaken by the collectivity of landowners, the municipality stepping in merely as agents of the collectivity.

A few schemes undertaken in Maharashtra under the provisions of this Act proved to be very successful. The town planning schemes in their country of origin, England were, however, languishing. These schemes had not incorporated the features of the Bombay counterpart, which ensured equalization of land loss for all landowners and automatic acquisition of lands required for public works. The English act did provide for betterment

recovery, but as far as acquisition of lands required for public purposes was concerned, a separate acquisition process for each parcel of land was required. The compensation liability in such acquisition was quite considerable and this spelt the downfall of the schemes. The tendency was to plan in a way as to minimize the need for the acquisition of new lands. An eminent English town planner remarked that the town planning scheme were no more than photographs of existing developments. To avoid compensation liability, they tended to follow the trends of development rather than giving new and desirable direction for future growth. A committee was then appointed in England to analyze and resolve the compensation issue in planning, which often thwarted the realization of the planning objective of bettering community life.

4.6. Process of Urban Planning in the State

The urban planning process in Maharashtra traverses several stages. It begins with the local urban body declaring its intention of preparing a Development Plan. After it resolves to do this, it intimates this decision to the State. The State with a view to assist the municipal body appoints a Town Planning Officer to assist the ULB in the preparation of the Development Plan. The activities undertaken include existing Land use survey and other surveys as may be necessary. based on these surveys and data, the Town Planning Officer prepares a draft plan. This is then presented to the ULB. The draft plan is then published for wider knowledge and interaction and comments from the public. These are termed objections and suggestions in the town planning parlance.

A Planning Committee is then constituted comprising three members nominated by the Standing Committee of the ULB and four members nominated by the Government. This Committee then goes through a process of actually hearing the objections and suggestions that have been made by the public. This is a truncated incorporation from the British town and country Planning Act where a whole series of public hearings, including by the Minister take place before a plan can be finalized. These are taken into consideration and the Planning Committee recommends modifications in the draft plan. These recommendations of the Planning Committee are required to be published for common knowledge. The General Body of the ULB then considers the Planning committee's report and takes decisions. Incorporation of such modifications as accepted by the GB in the Plan then follows. There is a republication of the plan if the changes are of substantial nature. The Plan is then submitted to the Government which sanctions the plan with or without modifications.

4.7. DCRs as Regulating Instrument

The building byelaws essentially aim at ensuring 'health and safety' for the occupants of individual buildings. However, when formulated in the context of a master plan, they also include the considerations that relate to the surroundings in terms of compatibility of use, intensity of use etc. The latter are sometimes called development control rules. The master plans on the other hand project a long term plan that divides the city into two realms the public and the private. Public refers to land designated for physical and social infrastructure. The building byelaws are designated to ensure conformity of development in the private realm with the master plan. The role of building byelaws in regulating the urban growth has to be thus seen in the context. Urban growth depend upon the provisions of the master plan, the infrastructure development in the public realm and the administration and enforcement of building byelaws in the private realm. (Phatak 2004).

The sub set of building byelaws that aims at ensuring health and safety of the occupants of an individual building typically includes:

- Strength of materials and structures (e.g. earthquake resistant structures)
- Water supply, drainage and sanitation
- Light and ventilation
- Fire protection and safety
- Vertical transportation- Lifts and escalators
- Heating, Lighting, Ventilation and air conditioning

The National Building code and various Indian Standards cover these issues through guidelines. The Bureau of Indian standards has undertaken to revise these codes in 2003.

The other sub set of building byelaws, apart from basic health and safety considerations, also attempts to control negative externalities that may arise on account of individual development. Typically such byelaws provide for

- Land use zoning and land provisions in each zone
- FAR regulations
- Density regulations
- Parking requirements
- Heritage conservation and
- Urban aesthetics architectural design controls.

In the recent past attempts have also been made, led by Mumbai, to use such byelaws particularly those related to FSI/FAR as public policy instruments to achieve wider objectives such as

- Grant of Development Rights in lieu of monetary compensation for acquisition of land for public purposes.
- Grant of additional development rights to promote redevelopment slums or dilapidated buildings
- Grant of extra FSI for schools and hospitals to make them financially viable
- Grant of extra FSI to promote new economic activities such as IT and ITES.
- To help sick industry to revive or at least pay the dues of labour.
- Sale of development rights as public finance measure.

With the regulations comes the elaborate enforcement machinery. This involves the legal and regulatory procedures to ensure that development is undertaken in conformity with the regulations, detecting the development that violates the regulations and the procedure to deal with such violations.

Typically the procedure includes:

- Provision of professional architects to submit building proposals
- Engineers at the local authority to scrutinize these proposals and grant approval.
- Building inspectors to detect unauthorized development and procedures to stop, remove or “regularize” such unauthorized development

In some cases, the local authorities follow the practice of “regularize” the violations of byelaws by levying a premium.

4.8. Poverty Planning in Urban Maharashtra

4.8.1 Urbanization of Poverty

Poverty in India, as in the entire developing world is rapidly acquiring an urban face. This phenomenon, now universally acknowledged, is known as the urbanization of poverty. While this has been partly on account of internal demographic multiplication that has suffered deprivation, it is accepted that this is primarily a sequel to very large numbers of rural migrants, especially in the mega and metropolitan cities, who have opted out of the rural choice in search of survival, employment, better livelihood and brighter future. Rural poverty strategies have largely been unable to stem this exodus, not primarily because of

a failure of rural interventions but because of the inevitability of urban dynamics, so emphatically surfacing across the developing world and already fully manifested in the developed world.

4.8.2 Informalization of Urban Poverty

The urbanization of poverty has altered India's urban face by imposing two distinct dimensions upon cities. Deprived of a proper urban habitat, the poor have had to find residential foothold in slums. And in their search for employment and enterprise, they have been enforced to find survival in the informal sector. Urbanization of poverty has thereby been accompanied with the informalization of poverty.

4.8.3 Debilities a Factor of Land Tenure

The combination of urbanization of poverty and its informalization impose overwhelming legal and institutional constraints on it. These limitations negatively impact the poor woman's and man's quality of shelter, livelihood, health, education, human dignity, access to basic services, credit, and any chance of integration into the city and upward mobility in life. In many fundamental ways, almost all these infirmities turn out in some important measure to be a factor of land tenure. Precisely for these reasons, and in view of its global nature, security of tenure and improving the lives of slum dwellers figure among the Millennium Development Goals and targets. Goal 8, target 11 speaks of having achieved "by 2020 a significant improvement in the lives of at least 100 million slum dwellers" (MDG).

4.8.4 Functional Domains: Centre and the States

Under the Indian Constitution, the current role of the Central Government in regard to urban issues is to encourage, exhort and advise states and to provide policies and a model legislative framework that the states could adopt and follow for their own use. The prime examples are the Land Acquisition Act, Transfer of Property Act, Town Planning Act and Slum (Improvement and Clearance) Act. In addition, through its financial incentives, and conditionalities attached to central resource allocation, such as those in the Jawaharlal National Urban Renewal Mission, Government of India could encourage reforms and a chosen path to follow. The principal urban function, however, rests with the States under Article 246 of the Constitution. States can adopt their own policy and enact legislation. In terms of urban land, the State's Department of Revenue is

generally the custodian of land owned by the State Government. It is vested with powers to undertake functions such as land expropriation, registration of transactions and tenure, and to deal with the issue of title deeds. Land use, planning and regulation are controlled by the State Department of Urban Development and urban local authorities.

4.8.5 Maharashtra

Maharashtra has pioneered, over several decades, a number of innovations in regard for tenure to slum dwellers. The Maharashtra Slum Areas (Improvement, Clearance and Redevelopment) Act of 1971 was the oldest in a series of legislations in the country and provided for protection against eviction. It allowed notification and recognition of slums, and defined the nature of improvement works to be undertaken. A census of hutments was also carried out in 1976 and identity cards were issued to slum dwellers.

1985 was a turning point in tenure regularization in the country and began with the slum upgrading programme (SUP) in Mumbai. Under the programme tenure was granted to registered cooperative societies of slum dwellers in a specified area. The SUP was later extended by the state of legislature to all the municipal corporations in Maharashtra. Little progress, however, was made in the other cities, nether was any positive movement witnessed in regard to slums on private land, and central government land in Mumbai. The tenure regularization programme thereby could not become applicable to a very sizeable chunk of slum dwellers.

The 1990 SRS gave way to the slum redevelopment scheme (SRD) in 1995, essentially an improved version of the SRS, based on lessons learnt. Under the SRD, lands under slums owned by institutions of the state governments can be leased out for 30 years at a nominal lease rate and increased floor space index (FSI) to developers. Highly subsidized tenements for members of registered slum or pavement dwellers' cooperatives on part of the land could then be built and the private market could thereby provide housing for the poor. They could recoup their costs and additional profits out of the remaining released land, helped by the additional FSI and the contributions by the slum dwellers. Modifications to the Slum Act, Maharashtra Regional and Town Planning Act of 1966 and Bombay Municipal Corporation Act of 1988 have been made to enable the participation of

slum dwellers, NGOs, developers and land owners. This scheme has only been partially successful.

Of recent, in July 2007, Government of Maharashtra came out with a State Housing Policy with the overall objective of 'Shelter for All'. Its specific objectives speak of facilitating, i. 'affordable housing' and creating 'shelters for the poorest of the poor on ownership or rental basis' ; ii. Pursuing 'the target of cities without slums through equitable slum redevelopment and rehabilitation strategy and shelters for the poor'; and deregulating 'housing sector and encourage competition and public private partnerships in financing, construction and maintenance of houses for Lower Income Groups (LIG) and Weaker Sections of the society'. (Deptt of Housing, GoM 2007)

The Policy talks of providing adequate lands for the weaker sections in close proximity of cities, towns and rural areas. It advocates 'inclusionary zoning provisions for low income group housing in private layouts'. It emphatically states that security of tenure would be 'the basis of all rehabilitation/redevelopment options' and that government lands would be offered 'after redevelopment to cooperatives on occupancy or lease-hold basis'.

For crafting such change, the Policy indicates legal and regulatory reforms, the erection of an institutional framework, a housing sector regulatory commission, encouragement to foreign direct investment, a special township policy, redevelopment of run down areas and dilapidated buildings. (Deptt of Housing, GoM 2007)

4.9. Infrastructure Planning for Quality of Life in Urban Maharashtra

The job of providing infrastructure facilities in cities of Maharashtra, as elsewhere in the country, has primarily been the job of municipal entities. However, since the State's urban local bodies perform many more local functions than in most other states (where several parastatals have some of the infrastructure responsibilities), provision of infrastructure and services that lead to the delivery of quality of life for citizens have fallen within the domain of municipalities.

It has been the common experience, however, that quality of life deficits in the cities have risen as municipal bodies find it increasingly difficult to meet the rising requirements of cities. This can be gauged through an analysis of the

compulsory annual status reports that municipal corporations are required to publish.

The assistance of JNNURM to some of the cities of the State such as Mumbai, Pune, Nasik and Nagpur have allowed some of the cities to put more money into capital assets and build more infrastructure. The following Table gives an idea of the kind of assistance some of these cities have received from JNNURM:

Table No. 4.2 Assistance received from JNNURM: (Rs. Millions)

CITY	NO OF PROJECT	TOTAL PROJECT COST	ACA COMMITTED	ACA RELEASED
MUMBAI	25	52,759.64	18,465.87	9,278.71
PUNE	20	34,199.51	15,675.38	9,838.01
NASHIK	6	7,991.62	3,995.81	2,422.82

Source: Ministry of Urban Development *ACA: Additional Central Assistance

But they have been insufficient in comparison with the ever expanding population, area and city demand. Other cities have had even greater resource crunch in the provisioning of infrastructure. This is despite the fact that Maharashtra cities have had the largest share of JNNURM funds and the largest number of sanctioned projects (79) among states.

One good indicator is the performance of the cities in terms of implementation of the Development Plan. The following Table illustrates the performance of some of the cities under study. As the Table illustrates, Pune whose DP was approved in 1987 has been able to implement only 35 per cent of its reservations in a period of more than two decades, whereas Kolhapur has achieved 5 per cent implementation in little less than a decade or half the period of validity of the Development Plan. In fact the average implementation percentage in the State hovers around the one-fourth mark.

Table No. 4.3 IMPLEMENTATION OF DEVELOPMENT PLAN

CITY / YEAR	TOTAL NO OF DP RESERVATIONS	NUMBER IMPEMETED	PERCENT IMPEMENEED
PUNE 1987	525	183	35
PCMC 1995	643	202	31
NASIK	416	89	21
KOLHAPUR 2001	385	20	5
BARAMATI 1988	27	7	26

(Director of Town Planning, Maharashtra, 30.06.2009)

4.10. Challenges Countenanced by Maharashtra Cities

Many of the challenges that face Maharashtra cities are shared by cities of other states. One of the most common challenges very widely shared is of rapid demographic expansion, especially of metropolitan areas and metropolitan cities. The provisional population of the State is recorded 11,23,72,972 in 2011 census. In terms of population, Maharashtra is the second largest State in the country with about 9.29 percent of the national population. In 2001 census, this was 9,68,78,627 i.e., an addition of 1,54,94,345 during the decade 2001-11. Maharashtra's urban population now stands at 5.08 crores which is 45.23 percent of its total population. During the decade, while the State's population grew 16 percent, its urban population grew at 23.7 percent against a rural growth of 10.3 percent. The largest concentration of State population, about one-fourth, emerged in the Mumbai metropolitan region (MMR). Some of the urban locations on MMR grew startlingly, topped by Kharghar that witnessed 1117 percent growth over 2001.

In the wake of such rapid urbanization, cities face the challenge of planning, requiring urban planning to be re-engineered in the Indian socio-economic context, getting it look more comprehensively on aspects of equity and on its implementation in a realistic time-frame. It is evident that unless the tools of planning are contextualized, sharpened and strongly implemented, cities will struggle to get urbanization right. The challenge is also of governance, requiring cities to decentralize, get more transparency and accountability into their systems, and find space for civil society participation.

Cities face challenges of infrastructure. It is obvious that with such rapid urban expansion, cities are finding it difficult to reach adequate infrastructure to rising numbers. The answers have to be found through more imaginative ways of finding resources, and

using them wisely. At the same time, municipal monopoly over all infrastructure and their delivery will have to be relooked, since the job is much beyond a single entity, given the circumstances of rapidity of urbanization, shortage of resource and a dearth of time.

As poverty urbanizes, the question of equity will haunt cities and the issue cannot be brushed under the carpet. The informalization of poverty would require a huge effort to be reversed by the provision of poverty within the formal walls of cities.

Above all, the cities will continuously need to balance the allocation of land and resources between the tripod of economy, environment and equity. In doing so, attention is drawn towards the complex challenges of globalization. This is because global forces are centred in cities, especially the very large ones. The challenge flows largely from the pressures emanating on urban land, requiring cities to allocate land for global economic use. As a consequence, the allocation of land for environmental and equity uses is increasingly getting relegated. This research document would deal with some of these in its future pages.

Summary

Urban planning and planning laws in India evolved in the course of the twentieth century under primarily British influence. Currently, a three-tier planning process of Regional Plan, Development Plan/DCRs and Town Planning schemes has been established. A well-laid process of plan preparation is in place. However, urban poverty and provision of urban infrastructure services remain a huge challenge for cities. Unfortunately, plan implementation in the State and the country as a whole has been very poor.

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CHAPTER 5

PRINCIPAL FEATURES AND BENCHMARKS OF THE DEVELOPMENT PLANS AND DEVELOPMENT CONTROL REGULATIONS OF SELECTED CITIES

This Chapter deals with the principal features of Development Plans and Development Control Regulations of Mumbai, Pune, Nashik, Kolhapur and Baramati. These are essentially land use plans prepared under the MR&TP Act. They comprise zonings, reservations for social and other infrastructure services and Development Control Rules.

5.1. Development Plans and City Development Plans

Ministry of Urban Development, Government of India, a number of cities undertook the preparation of City Development Plans. These were not the statutory plans this thesis is primarily concerned with. However, it is necessary to state this position to avoid any confusion. While the Development Plans or Master Plans are essentially land use plans dealing with zoning, reservations and amenities, City Development Plans were investment plans enabling the city to qualify and draw finances from the cited schemes. JNNURM was available to the larger metropolitan cities and UDISSMT to the A class cities and towns. For the purposes of this thesis, we shall exclusively deal with the statutory Development Plans (Master Plans) under the MRTP Act and draw from the City Development Plans only if data generated by them are of relevance to this thesis.

5.1.1. Purpose of Preparing Development Plan

Every municipal body under the MRTP Act 1966 must prepare a Development Plan for the area under its administrative jurisdiction. The plan is also commonly alluded to as master plan. The statutory details have already been cited in a previous Chapter.

Development plans enable planning for an orderly development of a town through zoning of lands, reservation of private lands for public purposes, rules & bye-laws for building control, protection of the environment and ecology and heritage buildings and creation of amenities and new infrastructure for future growth.

5.1.2. Composition of Development Plan

The Development plan includes an existing land use map of the entire area within the municipal boundary with a report of various surveys, statistical data and analysis of

information. The DP would also contain natural physical features like hills, rivers, nallahs, coastline, transportation networks like roads, railway lines, airports, provisions for services like water supply, sewerage, garbage, policies and strategies proposed for implementation and phasing, financial planning with resource mobilization strategies & costs, incentive policies for special developments – infotech / industry / sez / integrated townships , protection policies for ecology, environment, heritage & culture, policies and strategies for flood control and pollution control and proposals for filling and reclamation of low lying lands/ swamps. The development control rules are also a part of the Development Plan. The government gazette order sanctioning the development plan containing alterations and modifications also becomes an integral part in the composition of a development plan.

5.1.3. Statutory Process of Plan Preparation

The procedure as laid down in the different sections of the MR and TP Act is as follows:

Section 21 : legal compulsion to prepare a development plan

Section 22 : essential contents of a development plan

Section 23 : declaration of intention – with boundary definition

Section 24 : appointment of town planning officer for surveys

Section 25 : existing land use survey, analysis and report

Section 26 : publication of draft development plan (suggestions and objections)

Section 27 : consideration of regional plan proposals in the DP

Section 28 : hearings of suggestions and objections + report of planning committee

Section 29 : re-publication on major modification (suggestions and objections)

Section 30 : submission of draft DP by city government to state government for sanction

Section 31 : sanction to draft DP by state government and final DP in force

5.1.4. Colour Coding in Development Plan

With a view to easily distinguish different land uses that development plan areas have been mandated, planners use different colours in maps. The following Table shows the different colours used for different land uses.

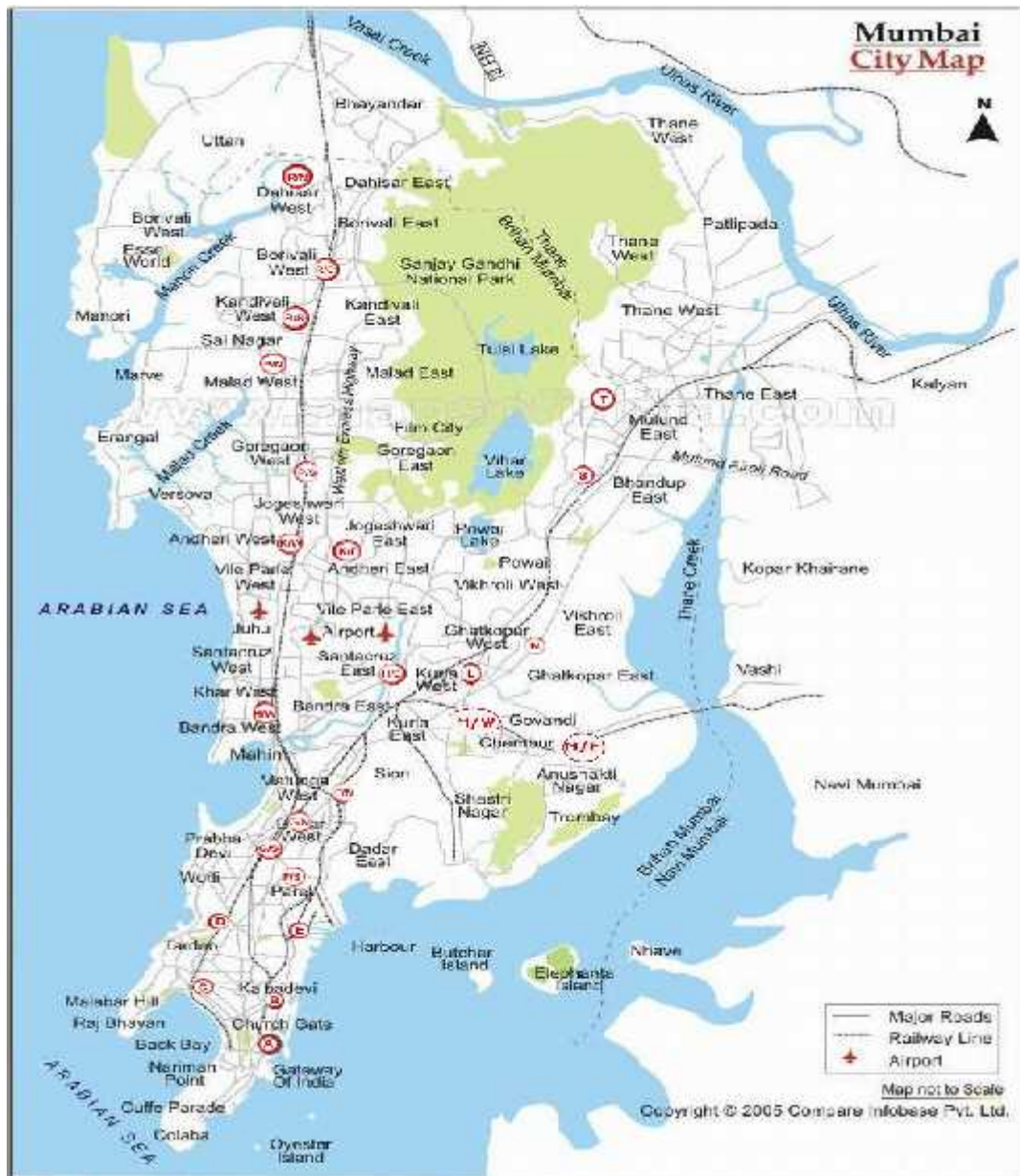
Table No 5.1 Use of different colours for different land uses.

SN	USE	COLOUR CODE
1	Residential	Yellow
2	Commercial	Blue
3	Industrial	Purple
4	Public/Semi-public/Institutional	Red
5	Defence + cantonments	Hatched
6	Forests/Afforestation/Green belts/vegetation	Green
7	Parks, Gardens, Playgrounds, Sports areas	Green
8	Roads, Railways, Transport Routes & Buildings	Grey
9	Water bodies, rivers, lakes, public utilities	Brown
10	Reservations, specified public purposes	Red verge

5.2. Mumbai Development Plan

The Municipal Corporation of Greater Mumbai has a physical area of 437.71 sq km and occupies 0.2 per cent of the land area of Maharashtra. It is hemmed on three sides by the Arabian Sea. But it holds one-ninth of the State's population (11.12 per cent) and one-fourth of its urban population (24.41 per cent). The Municipal Corporation of Greater Mumbai (MCGM) is the civic body that governs the city of Mumbai. In terms of its gross revenue, it is India's richest municipal organization. Established under the Bombay Municipal Corporation Act, 1888, it is charged with the governance, management and planning of the city of Mumbai. The Corporation was created in the year 1865. But its first Development Plan came about a hundred years later, in 1964.

MAP No 5.1 MAP OF MUMBAI



5.2.1. First Development Plan of Mumbai

The first Development Plan of Mumbai was prepared for the period of 1964 to 1977. Subsequently the plan got extended up to 1981. Some of its primary objectives were the provision of an array of amenities in line with land use plan, relocation of certain kinds of activities to the suburbs (such as wholesale markets, port activity, manufacturing industries, bulk material handling) and de-acceleration and decongestion of the island city. This plan fell far short of these objectives. It could not meet met time lines; it faltered on the provision of improved infrastructure and a large number of amenities proposed in the plan could not fructify. These were attributed to the slow pace of

planning, lack of a proper assessment of ground realities and lack of resources for acquisition of land for amenities. The city in the meanwhile continued to grow, economically and demographically. During this period, it was decided to build a satellite city for Mumbai. This, however, took a decade to take shape, primarily after land values began to rise appreciably.

5.2.2. Second Development Plan of Mumbai

The Second Development Plan was a revised development plan prepared for the period of 1981-2001. The preparation of the Plan began in 1977, got published in 1983 and public suggestions were invited thereafter. The plan finally went to the State Government for approval. An approval methodology began to be evolved that sanctioned the plan in parts. As a consequence, the plan found piecemeal sanction from 1991 to 1993. This plan subsequently was extended up to 2013. This was evidence once again of inordinate delays in the making of plan preparation and approvals.

The notable facts of the Development Plan vis a vis the emerging scene on ground need to be highlighted. The plan made provisions for residential land use and housing for a population of 9.87 million by 2001. However, the city reached a population of 9.9 million in 1991 itself. The Census 2001 showed the city's population as 11.9 million by 2001, thereby creating a housing backlog for a population of 2 million. We now have the 2011 Census figures putting Mumbai's population at 12.48 million. This puts the housing backlog for a population of 2.6 million.

The second DP continued to place emphasis on 'decongestion' policy for the island city. It also suggested innovative methods for land acquisition and amenity development. The use of 'Accommodation Reservations' and 'Transfer of Development Rights' were effectively deployed to ensure a quick release of land and amenity development. Yet, the plan has not been able to achieve the targets of amenities provision even by these methods. (Nallathiga, 2009).

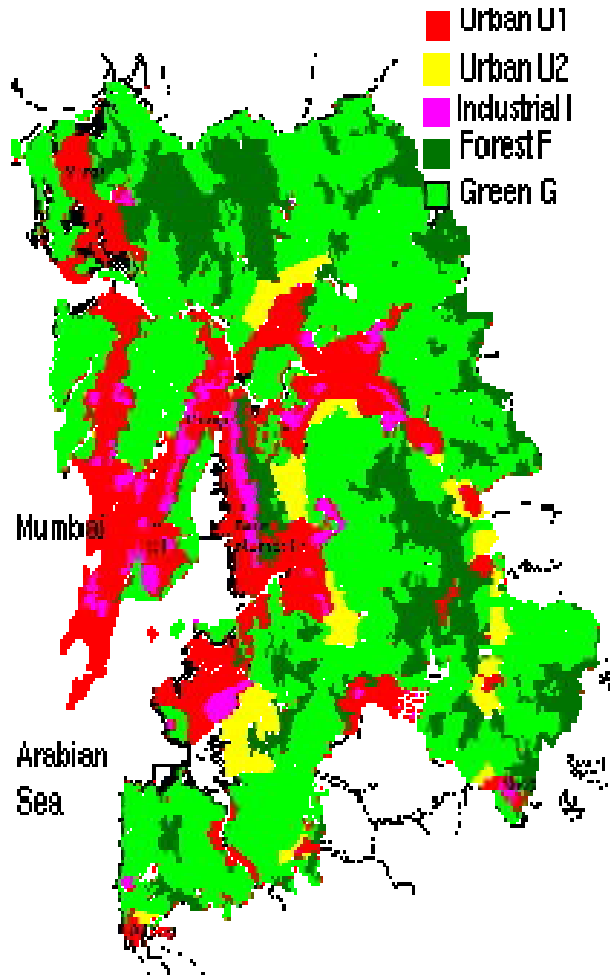
5.2.3. Preparation of a fresh Development Plan

Despite the currency of the second DP till 2013, a High Powered Committee recommended the preparation of a fresh one without waiting for the lapse of the former. This was in response to the order of the Bombay High Court in December 2006 in relation to Development Plan. A consortium of Indian and French urban planning companies chosen by the civic body has been assigned to undertake plan preparation. The earlier scheduled completion date was 2012. Although extension has been granted till

2014, and while the official stand is that planners should complete the plan by 2012, according to a rough estimate, the Plan may be ready only by 2016. The company Groupe SCE India Pvt Ltd had actually backed out from the task, just a month after commencing work, but it is believed that issues between the Company and the Municipal Corporation have been sorted out and a 30 month extension has been granted till 2014. The work assigned to Groupe SCE (which prepared Bangalore's DP in the past) involves thematic mapping, comprehensive land-use plans, tracking growth scenarios, and finally preparing the DP.

The quality of life in Mumbai, however, has over the years worsened. Slums have proliferated and congestion, pollution and traffic problems have surfaced. All of this has resulted in a slippage in rankings (Mumbai fell from 26th place in 1996 to 33rd in 2000 in Asiaweek's rankings of the top 40 cities in Asia). On the international stage, Mumbai ranks a poor 163rd (out of 218 cities world-wide) on the Forbes' quality of life survey and 124th (out of 130 cities world-wide) on EIU's hardship ratings. It is expected that the situation would in all probability deteriorate over the next decade with an expected population increase by about two million.

MAP No 5.2 MUMBAI LAND USE PLAN



5.2.4. Land Use in Development Plan

The current Development Plan of Mumbai shows the following land use plan:

Table No 5.2 Development Plan of Mumbai of land use plan

LAND USE	ISLAND CITY (SQ KM)	WESTERN SUBURB (SQ KM)	EASTERN SUBURB (SQ KM)	TOTAL AREA (SQ KM)	PERCENT TOTAL AREA
Urban Zone U ¹	54.58	105.61	80.78	240.97	52.64
Industrial	6.46	10.04	17.79	34.29	07.49
Green Zone G ¹	1.69	51.47	43.54	96.70	20.90
National Park		32.17	18.78	50.95	11.13
Recreation		22.48		12.48	02.83
Harbour/Airport	9.69	5.10		14.79	03.33
Coastal Wetland		0.01		00.01	
Water Body			7.61	07.61	01.68
Total Gr Mumbai				457.80	100.90

The Development Plan on Greater Mumbai needs to be placed in the context of the Regional Plan of Mumbai Metropolitan Region. As stated in an earlier chapter, the Development Plan must observe the overall tenets of the Regional Plan. In the context of Mumbai, a further overriding factor is the Coastal Regulation Zone declared by the Ministry of Environment and Forests, Govt. of India, under the provision of Environment (Protection) Act, 1986. This notification was issued in February, 1991, declaring an area of 500 m. along the sea coast, bays and estuaries and up to 100 m. from the rivers and creeks as areas under Coastal regulation. The developments within this zone are required to be regulated in accordance with the provisions of the notification and the Coastal Zone Management Plan which the State Govt. is required to prepare for this area. The provisions of this notification are far more restrictive than the provisions of present Regional plan and have an overriding effect on provisions of the Regional Plan. The developments within the Coastal Regulation Zone are therefore made subject to provisions of Coastal Zone Management Plans (which are under preparation) and the Regulation contained in the Ministry of Environment and Forests notification.

Urban Zone

The Urban Zone U¹ in the Development Plan will primarily cover areas where more intensive urban development and economic activity is expected in the future. It will include all the existing urban centres, areas earmarked for New Towns, growth centres and other areas having potential for urban development. Most of these areas of Development Plan need to be urgently prepared in accordance with the framework of the Regional Plan. The concerned Planning Authorities should then regulate the development in accordance with such plans.

In the present MMR Regional Plan, a number of activities such as expansion of Gaothans, housing for co-operative societies of local villagers, holiday resorts, bungalows on 1- acre plot, transit godowns, highway amenities, small-scale industry etc. are permitted in the G-1 Zone. However such developments have concentrated along the important inter-city roads in the Region. Recognising the inevitability of such developments, new areas along inter-city roads have been included in U¹ or U² Zones in the revised Regional Plan. Rest of the area, which includes agricultural land, plantation areas, hilly areas, forests other than the Reserved or Protected Forests, and low lying areas are designated in the revised Plan as Green Zone (G-1 Zone). G-1 Zone, much like Forest zone, was once seen as a conservation area. The aim was to protect agricultural activity, preserve area for recreational use and arrest urban sprawl. With agriculture becoming increasingly non-remunerative farmers are keen to convert their land for non-agricultural use. On the other

hand, many space extensive activities are no longer possible in urban areas because of high land values. Under these circumstances, certain degree of development in G-1 Zone is inevitable. The proposed D.C. Regulations therefore intend to permit certain selective developments such as farm houses, week-end houses on 2000 sq. m. plots, holiday homes, resorts, large institutions on minimum 2.5 ha. plots, film shooting sites on minimum 5 ha. sites and certain obnoxious or hazardous uses with adequate environmental protection measures. The FSI proposed for such activities is 0.05 which with a view to help minimise adverse impact on the character of the countryside. The Green Zone areas within Mumbai DP fall in the G¹ Zone and can be developed only as stipulated in the MMR Regional Plan.

Forest Zone

The Forest Zone is a highly restricted zone consisting of Reserved Forests and Protected Forests under the Indian Forest Act, 1927 and forests acquired under Maharashtra Acquisition of Private Forests Act. It does not include private lands under forests or plantation. Although any activity which is permissible in G Zone will also be permitted in F Zone, it will be subject to clearance from the Forest Department. Since the diversion of forest land for non-forest purposes is highly restricted under the provisions of Forest Conservation Act, 1980, no development of the type permitted in G-1 Zone is likely to take place in F Zone on any substantial scale.

5.2.5. Building Bye Laws and Development Control Rules

A municipal corporation prepares building bye laws and development control regulations under the provisions of MR &TP Act 1966 after following the legal formalities stipulated under the said Act. These are then submitted to State Government for sanction. The Urban Development Department, the nodal department for municipal bodies, consults the Director of Town Planning and calls for public suggestions and objections. These then are sanctioned and published in the Official Gazette and thereafter they come into force.

5.2.6. Building Bye Laws and Development Control Rules of Mumbai

The Development Control Rules of Mumbai run into several hundred pages. They comprise definitions of terms used, such as amenity, balcony, floor space index. The Rules detail the process of building plan submission and municipal approvals. There is a provision herein regard to *Deemed permission*. This means that if within sixty days of the receipt of submission of plans, "the Commissioner fails to intimate in writing to the person who has given the notice his refusal or sanction, or sanction with modifications or directions, the notice with its plans and statements shall be deemed to have been

sanctioned, provided that this shall not be construed to authorise any person to do anything on the site of the work in contravention of or against the terms of lease or titles of the land, development plan, these Regulations or any law in force." This clause scarcely has ever been allowed to operate.

5.2.7. Interpolations/Amendments to DC Rules

The Development Control Rules undergo several interpolations and amendments. In Mumbai, insertions have been made in regard to development of sites reserved for Resettlement & Rehabilitations of affected persons of Projects. In the instance of rehabilitation for the purpose of housing Slum dwellers who are displaced by projects undertaken by the Corporation, the FSI permissible has been hiked to 2.5. There are provisions in the DCR on Transfer of Development Rights. The Rules state that "In certain circumstances the development potential of a plot of land may be separated from the land itself and may be made available to the owner of the land in the form of Transferable Development Rights (TDR). These Rights may be made available and be subject to the Regulations in Appendix VII hereto."

The DCRs contain provisions on Floor Space Index Computation. It has provisions in regard to Parking Spaces. It states that "Wherever a property is developed or redeveloped, parking spaces at the scale laid down in these Regulations shall be provided. When additions are made to an existing building the new parking requirement will be reckoned with reference to the additional space only and not to the whole of building but this concession shall not apply where the use is changed. Parking spaces shall be paved and clearly marked for different types of vehicles. A table showing the space requirements of various types of vehicles is also included.

After the announcement of Information Technology Policy in August 1998 by the Government of Maharashtra, the State also decided to offer incentives and concessions for setting up Information Technology Establishments. In line with this incentivization, steps were taken to amend building bye laws. These allowed greater flexibility to IT establishments to set up their activities in various zones that included residential, industrial and even no development zones. Some FSI concessions were also granted. These provisions were also incorporated in Mumbai DCRs.

Special Regulations for physically handicapped persons with reference to access path, walkways and parking of vehicles for handicapped people have been recently interpolated. Similarly, rules in regard to development or redevelopment of lands of

cotton Textile Mills, Preparation of list of Heritage Buildings and Heritage Precincts, Regulation for the reconstruction or redevelopment of cessed buildings in the Island City by the Landlord and/or Co-operative Housing Societies have been included.

5.3. Pune Development Plan

5.3.1. Background.

The development of Pune as a city commenced from 1818. The city then had an area of just five sq. km. The first non statutory “master plan” of Pune was prepared in 1954. The first statutory “development plan” was prepared in 1966. The first ‘revision’ process of this Development Plan was started in 1982, and the ‘revised’ Development Plan was sanctioned by the State Government in 1987. The effective validity of this plan is for 20 years – i.e. up to year 2007. Hence the second revision (DP 2008) is now underway, as per law. As per the notification by the Urban Development Department of Government of Maharashtra on 11 sep 1997, 36 fringe villages were merged in the jurisdiction of PMC. The Municipal area as a consequence rose to approximately 450 sq. km. from the old area of 146 sq. km. Subsequently, some of the merged villages were demerged. The current area under Pune Municipal Corporation’s (PMC) jurisdiction is 243.96 sq km. For the newly added areas, the PMC has prepared a separate new Development Plan (DP). PMC, as the local planning authority, needs to prepare a development plan for the new area within the framework of MR&TP Act and submit it to the Government of Maharashtra for sanction within the stipulated period. Accordingly, as per section 23 of MR&TP Act 1966, PMC declared its intention to prepare a Development Plan. This was published in local newspapers and also in State Government Gazette in January 1998.

5.3.2. Private Sector Participation in Planning.

With a view to facilitate expeditious preparation of the plan, PMC sought for private sector participation in the planning process. This was done to ensure application of national/international planning norms along with state of the art technology in the planning exercise. PMC awarded the contract to M/s. India International Infrastructures Engineers Ltd. for this project. IIIIE team consisted of experts in the field of urban and regional planning, transportation, demography, economics, urban design, environmental management, infrastructure planning and management and geographic information systems.

They prepared a draft development plan using G.I.S. platform and used modern technologies of Satellite Imagery, total station survey to prepare existing land use plan. The plan was never published for comments of citizens. Meanwhile, the State

Government de-linked few newly added villages from PMC boundaries. The General Body of PMC cancelled the draft Development Plan for 36 villages and under the guidance of the City Improvement Committee prepared a new draft Development Plan for remaining fringe villages. This plan was published and objections/suggestions were invited under MR&TP Act 1966. Over 80,000 citizens registered their objections/suggestions. The State Government appointed a committee of experts to hear the aggrieved parties. The process is still incomplete and is pending approval from the State Government. The combined land use distribution as per both the Development Plans indicates that about 42 percent is allocated for residential use. The land use plan indicates that about 13.04 per cent of the area is allocated for transport, and 11.91 per cent is for reserved and forest areas.

5.3.3. Land Use The details of land use are as follows:

Table No 5.3 Details of land use of Pune

Land Use	Old Area (Sq Km)	New Area (Sq Km)	Total Area (Sq Km)	Old Area (Percent)	New Area (Percent)	Total Area (Percent)
Residential	50.58	53.16	103.74	36.55	50.35	42.52
Commercial	2.35	1.57	3.93	1.0	1.49	1.61
Industrial	7.26	2.62	9.88	5.25	2.48	4.05
Pub/Semi-Pub	15.22	1.45	16.67	11.00	1.37	6.83
Public Utilities	1.38	0.00	1.38	1.00	0.00	1.57
Transport	22.00	9.81	31.81	15.90	9.29	13.04
Res Forest & Agri	2.35	26.70	29.05	1.70	25.29	11.91
Water Bodies	12.04	2.48	14.52	8.70	2.35	5.95
Hills & Hill Slopes	12.45	0.00	12.45	9.00	0.00	5.11
Recreational	12.73	7.79	20.52	9.20	7.38	8.41
Total	138.38	105.58	243.96	100.00	100.00	100.00

5.3.4. Plan Implementation

The last Development Plan for PMC for the old area was prepared and published in 1981, and was sanctioned by the Government in 1987. It is estimated that PMC has so far cumulatively been able to implement the sanctioned DP to the extent of 28.5%. The total number of reservations are 525, of which 150 sites have been acquired for development. As mentioned earlier, the old DP was implemented only to the extent of 28.5%. A total area of 770.30 ha was reserved under the DP, but PMC managed to acquire only 244.25 ha and developed 193.57 ha. The DP prepared in 1987 projected a population of 18.25 lakhs for 2001, while the actual population by the time of the 2001 census was 25.40

zoning of various users, an optimum hierarchy of Traffic and Transportation Network and basic social amenities for each neighborhood unit and the hierarchy of city and intermediate level of amenities." (CDP)

5.4.1. Land Use 1985

Table No 5.4 Details of land use of Nashik

S N	Land Use	AREA IN HA	PERCENT OF DP	PERCENT OF TOTAL
1	Residential	1514.92	20.87	5.65
	Committed Residential	1415.07	19.49	5.28
	Total	2929.99	40.36	10.93
2	Commercial	61.89	0.85	0.24
3	Industrial	1378.39	18.98	5.14
	Committed Industrial	52.27	0.72	0.19
	Total	1430.66	19.70	5.33
4	Public And Semi-Public	487.21	6.44	1.74
5	Public Utility	83.67	1.15	0.31
6	Transportation	799.22	11.01	2.98
7	Gardens, Playgrounds	145.62	2.01	0.54
8	Military	943.7	13.0	3.52
9	Cidco	398.00	5.48	1.48
	Total Developed Area	7260.00	100.00	27.07
10	Agriculture	14213.82		52.99
11	Water Bodies	955.13		3.57
12	Vacant Land	3823.42		14.25
13	Forest & Hill Slopes	569.13		2.12
	Total Area	26822.00		100.00

- CDP Nashik Municipal Corporation

5.4.2. LAND USE (PROSPECTIVE)

Nashik Municipal Corporation also has a prospective land use plan. The following table shows that use.

Table No 5.5 Details of prospective land use of Nashik

S N	LAND USE	AREA IN HA	PERCENT OF DP	PERCENT TOTAL AREA
1	Residential	7347.68	51.80	27.39
2	Commercial	371.18	2.62	1.38
3	Industrial	1661.35	11.75	6.19
4	Public/Semi-Public	701.73	4.95	2.63
5	Public Utility	173.34	1.22	0.65
6	Transportation	2156.58	15.22	8.04
7	Gardens/Playgrounds	418.80	2.95	1.56
8	Military	943.70	6.68	3.52
9	Cidco	398.00	2.81	1.48
	Total Developed Area	14172.36	100.00	52.84
11	Water Bodies	955.13		3.56
12	No Development Zone	11694.51		43.61
	Total Area	26822.00		100.00

- CDP Nashik Municipal Corporation

As seen from Tables above, the Development Plan of Nashik proposed land use zoning of various users, an optimum hierarchy of Traffic and Transportation Network and basic social amenities for each neighborhood unit and the hierarchy of city and intermediate level of amenities. The Township planned by CIDCO, separately prepared, forms part of the DP and has been located between two industrial estates of Satpur and Ambad. This township provides various types of houses and plots for private development. This is an area of approximately 400 Hectares and is primarily a residential area providing for about 30,000 families. It supports housing with other necessary amenities.

5.4.3. TP Scheme.

For more localized and planned development, the town planning scheme mechanism is available. However, use of the tool is limited to only 2 schemes covering about 17 sq. km. There have been suggestions that given the rapid pace of development, it would be wise to initiate the preparation of a number of Town Planning Schemes. For the area for which TP Schemes have been formulated, the land pooling method of the TP has served well to give proper form to plots, a reasonable transportation network and the adequate availability of public amenities. Nashik is placed in Seismic Zone-III. Permission procedure has provision for structural design/Seismic protection.

5.4.4. Development Control Regulations.

The plan also incorporated the Development Control Regulations with an objective to bring about guided development through private sector participation. For this purpose, a certain criterion in terms of permissible floor space index and marginal distance for various heights of buildings were prescribed. Also for the first time concepts of Transferable Development Rights (TDR) and Accommodation Reservation (AR) were introduced. AR would allow a private person owning a site to partially develop it for his own purpose, although in conformity with the zoning stipulations in the DP. However, he would have to share the remaining portion (about half) of the land with the municipal corporation which could use the same for the development of the public amenity for which the reservation stood in the DP. The DCRs also found the introduction of TDR. Since 2006, provisions for mandatory rainwater harvesting, mandatory solar water heating systems in non-residential buildings have been interpolated. For promoting these practices, the NMC offers an incentive for residential buildings in the form of rebate of 5% in property tax.

5.4.5. Plan Implementation.

The Development Plan had 524 sites reserved for public purpose. Of these, 72 sites were to be developed through agencies other than the Municipal Corporation, mainly Governmental and parastatal agencies such as Railways, educational institutions, MSRDC and similar bodies. The Municipal Corporation on its own was to develop 452 sites by 2013. Of these, the NMC has been able to develop 101 sites. 104 sites have been acquired and 57 sites have been taken possession of through the mechanism of TDR and accommodation reservation. Nashik Corporation it appears has done somewhat better in the implementation of DP than many other ULBs.

5.4.6. Land Use Analysis.

An analysis of the prospective land use with the older DP provisions shows that more land is being committed to residential use, up from 41.36 percent to 51.60 percent. The industrial/commercial usage, however, finds a reduction from 19.70 percent to 11.75 percent. Happily, land allocated for public/semi-public, public utility, transportation and gardens/playgrounds have shown an upward trend. They stand at a total of 20.61 percent in the DP, but are up to 24.34 percent. This is mainly on account of addition to transportation network. The prospective plan reallocates all agricultural land and vacant land to other uses. Thus the non-developable land goes down from 19561.50 hectares (72.93 percent) to 12649.64 hectares (47.17 percent). It is evident that development would take its toll on openness in the city.

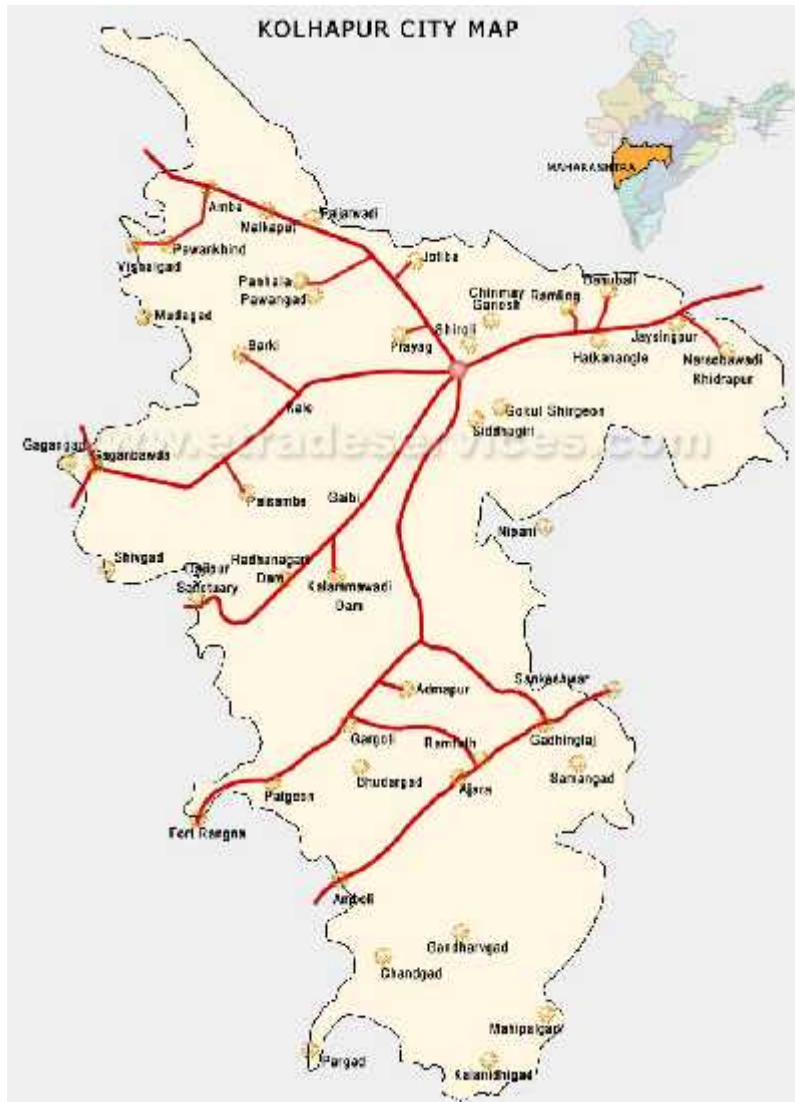
5.5. Kolhapur Development Plan

5.5.1. Kolhapur Development Plan

Kolhapur city has an area of 66.82 sq km. The first development plan for Kolhapur city was sanctioned by the State Government in 1977 and became effective from 15.10.77. This was prepared for a period of ten years till 1987. The plan was modified in the year 1987-89 and received final sanction on 18.12.99. It actually began to be implemented from 1 Feb 2000. The life of this plan is for 20 years.

The area of the municipal corporation has been static since the corporation was formed. The Kolhapur Corporation proposed an extension of its limits in 1990 comprising additional 42 villages. This, however, was not approved by the State on account of strong political opposition from the village panchayats. Later in 2002, in discussion with Government, it was agreed to propose a truncated extension by the inclusion of 17 villages within municipal limits. This now has been proposed by the ULB and is awaiting approval. This will increase the city limits to 189.26 sq km.

MAP No 5.4 Map of Kolhapur City



5.5.2. Land Use Plan

The land use plan finalized in the Development Plan is as follows:

Table No 5.6 Details of prospective land use plan of Kolhapur (Area in Hectares)

S N	LAND USE	AS PER DEV PLAN 1977	AS PER DEV PLAN 1989	AS PER DEV PLAN 2000
1	Residential	961.26 (15.14 %)	1073.53 (16.07 %)	2378.12 (35.59 %)
2	Commercial	111.17 (01.75 %)	160.65 (2.40%)	171.04 (2.55 %)
3	Industrial	124.76 (01.97 %)	106.67 (1.60 %)	147.88 (2.21 %)
4	Public/Semi Pub	811.60 (12.78 %)	903.58 (13.52 %)	991.52 (14.83 %)
5	Road & Transport	275.31 (04.34 %)	314.75 (4.71 %)	501.29 (7.50 %)
6	Open Space	56.08 (0.88 %)	57.35 (0.86 %)	237.64 (3.55 %)
7	Public Service	10.96 (0.17 %)	45.15 (0.67 %)	55.63 (0.98 %)
8	Defence	120.00 (01.89 %)	120 (1.80 %)	120 (1.78 %)
A	Total Dev Land	2471.14 (38.92 %)	2781.68 (41.63 %)	460.5 (68.88 %)
9	Water Bodies	130.30 (02.05 %)	130.27 (1.95 %)	130.27 (1.95 %)
10	Agriculture	3401.80 (48.38 %)	2478.75 (37.10 %)	1949.22 (29.17 %)
11	Barren	678.76 (10.65 %)	1212.55 (19.32 %)	--
B	Total Undev Land	4210.86 (61.08 %)	3900.32 (58.37 %)	2079.49 (31.12 %)
C	Total KMC Area	6682.00	6682.00	6682.00

* ESR, Kolhapur Municipal Corporation, 2008-09

5.5.3. DP ANALYSIS

A comparison of the three Development Plans 1977, 1989 and 2000 clearly shows that as population pressures have increased, more area has been allocated for development. Thus the total developable area moved from 24.71 sq km to 27.81 sq km to 46.05 sq km over the three plan periods. As a consequence there was a proportionate reduction in the non-developable area from 38.77 sq km to 39 sq km to 20.79 sq km. In percentage terms it means developable land almost doubled from 38.92 percent to 68.88 percent while undevelopable area diminished from 61 percent to 31.12 percent. This was primarily on account of agricultural land becoming non-agricultural as it moved from 48.38 percent to 29.17 percent. While the city had a total of 59 gardens, it occupied only 3.55 percent of the total area of the city, well below the mandatory 10 percent.

The laudable side of the Plan is that area in the residential zone moved up from 15.14 percent to 35.59 percent and land earmarked for transportation network went up from 4.34 percent to 7.5 percent. It is clear that as development pressures increase the agriculture zone will find increasing conversion to other uses.

The Environmental Status Report of the city itself lists out two further problems in regard to lands. One of them is in regard to its Red Zone area. It states that "Kolhapur is a flood prone city. In the rainy season it faces the flood. Low flood line and high flood lines are marked. This area is declared as Red Zone area". Despite the prohibition of construction in this area, the municipal corporation has found evidence of construction activities and enhancement of the heights of buildings in this zone. These are coupled with the dumping of demolition waste. "Such practices are growing, which is a severe problem", reports the ESR 2008-09. (ESR 08-09).

The other is the problem of land for solid waste disposal. The city generates 160 tonnes of solid waste and around 500 kg of medical waste per day. The medical waste is separately incinerated in an incineration plant. Two private agencies had been engaged for the collection and processing of solid waste. However, their performance was found wanting and are being discontinued. The KMC has a processing unit at Bawda but its land fill site is far removed and this does not fit the stipulations of MSW Rules 2000. The KMC had also proposed a buffer zone of 500 metres around the land fill site but the State Government has not approved it. As the ESR states, "Today there is no reserved piece of land for the solid waste treatment plant in the city. Hence, there is a serious problem of solid waste management. Place suggested at the outskirts of the city, i.e. Top Quarry is still under dispute. There is strong resistance from nearby population, and a stay order from the Hon'ble High Court not to use that place for dumping waste."

Kolhapur also has a major sewerage problem. "A sewage treatment plant capable of full capacity of the sewage of the city is not available in the city. In addition to the sewage produced by the city, addition of sewage from the adjoining villages adds to the problem". (ESR 09-09). Only 32 percent of the sewage receives treatment; the rest of it flows into 12 nallahs in the city. The bye laws of the city have been recently amended to tackle this problem partially. Constructions of buildings with more than 20 tenements or layouts of more than one acres would have to have their own primary treatment facilities.

The city has problems of hawkers. As the ESR states, "The issue of hawkers is a very complex one. They form a useful function in the society and at the same time proponents

of planned cities want to outcast them from all visible commercial places. The traffic department also considers the hawkers in the city as a major obstacle for the traffic. This essential system of hawkers as a profession becomes a problem due to the lacunae in the planning of the cities. It is essential to properly plan and provide them with hawker zones that are convenient to the people and commercially viable".

The DP has a total reservation of 386 sites for public amenities. Of these, in the first 10 years only 7 sites have been implemented. The municipal authorities reported that the DP is not necessarily a reference point when the annual budgets of the municipal corporation is framed. A recent rule of the Government of Maharashtra provides that if no intention to purchase a reserved DP plot is given till the end of ten years of the Plan, the reservation shall be deemed to be deleted. This is a hanging sword before almost all municipal bodies that are cash strapped and this may lead to a huge deficit of public amenities in cities.

Parking

The city has witnessed a sudden spurt in the registration of vehicles. This has been detailed in a previous chapter. This continuous increase in the number of private vehicles is creating a problem of vehicular parking. Currently, the KMC is in possession of only two sites in the city. Recently, a proposal has been mooted to construct a multi-storeyed parking on a PPP basis. This will be done in two phases with a parking provision of 400 cars in Phase 1 and 300 cars in Phase 2. There are very few parking places in the city. These are at Central Bus Stand, Gokul Hotel, Mahalaxmi Temple, Tarabai Road, Rankala and Railway station. out of these, only Railway station parking place is on pay and park basis whereas others are free.

Public Transport

The city runs its own bus services through its transport undertaking, the Kolhapur Municipal Transport (KMT). It has a fleet of 128 buses out of which 113 buses are owned and 15 are hired from a private contractor. On an average each bus travels around 200 km per day all of them put together log around 31650.9 km per day. There are 5 main bus stands as Bhavani Mandap, Shivaji Putala, Gangavesh, Shahu Maidan and Maharana Pratap Chowk. 350 pick up shades are available for public around KMT limit. KMT has services like one day pass, students' concession pass, and monthly pass for passengers.

Air and Noise pollution

Air pollution problem in the urban environment is a global problem over several decades, contributed in large measure by expanding vehicular traffic. Since 1975, systematic monitoring of the primary air pollutants (NO_x, SO_x, SPM, HC and Pb) were attempted world over. In Kolhapur, the Department of Environmental Science, Shivaji University is monitoring ambient air quality. "Though the SO_x and NO_x levels seem to be within the limit in the city, it has been observed that the Respiratory Suspended Particulate Matter (RSPM) level and Suspended Particulate Matter (SPM) levels are increasing at all the three sites i.e. Dabholkar Corner, Mahadwar Road and Shivaji University campus." In order to counter noise pollution, the city has also proposed 20 silent zones in the city around schools, courts, religious precincts and hospitals.

In regard to slums, recently KMC has completed the construction of 730 units and handed these over to slum dwellers. Each unit is of 269 sq ft and has cost upwards of 2 lakhs. Central grants were limited to Rs. 80,000 and the rest of the money was provided by the KMC.

5.5.4. Development Control Regulations

The Development Control Regulations for the KMC were notified on 15 Nov 1999. They run into 189 pages and are divided into eight parts with Appendices 'A' to 'U'. Part I provides meanings and definitions. Part II deals with permission for development, building plan, discretionary powers of the Commissioner, commencement of work, completion and occupancy certificates and access. Part III delves into development of land into sub-division and layout; Part IV is about land use classification, land uses permitted and manner of development. Part V has provisions regarding open spaces, area, FSI and height limitations. The section also provides for additional FSI in certain categories, transfer of development rights and parking spaces. Part VI is about requirements of parts of buildings such as habitable rooms, bathrooms, kitchen and garage as well as fire protection requirements. Part VII is in regard to structural safety and services. Part VIII has supplementary and miscellaneous provisions. The Appendices are a collection of forms and regulations. The DCRs are standard terms that are more or less common with other municipal bodies.

5.6. Baramati Development Plan

Baramati is a "B" class municipal council in Pune district in the state of Maharashtra. It is situated on the banks of the river Karha. Baramati and surrounding areas mostly depend

on agriculture as the main source of income. The land in the region is fertile and the Neera canal provides irrigation facility to farms.

However, Baramati has moved simultaneously towards industrialization industries located in Baramati range from Steel Processing to Wine making. Baramati is also home to the three wheeler plant of the Italian company Piaggio. Baramati uses 800 hectares of land as MIDC (Maharashtra Industrial Development Corporation) Industrial Area along Baramati-Bhigwan Road, 5 km outside Baramati town's municipal limits. Baramati has an airstrip near MIDC.

5.6.1. Baramati Development Plan

The First Development Plan of Baramati was sanctioned by the State Urban Development Department in 1967. Subsequently a revision took place which got sanctioned in 1977. Further, the Development Plan for the extended area of the municipal boundaries was sanctioned by GoM in 1983. The Development Plan underwent a further revision and this revised Development Plan of the original municipal limit got sanctioned by GoM in 1991. Finally, the two Development Plans (old area and extended area) were combined in 2010-11. The sanctioning process for the integrated version is currently on at the State level. A healthy aspect of the sanctioning process that emerges that Development Plans of this city was sanctioned not in parts, but in their entirety.

The DP had a total reservation of 38 sites. Of these, by June 2009, the Municipal Council had developed 7 sites. The implementation of these was funded by the UD -6 scheme of the State Government, municipal budget and other governmental sources. The MSRDC led the implementation of a 7.5 km road project of the city on a PPP model. No piecemeal amendments to the Plan have separately been made, but there have been four deletions. The reservation relating to water reservoir was deleted since the Municipal Council erected and commissioned water reservoir on its own land. The other three reservations in regard to the health centre, vegetable market and primary school and play ground were deleted as the State Government finalized the construction of Administrative Building at these sites. The other reservations remained on paper on account of factors that included non-availability of land, non-availability of resources for land acquisition or no resources to develop the plot. This puts the development percentage at 26 % in a total period of twenty-one years since the approval of the Plan.

5.6.2. Development Control Regulations

Government of Maharashtra had Standardized Building Bye-laws and Development Control Rules for B and C Class Municipal Councils. These were published in April 1974. After a decade, these were modified and the new Rules were published on 2 Nov 1979. These underwent piecemeal modifications. The Baramati Municipal Council has adopted these standard building bye-laws as per GoM directions.

In Aug 2011, the State Urban Development Department (UDD) took steps for the introduction of uniform development control (DC) rules across all municipal councils and gram panchayats. It was felt that, along with the big cities, these smaller towns and cities were also experiencing the impact of growth and industrialisation. UDD held consultations with architects, town planners, civic officials, elected representatives and citizens in regard to the rules. It also constituted a special committee to come up with uniform DC rules for B and C class cities in the state. The final set of draft rules were submitted to the Government early this year. These were then opened for suggestions/objections. The new Rules seek to address the issues of shortage of housing stock, unauthorized construction and the smooth amalgamation of fringe areas into municipalities in future by making the same set of Rules applicable to gram panchayats. The proposed DC rules have done away with extra floor space index (FSI) for staircase and corridors to allow more built-up area. Also, additional FSI has been allocated for educational complexes. The concept of transfer of development rights (TDR) has also been accepted for B and C class cities.

Summary

While Development Plans deal with land use (zoning, reservations and amenities), City Development Plans are investment plans. Every municipal body must prepare a DP under the MR&TP Act for the entire city and be implemented within two decades. It is seen that all research cities have taken up this activity, but have been struggling to get them completed and make them operational within a time frame.

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CHAPTER 6

CURRENT STATUS OF DEVELOPMENT PLANS AND DEVELOPMENT CONTROL REGULATIONS IN TERMS OF THE URBANIZATION OF POVERTY

Introduction

The principal objective of this chapter is to examine how the Development Plans of cities and their development control regulations have treated the issue of urban poverty and whether they have been able to provide adequate answers to the problem. It touches upon the definition of poverty, the urbanization of poverty and the differences between rural and urban poverty. It looks at slums, the shelter scenario in India and policies in regard to shelter, informal settlements, street vendors and DPs and DCRs vis a vis the urban poor.

6.1. Poverty

6.1.1. Definition

Poverty has been defined by the Planning Commission as “Basic minimum income required to meet minimum calorie requirement”. This minimum income formulated by using a consumption basket and referred to as the poverty line, has been set for all urban India at Rs. 454.11 per capita per month (1999-2000). Poverty lines vary by the size of class of the city and cost of living. For example, in megacities of Delhi and Mumbai, poverty lines are set as Rs. 505.11 and Rs. 539.71 per capita per month respectively, higher than the country average; whereas in metro cities such as Agra and Indore etc, poverty lines are near the state norm. In smaller cities they are invariable below the state norm.

According to the Planning Commission of India, poverty on the whole in the country has been showing a downward trend. This is attributed to the rapid growth of the national economy raising levels of income of individuals and families. The following chart tabulates poverty figures over several decades.

Table 6.1: Estimates of Incidence of Poverty in India

Year	Poverty Ratio			Number of poor (million)		
	Rural	Urban	Combined	Rural	Urban	Combined
1973-74	56.4	49.0	54.9	261.3	60.0	321.3
1977-78	53.1	45.2	51.3	264.3	64.6	328.9
1983	45.7	40.8	44.5	252.0	70.9	322.9
1987-88	39.1	38.2	38.9	231.9	75.2	307.1
1993-94	37.3	32.4	36.0	244.0	76.3	320.3
1999-00	27.1	23.6	26.1	193.2	67.1	260.3
2007*	21.1	15.1	19.3	170.5	49.6	220.1

* Poverty Projection for 2007

Source: Tenth Five Year Plan, Vol. 1, Planning Commission.

6.1.2 Tendulkar Committee

There was, however, widespread criticism that unrealistically low poverty estimates were being generated by Planning Commission whereas in actuality "the unemployment situation was getting worse, food grain consumption and cloth consumption were falling, average calorie intake as well as protein intake showed decline and there was considerable agrarian distress" (Usha Patnaik, 2010). This led to the setting up of the Tendulkar Committee in 2009 to look into the methodology for estimating poverty and to make realistic poverty estimates afresh. As per the findings of the Tendulkar Committee Report on Poverty Estimation (Nov 2009), India's poverty rate is estimated at 37.2 % of the total population. This implies an increase in the number of BPL households from 66.2 m to almost 80 m. The Committee worked on a poverty line of Rs 18 per day and urban nutrition standard of 1795 calories. (Tendulkar, 2009)

6.2. Urbanization of Poverty

In terms of poverty in the urban areas, over the past several decades, emerging trends in most developing countries have firmly established that poverty is rapidly acquiring an urban face, recognized as the phenomenon of the 'urbanization of poverty'. This is very starkly visible in the larger cities of the developing world. In India, this phenomenon went unheeded for quite some time. For close to sixty years since independence, all poverty was largely seen in the country as rural poverty. However, urbanization of poverty frighteningly developed into a huge Indian reality. It is now recognized that urban areas have huge degrees of poverty that must be tackled. It is accepted that this has been primarily a consequence of rural populations opting out of the rural choice in search of

survival, employment, better livelihood and brighter future. Rural poverty strategies have largely been unable to stem this exodus, not merely because of a failure of rural interventions but because of the inevitability of urban dynamics, so emphatically surfacing across the developing world and already fully manifested in the developed world.

6.2.1. Informalization of Urban Poverty

There are two important dimensions to this urbanization of poverty. Deprived of a proper urban habitat, the poor are being pushed into **slums** in order to find a residential foothold. And in their search for employment and enterprise, they have been forced to find survival in the **informal sector**. Urbanization of poverty has thereby been accompanied with the informalization of poverty. The ever expanding slum populations in cities, many of them living in sub-human conditions and the escalating informal sector have been issues that increasingly confront city administrations and governments.

6. 3. Rural and Urban Poverty

In very simple terms, the prime difference that marks rural poverty from urban poverty is that the former is mainly about the lack of income whereas the latter is about living conditions.

6.3.1. Lack of access to Basic Services

Much more than the rural poor, lack of access to basic services puts the urban poor at a tremendous disadvantage. For instance, in terms of security of tenure, the urban poor is infinitely worse placed. For many of these unfortunate men and women, apart from the threat of eviction, the nature of shelter that they manage for themselves and their children is extremely hazardous and highly insufficient for decent human living. In terms of sanitation and infrastructure, most urban poor are unacceptably worse off. Lack of toilet facilities especially for women, lack of potable water and sanitation and lack of clean air and ventilation make living conditions terribly deprived. Problems of transport and traffic hazards, perils of working condition and exposure to high levels of pollution and the resultant proneness to disease make life extremely demeaning and dangerous. These difficult conditions are further exacerbated by extortion and vulnerability to crime. All such negatives put together take heavy toll on family relationships and family cohesion. The slight gains made in terms of a higher income by the urban poor are negated by realities of urban poverty – additional costs for shelter, transport, water and sickness to name a few. These are aspects of urban life that do not get captured by any current definition of poverty and are consequently left unattended and uncared for.

6.3.2. Quality of Life

Two additional differences in the two kinds of poverty are worth note. Within the rural society, the standards of living of all village folk across the economic spectrum are far less stratified than in cities. Consumption patterns are likely to be less dissimilar since the variety of products available in a village is narrow. Such differences, however, rise in cities and apparently become more marked as the cities expand. Examples could be in food, in clothing, in health and education, in public goods such as air, water and sanitation, where the rich have far better availability, both in quality and quantity compared to the poor. In many rural areas, health, education and other public goods are difficult to get, because they are either not there, or poor governance in these services leads to poor delivery. That makes them inaccessible to all village folk, whether poor or rich. In urban areas, such services are available, but the poor get priced out.

6. 4. Slums

The 2001 Census described slums to broadly constitute (1) all specified areas in a town or city notified as ‘Slum’ by State/Local Government and UT Administration under any Act including a ‘Slum Act’; (2) All areas recognized as ‘Slum’ by State/Local Government and UT Administration which may have been formally notified as slum under any act; and (3) a compact area of at least 300 population or about 60-70 households of poorly built congested tenements in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities. (Census of India, 2001). Under the NSSO definition the size of temporary dwelling (housing structures) was decreased to 25 albeit it has retained the attributes of “practically no access to or inadequate access to latrines and water facilities.”

Of late, the Pranab Sen Committee, appointed by the Ministry of Housing and Poverty Alleviation to come out with “reliable and realistic” slum data defined a slum as “a compact settlement of at least 20 households with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions.” (Pranab Sen, 2010). On the basis of the above definition, it sought to revise the criterion for identification of slum areas. All clusters of 20 or more households that fitted the definitional attributes cited above having were to be enumerated. Earlier, the cluster size for identification of slums was 60 households. Government of India felt that it was important to count the slum population even in cities having less than 20,000 population. The Sen Committee, accordingly, applied its statistical model in all 5,161 urban areas of the country, including 3,799

statutory towns. The Census 2001 took into account only notified slums in 1,764 towns across the country.

As reported by the Office of Registrar General of India (ORGI), Census 2011 has used the same definition as used by Census 2001 for delineating the slum blocks in the notified, recognized and identified slum areas of each statutory town. However, in addition, the House listing and Housing Census data will be used for earmarking the “slum like” clusters uniformly through the country. The ORGI will also identify all the House-listing Blocks (HLBs) where at least 20 households satisfying the set criterion, as recommended by the Pranab Sen Committee.

As per the report of Pranab Sen Committee, the country's slum population had grown by 17.8 m in the last decade. The Committee, headed by Pranab Sen, principal adviser to the Planning Commission and former chief statistician, projected the slum population in 2011 at 93.6 m, up from 75.26 m in 2001. The 2001 census figures pegged the slum population at 52.4 m. The expert committee said the country's slum population had grown by 17.8 million people in the last decade. The Committee, projected the slum population in 2011 at 93.06 million, up from 75.26 million in 2001 as per the new methodology. The 2001 census figures pegged the slum population at 52.40 million.

6.4.1. Slums in India, Maharashtra and Research Cities

According to Census 2001, Maharashtra's slum percentage was the highest at 25.9 per cent of the State's urban population. The latest preliminary study by the National Sample Survey Organisation (NSSO) has revealed that Maharashtra continues to head states in slum population. The NSSO report pegs the current slum population in the state at 1.81 crore, an increase of 38 lakh in one decade. In Mumbai too, there has been a marked rise the 58 lakh slum population in 2001 has crossed the 70 lakh mark as of March 2011. The slum population numbers of other cities and states is much lower – while Delhi stands at 31.63 lakh, Karnataka is 36.31 lakh, Gujarat 46.62 lakh, Madhya Pradesh 63.93 lakh. UP 1.08 crore and West Bengal 85.46 lakh. The total slum population of the country which was 7.52 crore in 2001, is 9.3 crore today. (Times of India, 6 May 2011)

Table 6.2: Slum Population of Major Cities of India

State	2001	2011
Maharashtra	1.43 Cr.	1.81 Cr.
UP	85.27 L	1.08 L
WB	75.20 L	85.64 L
MP	51.07 L	63.93 L
Gujarat	37.08 L	46.62 L
Karnataka	29.51 L	36.31 L

The more recent Sen Committee continues to put Maharashtra at the top of the chart with around 18.15 million living in slums in 2011, followed by UP (10.87 million), TN (8.60 million), West Bengal (8.50 million) and Andhra Pradesh (8.10 million). According to the committee's estimates, Maharashtra's slum population in 2001 was 14.30 million, followed by UP (8.50 million), West Bengal (7.50 million), Tamil Nadu (7.30 million) and Andhra Pradesh (7.20 million), while 2001 census figures showed that 11.20 million of the total slum population of the country was in Maharashtra followed by Andhra Pradesh (5.20 million), UP (4.40 million) and West Bengal (4.10 million).

6.4.2. Slums in Research Cities

The provisional figures released by Census 2011 show that about 90 lakh Mumbai residents or 60 percent of the city now live in slums. The Pranab Sen Committee comes up with a similar figure of 8.68 m for Mumbai slums, followed by Delhi with 3.16 million people estimated to be living in slums by 2011, compared to 2.3 million in 2001, Among metros, Kolkata will have around 1.78 million people living in slums by 2011 as against 1.57 million in 2001, followed by Chennai with 1.02 million as against 0.86 million.

In Pune, the slum population stood at 13.75 lakh persons in 2001 forming 57.83 percent of the total population. In Nashik, in a survey carried out by the Municipal Corporation the slum population was 2,14,769 in 168 slums, approximately 19 percent. Kolhapur's slum population stood at 56235 or about 12 percent and Baramati's slums at 3774 persons in 8 slums, forming 7 percent of the total population. These figures state that the bigger the city, the percentage population in slums of that city is larger.

6.4.3. Basic Services in Slums

In terms of the provision of basic services, Government of India has set certain norms for the provision of basic services in slums. These are shown in the following table.

Box No 6.1 Minimum Basic Services for a Slum by GoI Norms

- Water supply – one regular size tap for 150 or less persons or for 30 or less families has to be there. Stand posts are made
- 40-70 lpcd where there is water supply is through stand posts and not piped supply to individual houses
- Community latrines: one latrine/One seat for 20 to 25 persons or for below 10 families- one toilet seat for 60 persons is the standard of PCMC, which is also not followed.
- Community baths – one bath for 20 – 50 persons (women priority)- There is no record of community baths construction by PCMC. The households themselves construct the bathrooms.
- Widening and paving of existing lanes – making it pucca lane- Both concrete and paving roads are constructed and tried to widen wherever possible.
- Storm water drain – for quick draining- Needs to be identified
- Sewer – open drains for normal outflow to avoid water accumulation- Open gutters are constructed and old gutters are also repaired.
- Street lighting – two poles 30 mtr. apart. These are minimum basic standards- This is tried to be followed, but as the roads in slums are not as regular (zigzag), it is very difficult to follow basic standard.
- Minimum can be increased as per availability in small/medium towns

It would be difficult to identify cities where slums are provided these basic services as per prescribed norms though some cities could have partially serviced some of the slums through some of these norms.

6.5. Shelter Scenario in India

Slums throw the poor to live in such demeaning and terrible physical and environmental conditions that such surroundings gave them little scope for life as normally understood. Families of five or above, quite often live in a single room tenement, of a dimension below 150 sq ft. and built of material that can barely withstand rain and cold and heat. They are perched on land or in a riverbed or on a hillock that is hazardous for shelter. In terms of basic services, several slums have no toilet to visit, no water to drink or wash

within a normally walking distance. They have their workplace separated by an unreasonable distance from their homes, and in general have no security to even such shelter and face the constant threat of extortion, physical harm and crime, disease and death and exploitation by middlemen.

An analysis of many of these issues would be seen converging on the point of the non-availability of land as the crux of the problem. The poor cannot get decent shelter because land costs are prohibitive and they cannot buy urban land from the market. The poor cannot get a decent piece of land for running their own business/informal employment because they cannot afford such land. They cannot break out of the vicious circle of poverty because they would have no access to credit, no access to life beyond nomadic survival. They cannot live in clean surroundings because there is little land for waste management, for building toilets, for recreation and community life and for minimum family privacy.

“Today, about 25 million households in India- 35 percent of all urban households- cannot afford housing at market prices and around 17 million of these households live in slums. With a further 250 million people expected to join the rank of India’s urbanites over the next 20 years, this number could increase to 38 million households. Unless new affordable housing is developed, new low income migrants, like their predecessors, are likely to settle in slums. Today, access to affordable housing is an acute problem among India’s lower income groups. Households in the deprived category (annual income of less than 90,000 rupees) are unable to access basic housing across urban India. We estimate that 25 million households- 35 percent of all urban households and 94 percent of the households in the bottom of two income segments- cannot afford a house at market prices. As India urbanizes, migration into urban India will continue and more than 70 percent of migrants are expected to belong to the lowest income group that are least likely to be able to afford a house at market prices.” (Mckinsey & Company, 2010).

6.5.1 Debilities a Factor of Land Tenure

The combination of urbanization of poverty and its informalization impose overwhelming legal and institutional constraints on it. These limitations negatively impact the poor woman’s and man’s quality of shelter, livelihood, health, education, human dignity, access to basic services, credit, and any chance of integration into the city and upward mobility in life. In many fundamental ways, almost all these infirmities turn out in some important measure to be a factor of land tenure. Precisely for these reasons, and in view of its global nature, security of tenure and improving the lives of slum dwellers figure

among the Millennium Development Goals and targets. Goal 8, target 11 speaks of having achieved “by 2020 a significant improvement in the lives of at least 100 million slum dwellers” (Millennium Development Goals).

6.5.2 Centre, States and ULBs

Under the Indian Constitution, the current role of the Central Government in regard to urban issues is to encourage, exhort and advise states and to provide policies and a model legislative framework that the states could adopt for their own use. The prime examples are the Land Acquisition Act, Transfer of Property Act, Town Planning Act and Slum (Improvement and Clearance) Act. In addition, through its financial incentives such as those in the Jawaharlal National Urban Renewal Mission and Rajiv Awas Yojana, Government of India could encourage reforms. The principal urban function, however, rests with the States under Article 246 of the Constitution. States can adopt their own policy and enact legislation. The landmark 74th Constitutional Amendment suggests a larger role for the urban local bodies. This role comprises ‘urban planning including town planning, regulation of land use and construction of buildings’ and ‘safeguarding the interests of weaker sections of society’, ‘slum improvement and up gradation’ and ‘urban poverty alleviation’. Such a role has still not become a complete reality on the Indian urban scene, although it could be said that the municipal bodies in western India, especially the larger ones, exercise more authority. Elsewhere, state governments retain their primary role in conjunction with their parastatals.

6.5.3 Evolution of Policy on Tenure

Despite the fact that tenure has been a subject of much debate, no national policy has been stated on land tenure. For the first time, the “Model Slum Areas (Improvement and Clearance) Act of 1956 provided the statutory basis and guidelines and was adopted by most states”. While there was no explicit expression of tenure in the Act, it did through notification restrict eviction without approval of the competent authority. It was an indirect endorsement of some kind of recognition of tenure. (Banashree Banerjee)

In 1972 the first scheme for slum improvement titled “Environmental Improvement of Urban slums” was launched by Government of India under the Slum Act. The central scheme in which the state was also to contribute was designed to provide basic services to slums notified under the Slum Act. A precondition was that the urban local body had to provide an undertaking that the slum that was going to be the recipient of basic services will not be demolished in the next ten years. In terms of urban land, the Urban Land (Ceiling and Regulation) Act (ULCRA) in 1976 saw the first signs of governmental

readiness to address the issue of scarcity of land availability for the urban poor. The Act mandated a redistribution of surplus vacant urban land held by individuals for public use and low-income housing. The pathetic performance of the Act, the malfeasance that it generated and the constrictions that it brought to the supply of urban land led to its abolition by Government of India in 1998 and most states thereafter, including Maharashtra.

Subsequent policy documents (in the 1980s and 1990s) wanted the Slum Act to move beyond their current concern and move towards providing security of tenure to slum dwellers. In the 1980s, as urban populations rose and as the importance of urban poor as vote banks began becoming critical in several larger cities, State Governments, especially in the west and south of the country, hurried to pass laws to regularize the tenure of squatters on government land. Apart from political compulsions, several other factors intervened to push the agenda of tenure for the poor. Internationally, agencies of the United Nations have been favouring more pro-poor policies at the national level. In 2000, Government of India also partnered UN-HABITAT in the launch of the Global Campaign on Secure Tenure in Mumbai. International opinion has consistently backed the formulation of a national housing policy, the recognition of the importance of the urban land issue and a positive view of irregular settlements.

The pro-active role of international advocacy for housing rights has been matched by civil society organizations since the 1980s. These have been most evident in the mega cities of India, and apart from lobbying with Government and parastatals, they have been instrumental in several landmark public interest litigations. The predominant judicial view through 80s and 90s was that evictions and displacement needed to be avoided unless there was a very strong public interest to do so. However, of late, several citizen's organizations have argued in courts against the proliferation of slums.

6.5.4 Five Year Plans

Several of the national Five Year Plans and policies have been arguing in favour of tenure. The Seventh Five Year Plan recommended steps "to provide security of tenure to slum dwellers so that they can develop a stake in improving and maintaining their habitat" (GOI, 1985). The Eighth Five Year Plan reiterated that providing tenure rights "is a precondition for success of any environmental improvement in slum areas". The Ninth Five Year Plan further specified the facilitator role of public institutions and identified certain disadvantaged groups for direct land and shelter provision. The Tenth Five Year Plan admitted that "around 90 per cent of housing shortage pertains to the

weaker sections. There is a need to increase the supply of affordable housing to the economically weaker sections and the low income category through a proper programme of allocation of land, extension of funding assistance and provision of support services". It warned that with the anticipated entry of FDI into the real estate sector, care has to be taken that the needs of the urban poor and marginal sections are not ignored". The 11th Five Year Plan pointed out to the "divide within urban areas which is growing".

6.5.5 Draft National Slum Policy

One of the important steps of Government of India was to declare a draft National Slum Policy. In its Governing Principles, the Policy states that "it does not advocate the concept of slum clearance" and that "households in all urban informal settlements should have access to certain basic minimum services irrespective of land tenure or occupancy status". However, it accepts that the long-term vision should be "cities without slums". It advocates that "town planning, land management, poverty alleviation, basic service delivery and capacity building" should be major areas of attention. Strikingly, it advocates that "all public land not identified for specific government use should be vested with the ULB".

In regard to tenure, the Policy admits that the lack of security of tenure is one of the major reasons why poor households are unable or unwilling to engage in shelter upgradation. It supports the grant of tenure to all residents on tenable sites owned or acquired by Government. The Policy advocates avoidance of resettlement and its use only as a last resort when other alternatives are not available. The Policy calls for a modification of existing planning framework, rationalization of construction standards, creative unit design and layout patterns, a stronger role for the private sector, community participation, improved market information, cost effective technologies and capacity building. Many of these suggestions are radical and extremely salubrious. Government of India followed these pronouncements up with programmes such as VAMBAY (Valmiki-Ambedkar Awas Yojana), introduced in 2001-2002 and the JNNURM (the Jawaharlal Nehru National Urban Renewal Mission) launched in 2005-2006. The objective of VAMBAY was to provide shelter or upgrade existing shelter of people living below the poverty line in urban slums. The JNNURM seeks to scale up delivery of civic amenities and provision of utilities with emphasis on universal access to urban poor. The latest GoI scheme, Rajiv Awas Yojana, aims at providing central support to states that are willing to assign property rights to slum dwellers. A preparatory phase began in March 2010 with a release of 60 crores to 20 states.

Unfortunately, there have been several subsequent developments that do not make the question of tenure easier. The draft Slum Policy has not reached any stage of finality over a period of several years. There is as yet no national policy on tenure. Other factors such as globalization, recent judicial rulings, emphasis on up gradation of urban infrastructure and the push for speedier economic growth are making inclusiveness in cities extremely difficult.

6.5.6 Maharashtra

Maharashtra has pioneered, over several decades, a number of innovations in regard for tenure to slum dwellers. The Maharashtra Slum Areas (Improvement, Clearance and Redevelopment) Act of 1971 was the oldest in a series of legislations in the country and provided for protection against eviction. It allowed notification and recognition of slums, and defined the nature of improvement works to be undertaken. A census of hutments was also carried out in 1976 and identity cards were issued to slum dwellers. 1985 was a turning point in tenure regularization in the country and began with the slum upgrading programme (SUP). Under the programme, tenure was granted to registered cooperative societies of slum dwellers. Little progress, however, was made and the tenure regularization programme could not become applicable to a very sizeable chunk of slum dwellers. In the 1990s, the private sector was roped in to provide housing with secure tenure to slum dwellers. In 1991 the State Government initiated the SRS for slums on private land. This gave way to the Slum Redevelopment Scheme (SRD) in 1995, essentially an improved version of the SRS. Under the SRD, highly subsidized tenements for members of registered slum or pavement dwellers' cooperatives were to be provided on part of the land. The developers could recoup their costs and additional profits out of the remaining released land, helped by the additional FSI. Modifications to the Slum Act, MR &TP Act and Municipal Act were made to enable the participation of slum dwellers, NGOs, developers and landowners. This scheme has only been partially successful.

Of recent, Government of Maharashtra has finalized a State Housing Policy with the overall objective of 'Shelter for All'. Its specific objectives speak of facilitating i. 'affordable housing' and creating 'shelters for the poorest of the poor on ownership or rental basis'; ii. Pursuing 'the target of cities without slums through equitable slum redevelopment and rehabilitation strategy and shelters for the poor'. The Policy talks of providing lands for the poor in proximity of cities, towns and rural areas. It advocates 'inclusionary zoning provisions for low income group housing in private layouts'. It emphatically states that security of tenure would be 'the basis of all rehabilitation/redevelopment options' and that government lands would be offered 'after

redevelopment to cooperatives on occupancy or lease-hold basis'. (Housing Department, Government of Maharashtra).

In Mumbai, the Slum Rehabilitation Authority (SRA) was created to rehabilitate slum dwellers, primarily in Mumbai. Since the setting up of the SRA, it has constructed 1.47 lakh tenements and 1.7 lakh are under construction. But these have been woefully inadequate in the face of the growing slum population. In 1995, the State Government promised free housing to the 60 lakh slum dwellers registered on the electoral rolls till January 1, 1995. It was assumed that no new slums would be created in the metropolis. However, the slum population continued to rise.

Pune's past efforts in regard to slum development have been considerable. The latest major announcement was made by the Standing Committee Chairman in 2009 whereby PMC intended that it would like to make the city slum free by 2012. (Times of india, 28 Feb 2009). The project for the purpose was named as Rajmata Jijau Gharkul Yojana. Those falling in category A were to be provided tenements free of cost; those in category B were to pay Rs 1 lakh and category C Rs 1.5 lakh over ten years. All categories will be provided a 25 sq mt tenement. The PMC hoped to earn Rs 3,157.50 crore through the sale of TDR of 37.5 lakh sq mt from category A households and Rs 4,000 crore from category B and C households. Around Rs 3,157.50 crore expenditure was expected. The objective was to make the project self-sustaining. From latest reports, it appears that the project scarcely took off and slums continued to grow.

In Nashik, 13000 tenements are being built under BUSP on relocation sites. Most slums in the city have been provided with community toilets and some have been covered under individual toilets under the VAMBAY scheme. Water is also provided in slums either through handposts or through individual connections ranging from 30 to 70 percent in slum families. About 60 slums have gutters. (Shelter Associates, 2011).

In Kolhapur, KMC has completed the construction of 730 units and handed these over to slum dwellers. Each unit is of 269 sq ft and has cost upwards of 2 lakhs. Central grants were limited to Rs. 80,000 and the rest of the money was provided by the KMC. In Baramati, which has 8 slums and a population of 3774 slum dwellers, there is no specific provision for slums in budget. Through the Budget heads of water supply, sanitation, solid waste, street light, roads and public toilets etc., the Municipal Council spends moneys for the slums pockets. A housing Scheme under I.H.S.D.P for 259 dwelling units is also being implemented in two slums pockets. The Council has provided one toilet seat

and one water stand post for 30 and 70 persons respectively. (Data obtained from Municipal Corporation Kolhapur and Municipal Council, Baramati Sep 2011).

6.5.7 Positives Emerging out of Past Initiatives

An analysis of the preceding initiatives shows that several positives in favour of tenure have emerged. Firstly, we have moved quite far in recognizing that the poor are valuable city assets and eviction or dislocation of slum dwellers is not the first option. Secondly, policy statements, initiatives and programmes of governments, interventions by civil society organizations and international bodies have led to an attitudinal change that is more sympathetic towards the urban poor. While solutions for secure tenure are yet not settled, tenure regularization undertaken in various states have led to the enhancement of security of tenure for large poor populations in Indian cities. They have legitimized the occupation of space in the city and provided access to development rights.

6.5.8 Negatives Affecting Tenure

Despite these efforts, the issue of land tenure is getting more complicated, especially in the larger cities. The pressures of globalization are getting largely translated into pressures on land for swanky offices, malls, star hotels and similar demands of the global market. Such 'commodification' of urban land is pressurizing cities to divert huge amounts of land for global commercial, residential and entertainment uses, making land availability for all sections of citizens ever more difficult. Since land is a finite commodity, such large diversion of land to cited uses invariably leads to a price spiral, increasing the mismatch between wages earned and housing costs generated by the market.

In towns, where the provision of housing is almost completely reliant on market mechanisms, huge housing problems appear to emerge. Access to housing is predicated on people's ability to pay the price resulting from the dynamics of supply and demand. If demand does not generate sufficient profit, suppliers will make rational decisions to seek higher returns on their investments elsewhere. Hence households without adequate incomes, that cannot translate their real housing needs into an effective market demand, find themselves at risk of homelessness. It is clear that markets have not eliminated and cannot be expected to eliminate homelessness.

While there is greater acceptance that the poor need tenure in cities, decision-makers are still groping in the dark on how to tackle this contentious issue. The questions confronting them are the availability of land, the costs at which they should be allocated, how big

should the pool of such housing be, who meets the costs of infrastructure, to what extent do we use FSI, what alterations do we bring about in the land use planning process, building regulations and building permissions. And after having done all this, how do we continue to deal with this issue in the face of relentless urbanization. There has also been no real effort at looking at the legal and institutional factors that informalize the poor and prevent their integration into cities. The current city planning does not seem to take into account the needs of the urban poor and find a place for them within the city plan by devising mechanisms through which the poor would have access to land. Additionally, as cited earlier, the emerging sympathetic attitude towards urban poverty is being challenged by a strong antipathy towards 'slumization' of cities and the destruction of city environment. After early humanistic judicial interventions, Courts are moving towards a strictly legal interpretation of urban land. This is obviously making it harder to work outside the formal confines of law, making 'informalization' difficult and in turn providing security of tenure to informal growth thorny.

“India has not addressed the economics of affordable housing adequately. The government has not systematically thought through the combination of incentives, subsidies and beneficiary contributions to bridge the gap between affordability and market cost. For example, to encourage creation of affordable housing stock, the government extended a 100 percent income tax exemption to affordable housing projects. However, this incentive on its own addresses only 5-10 percent of the gap and is therefore not sufficient to stimulate creation of the necessary affordable stock. Also the reality is that taxes account for more than 25 percent of the final cost to households of affordable housing. Yet the government has not put in place a tax regime that effectively incentivizes the creation of affordable housing stock.” (McKinsey & Company, 2010).

India's overall record in government participation in the affordable housing sector is weak. Until recently, funding allocations by the government had not taken into account the necessary scale of the exercise. Even in comparison with other emerging economies, this spending on affordable housing has been very low. As recently as 2005, government spending on urban affordable housing was about 30 million rupees per year. At that rate, it would take a century to address even today's need for affordable housing. Further, schemes has not provided for adequate funding. For example; India's VAMBAY scheme provided for only 20 percent of the true redevelopment cost of slums. Nor have state housing boards delivered on the scale required. In Mumbai, where 2.4 million households cannot afford formal housing, the housing board has constructed only 0.2 million

affordable units over the last 30 years, an annual construction rate of just 6700 units per year. (Mckinsey & Company, 2010).

6.6 Informal Sector

The informal sector comprises persons engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units operate at a low level of organization. Labour relations are based mostly on casual employment, kinship or personal relations rather than contractual arrangements. (International Labour Office, 1987). The informal sector is characterized by under capitalization, lack of skills, and the small size of enterprises. It denotes certain kinds of economic activities that are outside the realms of formal business practices established by the state. It includes the production and exchange of legal goods and services that involve the lack of appropriate business permits, violation of zoning codes, failure to report tax liability and non-compliance with labour regulations governing contracts.

The informal sector in many urban centers is assuming proportions that are larger than the formal. As globalization is pressing developing countries to restructure their national economies to make them more competitive in the global market, governments are being forced to resort to downsizing, privatizing the public sector and cutting government expenditures. Many of these have adverse implications for the urban poor. There is growing evidence in Asia to suggest that the capacity of the formal sector to generate employment has weakened in recent years (Sethuraman 1997). As a consequence more urban workers would be pushed into the informal sector to find employment and sustenance. Figures in regard to Mumbai (population above 10 million) reveal that the share of employment in the informal sector jumped from 67.5 per cent to 70.3 per cent between 1993 and 1998. In Chennai, it increased from 60.6 to 64.8 and in Indore from 63.7 to 72.7 during the same period. Quite clearly, the informal sector in the future must accept a larger role in finding space for more entrants within its fold. (GoI Urban Indicators).

6.6 .1 Constraints for the Informal Sector

If urban poverty alleviation is to be seriously attempted, the informal would have to generate more employment and allow the poor to work themselves out of the vicious cycle of poverty. The current scene, however, is replete with several constraints that disallow the informal sector from playing such a role. One of the chief constraints in the sector is the availability of capital. This is despite the fact that capital required is quite

small, since micro units are the essential nature of businesses in the sector. However, formal institutions are chary of lending money and it is only informal mechanisms that generally provide financial assistance. Prime examples are the Grameen Bank in Bangladesh or the Self-employed Women's Association (Sewa) in India, SUPF in Cambodia and ENDA in Vietnam. These credit providing institutions, based on the cooperative model have demonstrated that not only are the poor bankable, but they are also much more likely to repay their loans than the high-income borrowers. But these institutions are few and far between. Technical know-how is equally difficult to acquire. Governmental institutions providing capacity inputs have not been very helpful. In the absence of satisfactory access to credit and training, those in this sector are forced to remain content with simple technology, to profile their scale of operations close to the minimum, evade rent by opting for unauthorized locations and circumvent regulations to cut costs.

The informal sector enterprises face serious location disadvantages. They operate in temporary structures and have no access to land. To add to the woes, a host of regulations about land, rentals, labour, registration, licensing and bookkeeping and several others put up traumatic barriers. The consequences of non-compliance with regulations may result in penalties, confiscation of assets or closure of business. Hence just as such men and women are reluctant to invest in improving their housing stock for fear of eviction and consequent destruction of their investment, a similar fear inhibits them from investment in business. These constraints translate into a perpetual prescription to prevent the poor from breaking the shackles of poverty by wedding them to the status quo.

In regard to land and infrastructure, few cities have provided within their plans adequate space for informal activities. Mention, however, must be made that some countries and cities have had mounting pressure from organized informal sector groups such as hawkers in Kolkata and Mumbai and interventions by courts that have forced cognizance of some informal sector actors. These developments have crafted a 'semi-formal' economy in such places comprising activities that are recognized, partly regulated and sanctioned a certain degree of operational freedom. These include street vendors, garbage collectors and collective taxis. Similarly, countries like Thailand and Malaysia have facilitated street vending by allocating space for vendors. In other places, ways have been found of incorporating informal sector waste collection and recycling into the formal waste collection system, and setting up decentralized community-based waste collection and disposal mechanisms through partnerships among waste-pickers, communities and local government.

6.6.2 Street Vendors

National Policy on Urban Street Vendors

A National Policy on Urban Street Vendors prepared by Government of India was first formulated in 2004 and was later revised in 2009. Along with the 2009 Policy, a model bill on Street Vendors (Protection of Livelihood and Regulation of Street Vending), 2009 has been circulated for the States to adopt and provide the legal framework for implementing the policy recommendations.

The Policy (2009) defines a street vendor as "a person who offers goods or services for sale to the public without having a permanent built up structure'. Different names are used to signify a street vendor. They comprise "hawker, pheriwalla, rehri-patri walla, footpath dukandars, sidewalk traders, etc." (National Policy for Urban Street Vendors 2004). The Policy estimated that the street vendors count for about 2 percent of the population. The policy, much like the previous one, recognises the positive role of street vendors 'in providing essential commodities at affordable prices and at convenient places'.

6.6.3 Policy Recommendations

The policy recommends that streets within each city be classified as 'restriction-free vending, restricted-vending and no-vending zones' and registered vendors be allowed to go about their business without harassment. A Town Vending Committee is proposed to identify these zones, register vendors, issue them identity cards and monitor the functioning of the vending zones. About 40 per cent of the members of this committee will be from street vendors associations. If the recommendations are implemented, statutory plans such as master plans of the existing and new areas of each city will have a provision for vending zones and the norms for allocating space will be put in place. The recommendations also include provision of space for temporary markets and mobile vending in all areas excluding the non-vending zone.

The issue of street vending has been a matter of prolonged litigation. The matter ultimately reached the Supreme Court. The Apex court of India in a landmark judgment, (Sodan Singh & Others versus New Delhi Municipal Council, 1989) stated the following: *"if properly regulated, according to the exigency of the circumstances, the small traders on the sidewalks can considerably add to the comfort and convenience of the general public, by making available ordinary articles of everyday use for a comparatively lesser price. An ordinary person, not very affluent, while hurrying towards his home after a day's work, can pick up these articles without going out of his way to find a regular market. The right to carry on trade or business mentioned in Article 19 (1) g of the*

Constitution, on street pavements, if properly regulated, cannot be denied on the ground that the streets are meant exclusively for passing or re-passing and no other use."

The 2004 Vendor Policy relied on a study that found Mumbai having the largest number of street vendors numbering around 250,000, while Delhi had around 200,000. Calcutta had more than 150,000 street vendors and Ahmedabad around 100,000. The total number of street vendors in the country was estimated at around 1 crore. Pune has on official list 20,000 unauthorised hawkers., whereas a survey conducted by the Janiv Hawker Union in 2000 put the number at 37,000. Pune prepared a Hawkers Policy in 2007 based on the National Hawkers Policy of 2004. With an allocation of Rs.27 crore under the JNURM, implement of Phase 1 of the rehabilitation of hawkers was undertaken. 45 major roads were to be cleared of hawkers and four designated areas in Kharadi, Kothrud, Warje and Baner were to have Hawkers malls wherein 10,262 hawkers were to be rehabilitated.

Following the Supreme Court orders, some cities drafted guidelines for regulating urban vending activities. The Delhi Master Plan proposed to incorporate certain norms in this regard, such as allowing some hawking units in the CBD, in shopping centres, government and commercial offices, hospitals, bus terminals , schools, parks and in residential and commercial areas.

6.7 Development Plans vis a vis the Urban Poor

6.7.1 Deficits in Urban Planning vis a vis the Urban Poor.

City planning in respect of the urban poor has generally followed the policies, guidelines and directions of the centre and the State. Hence, in a situation where there have been large deficits in respect of urban poverty planning at the levels of the Centre and the States, it would be presumptuous to believe that cities would take any large scale initiatives. This is more so since city initiatives would fall outside the purview of planning and municipal laws and municipalities could be hauled up for stepping to do things for those outside the formal city. Development Plans and Development Control Rules are in any case approved by the State. The Constitution, it is true, puts certain poverty-related services in the Twelfth Schedule that fall within the domain of the municipal bodies. But even these need to be followed only when the States allocate such functions to the ULBs.

In the cited context, "India's cities have not planned for affordable housing or incorporated necessary space demand in urban areas. No Indian city actively forecasts demand for affordable housing, let alone creates mechanisms to allocate the necessary

space. Affordable housing has not been a key focus in the development plans of municipalities or the regional plans of metropolitan areas. Cities have not allocated land through their planning processes or zoning norms. Even when cities have allocated for affordable housing, poor governance has too often meant that land or housing units have been diverted to high income beneficiaries or for commercial use." (Mckinsey & Company, 2010).

6.7.2 Absence of Poverty Planning

A more virulent criticism of the current planning process states, "The planning approach and processes as of now have neither any way of including spaces for living, working and mobility of the bottom half of the city populations nor any participatory processes built into the system to include their aspirations. Clearly, everything else rather than the Urban Planning helps the poor in stabilizing in the urban system and hence other socio-political processes emerge as the paradigm of urbanization in India and not the Urban Planning." (Darshini Mahadevia, Rutul Joshi, December 2009).

The essay further concludes, "This is because the City Master Plans, as they are made, do not have any financial plan attached to them and have very poor reflection of socioeconomic concerns on one hand and hence integration of these concerns on the other hand. The Master plans have nearly no relationship with the governance structures. Hence, the City Master Plans have very poor implementability. In essence, preparation of City Master Plans become a statutory exercise that freezes lands and makes them unavailable for development and by that declaring large parts of city activities and large parts of city population 'illegal' or 'informal'." (Darshini Mahadevia, Rutul Joshi, December 2009).

6.7.3 EWS Housing Reservations in DP

As has been seen, since land is the fulcrum on which poverty alleviation in cities revolve, the task becomes extremely difficult if adequate land is not allocated for shelter to the poor. Development Plans have provided shelter reservation for the urban poor under EWS Housing. These reservations have been miserly; and even those lands reserved have not been used for the purpose reserved. They have been encroached, their use altered or just deleted. These inadequacies are reflected in the proliferation of slums.

6.7.4 Urban Transport

In the area of mobility, there has been inordinate emphasis on facilitating free movement of vehicles, primarily cars through measures such as road widening, viaducts and such transport facilities. Public transport has been a much neglected subject and finds little treatment in Development Plans. This is evident from the fact that at the beginning of 1950s, 11 percent of all vehicles were buses. This fell to less than 1 percent by 2005. Of late, however, Rapid bus transit systems are being aided under JNNURM and several larger cities are gearing to put up a rail-based metro system in place. Badami (2009) has argued that among all the options for public transport, enhancing pedestrian accessibility is the beginning and most equitable approach for 'sustainable transport' approach in Indian cities. This obviously means that the poor need to find space within the cities near their place of work. (Badami, 2009). In this context, it is important that cities imbibe planning ethos that build cities on a mixed use pattern that combine living, working, shopping and recreation in reasonably close proximity so that there is more city efficiency, more pedestrianization and the needs of long distance commuting is reduced. However, the opposite seems to be happening as linear urban development is pushing distances higher.

6.8 DCRs vis a vis the Urban Poor

Since the Development Plans have scant consideration of the needs of the poor, it only follows that the development control regulations (being part of the Development Plan) would not have specific tools of implementation that would be customized for the poor. Their concerns with proper planning and the need for avoiding undue congestion have led to regulations that disallow very small constructions or activities such as hawking. Slums are, therefore, not allowable under DCRs of cities. Neither is hawking, since it does not find reflection in Development Plans. Whatever infrastructure/service provisioning happens in slums is under the Slums Acts and not under the MR&TP Act, where slums remain outside plan. Similarly all hawking in the cities happen outside the provisions of the DP and DCRs. Hence in a sense, slums and hawking are activities violate the DP/DCRs and find little place in the urban rule book.

Under pressure from the Judiciary and Policy pronouncements of GoI and the States, however, there has been some positive movement to find space for the poor. The Municipal Corporation of Greater Mumbai, for instance, has proposed amendments to the DC Rules that would allow the creation of food plazas, night time food courts, weekly and weekend food courts, pitches on private premises and in municipal markets for selling vegetables, fruits, eggs and milk. Some of these amendments are already being

opposed by housing societies and the legality of reservations in private premises is being questioned. On the housing side, concepts of FSI and TDR have been pressed into service to provide housing for the poor. Other cities have also shown signs of moving towards the need for accepting changes to accommodate the poor in cities.

However, the overall conclusion would be that the efforts in this direction are too weak, too slow and too fragmented to make any dent in the sphere of urban poverty. Slums are growing, the hawkers are struggling, transport remains predominantly car driven and social infrastructure generally denies the existence of the poor. The Report on Indian Urban Infrastructure aptly summarizes the poverty deficits of urban planning. It states, "The master planning system has not focussed on spatial planning for the urban poor to provide them 'a place to live', 'a place to work', 'a place to sell', and public transport to move from one place to another."

The failures of urban planning in the developing world are reiterated by UN-Habitat in their recent study. The study states that "modern urban planning has failed to integrate the urban poor in the socioeconomic fabric of the city....the poor have survived despite master planning. Understood primarily as a technical tool, planning has been unable to address the power relations that have been at work to the detriment of the great majorities of urban populations". (Source: UN-HABITAT, 2012)

Summary

Urban poverty, unlike rural poverty, is more about shelter and dismal quality of life than about employment. It is evident that poverty in India is urbanizing and in cities it is being informalized. Slums and hawking are the result. This is on account of serious gaps in planning for urban poverty in the urban planning process. These gaps are in the areas of shelter, in the huge lack of a place to work and sell and in transport allowing the poor to move from home to work.

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CHAPTER 7

OPERATIONALIZATION OF DEVELOPMENT PLANS AND DEVELOPMENT CONTROL REGULATIONS

This Chapter deals with the central importance of DPs and DCRs for a city's planned growth. It raises issues that arise in the course of its operationalization such as land acquisition and financial and technical resources. It points out the impediments and pitfalls in implementation and the issue of urban poverty.

7.1. Significance of Development Plans and DCRs

The central significance of a Development Plan for the planned growth of a city and its desired quality of life cannot be overemphasized. The DP is a statement of intent or vision. It sets out how we would like to see the city develop over a specified time period. The DP of a city essentially plans all its lands and their various uses. This is called land use planning. "Land use planning refers to the process by which land is allocated between competing and sometimes conflicting uses in order to secure the rational and orderly development of land in an environmentally sound manner to ensure the creation of sustainable human settlements." (D Thomas, 2001). An ideal Development Plan seeks to articulate and satisfy the needs of a city's population - economic, infrastructural (water, sewerage, sanitation, roads, power, transport), social (housing, education, health), recreational and environmental (trees, open spaces, clean air, controlled noise) within the context of available financial resources and technical knowledge. Land-use planning seeks to accommodate these needs within a technical and spatial framework. While doing this, the Plan attempts to match the use with compatibility of the type of land.

7.1.1. Development Control Regulations

The development control rules that form part of DP seek to manage and regulate property development to ensure that all development takes place in such a manner that it conforms to a pre determined set of policies or standards and ensures the orderly and rational development of land to create sustainable human settlements. They ensure that buildings are structurally sound and will not endanger the safety or lives of those who live in or use them; that they are provided with the basic services and facilities necessary to support the purpose for which they are erected; and to ensure that the environment and natural resources are managed carefully for the enjoyment of present and future generations. Development control is the most visible part of the land use planning process and the

function with which members of the public - particularly those engaged in the construction and property development industries - interact on a daily basis.

7.2. Preparation of Development Plans and DCRs

Before a Development Plan (DP) and its Development Control Regulations (DCRs) are operationalized, they ought to be comprehensively prepared. Clearly, high quality DPs/DCRs lie at the heart of a high quality city. The legal basis for the process of making and adopting the DP/DCR has already been outlined in a previous Chapter. Since the DP is a blueprint for the economic, environmental and social development of the city, the process of making development plans must be open, transparent and inclusive and should be grounded in public and political consensus.

7.2.1. Future City Growth and DP

Development plans must be alive to the fact that a city's population and economy would continue to grow; hence they ought to be able to look into the future and assimilate those emerging needs into their fold, meaning thereby that lands would have to be earmarked for those emerging purposes. "Zoning that is not responsive to or justifiable by reference to reasonable needs, or that substantially exceeds such needs, is not consistent with proper planning and sustainable development." (Government of Ireland, 2007)

"Development plans play a central role in the identification and protection of the natural and built environment. The development plan will set out policies for the protection of the environment and heritage and is an important source of information for landowners, developers, communities and members of the public in this regard. The DP/DCRs must offer clear guidance to developers in framing development proposals and to the planning authority in assessing such proposals." (Government of Ireland, 2007)

7.2.2. Integration of Development Plan with Other Plans

Plans prepared at various levels (Centre, State, Region, City) and by various sectors (Railways, Transport, Water Resources, Power, Telecommunications, Housing, Poverty Alleviation, Commerce and Industries to name a few) have their impact on a city. It is important that the DP keeps them in view as far as its own area is concerned and each layer of the planning system must reinforce and support the others. Of special significance for conformity is that the DP must be in conformity with the Regional Plan.

7.2.3. Demographic Diversification and Development Plans

Communities in cities are becoming diversified as the impact of technology and impact of globalization widens. In the larger cities, their populations are progressively getting

drawn from various cultures. This demographic diversification rises as the economy diversifies. These people are of varying age, sex and economic and social contexts. DPs quite necessarily need to take these diversities into account. They should, therefore, attempt to give spatial expression to such factors as far as possible.

7.3. Operationalization of Development Plans and DCRs

The mere preparation of Development Plan for a city is not a sufficient step to ensure its implementation. The Plan must be accompanied by an implementation structure backed by institutional resources. The institutional aspect must particularly look at aspects of adequate manpower, coordination and decentralization for rapid decision-making and operationalization. It would be necessary at the same time to take care that lands meant for particular activities are not misused or diverted wilfully for other purposes. There must therefore be a strong legal and enforcement mechanism available. Finally, the DP needs to be underpinned by adequate investment (both public and private) to be able to be implemented in the specified time frame. It must provide a clear framework for public and private sector investment in infrastructure and in development in the area, having regard to both national and regional plans and policies. In effect the DP must be capable of implementation. Among financial provisions, tools for the acquisition of land needed for public purposes, incentives for participation in plan implementation through the provision of particular services would be necessary.

7.3.1. Municipal Empowerment

Plan implementation also requires that municipal bodies be empowered, as per 12th Schedule, to do their own urban planning. And if the states provide them with this function, they should have adequate manpower such as urban planners, surveyors and other technical staff for undertaking implementation. It also follows that they be of good quality. Since urban dynamics in all its aspects is beyond human ingenuity to be entirely controlled, the Development Plan must undergo changes to answer that call of dynamics. The Development Plan, therefore, ought not be too rigid disallowing in-built mechanisms for change. Additionally, the process should not be completely top down.

7.4. Land Acquisition for DPs

The DP, in the course of mandating land uses, would earmark lands for infrastructures and public amenities. These could be lands for roads, for public schools, parks, health facilities and a host of other utilities and public amenities. The operationalization of such activities would begin with lands being in possession of the urban local body that would be the Development Authority in a large measure. Only then they could be built on, Of

course, some of these lands would serve the purposes of other service providers - service providing agencies of the Central or State Government such as post offices and the police. Some of the reservation norms are displayed in the Table below:

Table No.7.1 Public Purpose: Development Plan Norms of Gov. of Maharashtra

Sn	Public purpose Head	Activity	Area Norm
1	Active & Passive Recreation		
	1.1.	Open Spaces	22 R Per 1000 Persons
	1.2.	Children Play Ground	1 R Per 1000 Persons
	1.3	Adult Play Ground	6 R Per 1000 Persons
2	Education		
		Nursery School	2.65 R Per 1000 Persons
		Primary School	3500 Sq M Per 5000 Persons
		Secondary School	4800 Sq M Per 20,000 Persons
		Libraries	2 R Per 10,000 Persons
3	Medical & Public Health		
		Dispensary	5 R Per 10,000 Persons
		Maternity Home	10 R Per 20,000 Persons
		General Hospital	2.5 Ha (3 Nos)
4	Bus		
		Inter City Bus Terminus	4 Sites Of Min 40 R Each
		Bus Depot (4 Sites)	1 Ha Each
		Intracity Bus Terminus	17 Sites Of 0.8 Ha Each
		Truck Terminus	3 Sites Of 15 Ha Each
5	Police		
		Police Chowkie	4 R Per 30,000 Persons
		Police Statn (1 For 5 Pc)	20 R Per Station
6	Fire		
		Fire Fighting Stations	9 Ha For 15 Sites
7	Markets		
		Neighbour Veg Market	10 R Per 20,000 Persons
		Central Market	4 Sites - 1 Ha
		Hawkers Market	Included In Central Mkt
		Slaughter House	3 Sites Of 0.8 Ha Each
8	Dead		
		Burial Ground (2)	
		Burning Ground (4)	1 Ha
9	Offices & Exchanges		
		Municipal Purposes (36)	2000 Sq M Each
		Ward Office (6)	8000 Sq M Each
		Post Office (36)	600 Sq M Each
		Telephone Exchange (6)	8000 Sq M Each
		Tel Sub Exchange (36)	2000 Sq M Each
10	Utilities		
		Mseb Receiving Statn (1)	60,000 Sq M
		Mseb Receiving Statn (3)	20,000 Sq M Each
		Mseb Receiving Statn (8)	4,000 Sq M Each
11	Water & Waste Water		
		15 Sites For Water	Total Land 48.6 Ha
		6 Sites For Waste Water	Total Land 11.25 Ha

Directorate of Town Planning, Maharashtra

7.4.1. Land Acquisition and Costs of Acquisition

The Table makes it apparent that the land use plan needs huge amounts of land for operationalization of the Plan. It is also apparent that these would not be overwhelmingly municipal lands or government lands. Quite a sizeable percentage would be of private ownership and would have to be acquired. These lands were earlier acquired solely through the use of Land Acquisition Act or through private negotiations. Such acquisition required huge amounts of money merely for land acquisition. Municipal Corporations quite clearly were not able to find such resources. As a consequence lands would lie locked and not available for the use for which they were earmarked. In several cases they were encroached and diverted for other uses.

7.4.2. Land Acquisition and TDR

This situation led to the implementation of Transfer of Development Rights (TDR). TDR is a certificate from the Municipal Corporation that the owner of a property gets where his/her property is reserved for the purpose of the above cited public utilities. In lieu of cash from the Municipal Corporation, the owner gets TDR and surrenders his property to the Municipality. These certificates can then be sold to those who wish to use it for additional construction on their property. As per Rules and zones decided for receiving TDR, additional construction beyond the usually permitted FSI can be loaded on to a plot. To allow this, a city had designated TDR Receiving Areas where development densities would increase and TDR Sending Areas from where development rights would get transferred. In most cities in Maharashtra where TDR is applicable, an additionality of 40% of the plot area is allowed. A further 20% is allowed in the form of slum TDR if the specific development undertaken is for the redevelopment of slum land. TDR has acted as a great relief to cities where this is applicable, since they can now acquire lands for roads and public amenities without budgetary provisions and cash outgoes.

7.4.3. Land Acquisition, Structures and Encroachments

While the provision of TDR has been of assistance to municipal bodies, land acquisition still remains a huge problem. This is on account of reservations on lands that were or have got encroached over time. This has put the burden of removal of encroachments on the municipal body, frequently requiring relocation in case of slums or activities such as hawking. In case of road widening, apart from the land, there have been authorized structures of owners, such as boundary walls that need pulling down. Municipal Councils are required to separately compensate the owners for this purpose. The removal of encroachments and the reclaiming of municipal land sometimes leads to violent protests

and mob activity endangering the lives of municipal employees. Examples have also surfaced where these groups are aided and abetted, either directly or indirectly, by municipal elected representatives. Because of the kind of governance climate that has begun to prevail in cities, these classes of representatives have become increasingly assertive and unaccountable. In view of such experiences, the larger municipal bodies have also taken on their rolls a posse of police constables and officers to be in readiness to aid the removal of encroachment by ensuring security cover for municipal staff. Infrastructure provisioning in view of these responsibilities relating to land continues to be an extremely onerous and heavy responsibility cast on ULBs.

7.5. Institutional and Legal Resources

The institutional set up for the implementation of DP is partly as provided by the MR & TP Act and partly as provided by the Municipal Acts. These are in place in cities, except that the time frame in which they operate is extremely laid back. There is therefore a mismatch between required speed of decision-making and the actual lethargy seen on ground. Besides, the top management of the municipal body - the municipal commissioner and the deputy municipal commissioners in municipal corporations and the chief officers in municipalities are state functionaries. In most cases they are not able to provide leadership to the operationalization of the Development Plan. This could be on account of a lack of familiarity with the nuances of the Plan and its operationalization. In most cases it is due to frequent state interference with their tenure in the municipal body where they are generally not able to complete a long enough period to see the Plan through. Many a times, it is because officers themselves find working in the municipal bodies very testing and seek to move out to more salubrious postings where the heat is less and delivery is easier. In many ways this is an outcome of ever mounting demographic load of cities and multiple kinds of shortages and deficiencies that stretch municipal services to the point of collapse.

7.5.1. Legal Issues

Since the Plan is not always to the heart's desire of individuals who have stake in lands and properties, there is a frequent tendency to stall municipal proceedings in regard to Plan implementation by taking recourse to approaching the Courts and obtaining stays. As cases mount, most municipal bodies find it difficult to defend their cases in the courts with the limited staff that they have. They, therefore, have to employ a battery of lawyers from outside who can defend their cases. While the High Courts have been critical of the manner and ease with which the lower judiciary grants stays, there has not been much positive impact of such observations and the municipal bodies continue to struggle on this

front. It can be safely said that resistance of vested interests to the Plan, poor defence from municipalities and legal loopholes combine to put tough hurdles to the operationalization of the Development Plan.

7.5.2. Technical Manpower

Apart from the top management having limited time frames in municipalities, urban local bodies also suffer from a lack of technical manpower that can undertake the grassroots activities such as surveys, joint measurements and detailed planning of individual activities within the Plan. These include urban planners, surveyors and such technical personnel whose presence is essential in the local bodies. Towns also need modern tools that are currently associated with land use planning, such as computer based technologies that enable accurate measurements and quick surveys and the preparation of drawings and plans. All these pose difficulties in Plan operationalization.

7.6. Financial Support to Operationalization of DPs

It is logical that if a plan is prepared and approved, it must be implemented. It should, therefore have sufficient financial and administrative strengths that would allow its implementation. Since the Municipal Councils/Corporations are planning authorities for their states, it is up to the urban local bodies to find resources to implement their Development Plans. A further point of importance is that Development Plans contain a number of public amenities that need implementation in the shortest time frame possible. This is because they are based on certain norms of projected population. If the amenities do not keep pace with population, it results in the unavailability of those services to the population.

7.6.1. Financing Land Acquisition for DP

It is widely observed that Development Plans are primarily land use plans and do not get into the financials of its implementation. The Development Plan is drawn on the basis of certain norms that the State sets in consultation with the Director of Town Planning. These are land norms and they are in regard to various services that the city would require. They are with regard to open spaces, playgrounds and gardens, in regard to schools and health facilities, transport facilities, police and fire stations, post office, telephone exchange, markets, slaughter houses, water and waste water, power and other municipal functions. These land allocations could be on public or private lands and in several cases would require acquisition.

Following this, they would need to be allocated to different governmental agencies that provide those facilities. Those that are to be done by other than municipal corporations/councils would be the responsibility of those departments. Thus land earmarked for police stations would be paid for by the Police Department and Post office land by the Department of Posts. However, the majority of lands pertains to municipal functions and would have to be acquired and built on by urban local bodies. These would be lands reserved for primary schools, for playgrounds and for gardens, for dispensaries, health centres and maternity homes, vegetable markets and slaughter house, for fire services and utilities such as water and waste water, power, municipal offices and others. Quite clearly, there is a mismatch between the DP and the resources since resources have not been a consideration in planning. This means that in the process of planning, the fact that implementation would require finances and it is important that the plan more or less be matched with what would require the implementation of the plan in the given time frame has not been a consideration factored into the plan. The plan may have cursorily dealt with areas where resources could be found, but there is no in depth analysis of the same. Given the central importance of the DP for the city and its absolute necessity to be implemented for the health of the city, this ought to be an obligatory exercise in the preparation of the Plan. Unfortunately, it is not so and the Plan, therefore, strictly in its nature, remains a land-use Plan.

7.6.2. Municipal Financial Support

The Planning process may be excused for having not undertaken a financial implementational analysis. But the document is primarily prepared for a city and the Urban Local Body is the prime custodian of the document as the planning and governance authority of the city. The responsibility is cast upon it to implement the Plan. Unfortunately, municipalities have not taken due note of the Plan. All cities that form part of our city have not done any detailed implementational analysis. This process would involve prioritizing the needs of the city; based on priorities splitting of the Plan into annual implementational tranches, working out the cost implications, identifying the financial stream from where money would come for implementation and then fixing responsibilities of implementation across the municipal departments. None of the cities seem to have taken up this exercise.

7.6.3. DP Not the First Charge on Municipal Budget

The poor implementation of the Plan gets compounded by its neglect when the Councils/Corporations formulate their budgets. At the point of money allocation, the true import of the Development Plan does not get appreciated. Development Plans, given their

significance, ought to be the first charge on municipal budgets. However, this has not been the case. Municipal Officers interviewed stated that when annual budgets are made, development plans are not kept before the corporation as a plan to which resources have to be allocated. While some allocation happens, it is more out of petitioning by corporators, citizens or such considerations rather than a well considered thought process. Quite definitely, DPs are not treated as the first charge on the municipal budget. In fact, scarce resources are seen to be diverted to several other uses that do not form part of the DP, nor are obligatory functions of urban local bodies. These include works such as memorials, museums, theatres, swimming pools, institutions of higher learning that would actually fall in the realm of the State departments. The results in the circumstances are evident.

7.6.4. State Control on Municipal Tax Domain

Wide differences exist among ULBs in tax jurisdiction, degree of control exercised by State Governments in fixing the tax base, tax rates and tax exemptions, and how efficiently taxes are administered and enforced. The revenue gap is widening in most ULBs due to low revenue generation, increasing expenditure, shrinking budgetary grants, and inefficient financial management. (H Pradhan)

7.6.5. State Financial Support

Key to the fiscal relations between States and ULBs are the State Finance Commissions. The Revenues that flow to the municipal bodies from the State are few and very meagre. And they are reduced as the city climbs up the ladder from nagar panchayats into 'C' class, to 'B' class, to 'A' class municipal councils up to municipal corporations. From an analysis of the budgets it is seen that State Government revenues are a small fraction of the municipal resources. The smaller municipal bodies receive grants under UD 6 and the larger ones get a share of vehicle tax and entertainment tax.

The Constitutional (Seventy-fourth) Amendment Act 1992 did provide for the State Finance Commission to go into budgets of local bodies and recommend to the State the devolution of funds to them based on their infrastructure requirements. The relevant provision reads as follows:

“243Y. (1) The Finance Commission constituted under article 243-1 shall also review the financial position of the Municipalities and make recommendations to the Governor as to-

(a) The principles which should govern-

(i) the Consolidated Fund of the State;

- (b) the measures needed to improve the financial position of the Municipalities.
- (c) any other matter referred to the Finance Commission by the Governor in the interests of sound finance of the Municipalities.

(2) The Governor shall cause every recommendation made by the Commission under this article together with an explanatory memorandum as to the action taken thereon to be laid before the Legislature of the State.” {Extract of the text on SFC in the Constitutional (Seventy-fourth) Amendment Act 1992.}

However, states have not acted upon the advice of the State Finance Commissions since the Act did not make it mandatory for the States to accept the recommendations of the SFC, as the language of the text above would show. The SFCs themselves have not been very helpful. “There is widespread perception that SFCs have not played a leadership role.....SFCs have not effected or recommended any change in the fiscal powers of ULBs; instead, they have exhorted ULBs to make better use of the fiscal powers they now possess.....each SFC defines for itself the policy goals for revenue sharing as well as the methodology for estimating the allocations for ULBs. The result is that SFCs produce a divergent blend of technical analysis and their own fiscal norms that substitute for political consensus, rendering their recommendations, at best, of limited use”. (Mathur and Peterson, 2006).

7.6.6. Central Financial Support

Central Finance Commissions.

The Urban Local Bodies in India get certain grants from the Central Government. These grants are mainly based on the recommendations of the Central Finance Commissions (CFCs). After the 74th Constitutional Amendment, the 10th, 11th and 12th CFCs provided ad-hoc grants to ULBs. The 10th CFC made an ad-hoc provision of grants to the tune of Rs. 1,000 crores to the ULBs for the award period of 1996 to 2000. The 11th CFC identified certain basic services, viz provision of primary education, primary health care, safe drinking water, street light, sanitation, drainage and scavenging facilities, maintenance of cremation and burial grounds, public conveniences and other common property resources. A total grant amounting to Rs. 400 crores was earmarked for ULBs. The 12th Finance CFC recommended grants amounting to Rs. 5000 crores for municipalities payable during the period 2005-2010. It also stressed the importance of Public Private Partnership (PPP) to enhance service delivery in municipal areas. The 13th CFC was constituted for the period of 5 years i.e. 2009-10 to 2014-2015. Its report has already been submitted to the Union Government in Feb 2010.

“The 13th CFC has adopted a complete shift over in recommending grant-in-aid to local bodies compared to earlier CFCs and has focused on linking of the system of grant-in-aid to a divisible pool of central taxes rather than the system of ad-hoc grant-in-aid recommended by the last three CFCs. Further, the 13th CFC has recommended three types of grant-in-aid to ULBs namely (i) general basic grant, (ii) general performance grant and (iii) special area basic grant. The general performance and special area basic grants are of conditional nature. The State Governments will be eligible to draw down its share of ‘general performance grant’ and ‘special area basic grant’ only if they comply with nine and four conditions respectively laid by the 13th CFC. The focus of these conditions is for proper budgeting, accounting and audit practices at local body level, a system of better administration at local body level, an electronic transfer system to local bodies at state level, compulsory levy of property tax and constitution of a state-level property tax board and defining of service standards by the state government.” (NIUA, 2011).

“The grants from CFCs are miniscule, however, compared to the estimates of investment required for municipal bodies. “The investment required for urban infrastructure over the twenty year period is estimated at Rs. 39.2 lakh crore at 2009-10 prices. Of this, Rs.17.3 lakh crore (or 44 percent) is accounted for by urban roads. The backlog for this sector is very large, ranging from 50 percent to 80 percent across cities of India. Sectors delivering urban services such as water supply, sewerage, solid waste management, and storm water drains will need 8 lakh crore (or 20 percent). The Committee has made explicit provision of Rs. 4 lakh crore towards investment in renewal and redevelopment including slums.” (Report on Indian Infrastructure and Services, March 2011, Pg xxiv)

Even if the items cited above are not all related to implementation of DP, it is evident that the financial gap is too wide to be bridged by paltry sums of central transfers. On their own as the above Report states “Urban local governments in India are among the weakest in the world both in terms of capacity to raise resources and financial autonomy.”

7.6.7. Jawaharlal Nehru National Urban Renewal Mission (JNNURM)

Government of India introduced the Jawaharlal Nehru Urban Renewal Mission (JNNURM) in 2005. This aims at improving and augmenting the economic and social infrastructure of cities as well as affordable housing and basic services to the urban poor. The Government of India has allocated a little over Rs. 66,000 crores out of an approved project cost of Rs. 109,700 crores. It is pertinent to note that all Central and State assistance is not linked to the implementation of the Development Plan, although it could

be a far-fetched consequence that Development Plan items have also found some money. But the focus clearly has been absent.

7.6.8. Costs of Operationalizing DP

Working out the costs of operationalizing DP is a challenging task. This would vary from city to city, since cities have different levels of income as well as costs. Despite these differences, however, an attempt is made here of coming to a cost estimate that may roughly approximate the costs across cities and give us a reasonable idea of the difficulties.

In working this out, the following assumptions have been made:

- i.** The city has an area of 50 sq km and a population of 5 lakhs, meaning thereby that it has a per sq km population density of 10,000. This is a very reasonable density in Indian conditions.
- ii.** The Urban Local Body has an annual income is 150 crores or Rs. 3000 per capita. This is knowingly taken above the overall average of Indian cities, to specifically highlight the plight of even such Indian cities that are relatively financially well off. It would be possible to locate this level of revenue buoyancy in the western cities where octroi continues to be a source of municipal revenue. Thus, for example, the city of Kolhapur with an area of about 67 sq km and a population of about 5 lakhs has a budget of approximately 160 crores.
- iii.** It spends one-third of its money on establishment, one-third on maintenance and one-third on capital assets. This is an excellent distribution, given the fact that many ULBs find it difficult to even meet the establishment expenses.
- iv.** Of the various reservations cited above and of the municipal services, the most basic and essential items have been taken into consideration. These are roads, water and waste water, open spaces, gardens and playgrounds, primary schools, primary health centres and dispensaries and land for amenities and roads. Other vital basic services, such as solid waste and street lights have been excluded as they are more of maintenance functions and have marginal financial impact on DP implementation.
- v.** The Development Plan is to be implemented in a period of twenty years, which is the period statutorily provided, and
- vi.** No increases in income and costs have been factored in. It is presumed that the rising costs will be compensated by rising income as there would be demographic growth, more construction and more taxes and a resultant larger expenditure.

Based on the above premises, the revenues of the considered municipal corporation would be as follows:

Revenue

Table No 7.2 Annual Budget 150 Cr

CATEGORY	PERCENT	ANNUAL AMOUNT (CR)
Establishment	33	50
Maintenance	33	50
Capital Assets	33	50
Total		150

And as cited above, the costs of DP implementation of the considered items would be as follows:

Table No 7.3 COSTS of developmental projects

Service	Description	Costs (Cr)
Roads	RS.3000 PER SQ M	2250
Water & Waste Water	RS. 9713 PER CAPITA	0500
Open Spaces, Gardens, Pgs	RS. 350 PER SQ M	0070
Schools	RS. 5,000 PER SQ M PER SCHOOL	0450
Phcs + Dispensaries	RS. 15,000 PER SQ M	0020
Land For Amenities	RS. 3000 PER SQ M	0750
Land For Roads	RS. 3000 PER SQ M	0900
Total Asset Bldg Cost		4940

7.6.9. Cost Presumptions Explained

An explanation is owed on how these calculations have been arrived at. In the case of roads, it has been assumed that the city would have 15 % of its area under roads. This is a reasonable percentage in regard to road densities that are planned for cities. This results in 7.5 sq km of area under roads or 75,00,000 sq m. At an average road width of 15 metres, there would be 500 km of roads in the city. The cost of road construction has been assumed at Rs. 300 per sq m inclusive of storm water drains and other items of road furniture. In the case of water and waste water, norms worked out by Urban Infrastructure Report (Pg 74) has been taken. These are at 2009-2010 prices. The general urban planning norm for open spaces is 10 percent of city area. This works out to 5 sq km in the instance of this city or 50, 00,000 sq m. It is assumed that only 20,00,000 sq m would be subjected to soft and hard landscaping at an average cost of Rs. 350 per sq m (cost norm

used by PMC) leading to a total cost of Rs. 70 crores. In regard to PHC and dispensary, GoI norms of 385 sq m for PHC and municipal norm of 200 sq m for dispensary have been used. The cost of Rs. 15,000 per sq m includes cost of construction as well as furniture and equipments that would be needed. It is presumed that all land required for all amenities would need to be acquired. Amenity land norm is 5 percent of all city land, in this case 2.5 sq km or 25,00,000 sq m. Similarly, it has been presumed that all of 15 percent road land would need acquisition.

7.6.10. Analysis of Municipal Ability on Basic Services

The sum total of all these implementation items works out to Rs. 4940 crores. Thus money has to be found in a period of 20 years. However, the city would be able to find only 50 x 20, that is Rs. 1,000 crores out of its budgetary resources, leaving a gap of 3940 crores. This amount would be found by the ULB over a period of almost 80 years. Even it is presumed that 50 per cent of all lands are available from Government or are of municipal ownership, it still leaves a resource gap that would be found over 40 years. Quite clearly, it is beyond a municipal corporation to find the resources to implement the Development Plan. It is also evident that the State and the municipal bodies would have to devise newer methods of bridging the resource gap. This would have to be done in partnership, since the State as the arbiter of municipal fortunes must move in to empower the municipalities to exercise power for the use of such instruments.

7.7. Use of Land Instruments for Operationalization of DP

One of the most important methods of raising resources is land instruments that can play a vital role in the implementation of the Development Plan. The most important of these are landpooling mechanisms of Town Planning Schemes, FSI (Floor Space Index), TDR (Transfer of Development Rights) and Accommodation Reservation. In Maharashtra, the use of TDR for the acquisition of land has been in use in the larger cities for quite some time. Since land acquisition is one of the most expensive items in the implementation of Development Plan as seen in the Table cited above (Rs.1650 crores), the use of TDR can almost entirely replace the requirement of hard money by the ULB for its acquisition. In Gujarat, particularly in Ahmedabad, Town Planning Schemes have been extensively used for the twin purpose of planning smaller areas of one to two sq km through the twin concepts of betterment and compensation and the acquisition of amenity space free of cost by the municipal body.

7.8. Use of the PPP mode for the implementation of DP

There are several alternate models/instruments that can be pressed into service to operationalize the Development Plan. Their use can go a long way in bridging the resource gap that municipal bodies face. These are discussed below:

7.8.1. Getting Others to Share Operationalization of DP

The use of PPPs for the implementation of Development Plan has not been given sufficient and serious attention. This could be especially useful in the provision of such services as primary schools or primary health services. The States/cities could specify norms for these services, especially where reservations for these facilities are on lands that do not belong to the municipal body. Such reservations could be developed by the respective owners for the public purpose for which these lands are reserved and in the manner prescribed. Wherever the owners would be happy to take up these tasks, the municipality could give up the development of these specific services. This would mean that the demands on DP implementation on the ULB would get reduced to that extent.

7.8.2. Public Private Partnerships.

In other cases, where the owners were willing to partner with the ULB, a PPP model could be employed. The model essentially would allow the municipal body to get the service provided at a reduced cost because of private investment in a public service, expecting to be compensated by a stream of revenue that the private developer could tap. Such examples, in core social sectors are few and far between and there is still some distance to be covered before this becomes the norm rather than the exception. It must be clearly acknowledged, however, that this is a vital strategy that needs to be pressed into service if the ULBs want to come anywhere close to the full and satisfactory implementation of Development Plan. This needs to become a part not merely in peripheral functions of ULBs but the core functions that are basic to the quality of life in cities, such as water and sewerage, health care, education, traffic and transport, parking and poverty alleviation programmes.

7.9. Monopolization and Implementation

7.9.1. The Combined Paucity of time, Talent and Money

Even after such methods are pressed into service, municipal monopoly over service provisioning in a city would not work because of a combination of several municipal deficiencies - time, talent and money. As cited above municipal bodies need to implement their Plans within two decades. And we have seen that or doing this, the kind of planning and attention that is needed is not available with ULBs. Municipal Councils/Corporations

are most of the time engaged in fire fighting and trying to live up to the delivery of basic services. Democratic processes such as meetings of different municipal committees, the General Body, review meetings and reviews at the district and State level take a lot of time. Hence the quiet luxury of forward planning is not sufficiently available with ULB officials. As cities grow, the scale and the complexities of urban problems escalate. As a consequence, municipal officials find themselves deficient in handling such issues all on their own. We also have seen that ULBs are extremely ill provided with resources and find themselves perpetually cash strapped.

In view of these constraints, it is essential that municipal bodies give up the insistence on monopolizing service provision and embrace partnerships, especially with the owners of land. If, for instance, land owners whose lands are reserved for schools want to get into partnership with reputed institutions and provide primary schools, ULB should readily accept such proposals as long as the basic parameters of running a primary school are met.

7.10. Plan operationalization and Urban Poverty

The operationalization of Development Plans have been sharply hit by the growth of urban poverty, slums and the informal sector. Since the land-use Plans do not have much in them that reflect the needs of the poor - either of shelter or of employment, the proliferation of activities of the poor can only be at the expense of the Development Plan. In other words the poor constitute the single largest cause of the unplanning of a city Plan. This may also be termed as the informalization of the Formal Plan. Since any city is unable to survive without the services of the poor - blue collared industrial worker, driver, milk vendor, domestic assistant et all - there does not appear any alternative to the poor becoming a larger city mass and more and more integral to the city as its economy accelerates. Such informalization, however, needs to be prevented if the Plan, indeed the city as we understand, has to survive.

What is required is the adoption of a planning ethos that raises the equity concerns to be a central cross-cutting theme in all urban planning processes. This would mean, on the one hand, addressing the problem of "slums and informal settlements through upgrading programmes, which entail the provision or improvement of infrastructure and basic services such as water, sanitation, garbage collection, storm drainage, street lighting, paved footpaths and streets. Besides the physical improvement of these settlements, the provision of such infrastructure can deliver major benefits in economic growth, poverty reduction and environmental sustainability. A major aspect of such upgrading

programmes should be land regularization, especially where previous tenure was insecure or unclear." UN-HABITAT. On the other hand, it means reorienting the land use plan to embrace the needs of the poor in regard to shelter and enterprise. Together, the Plan would cover the poor who are already in the city and the poor who would come in with its expansion.

7.11. Conceptual Expansion of Development Plan

"Urban planning has been much criticized for failing to adequately consider implementation issues. There is a considerable legacy from the 20th century of grand plans with little actual realization on the ground. Implementation has often proved particularly problematic when plans were developed out of obligation, statutory or otherwise, or from an overambitious political project. However, traditional master planning and the rational-comprehensive planning tradition tended to see implementation as synonymous with the control of urban systems, often with military precision. If that did not happen, the process of plan formulation was seen as a failure and plans were ridiculed as 'paper tigers'." (Global trends: The Urban Planning Process (Procedural), UN-HABITAT

7.11.1. Re-engineering of DP

On a consideration of all aspects of Plan operationalization, it is clear that Development Plans have to be re-engineered as more than mere land use plans, emphasizing physical design, and enforced through land-use control. This necessarily means widening the scope of planning beyond land use, and to get into the area of how plans shall be implemented. This requires the consideration of implementational tools - land instruments, land pooling, FSI and TDR, accommodation reservation, budgetary support, private investment, PPPs and any other method that could be available. Together they should allow a comprehensive support system that allows the operationalization of the Plan in the given time frame.

7.11.2. Shift to a Governance-Oriented Enterprise.

Additionally, since the entire city population is a stake-holder in the Plan and its outcome, an institutional shift is demanded from a government driven and controlled initiative to a governance-oriented enterprise where it becomes a collective city effort. "It is recognized that planning is not only undertaken by professional urban and regional planners (other professions and groupings are also involved); hence, it is appropriate to refer to the 'planning system' rather than just to the tasks undertaken by planners. Planning also highlights a developmental movement from the past to the future. The term planning' also

implies a mode of governance (a form of politics) driven by the articulation of policies through some kind of deliberative process and the judgement of collective action in relation to these policies. Planning is not, therefore, a neutral technical exercise: it is shaped by values that must be made explicit, and planning itself is fundamentally concerned with making ethical judgements." *Source:* adapted from Healey, 2004, UN-HABITAT.

7.12. Municipal Empowerment and Development Plan

The Constitution (seventy-fourth) Amendment Act has laid great emphasis on municipal empowerment and its spirit clearly wanted States to be facilitators rather than day to day managers of municipal affairs. Its twelfth Schedule listed right at the top urban planning as a function to be performed by urban local bodies. However, the Amendment, in actuality, failed to deliver ULBs from the clutches of the State. The State both in the domain of finances as well as functions continues to be the arbiter.

In terms of planning - the preparation of Development Plans of cities as well as their implementation, the State's approvals are critical. In many of the cities, there has been inordinate delay in the approval of Development Plans. Many modifications are sought to be made by the State superceding the voice of the city; and all these attempts cannot always be said to be in the overall interest of the city. This has clearly been a large stumbling block in the implementation of the Development Plan.

Summary

Despite the huge significance of DP and DCRs for planned urban growth, their operationalization currently is fraught with huge deficits and challenges. These exist in the area of land acquisition and in municipal, state and central support to fund implementation. As a consequence, DPs are seen to be substantially unimplemented. The growth of urban poverty and the inability to deal with it in the planned process is a big threat to the planned growth of cities. Quite obviously there is a need for the re-engineering of DPs and DCRs.

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CHAPTER 8

PROVISION OF MAJOR NON-SOCIAL MUNICIPAL INFRASTRUCTURE

8.1. Items of Major Non-Social Municipal Infrastructure

This chapter takes stock of provision of major non-social municipal infrastructure services in Indian cities. Items of infrastructure considered are water supply and sewerage, solid waste, roads and transportation services. The purpose is to show the kind of planning done in regard to these at the state/city level, the current state of these services and deficits if any, in their planning and provision.

8.2. Setting of norms

Infrastructure is crucial for the development, functionality and prosperity of urban area. It provides the foundation on which any city will thrive....Physical infrastructure like roads, power and communication facilities, improves urban connectivity, which is essential to induce growth and reduce poverty. There is also a positive link between the provision of infrastructure and the level of urbanization' (Source UN-HABITAT, 2012).

In India, the first attempt at setting urban service norms and standards was made in 1963 by the Zakaria Committee, which laid down the physical norms and corresponding expenditure norms for five services, i.e. water supply, sewerage, storm water drainage, urban roads, and street lighting. The standards were derived from the actual data collected on the quantum of basic urban services, demand for services, cost of provision, maintenance of services, and municipal finances from a sample of cities of different sizes.

The pattern of consumption of urban services has changed significantly over time as a result of increase in income and technological advances. Rising aspirations in a rapidly growing economy also call for a new look at the norms for public service delivery. Recognizing this need, a consultative process with State governments and other stakeholders was initiated in 2006, which culminated in the final benchmarks published by the Ministry in December 2008. The Thirteenth Central Finance Commission has endorsed these benchmarks and has made compliance with them a necessary condition for urban local bodies (ULB) to obtain performance-linked grants. In arriving at the estimates for urban infrastructure, the

Committee has adopted the principle of same standards for all citizens in a city/town without making any distinction between the urban poor, the non-poor, and the slum dweller.

8.3 Water Supply and Sewerage

Water supply in Indian cities is generally characterized by a number of inadequacies. Less than universal coverage, intermittent supplies, low pressure, and poor quality are some of the most prominent features of water supply in the cities of India. With rapid increase in urban population and continuing expansion of city limits, the challenge of delivering water in Indian cities is growing rapidly. Many large Indian cities have to source water from long distances ranging from 50 to 200 km due to exhaustion or pollution of nearby sources. This increases the cost of raw water and enhances the possibility of leakage during transmission.

Even when water supply is adequate, poor maintenance and inadequate replacement lead to technical losses in the distribution network. Errors in metering, unbilled water consumption and plain theft contribute to commercial losses. All this leads to high levels of non-revenue water. With no monitoring system in place and no incentive to reduce inefficiencies, the urban water scenario in India is one of poor service delivery, poor maintenance of physical systems, poor recovery of costs, and poor generation of revenues.

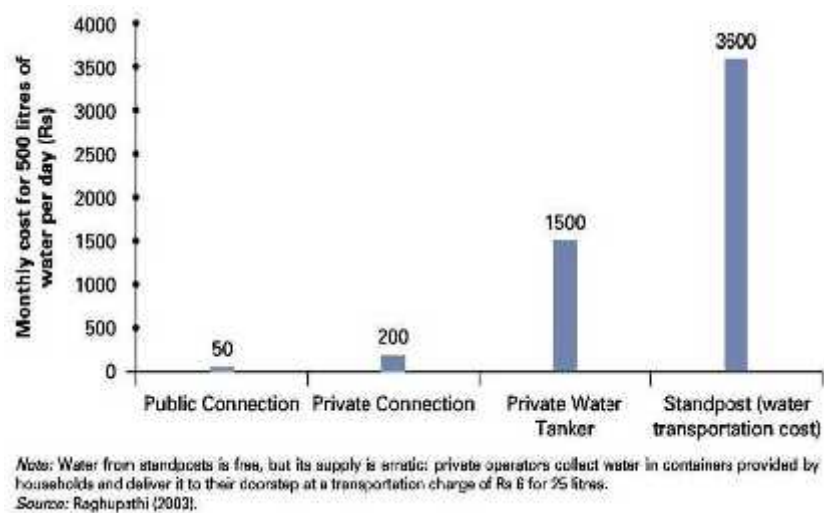
The high levels of commercial and physical losses in the distribution network are compounded by the unwillingness of local/state governments to levy adequate user charges. Water utilities in India are typically able to recover only 30-35 per cent of the operations and maintenance (O&M) cost. In the Philippines and Cambodia, most water utilities recover the full O&M cost. Even in Bangladesh, water utilities recover about 64 per cent of their O&M cost (ADB 2007). The brunt of the burden of poor quality of water delivery is borne by the poor. Lower-income households without access to public networks typically have to rely on market sources to access water at a higher price. **Chart 8.1** presents the coping costs of water supply.

Low pressure in the system encourages those consumers who can afford the cost to install booster pumps, thereby increasing energy consumption. Others make provision for storage of water by investing in storage tanks, which is difficult for low income households for want of money and space. The poor quality of water means that large amounts have to be spent subsequently by consumers on treatment of water-borne diseases, further adding to their

financial burden. Box 2.2 makes a simple case for why cities should provide continuous water supply.

Some excellent exceptions to this general state of affairs have emerged in recent years. A pilot project for supplying water 24x7 in the three cities of Hubli-Dharwad, Belgaum, and Gulbarga covering a population of 200,000 (about 10 per cent of total population in each city) has successfully transformed the water supply scenario in the five demonstration zones of these cities from about one to two hours every five days to water round the clock (Box 8.3)

Graphs 8.1 Coping Costs of Water Supply



8.4 Continuous Water Supply

Global experience in water supply tells that it is wise to design water supply systems that have 24x7 water supply. In a continuously pressurized distribution system, contaminants surrounding the pipelines cannot penetrate even if there are breaks in the pipes and joints. Without continuous pressure, street run-off, drainage water, raw sewage from adjacent sewer lines and leaky septic tanks get sucked into the water mains. Providing continuous water supply in cities results in system efficiency and economic benefits to citizens. A distribution system which is operated under continuous supply conditions has longer life as it is subjected to fewer shocks (water hammer effect) and changes in pressure than one which is operated under intermittent supply conditions. There is no need for households to invest in domestic storage, booster pumps, supplementary boreholes, domestic filters, and other treatment systems when water is in continuous supply. Also, there is no need to purchase water from

private suppliers. Continuous water supply reduces unregulated recourse to groundwater and is, therefore, environment-friendly. **Source: ASCI (2010).**

Attempts have been made to improve water supply systems in some cities. A laudable example is the effort of Government of Karnataka. With assistance from the World Bank, it launched the Karnataka Urban Water Sector Improvement Project (KUWASIP) in 2005 in five selected zones in three cities (Belgaum, Gulbarga, and the twin cities of Hubli-Dharwad) to build and deliver an efficient and commercially viable 24x7 urban water supply system through PPP.

The project included investments to improve bulk water supply and commissioned a private operator to construct-operate-manage 24x7 urban water supply systems for two years, after a preparatory phase of 18 months. The contract was awarded to a joint venture of Compagnie Generale Des Eaux (CGE) and Veolia. The management fee of Rs 22 crore to the private operator had a fixed component of 60 per cent, while the remaining 40 per cent was linked to performance. The contract also included a maximum bonus of Rs 5.6 crore and a penalty of up to 10 per cent in case of failure to meet the performance targets.

The investment was made by the Karnataka Urban Water Supply and Drainage Board (KUWSDB) and the private operator was responsible for installation of meters, tariff collection, etc. The tariff structure was rationalised by introducing variable rates based on consumption. Significant reforms were carried out in public sector institutions such as the KUWSDB, and the Karnataka Urban Infrastructure Development and Finance Corporation. The standards of delivery were established by these institutions including pricing of services to cover the O&M cost and holding the private party accountable through the performance management contract. A proactive communications strategy involving all stakeholders at local level was rolled out to seek buy-in for the project.

Losses were reduced from 50 per cent to 7 per cent due to improvements in the transmission and distribution network, and improved metering. Over 25,000 households now receive 24x7 water supply. In August 2009 the project was conferred the first prize in the PPP category of the National Urban Water Awards of the Ministry of Urban Development, Government of India. **Source: KUWASIP (2010)**

By contrast, the Pune Municipal Corporation's attempt at implementing a water supply and sewerage project through public private partnership (PPP) in 1998 failed to take off. The project was scrapped two weeks prior to the date when tenders from the private sector were to be opened for award of contract. It probably reflected lack of political backing from the State and local governments. There was also apprehension among local contractors about working with international partners who brought significant domain knowledge of the sector.

More recently, Nagpur has implemented a number of projects within an overall framework of integrated water management to achieve 24x7 water supply. The pilot project is in the demonstration zone of Dharampeth covering 10 per cent of the city's population. A private company was responsible for up gradation of the network, installation of meters, and putting in place a monitoring system and a customer service centre. The project initially ran into problems with the steep increase in water tariff, but a compromise solution was found. To scale up the project to cover the entire city of Nagpur, a contract has been awarded to the same private company. For the full city project, the private company is also contributing finances for capital investment. In the cities of Karnataka and that of Nagpur, the significantly better supply situation is accompanied by considerable improvement in the revenue generated from water supply. Both are cases of partnership rather than privatization. Both involved a number of governance reform and tariff increases, and the private sector brought in efficiency gains.

Urban areas have certain prescribed norms of water supply. While these norms vary marginally, depending on the agency that has prescribed the norms, they generally rise in terms of water per person per day as the size of the human settlement increases. The most common global practice is to supply water through metered connections. This is with a view to control usage as well as to charge in consonance with the quantum used. Higher usage leads to a higher rate. In Indian cities, supplying water through unmetered connections and charging a flat rate for domestic usage is the most common method. Even in such cities where metered connections are used, a very large percentage of these metres are non-functional. Data in regard to four of the cities under study bring up some significant facts.

Table No 8.1: Water Supply Coverage in study area

City	House Holds	Total Domestic Connections	Metered Domestic Connections (%)	Non-Functional Meters (%)
Baramati	12,851	5,560 (43%)	0	-
Kolhapur	1,03,156	81,079 (78.6%)	100	10.1
Nashik	3,71,750	1,59,964 (43%)	98.5	2.6
Pune	9,95,731	1,28,159 (12.9%)	17.4	8

An analysis of the above table shows that of all the households, 43% have either an independent domestic connection or share it. Nashik has the same dispensation. In Kolhapur, domestic connections are the highest in terms of household percentage. Pune has the lowest number at around 13 %. It appears that on account of slums and the old part of the city where residences are largely in the form of chawls, individual connections are low. Further, all domestic connections are unmetred in Baramati. However, almost all such connections are metred in Kolhapur and Nashik. In Pune, only 17.4 % connections are metred. In terms of functional metres, only 8 % metres out of metred connections are functional in Pune as against 95.8% in Nashik. No Pattern related to city size emerges here and local traditions and efficiencies seem to be largely impacting the pattern.

Table No 8.2: Availability of Water

City	Supply In Month	Hours	Collected Water Samples	Potable Water Samples
Baramati	30 days	1 per day	9700	9698 (99.9%)
Pune	30 days	5 per day	70473	68516 (97.2%)
Nashik	30 days	3 per day	116132	99,000 (85.2%)
Kolhapur	30 days	3 per day	1456	1384 (95.1%)

In regard to water availability, all cities have water provided daily throughout the year which puts them in an exceptional category of cities in India. Of the four, Pune appears to be the best provided whereas Baramati has the least hours of water supply. The real situation, however, may be camouflaged on account of averages. There are areas in all cities that depend on tanker water or receive very little water. In general, evidence suggests that the supply on an average reduces as we move outwards from the core of the city towards the fringes.

Table No 8.3: Details of water supply finances (Figures are in Lakhs)

City	Total Operating Cost	Current Demand	Current Collection	Deficit
Baramati	88.97	121.2	74.47	46.73
Pune	15129.66	14023	11844	2179
Nashik	4123	2883	1970	913
Kolhapur	2346.38	2089.11	1304	885.11

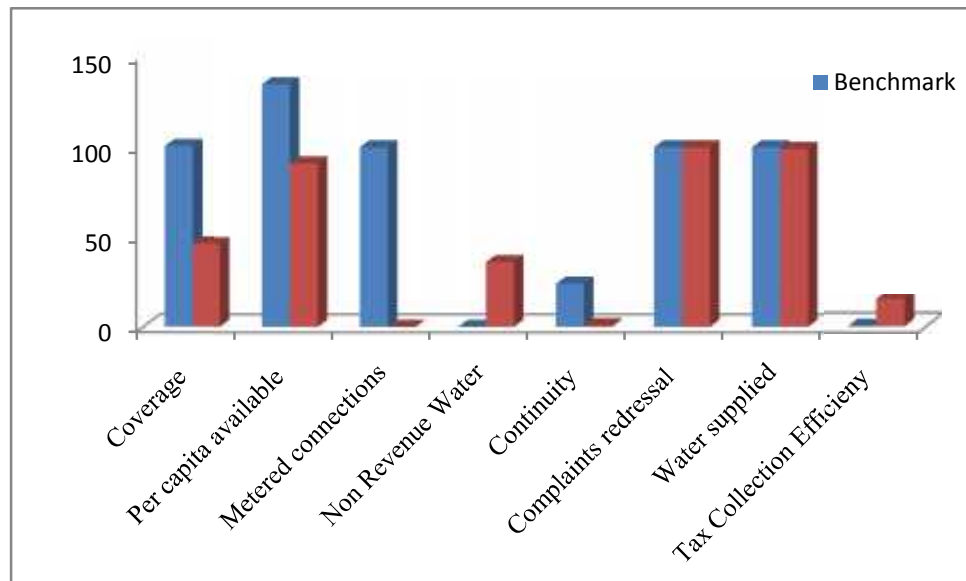
It is quite clear from the above table that apart from Baramati, none of the cities are meeting even their operating expenses. Ideally costs ought to take care of repayment of debt if any, operation, maintenance, staff, capital works and expansion and augmentation works. It is clear that cities do not meet these requirements. This is compounded by their inability to collect dues and carry high arrears over the years.

8.5 Water Tariff Structure - Flat Rate Tariff

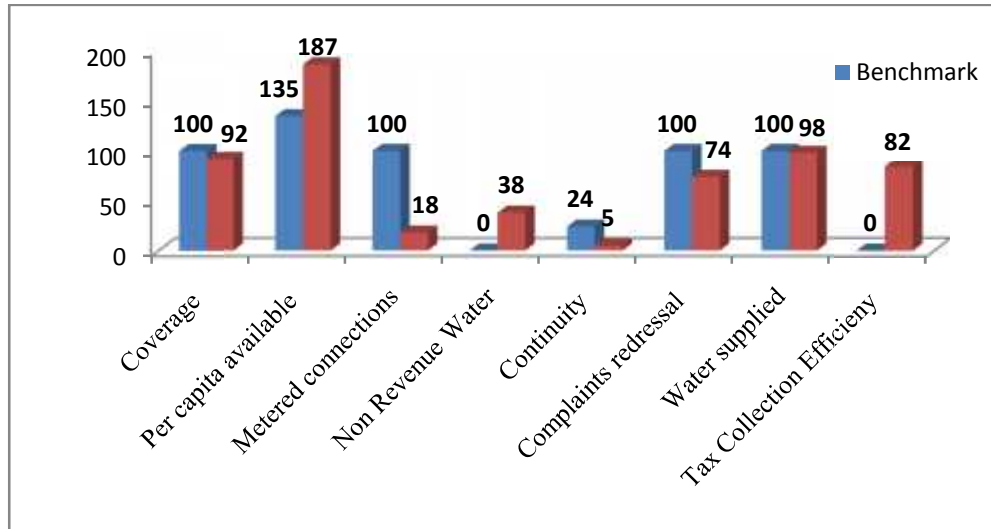
Table No 8.4: Water Tariff Structure - Flat Rate Tariff

City	Water Tariff Structure - Flat Rate Tariff				
	Residential - General	Residential – Urban Poor	Institutional	Commercial	Industrial
Baramati	125	125	250	560	560
Pune	160	100	200	300	300
Nashik	110	100	200	300	300
Kolhapur	70	70	240	560	560

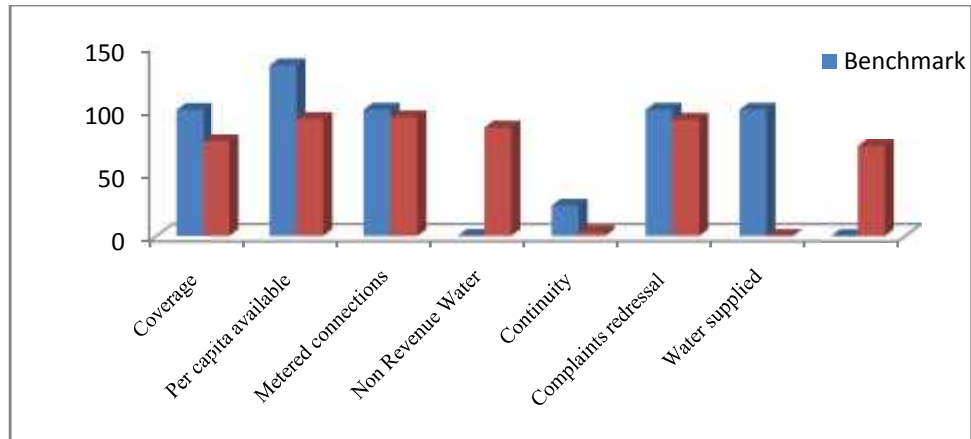
Graph 8.2: Baramati: Key Performance Indicators of Water Supply



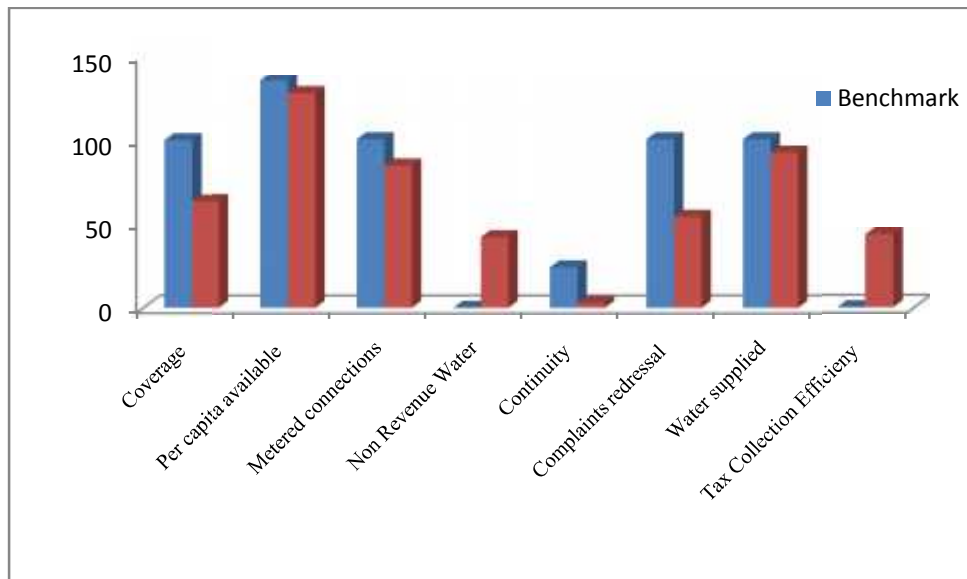
Graph 8.3: Pune: Key Performance Indicators of Water Supply



Graph 8.4: Nashik: Key Performance Indicators of Water Supply



Graph 8.5: Kolhapur: Key Performance Indicators of Water Supply



8.6 Sewerage and Sanitation

The challenge of sanitation in Indian cities is acute. With very poor sewerage networks, a large number of the urban poor still depend on public toilets. Many public toilets have no water supply while the outlets of many others with water supply are not connected to the city's sewerage system. Over 50 million people in urban India defecate in the open every day. The cost in terms of Disability Adjusted Life Years (DALY) of diarrhoeal disease for children from poor sanitation is estimated at Rs 500 crore. A study by the Water and Sanitation Program (WSP 2010) of the World Bank using data for 2006 shows that the per capita economic cost of inadequate sanitation including mortality impact in India is Rs 2180. The problem of sanitation is much worse in urban areas than in rural due to increasing congestion and density in cities. Indeed, the environmental and health implications of the very poor sanitary conditions are a major cause for concern. The WSP study observes that when mortality impact is excluded, the economic impact for the poorest 20 per cent of urban households is the highest. The National Urban Sanitation Policy of 2008 has laid down the framework for addressing the challenge of city sanitation. The Policy emphasizes the need for spreading awareness about sanitation through an integrated city-wide approach, assigning institutional responsibilities and with due regard for demand and supply considerations, with special focus on the urban poor.

It is estimated that the lack of waste water treatment leads to over \$15 billion spent in treating water-borne diseases in India (CII and CEEW 2010). Often, polluted water is allowed to leach untreated into surface and ground water bodies. In the Ganges Basin alone, there are 223 towns and cities that generate 8250 million litres of sewage each day, of which about 2500 million litres is disposed directly into the Ganges without treatment and 4250 million litres into its tributaries.

In a City Sanitation Study (2010) conducted by the Ministry of Urban Development, none of the 423 cities was found to be 'healthy' and 'clean'. The Municipal Corporations of Chandigarh, Mysore, and Surat and the New Delhi Municipal Council were the only four ULBs that fared relatively better. Close to 190 cities in the study were rated to be in a state of emergency with respect to public health and the environment (Box 2.4)

Box- 8.1: State of Urban Sewerage and Sanitation

- 4861 out of the 5161 cities/towns in India do not have even a partial sewerage network
- Almost 50 per cent of households in cities like Bangalore and Hyderabad do not have sewerage connections
- About 18 per cent of urban households do not have access to any form of latrine facility and defecate in the open
- Less than 20 per cent of the road network is covered by storm water drains
- Only 21 per cent of the waste water generated is treated, compared with 57 per cent in South Africa
- Of the 79 sewage treatment plants under state ownership reviewed in 2007, 46 were operating under very poor conditions.

8.6.1 Navi Mumbai's Sanitation Initiative

As in the case of water, some instances of better service provision in sewerage have also emerged. Navi Mumbai's city-wide sanitation initiative has led to the construction of a sewerage network covering the core urban areas and building of three sewage treatment plants between 2006 and 2008. The O&M of the plants has been outsourced to private companies through a performance-linked contract. Some cities are beginning to unlock revenue streams from treated waste water. Navi Mumbai sells 100 per cent of its treated waste water to industries. The Surat Municipal Corporation converts its municipal liquid waste into electricity, leading to reduced emission of greenhouse gases and savings on energy costs.

8.6.2 Alandur's Sewerage Project

Alandur's sewerage project is the case of a small city implementing an underground sewerage system, led by public participation. Within a short period of five years from 2000 to 2005, Alandur, a residential suburb outside of Chennai, has moved from a situation where 80 per cent of households depended on septic tanks with soak pits to a comprehensive underground sewerage network and a sewage treatment plant. A special distinguishing feature of the

project was the explicit involvement of Alandur's residents and their drive for mobilising funds.

Table No 8.5: Coverage of Toilet

	Baramati	Pune	Nashik	Kolhapur
HHs	12851	995731	371750	103156
Properties With Toilet	9522 (74%)	815200 (81%)	30,000 (80.6%)	92031 (89.2%)
HHs Dependent On Community Toilets	3110 (26%)	156456 (19%)	71750 (18.4%)	3278 (10.8%)
Properties With Sewer Connections	0	971385 (97.6%)	3,28,000 (88.2%)	25000 (24%)
Primary Treatment		0	171.5	43.5
Secondary Treatment		527	171.5	0
Volume Of Treated Waste Water		527	171.5	0
No Of Treated Effluent Samples		3753		12

Table No 8.6: Financial Information - Annual Operating Expenses (Lakh)

City	Baramati	Pune	Nashik	Kolhapur
Regular Staff and Administration	138.89	2594	45.23	43.65
Outsourced /Contract Staff Costs	0	0	109.63	0
Electricity Charges /Fuel Costs	0	878	156.45	88.3
Chemicals Costs	0	22		0.1
Repairs/Maintenance Costs	0	0	47.18	29.21
Contractor Costs for O&M	5.36	352	0	0
Others Emergency civil work		461	0	0

Table No 8.7: Financial Information- Revenue Income

City	Arrears at the beginning of previous year	Current revenue demand		
		User charges - sewerage only	Tax/cess sewerage only	Other sources (eg. connection costs /donations etc.)
Baramati	12.25	0	32.25	0
Pune	1249.47	0	3246.49	100
Nashik	N. Av	N. Av	N. Av	N. Av
Kolhapur	0	71	0	0.4

Table No 8.8: Financial Information- Demand and collection

City	Arrears at the beginning of previous year	Collection against arrears	Current revenue demand	Collection against current demand	Deficit
Baramati	12.25	2.77(22.61)	32.25	21.5	-10.75
Pune	1249.47	30.11(2.4)	3346.49	2596.99	-749.5
Nashik	N. Av	N. Av	N. Av	725	-375
Kolhapur	0	0	71.4	56	-15.4

8.7 Solid Waste Management

The average generation of solid waste from Indian households is significantly below the developed countries. Yet management systems set up by Indian cities cannot cope with this waste. (Boxes 2.6 & 2.7). The problem begins with the non-segregation of biodegradable waste by either households or by municipalities. The collection of the garbage from dumpsites is haphazard, processing is not undertaken and disposal rules are not followed. The Municipal Solid Waste Rules were put in place in 2000 but their enforcement has been poor.

Box 8.2: State of Solid Waste Management

- Waste collection coverage ranges from 70 per cent to 90 per cent in major metropolitan cities, and is less than 50 per cent in smaller cities-Eleventh Five Year Plan (2007)
- Waste collection in Kunming (China) is 100 per cent, in Belo Horizonte (Brazil) 95 per cent, and in Quezon City (the Philippines) 99 per cent-UN HABITAT(2010)
- Less than 30 per cent of the solid waste is segregated-MoUD, Government of India (2010b)
- Scientific disposal of waste is almost never practiced-MoUD, Government of India (2010b) UN HABITAT (2010)

Box 8.3: Report Card based on Municipal Solid Waste Rules 2000 in India

Primary collection	38 per cent
Segregation of recyclables	33 per cent
Street sweeping	72 per cent
Transportation	52 per cent
Processing	9 per cent
Disposal	1 per cent

Source: World Bank (2006) and Zhu et al. (2008).

The Energy and Resources Institute (TERI) has estimated that by 2047, waste generation in Indian cities will increase five-fold to touch 260 million tonnes per year, implying that the current solid waste generation is over 50 million tonnes per year (Asnani 2006). A study by the World Bank (2006) puts India's annual generation of municipal solid waste to be somewhat lower, i.e. in the range of 35 to 45 million tonnes, amounting to about 100,000 to 120,000 metric tonnes every day. Asnani (2006) estimates that the annual increase in overall quantity of solid waste in India's cities will be at a rate of 5 per cent per annum.

The fact that a large part (over 60 per cent) of India's waste is biodegradable provides an opportunity for composting. While lifestyle changes, especially in the larger cities, are leading to increased use of packaging material, and per capita waste generation is increasing at about 1.3 per cent per annum, the biodegradable component is still expected to be much higher than in industrialized countries.

Besides ULBs, non-governmental organizations, (NGOs), community- based organisations, and private companies are involved in the collection of solid waste, but little attention is paid to waste disposal. Chandigarh (96.2 per cent) and Surat (90.3 per cent) record the highest household coverage of solid waste collection in the country (MoUD, Government of India 2010). Typically, collection of solid waste from roadside dustbins to transfer stations is done by ULBs with varying degree of efficiency. Transport of waste to transfer stations often takes place in open vehicles with manual loading. This is followed by transportation to open dumping grounds. The expansion of city limits has led to old dumping sites which were relatively remote, now becoming part of the city.

Disposal practices at the open dumping sites are highly unsatisfactory. The poor management of solid waste has led to contamination of groundwater and surface water through leachate and pollution of air through unregulated burning of waste. Unscientific practices in processing and disposal compound the environmental hazards posed by solid waste.

Even with current levels of highly inadequate service, solid waste management accounts for 25-50 per cent of a ULB's expenditure (World Bank 2006), but cities recover less than 50 per cent of the O&M cost, according to a study by the Ministry of Urban Development, Government of India (2010b). The distribution of the expenditure is heavily loaded in favour

of collection and transportation, and little attention is paid to processing and scientific disposal of the waste.

Once again, there are exceptions to the generally abysmal state of solid waste management. A few cities such as Surat and Rajkot have set up modern plants for processing solid waste under PPP and converting it to wealth through sale of bio fertilisers, green coal, and eco bricks. (Box 8.4).

Box 8.4- Waste to Wealth in Rajkot

Rajkot, the fourth largest city in Gujarat, generates about 300 metric tonne of solid waste every day, which was earlier collected and dumped at different locations on the outskirts of the city. After the Municipal Solid Waste Management Rules 2000 were notified, Rajkot Municipal Corporation set up a modern processing plant for solid waste and engaged Hanjer Biotech Energies Pvt Ltd for this job. The state government stepped in by providing land to the Municipal Corporation, 30 acres of which was leased out by the Corporation to the private company, Hanjer, at a rate of Re 1 per sq. m per year to set up the waste-processing plant. The remaining land was used for a sanitary landfill. The project was initiated in 2003 and the plant became operational in 2006.

The city waste is first brought to the site in dumpers and then segregated. The wet organic waste of about 20-30 per cent is left in the composting yard, transformed into organic compost, and sold to corporate clients. The dry organic waste is compressed into high calorific fuel fluff (green coal) and sold to cement and paper industries. The recyclable waste consisting of rubber, plastic, and metals (about 5 per cent of the total waste) is sold in the junk market. Only 10-15 per cent of the waste collected is sent to the landfill. From the daily collection of 300 metric tonnes of waste, Hanjer produces 40 metric tonnes of bio fertilisers, 70 metric tonnes of green coal, and 2.5 tonnes of plastic. Source: Rajkot Municipal Corporation (2010).

8.7.1 PPP Arrangements in Solid Waste

PPP arrangements in solid waste management have not always worked smoothly. The implementation of the municipal solid waste-based power plant installation scheme through PPP in Lucknow has had its fair share of problems, with an arbitrator being nominated to adjudicate the dispute between the Lucknow Nagar Nigam and the private company.

Arbitration has revealed lack of clarity in assignment of roles of the parties involved in the project. The project also highlighted the need for feasibility studies, project structuring, and advisory support for PPPs. In this project, as with the Pune project of water supply and sewerage (para 2.3.10), an independent regulator could have played an important role in disseminating accurate information and addressing project implementation issues.

An innovative PPP project led by the Municipal Corporation of Greater Mumbai (MCGM) has brought about scientific closure, completed in 24 months, of the Gorai dumpsite where almost 1200 tonne of garbage was being dumped daily at the open grounds. Besides ensuring scientific closure and a green cover for the Gorai dumpsite, the Corporation earns carbon credits for the capture and combustion of methane (landfill gas). The transaction is one of the largest carbon advance transactions in the Clean Development Mechanism (CDM). Gorai is the first dumpsite closure project in India to be registered at the United Nations Framework Convention on Climate Change (UNFCCC). The Corporation has already received a carbon advance of Rs 25 crore against future delivery of carbon credits from the Asian Development Bank (ADB), and the total carbon credit earnings are expected to be Rs 72 crore, higher than the project's total capital cost of Rs 50 crore. The project is estimated to reduce greenhouse gases by 1.2 million tonnes of carbon dioxide over a 10-year crediting period.

Modern practices of solid waste collection and management will have adverse impact on the livelihoods of scavengers' and rag pickers' who are currently engaged in large numbers in the task of collection and segregation of waste. Informal operations in recyclable materials have meant that items such as bottles, syringes, and needles find their way into the market, which is a health hazard. It is important to create new avenues of employment for these people in a rapidly growing economy, while efficient methods are sought for solid waste collection, segregation, and disposal.

Table No 8.9: Household Level Coverage Of Solid Waste Management Services

City	HHs	Coverage of D to D collection			
		Households	Hotels and Restaurants	Commercial Establishments	Other est (incl. markets)
Baramati	12851	10613(84%)	216(2%)	2646(2.9%)	192(1.8%)
Pune	995731	523429(52.56%)	29871(3%)	1800(1.8%)	295518(29.67%)
Nashik	371750	304800(81.9%)	21000(5.64%)	22380(6%)	22968(6.17%)
Kolhapur	103156	59514(57.7%)	18350(17.78%)	16169(15.6%)	9123(8.8%)

Table No 8.10: Waste collection and transportation.

Aspects	Baramati	Pune	Nashik	Kolhapur
Total waste generated (MT/Month)	496	39000	16650	5100
Quantity of waste received at processing and recycling facilities	0	20000	9000	4901
Percent processing and cycling	0	51	54	96%
Quantity of waste received at disposal sites	496	19000	7650	1178
Percent of quantity of waste received for processing	100%	48	45	3.4
Total quantity of waste collected and transported to disposal site	0	39000	12960	5040
Quantity of waste arriving at Processing/ Disposal facility in segregated manner	0	10500	N.Av	450
Quantity of waste taken away by recyclers from intermediate points	0	1440	4800	480

Table No 8.11: Status of Key Performance Indicators of Solid Waste Management

Status of Key Performance Indicators of Solid Waste Management									
	<i>S.No</i>	1	2	3	4	5	6	7	8
	Solid Waste Management Indicators	Household Level Coverage Of Solid Waste Management Services	Efficiency Of Collection Of Municipal Solid Waste	Extent Of Segregation Of Municipal Solid Waste	Extent Of Municipal Solid Waste Recovered	Extent Of Scientific Disposal Of Municipal Solid Waste	Extent Of Cost Recovery In Solid Waste Management Services	Efficiency In Collection Of Solid Waste Management Charges	Efficiency In Redressal Of Customer Complaints
	<i>Unit</i>	%	%	%	%	%	%	%	%
Benchmark		100	100	100	100	100	100	>90	100
Baramati	2008-09	86.9	100	0	0	0.0	\$0.0	#DIV	100.0
	2009-10	86.2	100	0	0	0.0	\$0.0	#DIV	100.0
	2010-11	85.9	100	0	0	0.0	\$0.0	#DIV	100.0
	Average	86.3	100	0	0	0.0	\$0.0		100.0
Pune	2008-09	23.9	100	4	3	0.0	\$66.9	117.4	79.0
	2009-10	54.4	97.68	11	21	0.0	\$70.3	89.9	81.3
	2010-11	49.2	100	31	100	100.0	\$76.9	80.1	84.7
	Average	42.50	99.23	15.21	41.06	33.33		95.82	81.70
Nashik	2008-09	733.70	86.40	34.72	125.00	#DIV	0	#DIV	97.89
	2009-10	807.73	82.55	36.27	129.63	#DIV	0	#DIV	98.43
	2010-11	#DIV	77.84	37.04	135.03	#DIV	0	#DIV	100.72
	Average	#DIV	82.26	36.01	129.89	#DIV			99.01
Kolhapur	2008-09	23.51	103.58	14.06	6.70	#DIV	9.14	305.53	95.03
	2009-10	71.22	105.05	18.85	7.85	#DIV	20.76	64.57	84.99
	2010-11	44.37	105.51	18.45	7.86	#DIV	#DIV	52.21	89.94
	Average	46.36	104.71	17.12	7.47			140.77	89.98

8.8 Urban Transportation

Problems arising from inadequate investments in urban transport and roads over the years have been exacerbated by the increasing concentration of economic activity and human settlements in certain areas due to relative underpricing of hydrocarbon fuels. Indian cities are increasingly faced with the twin challenges of providing adequate road space for future use and improving the poor condition of existing roads due to the neglect of maintenance over the

years. Current road designs do not adequately provide for facilities such as footpaths and cycle tracks. The available road space gets encroached by commercial establishments, street vendors, and on-street parking due to poor enforcement of the existing regulations. The variety of vehicles on the roads moving at different speeds without any demarcated lanes also adds to the challenges of urban transport (Box 8.5)

The highly inadequate and poor quality of the public transport system in Indian cities not only poses a major challenge to realizing the growth potential of the economy but also has adverse impact on the health and well-being of the people. Long hours spent on road journeys, lives lost in road accidents, and air pollution are only some of the effects of the acute problem of transportation facilities in and around cities.

The motor vehicle population in India has increased 100 times from 1951 to 2004, while the road network has expanded only eight times, and this does not even cover the period of sharp acceleration in vehicle purchases after 2003 (Uddin 2009). In 2007, Indians bought 1.5 million cars, which is more than double the number purchased in 2003. In addition, two-wheelers are a dominant form of private transport on Indian roads (Box 2.10). Eleven of the twelve Indian cities studied have higher motorization levels than the average of middle income Asian (MIA) cities. Road capacity has come under stress for all these reasons.

Box 8.5- State of Urban Transport and Roads

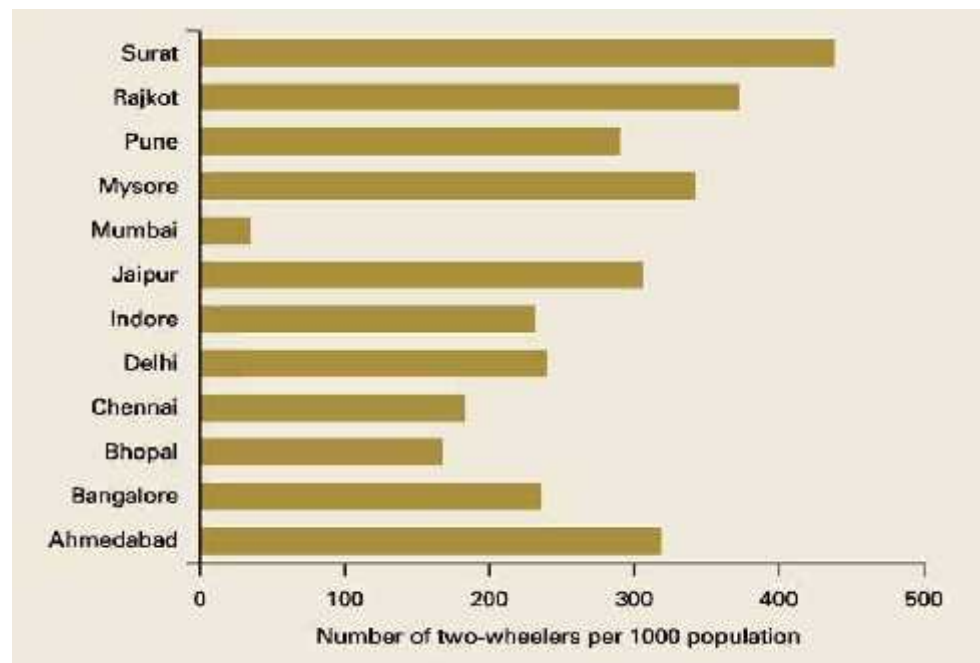
- Public transport accounts for only 22 per cent of urban transport in India, compared with 49 per cent in lower middle income countries (e.g. the Philippines, Venezuela, Egypt) and 40 per cent in upper middle income countries (e.g. South Africa, South Korea, Brazil)- MoUD, Government of India (2008c)- Kenworthy and Laube (2001)
- Share of the public transport fleet in India has decreased sharply from 11 per cent in 1951 to 1.1 per cent in 2001-Agarwal (2006)
- Only 20 out of India's 85 cities with a population of 0.5 million or more in 2009 had a city bus service-Agarwal (2006 and 2009)
- Road density (km per sq. km) is 9.2 in Singapore, 9.7 in Curitiba, 21.8 in Seoul, 10 in Johannesburg, 3.8 in Chennai, and 19.2 in New Delhi
- City Development Plan of Delhi (2006)-Kenworthy and Laube (2001)
- Share of two-wheelers in the total fleet was 72 per cent in 2006- Ministry of Road Transport and Highways, Government of India (2009)

8.8.1 Public Transport

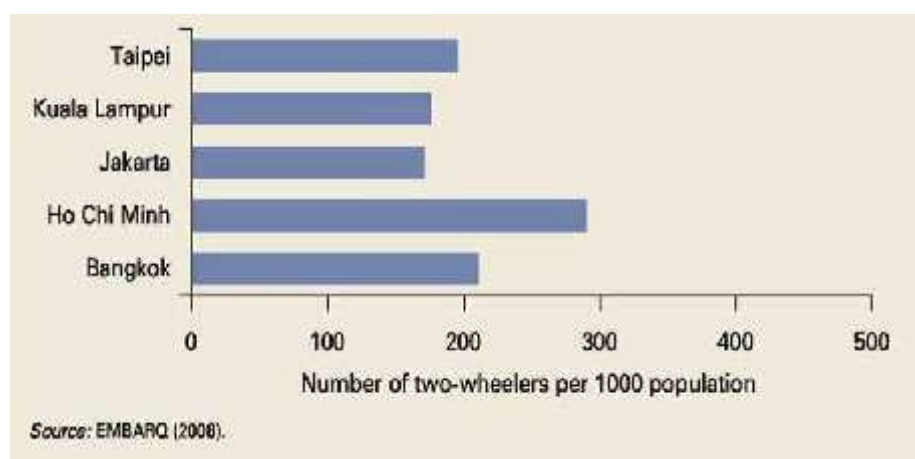
The share of public transport is estimated by the Government of India (2008c) at 22 per cent and has been decreasing over the years. This is because more and more private vehicles have come on the roads. Agarwal (2006) reports that the share of buses decreased from 11 per cent in 1951 to 1.1 per cent in 2001. Most city bus services are operated by state-owned public entities. Except for Bangalore and Hyderabad, the rest make losses and do not have the resources to renew their fleets. There are only a few corporate bus operators in India, while a number of bus services are operated by small bus owners.

There are a few cases of improvement in public transport in recent years. Delhi's rail-based MRTS and Ahmedabad's Bus Rapid Transit System (BRTS) have successfully contributed to improving the situation with respect to public transport. Indore, which did not have a public transportation system until 2006, now has a city bus service with 104 buses run by a special purpose vehicle (SPV), the Indore City Transport Services Ltd (ICTSL). Surat's bus fleet of 125, established in 2008, carries 70,000 passengers every day (Box 8.6). In both cases, operation of the bus services has been outsourced to the private sector, while the Municipal Corporations have found innovative ways of investing in public transport infrastructure and traffic monitoring systems of regulation and enforcement.

Graph 8.6: Two Wheeler Ownership-India



Graph 8.7: Two Wheeler Ownership-Other than India



To some extent, the poor showing of public transport in India can be attributed to the fact that the tax policy regime militates against public transport. The total tax burden for public transport vehicles per vehicle km is 2.6 times higher than for private vehicles (Table 2.2). The Parliamentary Standing Committee on Urban Development (Urban Transport) 2010 recommended a 'congestion tax' on personal vehicles in the form of a toll tax in congested areas. But the Ministry of Urban Development has indicated that in the Indian context, levying of congestion tax may be pre-mature at this stage keeping in view the quantity and quality of the available public transport and the absence of Intelligent Transport System (ITS)' (Lok Sabha 2010).

Box 8.6- City Bus Services in Indore and Surat

Indore and Surat have made significant strides in developing their city bus services. Both cities had hardly any public transportation system until a few years ago. Common features in developing their city bus services were:

- A transparent and competitive bidding process for service providers
- Private bus operators running the services on routes determined by the ULB
- Bus stops built on build-operate-transfer (BOT) basis

8.8.2 City Bus Transport

The marketing of the city bus service in Indore is done by a vendor who issues at least 15,000 monthly and daily passes at agreed rates every month, ensuring a monthly income of Rs 40 lakh for the ICTSL, the special purpose vehicle set up in December 2005 by the Indore Municipal Corporation and the Indore Development Authority to operate and manage the public transport system through PPP. Indore runs 104 buses on 24 routes,

with 300 bus stops built on BOT basis. The net profits of the ICTSL have gone up from Rs 34 lakh in 2006-07 to over Rs 1 crore in 2009-10.

A GPS (global positioning system) tracking system is used to monitor the bus services, while passenger information systems are installed at bus stops for customer information and tracking of buses. The high maintenance cost of the technology (at 55 per cent of the ICTSL's total costs) is justified by its ability to put in place a monitoring mechanism that helps in overseeing the service standards set by the ICTSL. The maintenance of buses has been inadequate in Indore's city bus system as the private operators had entered into maintenance contracts with the manufacturer only for the first year of operations. In the new contracts that the ICTSL is putting in place, maintenance is being made mandatory.

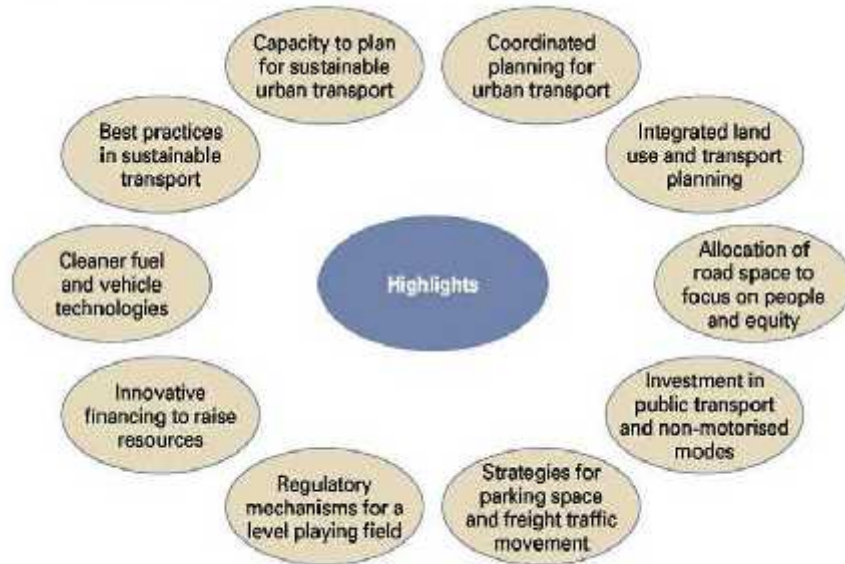
Surat has 125 buses running on 44 routes, carrying 70,000 passengers every day. There are 87 bus stops on BOT basis, each earning a revenue of Rs 40,000 per year. The ULB gets a premium of Rs 20,000 per bus from the operator for the contract period of five years. All city buses are run on CNG and are owned, operated, and maintained by private operators. Source: ICTSL (2010); and discussions with Surat Municipal Corporation (February 2011).

A study by Palanivel (2002) finds that per capita emission levels in India's seven largest cities are at least three times higher than the World Health Organization standard. Of a total of 127 cities/towns monitored under the National Air Quality Monitoring Programme, only 3 have low air pollution, and 101 cities report at least one pollutant exceeding the annual average air quality standard (Central Pollution Control Board 2009). Considering that India has much fewer cars per capita than developed countries, this must reflect the poor quality of fuel and traffic congestion. The estimated use of fuel by vehicles in 2035 will be six times the 2005 level, which would further aggravate the situation (Roychowdhury 2009). Since the marginal cost of using a two-wheeler is less than the cost of using public transport, shifting passengers from private two-wheelers to public transport is a major challenge.

In most cities in India, there are multiple organizations like Development Authorities, Road Transport Authorities, State Transport Corporations, Public Works Departments, and Police Services engaged in different aspects of transport regulation, with little coordination among them. Bangalore has taken the lead in setting up an Urban Metropolitan Transport Authority as envisaged in the National Urban Transport Policy guidelines to address the challenges of integrated transport planning (Chart 8.1). The

Bangalore Metropolitan Land Transport Authority (BMLTA), set up through an executive order in 2007, is headed by Chief Secretary, Karnataka. It is a platform for coordinating transport management among the many agencies involved in city transport.

Chart 8.1: National Urban Transport Policy



Source: MoUD, Government of India (2006b).

A good example of transport-led planning for regional growth is the Nehru Outer Ring Road of Hyderabad, which is an eight-lane expressway (158 km long) encircling an area of 3000 sq. km around Greater Hyderabad. Large parcels of land outside the area of the Greater Hyderabad Municipal Corporation have been freed up for development. This has helped divert traffic from the city centre and has decongested the existing ring road. Radial roads have been identified connecting the outer ring road with the existing inner ring road to provide easy access to the airport road and other developments around Greater Hyderabad. Connectivity is being established with the wider region through alignment of radial roads with the National Highways and State Highways.

The Hyderabad Growth Corridor Limited has been set up to execute the outer ring road project with satellite townships planned along a growth corridor of 1 km on either side of the ring road to attract business parks, technology clusters, etc. Provision is also being made for a 25 km-long integrated network of metro rail and buses. The increased land values arising from the opening of the ring road can be channelised towards financing future infrastructure development along the growth corridor and in areas between the outer and inner ring roads; this should be a good example of financing urban infrastructure through unlocking land value

Poor data resulting from the multiplicity of agencies in the transport sector is a problem observed across the world. The Institute of Urban Transport (IUT) has been trying to set up a National Urban Transport Information Centre (NUTIC) in India to collect and maintain urban transport data. This Institute can help in developing an integrated land and transport planning framework for Indian cities.

Table No 8.12: City Roads

City	Total Length of Road Network	Total Length of Pucca covered drains
Mumbai	1900 kms	440
Pune	800 kms	120
Nashik	692 kms	-
Kolhapur	415 kms	130
Baramati	70 kms	15

8.8.3 City Roads

In the case of cities that are the specific subject of the study, the table above illustrates the provision of physical area under roads. These roads are of various widths and of different kinds of surface. The general condition of most roads in cities is poor on account of multiple factors. These include quality of construction, frequency of digging by utility agencies, lack of coordination among agencies that look after roads, encroachments and flooding during monsoons due to choked or non-existent storm water drains. As the figures show, none of the cities referred to have a decent storm water drain system. Whatever is available has extremely poor maintenance and are unable to drain water away from the roads.

The roads lately have had to bear an increasing burden of vehicular traffic, leading to greater wear and tear. Moreover, some of these cities have additional infrastructure works that have been undertaken, such as a metro system in Mumbai, road widening works in Pune and Nashik and Baramati and the implementation of an integrated road development project in Kolhapur. These have disturbed the surfaces, leading to a chaotic situation on several of the city roads.

Summary

The water supply and sewerage systems of cities leave a lot to be desired, both in quality, quantity and maintenance. The challenge of sanitation is even more acute on account of very poor sewerage networks and weak system of public toilets. Management systems set up by Indian cities are also not able to cope with the waste cities generate and MSW

Rules 2000 are scarcely followed. Indian cities are increasingly faced with the twin challenges of providing adequate quality roads and are highly deficient in the provision of a public transport system.

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CHAPTER 9

DEFICITS IN NON-SOCIAL MUNICIPAL INFRASTRUCTURE PLANNING

Introduction

This chapter assesses the provision of non-social municipal infrastructure in cities and points out the deficits and probable causes of deficits. It especially highlights the planning deficits as one of the principal reasons for the kind of insufficiencies that emerge in cities.

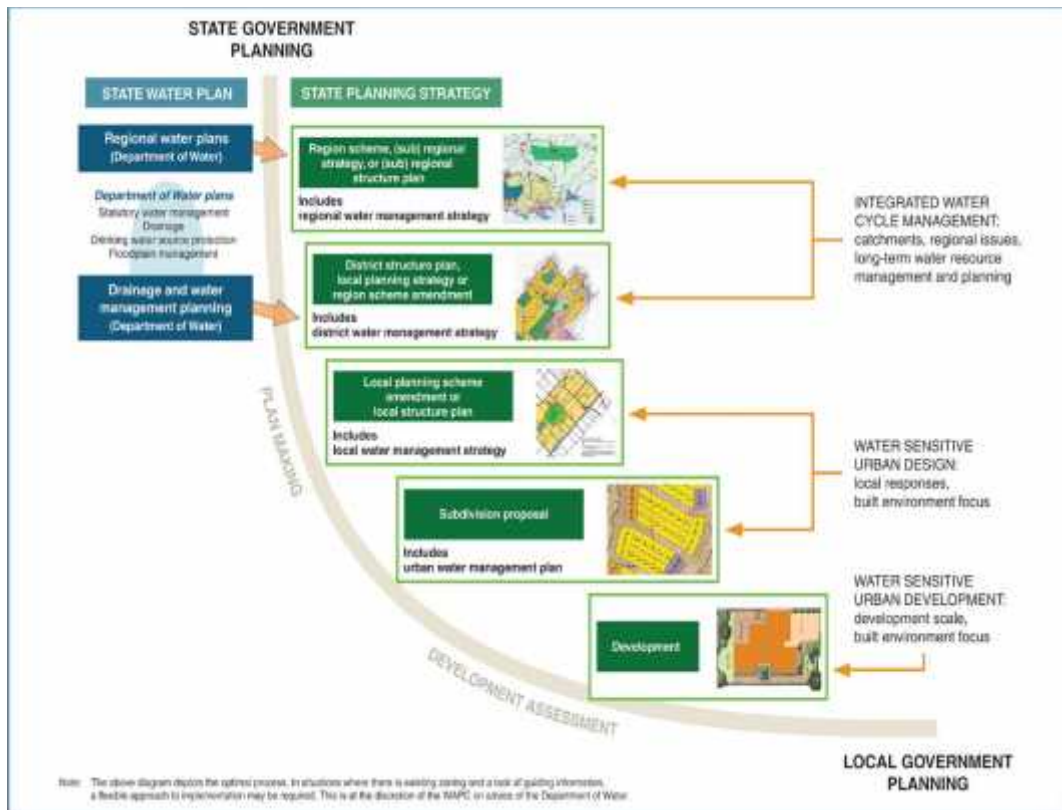
9.1. Water

Water is the most important infrastructural requirement for a city. An ideal city would have universal coverage and water availability in sufficient quantity and quality. It would have to meet the needs of drinking, industrial, commercial and other household requirements within the overall water policy and priorities in usage that that water policy would mandate. In the Indian context, given the projected rapid rise of urban populations, this also means making adequate water available for meeting the demands of a growing number of citizens. A strategy, therefore, needs to be in place for integrating land use and water planning based on the principle of total water cycle management, along with a focus more on making sure that development does not compromise the quality of drinking water or the integrity of aquatic ecosystems. This would comprise drinking water, groundwater, storm water run-off, wastewater, waterway health and water reuse. Globally, in recent years substantial progress has been achieved in integrating urban water planning and management with land-use planning and development.

Looking at the issue on a wider scale, water resources may not be city-specific and would have to be shared with other human settlements in the region. Hence, in the context of regional urban planning, land use decisions need to take into account where the necessary water will come from, and at what cost (economic, environmental, and social). Land use decisions have to be coordinated on a large-landscape scale across jurisdictional boundaries. Land use planning would be mindful of water supply constraints, and prioritizes development that is most consistent with maintaining water quality and ensuring sustainable supplies. Such projections of water needs need to be based on more than simple population estimates. A comprehensive plan would require a hard look at the sustainability of anticipated water sources for proposed new development prior to approval. Since water is a limited resource, there would be a need to reduce overall demand and stretch existing supplies through rules and regulations that would mandate

conservation measures and incentivize these through suitable regulatory provisions. Ideally, how a State would plan water is shown in the following tabular representation;

Chart No 9.1 Government of Western Australia, Department of Water



9.2. Deficits in Water Planning

The following slide presents in a nutshell the status of services in regard to water and sewerage across urban settlements in India. (*India Infrastructure Report, 2010*)

Chart No 9.2 Deficits in Water Planning

STATUS OF SERVICES		
SERVICE		
WATER	Coverage	64 %
	Duration	1 to 6 hrs
	Per capita	37 to 298 lpcd
	Non-revenue water	50 %
	SEWERAGE	No network
	Households covered	50 %
	Waste water treated	21 %
	Non-functional plants	46 out of 79

A study of regional plans in Maharashtra shows that such holistic thinking has not gone into their preparation. The Plans are usually in two parts. The first deals with surveys and data collection and some analysis of the same. The second is a set of recommendations. Regional consideration of water resource may be said to be peripheral. While it is not expected that the regional plan would delve into details of utilization within settlements, it is logically expected that questions of total water available for various uses, their proper distribution and threshold studies of how much population this water would support ought to be stated. It appears that from this point of view, a great degree of coordination among departments such as irrigation, agriculture, urban development, rural development, industries would be needed. This appears to be sadly missing.

It is quite clear that such a mechanism was the intention of the metropolitan planning committees envisaged by the Constitution. But these have not been fully translated on ground and the current mechanisms do not have adequate answers to the questions that developments in the region are raising. While the Regional Plan is prepared, that does not become a mandatory reference point for departments to follow. Industrial acquisitions, for instance, by state parastatals have put industrial zones in non-industrial zones and have not taken care to be in tune with the overall regional road network blocking arteries that then need to be reconfigured.

9.2.1 Water Conservation Planning

At the city level, it is extremely important that water conservation measures must be adequately reflected in DCRs. These would include regulations for roof top collection, storage and rainwater harvesting, recycling of waste water, use of ground water and groundwater recharge. While awareness is building to see that these aspects find place in the DCRs, these are happening too slowly. In the interim properties are coming up without adherence to these revised norms.

9.2.2 Twenty-four by Seven Water Distribution Planning

For potability, a twenty-four hour distribution system needs to be designed. However, we have shown in the previous chapter that Baramati is able to supply water for only one hour per day, Kolhapur and Nashik three hours per day and Pune five hours per day. There are other cities, especially the smaller ones that have alternate day supply of water or two to three days a week. Even in some of the cities that have been mentioned, water

supply may be far removed from the average quoted. In such a situation, water pipelines do have a tendency to suck in elements outside and contaminate drinking water. Potability of water therefore is a universal problem in Indian cities. As a consequence, no city in the country could boast of a system where water could be drunk from a tap with full guarantee that the person would not be affected by some water borne disease.

9.2.3 Road Planning and Water Planning

Since roads are immensely costly, initial designing that mandates ducts for road crossing of water lines and which would prevent destruction of roads are imperative. The DP and DCRs of the city appear to be inadequate in that laying of water pipe lines repeatedly leads to road-cutting. This is because the land use plan of the city does not indicate how the trunk pipes would be laid. The actual laying happens on one side of the road. As a consequence, properties requiring water connection on the other side of the road have to cut the road to access water lines. Since construction is a constant activity in Indian cities that are growing, and every structure constructed would be expected to seek water, road cutting activity becomes very frequent, leading to poor roads and hugely expensive and repetitive activity of road repairs and resurfacing. While it saves money initially through economies in water pipelines, it leads to enormous expenditure later as roads are the most expensive infrastructure item in a city.

Given this lack of non-integration, it would be safe to assume that the current planning practices at the regional level as well as the city level would fail to adequately answer water woes of cities and regions. Since carrying capacity studies, both at regional and city levels are firstly inadequate and secondly not factored into urban growth, these are bound to raise issues of sustainability.

Financial difficulties in the area of water also seem to be impacting the laying of pipelines and extending city water network. As a result, new city areas lack provision of water services. In Baramati only 43 per cent of households have water connections, in Kolhapur 78.6 per cent, in Nashik 43 per cent and in Pune 12.9 per cent. The pattern clearly establishes that the larger cities find it difficult to reach water services to the outer areas of the city. But irrespective of size, high systemic losses, low tariffs for water and poor collection of dues are observed across India, leading to unsustainable service delivery. Figures from the research cities confirm this. Whereas Baramati runs a deficit of 52.52 per cent, Kolhapur has a deficit of 37.72 per cent, Nashik 22.14 per cent and Pune 14.40 per cent.

9.3. Sewerage and Sanitation

9.3.1 Sanitation Planning Deficits

We have shown in the earlier chapter that public sanitation is not integrated in the Plan that is prepared for the cities. It is an essential item that needs to be comprehensively taken care of at the detailed planning and infrastructure engineering process. About one-fifth of urban houses have no toilet facilities. A very large number of urbanites depend on public toilet facilities and open defecation is rampant. Lack of water for toilets is compounded by no connection to the sewerage system. Serious health issues have been the result.

9.3.2 Sewerage Planning Deficits

Among the huge deficits that cities suffer from, sewerage is one of the largest. This is more on account of the high costs of treatment and very low recovery. It is clear that if cities struggle to receive water dues, recovery of sewerage dues is even more difficult. And in this situation, providing sewerage services is a far thought in the minds of urban local bodies.

The consequence is that most cities in the country have no sewerage network and many households do not have sewerage connections. Most sewage treatment plants are non-functional. In Baramati no property had sewer connections. In Kolhapur the percentage was 24 and in Nashik 88. In Pune, part sewerage cover that the Municipal Corporation provides, functions intermittently, the city is infamous for dumping its sewage into rivers and streams, thereby compromising the drinking water of human settlements downstream. Since densities of cities are increasing, the problem of sewerage is getting worse. The growing concern is best reflected by health figures. As shown in the previous chapter, of the 423 cities surveyed by Government of India, no city satisfied the norms of healthy and clean and 190 cities were found to be in a state of emergency.

9.3.3 Recycling Planning

In times when water shortages are going to be increasingly felt and hence recycling water is essential, most cities in the country do not recycle water. Neither do the planning norms of the cities mandate this. Of late, the Ministry of Environment, Government of India is making this compulsory in its environment clearance for all large projects that area taking off. However, it is doubtful that even if the planning norms were provided for and written into rules, city finances would permit the mandatory provision of sewerage networks.

The situation in regard to toilets was also very poor. In Baramati, only 74 per cent properties had toilets, in Pune 81 per cent, Nashik 81 per cent and Kolhapur 89 per cent. The rest depended on community toilets. The urban sanitation situation quite clearly is not healthy.

9.4. Solid Waste

The following slide presents in a nutshell the status of services in regard to solid waste across urban settlements in India.

Chart No. 9.3 Solid Waste Management status of services



India Infrastructure Report, 2010

Since the MSW Rules 2000 mandated by the Supreme Court, solid waste management has been at the top of the agenda of urban local bodies. However, despite the Rules, and despite the priority accorded to them, their enforcement has been poor. Waste collection itself is still struggling, segregation is still a far cry, transportation has a question mark and scientific disposal is almost completely absent.

In research cities, the previous chapter (Table 6.1) shows that none of the cities are able to do 100 per cent collection and transportation at the household level or for commercial establishments. In this context, the thesis presents some aspects of two western cities and its planning in regard to solid waste.

9.4.1 Global Examples of Waste Planning

In the city of Ottawa their plan (2001-2013) contains the zoning by-law that restricts the location of Solid Waste Disposal facilities to specific sites. Land within 500m of an operating or non-operating solid waste disposal site boundary is considered to be the

influence area of the site. However, where the City or the owner of the site, has determined through an Environmental Assessment, hydro-geological analysis or similar study that significant ground, surface or air-borne impacts occur at a distance greater than 500m the greater distance will establish the influence area.

Similarly, the comprehensive zoning regulations for Baltimore City provide for the siting and operation of a broad range of solid waste management facilities, including incinerators, landfills, recycling collection stations, materials recovery facilities, and other types of facilities. Generally, these solid waste facilities are confined to industrial and commercial districts, to ensure compatibility with other allowed uses. Commercial or municipal incinerators are conditionally allowed only in (heavy industrial) district. Sanitary landfills accepting mixed refuse as well as other waste are exempt from zoning regulations if they are to be operated by the City, and if they are established through a City ordinance. Otherwise, such landfills are not allowed anywhere within the limits of Baltimore City. Landfills not accepting mixed refuse are conditionally allowed in the M-2 (general industrial) and M-3 (heavy industrial) districts.

Solid waste acceptance facilities of any kind are not allowed to be sited within the City's Critical Area, which is the environmental overlay zone in Maryland, 1,000 feet wide measured from the mean high tide around the Chesapeake Bay and its tributaries. The affected tributaries in Baltimore City include the Patapsco River, Gwynns Falls, Jones Falls and Colgate Creek. The siting of recycling facilities is also prohibited within the Critical Area. To facilitate recycling, small collection stations are conditionally allowed throughout the City, and larger processing centers are conditionally allowed in industrial areas. These uses were specifically defined and provided for in the 1989 zoning regulations. Materials recovery facilities, where recycling materials except ferrous metals can be mechanically processed and packaged for resale, are conditionally allowed in the M-2 (general industrial) district and the M-3 (heavy industrial) district with Board approval, and in the B-3 (community commercial) district with enactment of a City ordinance.

When located in the B-3 district, the recycling materials must be stored as well as processed indoors. Dismantling, processing and storing of scrap metal and discarded automobiles are conditionally allowed (with Board approval) in the M-3 (heavy industrial) district. These uses tend to require extensive outdoor storage of large items and include ferrous metal, and are therefore distinguished from materials recovery facilities. The City's comprehensive zoning regulations also accommodate facilities for managing

certain special categories of solid waste. Handling of radioactive waste is conditionally allowed (with Board approval) in the M-2 (general industrial) and M-3 (heavy industrial) districts. Handling and storage of hazardous materials as defined in Title 7 of the Environment Article Annotated Code of Maryland are conditionally allowed (with enactment of a City ordinance) in the M-3 (heavy industrial) district. Composting of sewage sludge or yard wastes is provided for in the zoning laws by treating it as an additional industrial use.

9.4.2 Solid Waste Planning Deficits

It is quite clear that the planning process in our country is oblivious to the needs of solid waste management. The Indian situation is well summed up by the following paragraph: “Solid waste management is a key function and a daily activity of all cities and of every household and yet, this activity is not integrated either in the Development Plans or the Development Control Rules of the cities. Nor is it planned at the household level and within campuses and housing societies, leading to piling up of garbage on streets and in public places. Surely, by no stretch of the imagination, can garbage be a matter of proud public display! Similarly, long distance transportation of solid waste is increasingly becoming a feature of large towns, because growing cities have failed to earmark land for multi-nodal collection to make garbage clearance cheaper, faster and more hygienic. Many more urban activities are conspicuous by their absence in the Development Plan. As cities grow and services and technologies emerge, plans need to be flexible enough to embrace them. Tragically, such pragmatic dynamism continues to elude Indian urban planning.” (Siddiqui and Jha, 2000).

9.5. Urban Transport

The following slide presents in a nutshell the status of services in regard to urban transport across urban settlements in India.

Chart No. 9.4 Urban transport status of services

SERVICE		
PUBLIC TRANSPORT		
	Two wheelers	72 %
	Buses	1 %
	Public transport	22 %
	Bus service	20 cities

India Infrastructure Report, 2010

Transport may be defined as the movement of people and goods from one place to another. In its widest form, it comprises air service, rail and bus service, ferry service through water, taxi service and personalized travel by cars or any other kind. All such transport services that are not personalized fall into the realm of public transport. Services that are personalized move into the territory of private transport.

Urban transport may be treated under five heads. The first is the realm of an overall plan in regard to questions of transport. The second is the area of strategy in regard to implementation of the plan and various transport modes. Thirdly, the modal strategy needs to be backed by appropriate and sufficient infrastructure. Hence an infrastructure plan is essential. Fourthly, instruments have to be identified to locate resources to fund that infrastructure in a time frame. Lastly, a regulatory mechanism (laws, rules etc.) for regulation, operation and coordination must be put in place.

In Indian cities, transport is more or less synonymous with roads. Some of the mega cities have some rail-based transport services. Mumbai, Chennai and Kolkata witness the operation of suburban trains. These have been either joined or are being joined by the Metro, and several other cities such as Mumbai, Bangalore and Hyderabad that have

begun walking the path of greater engagement with the rail-based mode. Delhi has taken great leaps in operationalizing a world class metro and is further expanding its reach through subsequent phases.

9.5.1 Vehicular Growth

An area of major concern has been the phenomenal growth of motor vehicles. In larger cities they have been rising four times as fast as population. In the six largest cities, while their demographic profile rose by a factor of 1.8 between 1981 and 2001, their automobile numbers rose over seven times in the same period. The two-wheeler segment largely fueled this rise. The growth in vehicles was not matched by the equal addition of road space. This rose only 1.34 times between 1971 and 2002. Intense clogging, soaring pollution, an unacceptably high rate of road crashes and fearsome levels of noise have been the concomitants.

These results have essentially come out of a misplaced emphasis on a plan for moving vehicles rather than a plan for moving people. This has led to a neglect of public transport. “For example, in Delhi, while the number of personal vehicles per 1000 population has expanded about 3 times (between 1981 and 2001), the number of buses per 1000 population has increases only 2.3 times”. A more glaring neglect of public transport is shown by the state of bus transport. A perusal of Table 2 below would show that the share of buses in the total motor vehicle fleet was 11 per cent in 1951, it came down to only 1.1 per cent in 2001.

9.5.2 Urban Poor and Transport Planning

For the urban poor, the cited transforming scenario is fraught with grave consequences. The cost of traveling for them in search of livelihood opportunities within the city centre is rising and the time spent on traveling is climbing as the poor get pushed out on the periphery of cities and in the peri-urban areas. The cheaper modes of non-motorized transport such as walking and cycling have become hugely perilous. Further, on account of air pollution caused by automobile emissions, the poor suffer maximum exposure and this severely impacts their health. Above all, they are subject to a maximum of crashes on roads. These have risen sharply from 1.6 lakh in 1981 to over 3.9 lakh in 2001 and the number of persons killed going up from 24,800 to over 80,000 during the same period. It is quite evident that “the more we try to add infrastructure that merely aids private motor transport, the more anti-poor the city becomes”.

The driving philosophy behind a city's transport policy must be to maximize mobility of the largest number of people in the shortest possible time in order to achieve the largest economic efficiency and the minimum adverse environmental impact. This is only possible if there is 'optimum people utilization' of all space available for mobility. This quite clearly points towards an efficient public transport system as the focal point of transport decisions.

The disastrous consequences of pushing vehicles instead of people are there for all to see. While ownership of a personal vehicle is the dream of an average middle class Indian and while current policies do not restrict the proliferation of such ownership, it is obvious that the allocation of more and more mobility space to private transport is against the overall interest of any city. A policy that prioritizes in favour of the public transport system is the call of the hour.

Public Transport System is an efficient user of space and energy, with reduced level of air and noise pollution. As the population of the city grows, the share of road or rail-based public transport should increase.

A more innovative concept in transport has been the bus rapid transit system. The benefits of a high capacity bus transit are substantial. Firstly, a BRTS forces the reallocation of road space in favour of public transport. There is hence improved road space utilization. Since the growth of the formal sector is accompanied by the growth of the informal sector, and the latter logging higher growth rates comprising low income households, a bus rapid system becomes essential to address the needs of large numbers of commuters from this sector. For a large mass of people, there is reduction in travel time and anxiety with clear economic benefits of having provided faster mobility to a large number of people. The city also gains through lower fuel consumption and cleaner air.

This BRTS improves the efficiency of bus traffic, the flow of cars, motorized two-wheelers and the safety for all commuters. Improvements in bus technology allow very comfortable, air conditioners and more efficient buses. What is more striking is that this is a system that could fit the pockets of many cities as its costs are 1/50th the cost of a metro.

Since the process of urbanization is closely linked to the creation of demand for transport, it would be wise if an integrated human settlement management approach could provide the needed framework for urban transport policy planning. This is because the demand

for transport and the ways in which it can be met depend, to a large extent, on how human settlements are managed.

Transport “is not a stand-alone component of urban infrastructure. It cannot be planned in splendid isolation, and needs a complete systemic integration into the overall city plan. In fact it needs even wider integration, because these systems cannot be cut off at merely city levels but need to take into account the entirety of the transport and communication networks that impact on the city and networks that the city impacts”. It has been seen in Indian cities that one of the primary areas in which cities are unable to respond is on the front of transport provision. This is because the road and other transport networks have not been integrated with the land use plan. This makes it extremely difficult at later stages to set right as developments overtake planning and virgin areas are not left to lay out roads and transportation networks.

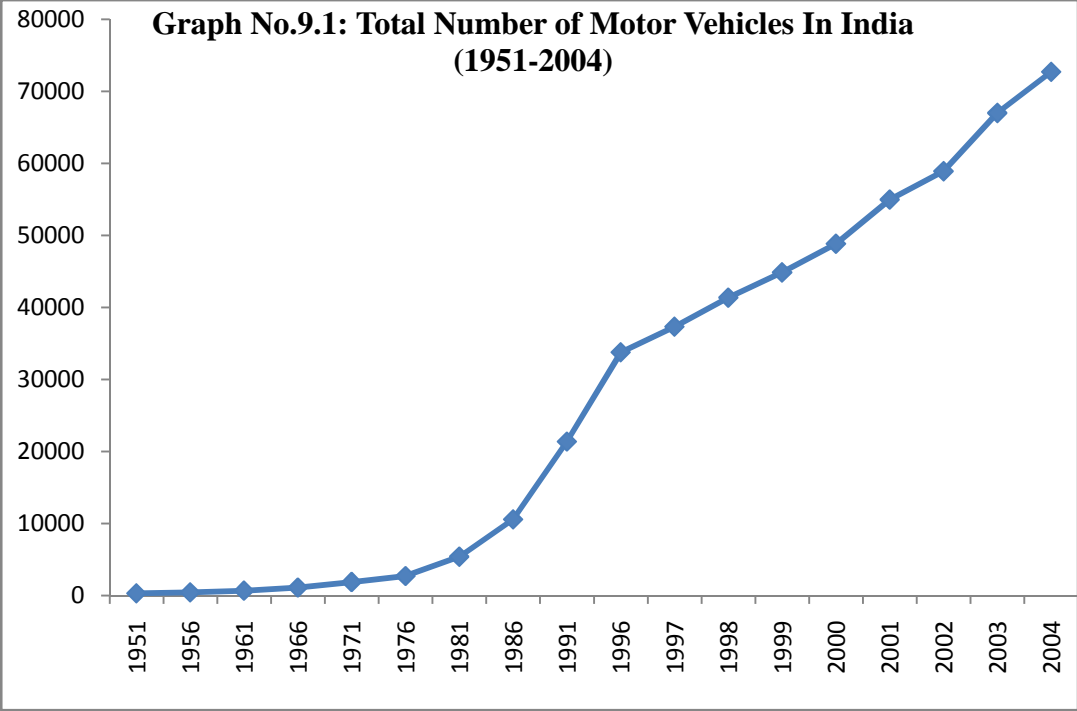
Table 9.1: Total Number of Motor Vehicles In India (1951-2004) (In Thousands)

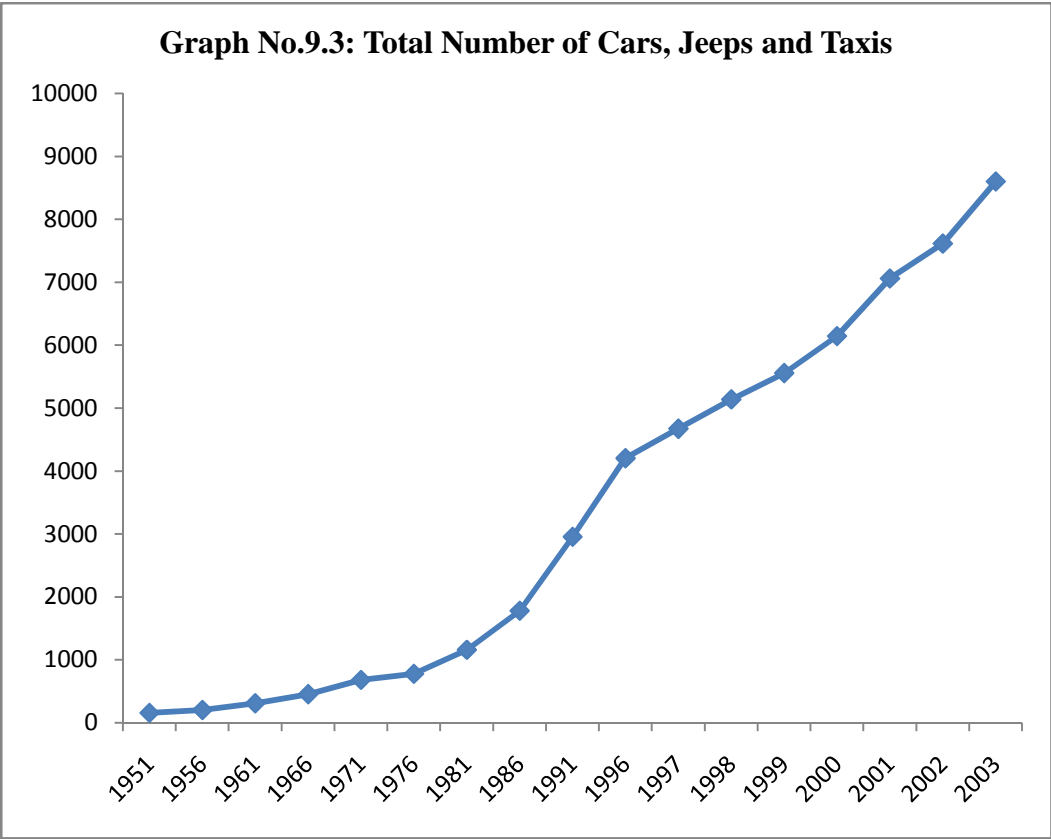
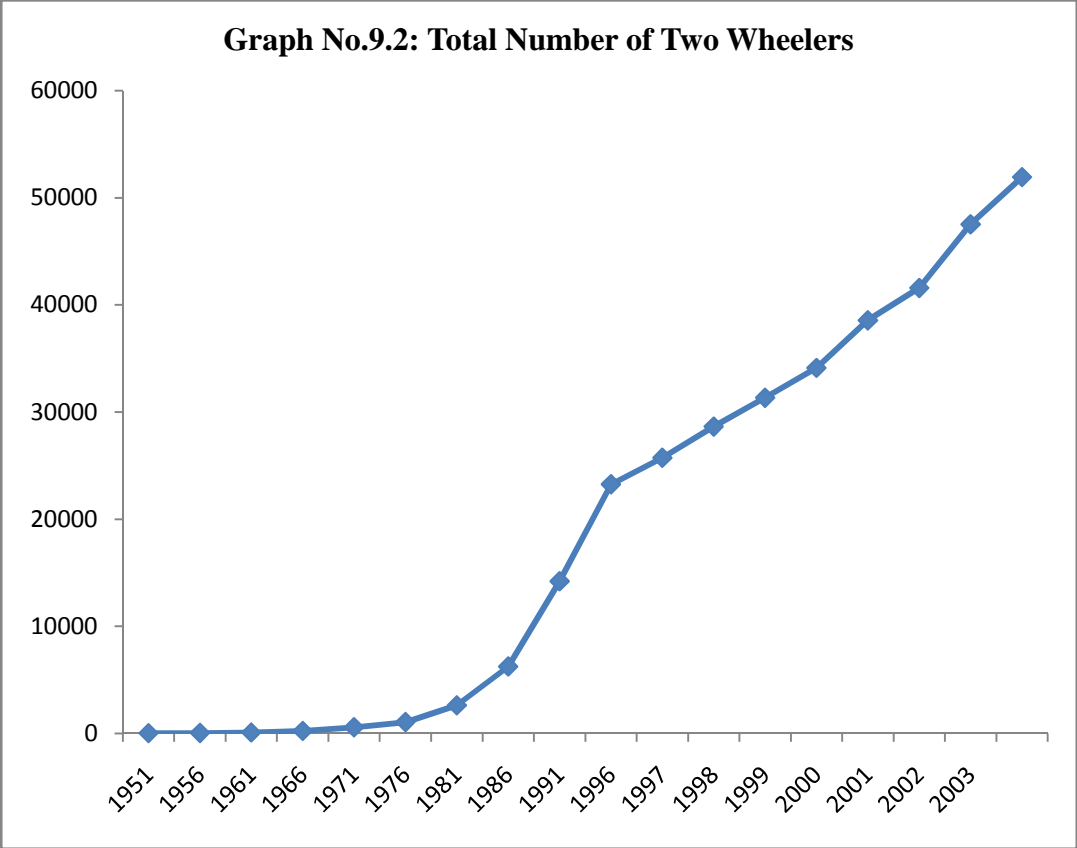
Year (As on 31 st March)	All Vehicles	Two Wheelers	Cars, Jeeps and Taxis	Buses	Goods Vehicles	Others*
1	2	3	4	5	6	7
1951	306	27	159	34	82	4
1956	426	41	203	47	119	16
1961	665	88	310	57	168	42
1966	1099	226	456	73	259	85
1971	1865	576	682	94	343	170
1976	2700	1057	779	115	351	398
1981	5391	2618	1160	162	554	897
1986	10577	6245	1780	227	863	1462
1991	21374	14200	2954	331	1356	2533
1996	33786	23252	4204	449	2031	3850
1997	37332	25729	4672	484	2343	4101
1998	41368	28642	5138	538 @	2536	4514
1999	44875	31328	5556	540 @	2554	4897
2000	48857	34118	6143	562 @	2715	5319
2001	54991	38556	7058	634 @	2948	5795
2002	58924	41581	7613	635 @	2974	6121
2003 ®	67007	47519	8599	721 @	3492	6676
2004 (P)	72718	51922	9451	768 @	3749	6828

* Others include tractors, trailers, three wheelers (passenger vehicles) and other miscellaneous vehicles which are not separately classified

@ : Includes omni buses (P) : Provisional ® : Revised

Source: Motor Transport Statistics of India, 2001-2002, Ministry of Shipping, Road, Transport & Highways, Government of India





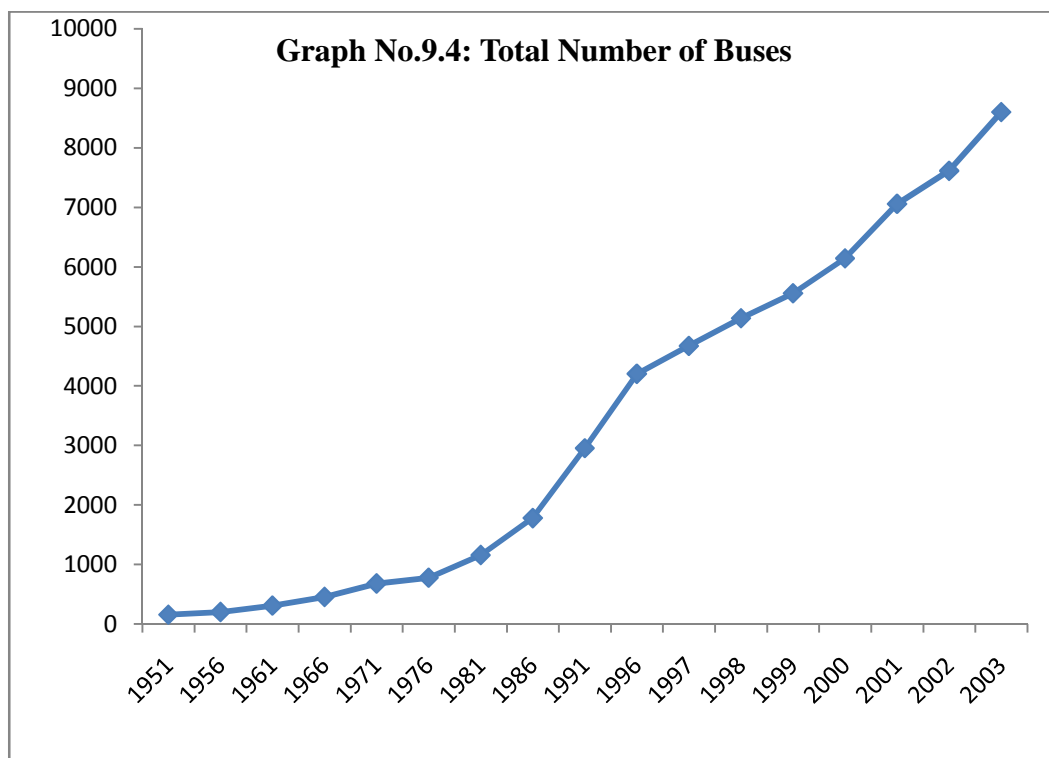


Table 9.2: Share of Buses In Total Motor Vehicles In India

Year	Total registered vehicles ('000)	Registered Buses ('000)	Share of buses to total (per cent)
1951	306	34	11
1961	665	57	9
1971	1865	94	5
1981	5391	162	3
1991	21,374	331	2
1996	33,786	449	1.3
1997	37,332	484	1.2
1998	41,368	538	1.3
1999	44,875	540	1.2
2000	48,857	562	1.1
2001	54,991	634	1.1

Source: Motor Transport Statistics of India, 2001-2002, Ministry of Shipping, Road, Transport & Highways, Government of India

9.6. City Roads

The following slide presents in a nutshell the status of services in regard to roads and storm water drainage across urban settlements in India.

Chart No. 9.5 City Roads status of services

STATUS OF SERVICES	
ROADS	
Vehicle pop increase	100 times (1951-2004)
Road network increase	8 times
Area as % of city area	6 % to 18 %
SWD	
Roads covered	20 percent

India Infrastructure Report, 2000

With an increasing population and increasing number of motor vehicles, cities need adequate and well designed roads to allow smooth transit of people from homes to offices, homes to schools, to health facilities, to markets, hotels, recreation centres and to other cities.

9.6.1 Road Planning Deficits

However, road planning in Indian cities, from actual experience, appears to be in very poor shape. Roads are not able to take vehicular road, leading to frequent jams and more and more time consumed in travelling. Their quality is poor and there is constant digging. As a consequence, smooth road surfaces appear to be a rarity. Constant digging makes road repairs a continuous feature affecting smooth flow of traffic. Footpaths are also constantly in a state of disarray, with frequent breaks and the need to mount and dismount stretches of footpath, making it very difficult for the elderly to use them. Storm water

drainage is a highly neglected item.. Most roads in cities do not have storm water drains and the ones created are frequently choked rendering them ineffectual.

These problems lead us to conclude that these are largely on account of deficits in the planning of roads and delineation of roads in the land use plan. In view of the growing urbanization, adequate road space should be provided for in the land use plan. Road space as a total percentage of city area currently stands between 6 to 18 per cent. Quite clearly, the ones closer to 6 per cent are going to continue to struggle. The ones with 15 to 18 per cent are the cities that can be said to have adequate road space. Additionally, the hierarchy of roads and their interconnectivity also need to be properly established.

The reasons that lead road digging need to be avoided through the provision of ducts at intervals to allow for crossing of services. While this may look expensive to begin with, they lead to enormous savings in the long run and improved road surfaces, reduced repair work and more pleasurable rides on roads. Footpath design standards need to change so that there is minimum disturbance to pedestrians of all ages in negotiating stretches of footpath despite breaks in them to allow properties access to roads. Such designs are established in global cities and we could borrow a leaf from them.

Storm water drains are absolutely essential to drain water away from the roads so that their surfaces are not eroded. This is again an additional expenditure, but they protect the road and provide them longevity. In the long run, they save money and allow roads to provide smooth service.

Unfortunately, these are not adequately written into the rule books and therefore leave works haphazardly done. These deficits in the plan process need to be plugged. In their absence, cities will continue to have sub-standard non-social municipal infrastructure.

Summary

Indian cities appear weak in integrating land use and water planning on the principle of total water cycle management. Gaps also exist in inter-departmental coordination, in recycling and rain water harvesting. The sewerage deficits are very large and SWM Rules 2000 are only partially implemented. Cities are still struggling with collection, segregation and disposal. Non-motorized transport has been pushed out of cities and public transport has been sadly neglected.

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CHAPTER 10

DEFICITS IN PLANNING AND DEVELOPMENT CONTROL REGULATIONS

10.1 Development Plans for Well-Rounded Development

In the Mumbai Human Development Report, the Foreword by Maharashtra's Executive President of the State Planning Board states the following: "Development after all cannot be mistaken for economic attainments alone. It is a multi-dimensional concept. Its focus ought to be on expansion of opportunities and enhancement of choices through building capabilities. Human Development has now emerged as an important policy tool which would help mobilize and focus resources on critical areas for overall social development. A general sense of well-being is a reflector of the level of human development attained by a community. The sense of well-being is personal, subjective and difficult to quantify. However, the report uses methodology popularized by UNDP based on parameters such as health, education, livelihood and gender discrimination. It gives us a broad perspective of attained progress and its complex relationship with well-being" (Mahajan, 2009).

Ideally, the purpose of city planning would be to subserve a balanced development of its economy, and its environment (quality of life) and achieve these goals with equity. In this process, planning should also enable the ULB to prevent undesirable development and to provide as far as possible resources required for infrastructure and amenities. The Development Control Rules forming part of the Development Plan here are of great significance as they spell out what can be done in terms of development and what cannot.

10.2 Overall Failure of DPs/DCRs

The experience to the development plans being currently prepared and enforced indicates that the DPs have been only partly implemented. No city has been able to translate on ground more than a tiny part of its Development Plan in the given time span. In fact, having witnessed the embarrassingly slow progress in plan implementation, Governments have been forced to revise the original time targets by amending the statute and doubling the life span of plans. Further, the development control rules have not been able to either prevent undesirable development or promote desirable development in any substantive manner. Apart from laxity in the exercise of laws and rules and malfeasance on the part of some, it is important to look at the significant deficits both in the framing of the DP and its DCRs. The ones most significant to our mind are detailed in the following paragraphs.

10.3 Delays in Plan Preparation

It is seen that in each case the preparation and approval of a Development Plan has taken inordinately long – sometimes more than a decade. Cities in India have been growing at great pace – some of them witnessing decadal growth rates of 40% to 50%. If the planning process of such regions and cities takes so much time, it is made redundant by substantial growth in the meantime, outside the Plan. While planners have been deliberating on the future use of land, the people have not waited and have already taken decisions. If planners have the luxury of time, citizens certainly do not – while planners fiddle, citizens build.

A blog on Pune Property titled its item "Does DP stand for Development Plan or Delayed Progress?" It further added "Since the Government of Maharashtra simultaneously receives scores of proposals from all over the State, this process often takes up to 10-15 years, which in turn leads to rising costs, enormous waste of man hour, and a negative impact on the GDP. There are several examples of such delays in the DPs proposed, such as in the Pune Municipal Corporation and the Pimpri-Chinchwad Municipal Corporation." (Property Blog, 2011)

The Free Press Journal reported that "The entire process of formulating and implementing a Development Plan (DP) under the purview of the MRTP Act for urban growth in Maharashtra is cumbersome, archaic and needs a complete overhaul to become effective and achieve the purpose it is meant for. It involves wading through a maze of several agencies: The Local Self- Government bodies of the concerned villages or towns, the Town Planning Department of the Municipal Corporation, the Deputy Director of Town Planning, Government of Maharashtra, the Director of Town Planning, Government of Maharashtra, the Secretary, Ministry of Urban Development, Government of Maharashtra, the Hon. Minister for Urban Development, Government of Maharashtra, the Hon. Chief Minister, Government of Maharashtra. It would be much more efficient if the whole process were simplified, with one nodal body coordinating with all the other local bodies and being empowered to issue the necessary sanctions." (Gokhale, 2011)

The Indian Express reported in relation to Pune's Development Plan that the Pune Guardian Minister Mr. Ajit Pawar, speaking at the launch of the Rajiv Gandhi Academy of e-learning (RGAEL) in the city, "pointed out how the government has delayed a decision on DP. The DP which will determine the development of 23 villages merged with Pune Municipal Corporation in 1997, has been pending for six years." Addressing

the Chief Minister, Maharashtra, he said, "Pune city's DP has been pending for long with the state government. We had approached two chief ministers for its early approval. Now in front of Puneites, I urge you to take action in the matter on priority," he said. (The Indian Express, 2011)

Similarly, in the case of Mumbai, it was reported that "The revision of the city's Development Plan is set for further delay with the Brihanmumbai Municipal Corporation (BMC) seeking a 2.5 year extension to the contract period for submitting the draft plan. The draft development plan was scheduled to be submitted in June 2011; however, administrative delays have pushed the date to December 2013." (The Indian Express, 2011)

10.4 Part Approval of Development Plans

A further disturbing trend has been part approvals given to Development Plans. This means that instead of according approval to the DP as proposed with due modifications, the State Government separates certain parts in the name of urgency and sanctions the implementation of those parts alone and keeps the rest of the DP pending for approval. Such part approvals have been noticed in the case of Pune, Regional Plan Mumbai and scores of others. Apart from causing unnecessary delays, it brings into the approval process unwanted practices that are best avoided.

10.5 Limited Use of Technology and Modern Techniques in Plan Preparation

A major drawback in current planning processes in the country is the limited use of available modern technology that has revolutionized urban planning. In the last few years in many parts of the world, there has been a tremendous innovation at the intersection of urban planning and technology. Modern urban planning practices use GIS to prepare plans. By integrating and organizing information spatially, planners can get a broad view of the current situation and more accurately assess the future. GIS software can analyze more scenarios more quickly, giving decision makers more choices. It is estimated that GIS has reduced the time needed to complete mapping tasks by more than 90 percent, and the result is a better product.

Before GIS was used, planners located properties on a paper map and checked property locations by referencing property descriptions stored on a mainframe, and then cross-referencing coded values with a more generalized scheme kept in a notebook. The city's Master Plan maps were created using a graphics program so the technician had to photograph the pertinent Master Plan map to create slides for zoning. With GIS, the

drafting technician can query for a specific address, zoom to a desired geographical extent, and quickly create a site, zoning, existing land use, or Master Plan land use map with a date and scale bar.

Planning involves determining appropriate future decisions and actions through a series of choices. Making choices requires, in addition to thorough planning know-ledge, comprehensive data about the past, present and future. Generating such information is very difficult with manual methods with possibilities of error. "GIS provides many basic functions for appropriate and efficient management of geo-information. Essentially, GIS supports the collection, maintenance, analysis and display of spatially related information. GIS data enable multiple viewpoints to be considered and provide the capability for dynamic query and display of information, and a more understandable representation. Statistics, reports, articles, aerial and close-range photos, satellite images, maps and drawings all aid in understanding the planning area and its problems.

Alternative solutions may be developed by importing this data into computer models. These models may predict, for example, demographic changes and land use modifications or simulate traffic flow. Often these computer models are implemented as stand-alone software. GIS facilitates by providing digital geo-data and display of intermediate and final results. Arriving at the most appropriate solution requires communication and collaboration among many stakeholders. Communication is best done through visualisations such as images and maps rather than through bare text. GIS is a perfect visualisation aid. So, GIS makes model creation and interpretation easier and provides understanding that may otherwise not be achieved." (GIM International, 2005).

Unfortunately, the use of such technology is not extensive in plan preparation. As a consequence Development Plans take more time, are error prone on account of manual practices and have the capability of generating fewer choices. In a nutshell, the current planning practices result in lack of quick, accurate and quality planning. In a country and in a state like Maharashtra, where urbanization is happening at pace, the slowness of technology adoption in urban planning is a big disadvantage. Since the preparation of Development Plans stands centralized in the Directorate of Town Planning, delays have huge adverse impacts on the planned growth of cities.

10.6 DP Preparation and Lack of Transparency

One of the primary pitfalls in the preparation of Plans is that they are prepared in great secrecy. "Nowhere has secrecy been more strictly maintained than in the national capital

itself, where the first Master Plan was drawn up only after the notification for acquisition had already issued. Theoretically the objective of secrecy is to prevent speculative land purchases. In actual fact judicious leakages have worked to the benefit of land speculators, whilst keeping the general public ignorant of what is being proposed for their own future welfare.

If we take the example of the second Master Plan of Delhi, which has been drafted and is awaiting formal approval from government, DDA conducted most of its exercise internally and never exposed its proposals fully to the public. There were a few seminars to which selected groups of people were invited. Agenda papers were distributed only in a seminar itself. The average citizen of Delhi probably has still no idea of what went into the drafting of the Master Plan. As for suggestions and objections, there is a proforma consideration of any that might be received, but there is very little chance of any of them being accepted. The process of modification on the basis of public objections and suggestions would involve an effort on the part of the planners which, as is natural, is avoided by rejecting most of them". (Phatak, 2004).

10.7 No Fixation on Expansion of Municipal Limits

Preparation of integrated and quality plans also suffer on account of peripheral urban areas left out of the DP process. The planning norms used immediately outside the plan area are ad hoc and more rural than urban. Their merger into urban areas is resisted politically and allows the play of wanton and arbitrary urban benchmarks. Village Panchayats have been seen to be passing plans of large buildings without adequate safety, mobility and environmental considerations. When these areas eventually get merged into the city, their unplanned growth makes it extremely difficult to bring a semblance of order into these areas. Villages around Pune such as Dhankawadi are prime examples where urban planning observations have been excessively lax. In effect, they become permanently blighted areas on account of their haphazard growth.

10.8 Lack of Emphasis on Planning People

There has been criticism that apart from delays in plan preparation and approval, there are deficiencies in approach. "Planners who have been trained as architects plan space, with little emphasis on 'planning' people. A Development Plan determines land use, not as an end in itself, but as a tool to allow people to live and engage in productive activities. However, a proper appreciation of the needs of the people who inhabit cities seems to have eluded its planners – because of their largely Western orientation, and the lack of an indigenous planning ethos. It is no surprise therefore, that Indian planners borrowed the

early practice from the United Kingdom and the United States of preparing city plans with a heavy, physical land use bias.”

The planning process has also been faulted with regard to the thought process behind urban planning. It has been contended that this is dictated by the mindset of a regulator rather than of the developer. “This has led to a negative rather than a positive orientation, enslaving urban administrators in the exercise of examining whether intended activities strictly fit rigid stipulations. But whether those stipulations are healthy, viable, activity-friendly and capable of handling an urban deluge are questions that do not cross planning minds couched in the policing mode, that are themselves unquestioning and do not like to be questioned by others.” (Siddiqui & Jha, 2000)

10.9 Freezing of City Activities through Development Plan

Since all city land comes under the land use plan of the Development Plan, their non-utilization consequentially results in the freezing city activities. Most of these are critical physical and social infrastructure. “It is not enough for a plan to earmark lands for various public uses. Lands need to be utilised for activities for which they are earmarked. For example, a piece of land reserved for a health care centre first needs to be acquired, and then the centre built. That costs money, and the planning authorities must allocate resources for putting up such a Centre. However, Development Plans are not known to include either a financial analysis of their proposals, or a strategy for meeting the costs of implementation. No wonder then that 90% of all Development Plans have remained on paper, leading to a growing shortage of planned services. Indeed, it would be fair to conclude that Indian urban planning lays great emphasis on Plan preparation but refuses to get down to the grinding and painful task of working out the details of Plan implementation.” (Siddiqui & Jha, 2000)

Cities such as Pune, Mumbai, Nashik and Kolhapur are facing a grave shortage of schools. This is despite the fact that the Plan earmarks lands for schools as per planning norms and projected population. However, municipal bodies do not have adequate money to acquire the lands, nor sufficient money to build after acquisition. “As a consequence, available educational facilities begin to fall short with increase in population, putting intolerable pressure on certain schools and nightmarish pressure on parents with children not yet in the educational mainstream. While petrified parents queue up outside the chambers of harassed and haughty school principals, the municipalities and educational institutions ruminates over the plight of the city as mute spectators.”

“Civic bodies cannot provide more schools because they have no money; and willing investors cannot provide more schools because they have no land. And yet, our cities are strewn with sites reserved for schools longing for a building, for students, teachers and books; but standing forlorn and vacant, fearing the grim prospects of being consumed by encroachments for less laudable purposes. This is a shortage that is wholly artificial. It is the consequence of a lack of detailed planning, the regulator’s smug satisfaction that no breach of rule has been permitted, and the civic body’s unwillingness to find solutions in partnership with its citizens on vital issues that affect the future of whole generations.” (Siddiqui & Jha, 2000)

10.10 Difficult Amendment Process

All plans require in the course of their lives certain amendments because of a number of factors that were unforeseen at the time of doing the Plan. After all, even the most precisely planned space programmes allow for some in-flight correction. This is also true of Development Plans. But while the Development Plan allows for change, it is the speed at which changes, even small changes, can be made is the problem. The process is made tremendously difficult as even minor alterations get entrapped in prolonged procedural wrangles or formalities. The whole gamut of getting the proposal through the ULB, publication, consideration of objections and governmental approval must be followed. Such legislation defeats the purpose of a Plan. The inability of the Plan to match the speed of city dynamics makes it a lame duck.

10.11 Limitations of Merely Physical Land Use Approach

Development Plans have also been criticized for being inflexible in the manner of planning. “Indian planners continue to take the emphatically physical land use approach to planning, even though it has been abandoned in the West. The developed world was quick to realise that while Master Plans operate for longish periods and are essentially static, complex and continuous city growth is essentially dynamic. Therefore, a physical plan that only superficially dealt with economic realities and human responses, was unable to react to urban flux and consequently, rigid master plans were replaced by indicative structural plans with built-in flexibility. Unfortunately, Indian planning like many other areas of governance has been quick to adopt western concepts but slow to indigenise them, and has persisted with its old emphasis on spatial planning.”

“A corollary of the primacy of physical land use planning has been the instrument of zoning of lands. British zoning practices in India broadly trisected cities into cantonments for British soldiers, civil lines for British and Indian rulers, and native towns for the

providers of services. These concepts have largely persisted, though without the colonial overtones. Indian planners, probably unconsciously, continued to segregate cities by strict zoning of industry, trade and commerce, residence, and recreation which effectively divides a city into one area for the rich and the powerful, and another for the low middle class and the poor. But Indian cities in the past were never designed in this manner. Their lifestyle and quality of housing may have set the rich apart, but designated areas of a town itself were not segregated on the basis of class. Land use concepts favoured more intermingling of reasonably compatible activities; and retail trades, household manufacture services, and work sites were all an integral part of residential areas. Such an arrangement was convenient, cheap and suitable, particularly for the poorer citizens and service providers, and their clientele from the neighbourhood. Unfortunately, modern Indian planning has failed to recognise this centuries-old reality – and that is precisely why this compulsive reality has superimposed itself on our cities in the form of informal settlements and informal markets; oblivious and indifferent to the woolly and unreal zoning concerns of urban planners and regulators.” (Siddiqui & Jha, 2000)

10.12 Extraneous Influences in Planning

Urban plans in India have been subjected to a great deal of extraneous pressures and manipulations that have little to do with public interest. Such interference has been encouraged by the secretive planning process and the large stakes that exist in urban land. A lot of discretion in decision-making exists at all levels and these can be exploited by the powerful and the influential to serve their personal objectives.

“Examples of such interference can be seen in the fastening of reservations on urban lands. Indeed, land reservations in a Plan have unwittingly become a tool of great reward and punishment for landowners. Those whose lands get reserved for shopping or housing, stand to benefit most because they can exploit the full market potential of their land and make good money. The less fortunate have their plots earmarked for schools or hospitals where profit out of land suffers. But the most unfortunate are those, whose properties are designated as gardens, open spaces or playgrounds. Since no buildable potential exists on such reservations, the owners make every effort to get their lands freed from the clutches of reservation. If this strategy of pulling the levers of political power fails, the alternative is to aid and abet unauthorised construction on the land, either in the form of slums or shops or garages or hawkers. The unauthorised sale of land to the occupiers gives them no rights, but the owner is able to make at least some money out of this illegal sale. The authorities on the other hand, find it difficult to get the land vacated through eviction, because of the political resistance to such extreme steps.

Land reservations also bestow enormous powers on the Town Planning Department to grant and withhold favours – and this is not regarded as either fair or just, by the beleaguered citizenry. It has also been observed that most urban plans show a very alien attachment to openness and low densities. In cities, by their very character, there are acreages that cannot be built upon. Water bodies, roads and footpaths, hills, nallas are all unbuildable and every city has substantial space occupied by some of these. In addition, planners earmark ‘lung’ spaces such as gardens, playgrounds, open meeting grounds, zoos etc, and on top of this, the control rules stipulate marginal open spaces in the front, rear and sides of each construction. The city thereby renders more than half of its area unbuildable, which coupled with a low floor space index, has tremendous impact on land values and city infrastructure.”

“Since the value of city land depends primarily upon its building potential, the present dispensation hikes up the price of available land inordinately. To make matters worse, even the buildable properties cannot be developed adequately, because of the insistence on a uniformly low floor space index. This is highly detrimental both to the interests of the poor, and the city, which must perforce grow horizontally, consume more agricultural land, spend more on a spread-out infrastructure, and add more to vehicular pollution because its inhabitants must traverse longer distances for education, employment and services.” (Siddiqui & Jha, 2000)

10.13 Planning Gaps

Urban planning processes in the past have also left large planning gaps. “Even the most cursory look at any city will show that several prominent facets of urban life find no reflection in a typical spatial plan. In housing for instance, cities are overwhelmingly expanding into informal settlements, precisely because Development Plans have given little thought to housing for the poor. Similarly, because the planned process does not incorporate informal marketing services, city streets and pavements are cluttered with hawkers and informal markets. There has been inordinate increase in pollution, mainly on account of the phenomenal increase in vehicles and vehicular pollution, partly because cities do not have a well integrated transport systems knitted into the land use plan. City roads have not been able to contend with the variety of vehicles that Indian commuters are forced to use, because of the sad neglect of public transport systems. And sadly, planned city roads have driven out the bicycle as a mode of travel, even for those who are willing to use it.”

“Solid waste management is a key function and a daily activity of all cities and of every household and yet, this activity is not integrated either in the Development Plans or the Development Control Rules of the cities. Nor is it planned at the household level and within campuses and housing societies, leading to piling up of garbage on streets and in public places. Surely, by no stretch of the imagination, can garbage be a matter of proud public display! Similarly, long distance transportation of solid waste is increasingly becoming a feature of large towns, because growing cities have failed to earmark land for multi-nodal collection to make garbage clearance cheaper, faster and more hygienic. Many more urban activities are conspicuous by their absence in the Development Plan. As cities grow and services and technologies emerge, Plans need to be flexible enough to embrace them. Tragically, such pragmatic dynamism continues to elude Indian urban planning”. (Siddiqui & Jha, 2000)

10.14 Little Emphasis on Poverty Planning

The Chapter on Urban Poverty has detailed the very marked lack of consideration of urban poverty in the Development Plan. The DP does not recognize the now ubiquitous presence of informality and informal growth in cities. As we have seen, in Mumbai, Pune and in the other research cities, the growth of a city propels informality as land values appreciate, pushing a larger percentage of populations into the informal sector. A study of Delhi reveals no better situation. As it states, “A large part of Delhi continued to grow unplanned, notwithstanding all the safeguards, with lakhs of urban working poor living in illegal squatter colonies in the city. In the 'Emergency' years, from 1975 to 1977, it was such groups who were forcibly moved out into resettlement colonies.” (Lahiri, 2011). “The planning process continues in much the same way, in the sense that subsequent Master Plans too have failed to provide adequate authorized housing for millions of Delhi’s citizens”.

The Development Plan and DCRs do not have policies or regulatory systems that could engage with informality that already exists. Nor is there a forward thinking on ways and means that would allow the reduction of informality. This must rank as one of the key deficits of urban planning. The non-recognition of informality poses a huge challenge to the Development Plans as growth takes outside of it and tends to destroy the very fabric of a Development Plan.

10.15 Inadequate Treatment of Housing

The significance of housing in a city is enormous. It is a product that every citizen requires. However, each can only get into such housing as is affordable to that person. In

view of the facts of universal need of housing, coupled with issues of universal availability and affordability, a Development Plan needs to get into details of such analysis. This would require not merely futuristic demographic projections, but also segmenting the projection into income groups and housing that would be affordable to each. The DP also needs to proactively consider how affordability can be aided by land use policies and development control regulations and how incentivization through policy instruments could happen. Based on these calculations, housing land would have to be divided up into lands that each segment of population would require. Unfortunately, a DP does not get into the grind of such detailing. Since housing is almost entirely left to market forces in a city, the market responds to only such housing demands that have high profitability. The rest of the people are forced out of the market into informal housing.

10.16 Inadequate Road Space

Indian cities have a large diversity of vehicles – bicycles, two wheelers, three wheelers, cars, mini buses, buses, trucks and multi-axle vehicles. Road spaces also get diverted partly to non-mobility uses such as hawking, parking and seasonal abutments such as festival pandals. Despite this variety, city planning tends to economise on the land that gets put to road use. The average road space in cities is low and this leads to choking of a city due to traffic congestion. This gets worse as hikes in FSI and heights in buildings get increased without any addition to road space leading to greater road congestion. Further, the DP does not get into an analysis of the city's mobility plan, especially the public transport system and land use planning that will gel with the public transport planning.

10.17 DP and Impracticable Applications

The Development control also sometimes fails because the development plan is so impracticable that it leaves no option for people but to transgress its provisions. The larger areas of 'No Development Zone' included in a Development plan are an example of provisions which have an (indirect) effect of inducing unauthorized development. Reservations of the sites for public purpose without any action or programme for their acquisition are another culprit in this respect. 'No Development Zones' should (as far as possible) be confined to the really undevelopable lands and all lands that are capable of receiving development should be included in one or other development zone. The problem of unimplemented reservations becoming receptacles of unauthorized development is another serious matter.

10.18 Lack of Financial Planning

A Development Plan casts a legal liability on the Municipal Council to acquire all the designated sites within a period of ten years or earlier if a 'Purchase notice' served by the owner of the reserved land is confirmed by the Government. This requires money for the payment of compensation which usually not available with the council. Implementation of the Development plan by the provision of infrastructure, amenities and facilities promised by the Plan is at least a moral if not a legal obligation. This also calls for capital finance for the initial provision of the infrastructure etc. and revenue finance for its maintenance subsequently. Usually very little capital finance is available and the revenue finance is also inadequate. Under such circumstances it becomes necessary to find out ways and means to raise or obtain the money required for the implementation of the plan. The Maharashtra Government does provide grants and loans to the Municipal councils for the implementation of selected proposals in the development plans. But the government grants and loans cannot cater to the requirement of all towns and certainly not for all proposals in all towns. It becomes necessary therefore to explore other avenues for the financial requirements for Development Plan Implementation. Without being over optimistic in this regard, it may be stated that raising finance for plan implementation is not such a hopeless proposition as it at first appears or is made to appear. Self financing urban development is a distinct possibility. The various ways in which this can be achieved are described below:

The failure of DDA in the public realm has been noted by the planning Commission in the Tenth five year plan as "The most important cause of this is the poor and inadequate implementation of the plan during the first 20 years of its existence from 1961 to 1981. Most of the provisions made for various facilities in the Plan were not realized on the ground. Space made available for housing, retail, commercial offices, service industry, small scale industry, as well as for educational, social and cultural institutions was far below the provision made in the Master Plan. The implementing agency, the DDA, notified and acquired all the land required for future growth of the city, but failed to develop it on a scale and at a speed sufficient to meet actual need." Thus, the role of building byelaws cannot be considered in isolation but only as an element of overall urban management system.

10.19 Central and State Financial Support Perfunctory

The very meagre support that cities have received from the Central and State Governments have already been highlighted in an earlier chapter. While the JNNURM is the first major effort by the GoI in supporting metropolitan cities, the analysis of the

financial burden of DP on ULBs made earlier makes it abundantly clear that the current rate of support is marginal and will not carry the operationalization too far. The scaling up of state and central financial support would have to be massively raised.

10.20 Limited Use of TP Schemes

The provisions of DPs and the DCRs of various cities have prescribed how a plot of land should be used for construction; but they have been weak in defining the inter-relationships among plots in a specific area. Plots in cities, originally, have different lengths and breaths; they could be very large or very small squares, rectangles, triangles and quadrangles with oddities that do not render them the best for construction. While this fact individually could somehow be dealt with, they could have disastrous consequences when knitted together. Roads could end up in weird alignments, open spaces would have no shape and neither would areas of cities. Ultimately, aesthetics form and shape in a city would have been destroyed. This is exactly that is happening to Indian cities. The right way of marrying these aspects in city planning would be by getting the plots lose their original uneven shape and re-engineering them with proper shape conducive to city aesthetics. This is best done by forcing such reformation of plots through provisions in the development control regulations of these of cities.

The provisions of the Town Planning scheme that allow such re-engineering are through the Town Planning Scheme instruments of betterment and compensation. However, the TP scheme had almost been abandoned as a planning instrument. This needs to change.

One of the retrograde happenings in regard to DP has been the quiet abandonment of the Town Planning Scheme by Maharashtra as a DP implementation tool. Its benefits are enormous – in terms of form and shape to the city, in location and provisioning of public amenities and in respect of adding viability to the DP. However, on account of certain delays and procedural cumbersomeness, the scheme fell into disuse. This has had adverse impact on DP implementation and must rank as a key deficiency in DP operationalization.

10.21 Limited Use of Land Instruments

The use of land instruments have begun in cities, but their role is still limited. They have primarily been used for land acquisition, but not in the provisioning of services. They are also not well detailed in their application. As a consequence, the full potentials of these instruments have not been realized.

10.22 Development Plan Implementation and Municipal Monopoly

Even after such methods are pressed into service, municipal monopoly over service provisioning in a city would not work because of a combination of several municipal deficiencies - time, talent and money. As cited above municipal bodies need to implement their Plans within two decades. And we have seen that or doing this, the kind of planning and attention that is needed is not available with ULBs. Municipal Councils/Corporations are most of the time engaged in firefighting and trying to live up to the delivery of basic services. Democratic processes such as meetings of different municipal committees, the General Body, review meetings and reviews at the district and State level take a lot of time. Hence the quiet luxury of forward planning is not sufficiently available with ULB officials. As cities grow, the scale and the complexities of urban problems escalate. As a consequence, municipal officials find themselves deficient in handling such issues all on their own. We also have seen that ULBs are extremely ill provided with resources and find themselves perpetually cash strapped.

In view of these constraints, it is essential that municipal bodies give up the insistence on monopolizing service provision and embrace partnerships, especially with the owners of land. If, for instance, land owners whose lands are reserved for schools want to get into partnership with reputed institutions and provide primary schools, ULB should readily accept such proposals as long as the basic parameters of running a primary school are met.

10.23 Lack of Municipal Empowerment

Plan implementation also requires that municipal bodies be empowered, as per 12th Schedule, to do their own urban planning. And if the states provide them with this function, they should have adequate manpower such as urban planners, surveyors and other technical staff for undertaking implementation. It also follows that they be of good quality. Since urban dynamics in all its aspects is beyond human ingenuity to be entirely controlled, the Development Plan must undergo changes to answer that call of dynamics. The Development Plan, therefore, ought not be too rigid disallowing in-built mechanisms for change.

10.24 ULBs ill-equipped to Plan

Apart from the top management having limited time frames in municipalities, urban local bodies also suffer from a lack of technical manpower that can undertake the grass root activities such as surveys, joint measurements and detailed planning of individual activities within the Plan. These include urban planners, surveyors and such technical

personnel whose presence is essential in the local bodies. Towns also need modern tools that are currently associated with land use planning, such as computer based technologies that enable accurate measurements and quick surveys and the preparation of drawings and plans. All these pose difficulties in Plan operationalization.

Since the Plan is not always to the heart's desire of individuals who have stake in lands and properties, there is a frequent tendency to stall municipal proceedings in regard to Plan implementation by taking recourse to approaching the Courts and obtaining stays. As cases mount, most municipal bodies find it difficult to defend their cases in the courts with the limited staff that they have. They, therefore, have to employ a battery of lawyers from outside who can defend their cases. While the High Courts have been critical of the manner and ease with which the lower judiciary grants stays, there has not been much positive impact of such observations and the municipal bodies continue to struggle on this front. It can be safely said that resistance of vested interests to the Plan, poor defence from municipalities and legal loopholes combine to put tough hurdles to the operationalization of the Development Plan.

10.25 Laws on Encroachment Weak

While the provision of TDR has been of assistance to municipal bodies, land acquisition still remains a huge problem. This is on account of reservations on lands that were or have got encroached over time. This has put the burden of removal of encroachments on the municipal body, frequently requiring relocation in case of slums or activities such as hawking. In case of road widening, apart from the land, there have been authorized structures of owners, such as boundary walls that need pulling down. Municipal Councils are required to separately compensate the owners for this purpose.

The removal of encroachments and the reclaiming of municipal land sometimes leads to violent protests and mob activity endangering the lives of municipal employees. Examples have also surfaced where these groups are aided and abetted, either directly or indirectly, by municipal elected representatives. Because of the kind of governance climate that has begun to prevail in cities, these class of representatives have become increasingly assertive and unaccountable. In view of such experiences, the larger municipal bodies have also taken on their rolls a posse of police constables and officers to be in readiness to aid the removal of encroachment by ensuring security cover for municipal staff. Infrastructure provisioning in view of these responsibilities relating to land continues to be an extremely onerous and heavy responsibility cast on ULBs.

10.26 Municipal Legal Apparatus to Defend DP weak

The institutional set up for the implementation of DP is partly as provided by the MR &TP Act and partly as provided by the Municipal Acts. These are in place in cities, except that the time frame in which they operate is extremely laid back. There is therefore a mismatch between required speed of decision-making and the actual lethargy seen on ground. Besides, the top management of the municipal body - the municipal commissioner and the deputy municipal commissioners in municipal corporations and the chief officers in municipalities are state functionaries. In most cases they are not able to provide leadership to the operationalization of the Development Plan. This could be on account of a lack of familiarity with the nuances of the Plan and its operationalization. In most cases it is due to frequent state interference with their tenure in the municipal body where they are generally not able to complete a long enough period to see the Plan through. Many a times, it is because officers themselves find working in the municipal bodies very testing and seek to move out to more salubrious postings where the heat is less and delivery is easier. In many ways this is an outcome of ever mounting demographic load of cities and multiple kinds of shortages and deficiencies that stretch municipal services to the point of collapse.

10.27 Deficits in Building Bye-laws

10.27.1 Form and Shape Unattended

The provisions of DPs and the DCRs of various cities have prescribed how a plot of land should be used for construction; but they have been weak in defining the inter-relationships among plots in a specific area. Plots in cities, originally, have different lengths and breaths; they could be very large or very small squares, rectangles, triangles and quadrangles with oddities that do not render them the best for construction. While this fact individually could somehow be dealt with, they could have disastrous consequences when knitted together. Roads could end up in weird alignments, open spaces would have no shape and neither would areas of cities. Ultimately, aesthetics form and shape in a city would have been destroyed.

This is exactly that is happening to Indian cities. Constructions in the extended areas of Pune and Pimpri would show that private developers have bought plots of land from farmers that have, for instance, huge lengths but narrow widths. The developers perforce have had to adjust their constructions accordingly. This has resulted in narrow entries, poor aesthetics and compromised infrastructure. The right way of marrying these aspects in city planning would be by getting the plots lose their original uneven shape and re-

engineering them with proper shape conducive to city aesthetics. This is best done by forcing such reformation of plots through provisions in the development control regulations of these cities. The provisions of the Town Planning scheme that allow such re-engineering are through the Town Planning Scheme instruments of betterment and compensation. However, the TP scheme has almost been abandoned in Maharashtra as a planning instrument. This needs to change.

10.27.2 DCRs, City Aesthetics and Heritage

Cities across the world, especially in the developed world, pay a lot of attention to aesthetics, form and shape of the city. While the city may be efficiently planned, it adds to the city if it also looks nice and pleasing to the eyes. An examination of the Plans and development control regulations of such urban local bodies show that these are specifically provided for. The Smart Codes applicable to US cities make this amply manifest in the ‘Authority and the Intent.’

The Authority of the Smart Code states, “This Code was adopted to promote the health, safety and general welfare of its citizens, including protection of the environment, conservation of land, energy and natural resources, reduction in vehicular traffic congestion, more efficient use of public funds, health benefits of a pedestrian environment, historic preservation, education and recreation, reduction in sprawl development, and improvement of the built environment”.

The Intents of the Smart Code specify the objectives related to the Region, the Community, the Block and the Building as well as the Transect. The Intent for the Region, for instance, states “That the Region should retain its natural infrastructure and visual character derived from topography, woodlands, farmlands, riparian corridors and coastlines.” Further “That Affordable Housing should be distributed throughout the region to match job opportunities and to avoid concentrations of poverty”. In the Intent for the Community, the Smart Code states “That within neighborhoods, a range of housing types and price levels should be provided to accommodate diverse ages and incomes”. Further, “That Civic, institutional, and Commercial activity should be embedded in downtowns, not isolated in single-use complexes”. Moreover “That a range of Open Space including Parks, Squares, and playgrounds should be distributed within neighborhoods and downtowns”. In regard to the Block and the Building the Intent states “That buildings should provide their inhabitants with a clear sense of geography and climate through energy efficient methods”. Further “That Civic buildings should be

distinctive and appropriate to a role more important than the other buildings that constitute the fabric of the city”. (Smart Code, version 9.2. Municipality)

The Smart Code, it is further seen, provides for particular kinds of public and private frontages and standards for the façade of the building, that is the exterior wall of a building that is set along a frontage line or a ‘Lot line bordering a Public Frontage’. Facades facing Frontage Lines define the public realm and are therefore more regulated than the Elevations (an exterior wall of a building not along a Frontage Line) facing other Lot Lines. It is interesting to note that the Smart Code does not believe in all out uniformity and standardization of Rules. There is sufficient customization depending on the requirements of a specific area or building across Transect Zones (areas on a Zoning Map). Further, the provisions of the Smart Code are not always mandatory. This is beautifully stated in the following manner, “Provisions of this Code are activated by ‘shall’ when required; ‘should’ when recommended; and ‘may’ when optional”. (Smart Code, Municipality)

Unfortunately, it has been seen that Indian authorities have grown insensitive to the aesthetic needs of the city. A little over a year ago, the Delhi High Court had dramatically highlighted this when it pointed out the manner in which protected monuments in Delhi were being compromised - with the Archaeological Survey of India (ASI) having proactively broken the very law by which it is supposed to protect monuments and archaeological sites. (Delhi High Court, 2009).

In a roundtable on Urban Design held at Delhi, it was contended that the Development Plans have shown secondary consideration to the design dimension in urban planning. “Design was never a conscious primary consideration in the way the cities were being planned. It was always a by-product, landing second or third on the (planners) list”. (Raj Liberhan, 2008). The roundtable specifically discussed the case of Gurgaon and concluded that “Gurgaon is a city without a sense of space, design, and sensitivity because of the way it has been planned”. (Rajat Ray, 2008).

What the First Master Plan had visualized, Singh says, was essentially private-vehicle-ownership based: be it a cycle, a two-wheeler or a car. No specific scheme was formulated for mass transit facilities. The subsequent growth in population of the city "from the forecast of 5.4 million in 1981 to 8.25 million in the year 2001 and now 22.0 to 23.0 million in the year 2021 has led to jam packed roads, overflowing car parks,

painfully high accident rate, all pervasive noise pollution, and numerous incidents of murderous road rage." (Singh, 2010)

It was with the idea of overcoming this deficiency that the Delhi Metro Rail Corporation (DMRC) was formed under a statute in 1995. The first stretch of the rail system was completed in 2002, well ahead of schedule, and, because of the advantages to the travelling public, it has since been hailed in Singh's description "as the torch bearer of a resurgent India determined to shed its image of project bunglers!" (Lahiri, 2011)

What the Metro also did was to deface the surrounding cityscape in a way that would have made Nehru furious. For one, this 400-billion-rupee undertaking with some 415 km length of rail track all over Delhi is by far the longest elevated rail track system in any city in the world. Its elevated character has ensured that the central medians in arterial roads of Nehru's Master Plan now have huge monsters of concrete. For another, the project is detached from the Master Plan. Since 2006, some 500 registered architects as also 60 town planners have been tenaciously highlighting this. Their petition to the Prime Minister on 29th March 2007 noted that "the logic of urban planning has been turned on its head. Instead of fitting a transport system into a well organized land use framework, land-uses are now arbitrarily altered to chase a transport system." The petition resonates with my own experience as a member of the DUAC, a body which frequently examines DMRC projects that are required by Parliament to be conceptually approved by it. Making a mockery of the DUAC Act, most stations that come for approval are already more than half-built when sent for 'sanction'. Delhi Metro projects, unlike similar schemes in other parts of the world, are also exempt from environmental evaluation. (Lahiri, 2011)

10.27.3 Adequate Parking Norms not spelt out

A news report of a study conducted in Rambag and Ideal Colonies of Kothrud, Pune concluded that modifications in the DCRs through 300 internal circulars by the Pune Municipal Corporation (PMC) since 1987 have led to shrinking of public space set aside for roads, parking, and recreational areas. These changes resulted in increasing the population density from 250 people per hectare to 325. Amenity space planned at 3.9 sq m per person shrunk to 0.92 sq km. The modifications also affected parking requirements, with per capita road area decreasing to 4.10 sq m, and parking space deficiency of 28,945 sq m in all. Additionally, the original DCR provision of 36 m height for buildings was subsequently revised to 100 m, despite the access road width continuing to be 9 metres.

The staircase width fell from 1.2 m to 1 m. Margins were also reduced, compromising light and ventilation in buildings. (Times of India, 2011)

10.27.4 DCRs and FSI

The concept of FSI as used in Indian cities tends to keep it flat and low. Some of the most significant FSI impacts are on costs, building and population densities and quality of life. The adherence firstly to a uniform FSI throughout the city has not had salutary impact either on affordability, or to density or to quality of life. Neither is it backed by practices in cities across continents. It is quite clear that commercial areas need higher FSIs. This is at least on two counts - lowering costs and productivity. Additionally, these are places where people work and do not live and hence can tolerate greater densities. Bungalows and bungalow societies, on the other hand, do not consume allotted FSI since they desire greater openness. High middle class apartments would like to consume larger FSIs since they prefer living in tall buildings with more air, quiet and more living space. The poorer classes may not be able to afford living in very high rise constructions because of additional costs, such as of elevators and fire fighting requirements, but can live with FSIs that help reduce costs.

The inability to interpret FSI in line with a city's varied requirements is a significant planning deficit. Some of the most significant FSI impacts are on costs, building and population densities and quality of life. The adherence firstly to a uniform FSI throughout the city has not had salutary impact either on affordability, or to density or to quality of life. Neither is it backed by practices in cities across continents. It is quite clear that commercial areas need higher FSIs. This is at least on two counts - lowering costs and productivity. Additionally, these are places where people work and do not live and hence can tolerate greater densities. Bungalows and bungalow societies, on the other hand, do not consume allotted FSI since they desire greater openness. High middle class apartments would like to consume larger FSIs since they prefer living in tall buildings with more air, quiet and more living space. The poorer classes may not be able to afford living in very high rise constructions because of additional costs, but can live with FSIs that help reduce costs.

The UN's City Agency, UN-HABITAT bears the deficits out when it states that "in most cities of the developing world, modern urban planning (where any) has proved unable to nurture shared socioeconomic advancement....Planning has also proved unable to prevent

environmental degradation or the formation of slums, and is notable for serious shortcomings in terms of transport and urban mobility”. (Source: UN-HABITAT, 2012).

Summary

The primary objective of urban planning - to subserve a balanced development of a city's economy and environment with equity – has not been achieved through current planning. A very large number of problems clog its path – delays, pressures and a long process. But even more substantive issues impinge upon the plan – inadequate norms, weaknesses in planning housing and transport and solid waste, deficits in building bye laws, inadequate treatment of finance, and lack of strategies to bridge infrastructure deficits.

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CHAPTER 11

NEW STRATEGIES FOR ADDRESSING PLANNING AND DEVELOPMENT REGULATION DEFICITS

Introduction

Why should every city in the country collect its garbage on streets, create eyesores and destroy its cleanliness? Is that how garbage in cities around the world is collected? Why should every city struggle to provide admission to its children in schools or treat its patients in hospitals? Why should most cities have no form and shape and look so completely devoid of aesthetics? Is this how cities elsewhere have grown? Why should there be so much of unauthorized construction everywhere? Why should every large city struggle with traffic and transport and continuously dig its roads? Above all, why should cities push more and more of its people into slums? In other words, why should cities give to themselves a plan each and then move to destroy it? And if this is what is generally happening in most towns, is it not time to look into the development Plans and Development Control regulations, two key documents that capture the future of cities in their folds?

11.1 Core Group Recommendations on Reviewing Town Planning and Development Control

The earlier chapter has detailed deficiencies of the planning process. This Chapter seeks to shed light on the remedial measures possible in reengineering the Development Plan and its DCRs. A lot of thought has been given to these problems by several studies and urban thinkers and there has been practical evidence of some of the solutions on ground. These include international agencies, think tanks constituted by Government of India and State Governments, urban local bodies, urban-oriented universities and urban practitioners.

In this regard, it is significant to look at the recommendations of the Core Group on Reviewing Town Planning and Development Control Process (UD, 2005). The Terms of Reference of the Core Group were

- “To study and review the legal framework and procedure involved in the development planning and town planning process and suggest areas of simplification and improvement.

- To redefine the objectives of the Development Planning process in the context of the challenges posed by the rapid urbanization, imperatives of the 74th Constitutional Amendment Act and global agenda of sustainable development.
- To examine the limitations in the implementation of the Development Plan and suggest the ways and means to mobilize resources to implement the Development Plans
- To examine the constraints in the implementation of the Town Planning Schemes and highlight areas of improvement.”

11.1.1 Key DP Deficiencies

The issues that the Group identified were that the present Development Plans were largely "land use plans without much consideration of socio-economic parameters" and unrelated to the imperative of urbanization and environmental problems. There was "absence of consultation" and the process was "very long". The DP was not accompanied by any "investment Plan" and implementation was 'poor'. Reservations led to "inequities and litigations" and there was "inadequate integration with regional and peripheral planning process".

11.1.2 Remedial Measures

The Core Group suggested a number of modifications. It advised an "integrated Planning Process at Regional/District and city level including peripheral areas". It wanted the authority of preparation and approval of DP to be transferred to the ULBs. The State was counselled to take the role of providing "comprehensive guidelines" and the "power to intervene under exceptional circumstances which must be recorded in writing". It prescribed that the "Development Plan should have an explicit commitment of the ULBs to allocate the financial resources to implement the plan". It wanted the "system of reservations on individual land holdings" to be replaced by "land pooling and readjustment for development of infrastructure and amenities".

11.1.3 Three-Fold Planning Process

The Group advised a three-fold planning process: Regional/District Plan, city-level structure Plan and at city level and TPS for amenities in the neighbourhoods. The Planning was required to be "participatory and inclusive" and "a mix of the 'Top Down' and 'Bottom Up' approach". It wanted a five year "action plan with investment planning" and a revision of planning standards for developing amenities. The Core Group strongly felt that "planning must address the issues of low income housing, livelihood generation

and informal sector" and the provision of "adequate infrastructure for sustainable environment management".

11.1.4 Institutional Planning Framework

The Group also put forth the following "Institutional Framework for Planning":

Table No. 11.1 Proposed Institutional Structure

Level of Plan	Planning Authority
Regional Plan (Metropolitan Areas)	Metropolitan Planning Committee (MPC)
District Plan	District Planning Committee (DPC)
Peripheral Plan	PCM/DPC/ULB
Structure Plan	ULB
TPs/Local Area Plan	ULB

11.1.5 Time Frame

The Core Group prescribed a time frame for Plans. The Regional Plan/District plan was to be ready in one year. Municipal Councils were allowed one year to get a City Level Structure plan and Peripheral Plans together and Municipal Corporations two years. The State Government was to approve the Regional/District Plan within six months and MPC/DPC were to approve city level Plan within three months. Failing this the Plan was to be deemed approved.

11.1.6 DP Implementation Plan

The Development Plan was to comprise an implementation Plan. The plan period of 20 years was to be broken into five year action plan with investment commitments and an annual report on implementation was to be submitted. In regard to reservations, the Group suggested that reservations should be fastened on lands of owners who had multiple holdings. Land acquisition was to be effected through the use of FSI/TDR and accommodation reservation. Levy and recovery of value based betterment charges was to be credited to a city development fund and budgetary provisions were to be made at the time of reservations themselves.

A detailed mechanism for implementation of Development Plan through town planning schemes was spelt out by the Core Group. Areas to be developed by the TPS were to be identified in the structure plan. These would include Urban Renewal areas as well as new developing areas. The identification of TPS areas were to be based on Planning Sectors in

the City/Town. A consultative process for formulating town planning schemes was to be initiated at the electoral ward level. A "Revolving City Development Fund" was to be set up to compensate the land owners. The schemes had to attempt to be self financing to the extent possible and amendments on the lines of Gujarat Model were to be incorporated in the MRTTP Act. Private empanelled town planners/architects were to be employed as TPO and arbitrators and land possession was to be taken on declaration of preliminary award.

11.1.7 Other Recommendations

The Core Group recommended amendment in the Municipal Acts to make implementation of the Development Plan mandatory. Digitization of Survey Sheets and application of GIS and information technology for regular updation of survey records was important. While the Master Plan was prepared for the city as a whole, the Group felt that local level planning in the nature of urban design had great relevance. local issues "like footpath design, street furniture, locating street vendors, utility booths, signage, conservation of heritage precincts are important elements of urban planning that can hardly be attended to through twenty year master plans. Byelaws could probably provide for preparation of such plans and enforcing them within the framework of master plan".

11.1.8 Suggestions with respect to DCRs

In regard to DCRs, it was felt that "development control is based upon an absolute set of regulations. It does not permit location specific impact evaluation of an individual proposal. This is due to a general apprehension that discretion lead to rent seeking behaviour. On the other hand such rigid regulations impel developers to bypass the regulations by rent paying perhaps at different levels. This delays development and adds to the transaction cost. Unwillingness to evaluate impacts of individual development has also prevented Indian planning system from adopting Impact Fees of imposing Planning Obligations, ways of exacting resources, monetary and land - for mitigating adverse impacts of development". A constraint on redevelopment was "the fragmented landownership (or leasehold rights) of very small and narrow plots. Instead they should provide incentives for assembly of such plots and proper layouts with adequate roads, parking and open spaces".

It was further suggested that the building byelaws "should not be exclusionary in nature. It is experienced that the minimum legal housing unit defined by such regulations is not affordable by the majority, even if the influence of land prices is not considered. Could we explicitly target that the construction cost of minimum legal dwelling unit defined by

the byelaws will be affordable to at least 80% of the households? In that direction, can we consider materials and specifications that do not assure a structure that would last for 80 or 100 years but only 15-20 years? Obvious in this, is an assumption that there exists a trade-off between the longevity of the structure and its cost". It was also suggested that an attempt should be made to have building byelaws that enable local authorities "to prepare local plans within the broad framework of master plan'. These could provide for "so called informal activities such as retail trade without their occupying footpaths or small manufacturing without having adverse environmental impact".

11.2 Study of McKinsey & Company

Another recent and important study was undertaken by McKinsey & Company. In its study titled "India's Urban Awakening: Building Inclusive cities, Sustaining Economic Growth", it devoted Chapter 2.1. to Urban Planning and made the following recommendations:

11.2.1 Overhaul Metropolitan and Municipal Plans, Planning Systems and Planning Capabilities.

"India's planning is in a very poor state. On paper, India does have urban plans - but they are impractical, rarely followed, and riddled with exemptions. For example, no city in India has a proper 2030 transportation master plan, nor has any of them allocated enough space and appropriate zoning for affordable houses. India needs to make urban planning a core, respected function, investing in skilled people, rigorous fact base, and innovative urban form. Putting this right should not be difficult. This can be done through a 'Cascaded' planning structure in which large cities have 40-year and 20-year plans at the metropolitan level that are binding on municipal development plans (Exhibit 16). Central to planning in any city is the optimal allocation of space, especially land use and Floor Area Ratio (FAR)² planning. Both should focus on linking public transportation with zoning for affordable houses for low-income groups. These plans need to be detailed, comprehensive, and enforceable, and exemptions should be rare than the norm. By revamping its planning system in this way, India could save more than 6 million hectares of potentially arable land over the next 20years (Exhibit17)." (McKinsey & Company, 2010).

The study recommended the "devolution of planning function to local governments by empowering MPCs to create statutory metropolitan plans and transferring local urban planning powers to municipalities" It further suggested an "integrated, cascaded planning system consisting of 20-year master plans at metropolitan and municipal levels containing

calculations of predicted population, GDP, required transportation, affordable housing and other urban infrastructure as well as land use and FAR norms. It advised creation of “well-resourced planning organizations at metropolitan and municipal levels and innovate with latest planning technologies and models” and transparency and public participation in planning. It counselled “building six to eight world-class urban-planning institutes to train 3,000 to 4,000 planners annually”. (McKinsey & Company, 2010)

11.2.2 Clarify Mandates and Roles by transferring the Planning Function to Local Governments

India first needs to define the roles and mandate of the five government institutions involved in the planning process- the state government, metropolitan and district planning committees, regional authorities, local governments, and other parastatal agencies. Three key initiatives can make this work:

- Constitute and empower MPCs to create statutory metropolitan plans in at least the top 20 metropolitan regions that have multiple municipalities. A metropolitan authority should act as its secretariat. For the remaining towns create and empower equivalent DPCs to create regional plans at district level.
- Make the metropolitan (or regional) plan binding on municipal plans through four parameters:
 - Target population for key wards
 - Broad land use for FAR, especially for commercial and residential parcels, including areas for intensification, regeneration, and Greenfield development.
 - Major metropolitan transportation projects and their efforts on land use and densities at a ward level.
 - Goals for specific sectors, such as affordable housing, education and health care units, including zoning norms.

Outside of the subjects for metropolitan (or regional) planning, all local governments should fully transfer the appropriate set of local urban planning powers, among them parcel by planning norms such as those governing FAR and land use.”

11.2.3 Execute an Integrated, Cascaded Planning System

“For larger metropolitan areas, MPCs would need to prepare two types of metropolitan plans - a 40 year concept plan and a 20 year master plan. For other cities, DPCs in partnership with state TCPDs, could create just the 20 year district master plan. These

plans could then flow down into a detailed 20 year municipal development plan. All plans must be integrated across sectors. We now summarize this cascading structure and the plan contents:

11.2.4 Create 40 year Concept Plan for the top 20 Metropolitan Regions.

This long range plan should articulate the broad vision of the city (including the economic proposition to investors and the quality of life targets for citizens), key projections on population =, employment by sector, and land demand, as well as a broad distribution of a population in new and old growth centers with sufficient high capacity transit systems. Broad land use should be specified, ideally to a 1:100,000 scale. The concept plan could also provide high level guidelines for projects and policies in key priority sectors, such as transportation and affordable housing. These plans should be updated every ten years.

11.2.5 Cascade the 40-year Metropolitan Concept Plans into 20-year Metropolitan Master Plans.

These 20-year metropolitan master plans need to translate concept plans into a detailed 1:25,000 scale land use plan that includes distribution of population across new and old growth centers along with key planning norms such as FAR, setback, density and land use. These plans should also contain detailed reports that enumerate key infrastructure projects and polices in strategic transportation, environment, affordable housing, education, and health care as well as urban design. Cities need to sequence these projects and back them up with a broad financing plan. For smaller cities, the DPCs should directly create these 20-year regional master plans with a similar content.

11.2.6 Cascade 20-year Metropolitan Master Plans into 20-year Municipal Development Plans.

Municipal (city) development plans must conform to the four cascading parameters mentioned in the metropolitan (or regional) master plans. Based on the specified target holding population and employment by ward, broad land use and FAR and goals for specific sectors, these development plans should then create parcel by parcel land use norms (including such matters as zoning, FAR and setback) as well as key projects in basic services (e.g. water supply, sewage treatment, solid waste, storm water drains), local transportation (local roads and highways, local mass transit), environment, cultural heritage, and social services (education, affordable housing and health care) in line with the metropolitan master plan. These plans should emphasize urban design norms to give a unique character to the city. As with regional level planning, a plan should set forth priorities for projects, what sequence they should follow, and how to pay for them."

11.2.7 Create well resourced Planning Organizations

"The quality of urban plans is only as good as that of planning organization. More often than not, large scale urban planning has been the forte of government organizations around the world. However, India faces capacity shortages in both personal and technology, and this makes the creation of high quality plans more challenging. We recommend four broad areas of action to address these deficiencies:

11.2.8 Build an effective planning organization at the metropolitan and city levels

At the metropolitan level, India needs to create separate planning departments housed within the metropolitan authority. In addition, there is need for metropolitan planning board that could consist of four or five eminent urban planning experts (such as planners, economists, and architects), heads of other parastatal agencies active in the region, and two or three citizen representatives. The planning board could be chaired by the head of metropolitan authority and would be responsible for all the technical decision in planning process, including coordination with different agencies. The decisions in the planning board would ultimately need to be ratified by the appropriate MPC and DPCs which would define the overall vision for the region and key projects and policies. A similar structure is needed at the city level; the planning department should be housed within the municipality and be overseen by a similar planning board. The decisions of the planning board would need to be ratified by the MPC (ultimately headed by the metropolitan mayor), who would be responsible for the overall vision of the region and key projects and policies. For smaller cities, state TCPDs could help create city development plans and should be strengthened appropriately."

11.2.9 Build sufficient urban planning capacity.

"India needs 200 to 300 planning professionals (such as planners, economists, architects, geographers, demographers and digital experts) per city in the larger tier 1 and 2 cities and 15 to 20 in smaller Tier 3 and 4 cities, against the current aggregate annual supply that is below 200. Clearly, there is an urgent need to augment this capacity by building new institutes. Until India builds the necessary capacity, it could access talent by leveraging global expertise, simplifying the writing of new plans by creating common templates that can be used and reused across cities; and creating standards and specifications that enable existing talent to work more effectively.

11.2.10 Innovate with planning technology and models to ensure quality plans.

A high quality plan requires reliable data base. India's cities need to improve the country's data in such fundamental subjects as land availability and usage, population growth and movement, job mix and its prospective evolution, and income mix and forecast changes in that mix. For each of these, smart technology solutions are likely to be available. As we have already noted from our summary of best practice in other world cities, every urban centre in India should create rigorous econometric models to project likely economic and demographic evolution, devise a detailed GIS mapping of existing land use and conduct detailed studies of future needs in various sectors, especially in transportation. We recommend an investment of \$ 10 million per city for 1 and 2 tier cities and \$2 million per city for smaller tier 3 and 4 cities to build these capabilities over the next five to ten years."

11.2.11 Create tight execution and enforcement mechanisms with sufficient public participation

"Three initiatives could help improve execution of India's urban plans:

- Ensure community participation in the planning process by collecting public feedback through public exhibitions of draft regional concept and master plans.
- Make urban plans an anchor to the development priorities of a city, with all subsequent policy and investment trade-offs based on those plans.
- Minimize exemptions and ensure that they are fair by creating a simple, streamlined process that provides a mechanism for public hearing on major exemption proposals and allows for appeals to the local council, the MPC, or the DPC.

Implementing the steps that we have discussed could transform India's Urban Planning in five to ten years. The question is where and how India should start. We have identified the following next steps for central, state, metropolitan, and municipal governments."

11.2.12 Central Government

"The Central Government should focus the first wave of urban planning reform on the 65 largest cities (including 2 metropolitan regions) through four key initiatives:

- Using the flagship National Urban Renewal Mission (NURM) to provide 500 crore rupees for creation of metropolitan concept and master plans subject to four conditions:
 - Creating and empowering the MPC and DPC
 - Transferring the appropriate set of planning functions to all municipalities.

- Making metropolitan concept and master plans statutory and binding on local development plans.
- Issuing effective guidelines for the planning process, plan contents and exemption mechanisms.
- Creating detailed manual and templates of best practice concepts and master plans in simple, easy to understand language.
- Providing an additional direct grant of 10 billion rupees (\$222 million) to upgrade planning technology with such things such as GIS maps and economic, transportation, and affordable housing models.
- Launching between six and eight planning institutes with an annual capacity of at least 5000 urban planners to cope with the expected demand; these institutes could be greenfield or housed in existing institutes such as the Indian Institute of Technology."

11.2.13 State Government

"The state government would need to initiate four key reforms:

- Prepare a 20-year urbanization master plan for the entire state that determines the target portfolio of cities with anticipated population and employment, key policies to attract investment and create jobs, and specific major intercity transit project such as high speed expressways.
- Form an MPC in at least 20 metropolitan regions and a DPC in each of the remaining districts and transfer regional planning powers to them.
- Make the cascaded planning system official by ensuring regional concept and master plans statutory and that four key parameters from regional master plans are binding on district plans.
- Create guidelines for content, capacity, and technology investment as well as for community participation in planning."

11.2.14 Metropolitan Authorities

"Once formed, the MPCs, with the help of metropolitan authorities, must immediately begin the process of creating 40-year metropolitan concept plans and 20-year master plans with integrated content by leveraging private sector expertise in the short-term. All subsequent major regional infrastructural projects, such as mass transit and affordable housing, must be decided on the basis of these plans."

11.2.15 Municipal Government

"Local governments should create their own 20-year city development plans based on the new metropolitan or district master plans with integrated content and, like metropolitan plan, ensure that all subsequent infrastructure projects, such as water supply and sewage are decided on the basis of these plans.

A shift to a systematic planning structure and process is critical to help India anticipate, and facilitate, effective and sustained urbanization. India needs to put in place urban plans that- like any corporate plan- create a vision that articulates a city's value proposition for both citizens and investors, make the best use of finite resources, and create a tight process to ensure effective implementation with minimal exemptions, and robust enforcement. Our analysis suggests that India can achieve these aims even in the relatively short term." (McKinsey & Company, 2010);

11.3 Report on Indian Infrastructure and Services

The next important Report is the "Report on Indian Urban Infrastructure and Services" commissioned by Ministry of Urban Development, Government of India in 2010. While the Report mainly deals with municipal services delivery and their financing, it gives some useful advice on urban planning. The Report states that "Planning for India's cities and towns has received little attention at all levels of government. The planning commission of the Government of India has focused on socio-economic planning in its dialogues with state government. The Committee recommends that spatial planning be made an essential part of the state plans and that the Planning Commission provide incentives to state government for integrating socio-economic planning with spatial planning."

11.3.1 Dovetailing State Plans with Central Infrastructure Plans

It also has several suggestions on dovetailing State plans with central infrastructure plans such as the Delhi-Mumbai Industrial Corridor. In such cases, "integrating spatial with economic planning is vital for the success of this project." It suggests that the starting point for integrating socio-economic and spatial planning should be regional planning. Rather than focusing on expansion of towns in isolation from their hinterland. It is important to focus simultaneously on the watershed region. Within a region, the aim should be to identify towns or growing villages with locational or natural resource advantages, and focus future socio-economic and spatial growth by guiding investment of funds for infrastructure and industrial growth into such nodes."

11.3.2 Metropolitan Planning Committees

"The committee strongly recommends the creation of Metropolitan Planning Committees (MPC)/District Planning Committees (DPS) as set out in the 74th Constitutional Amendment Act. DPCs have been constituted but not empowered to function in most states, while MPCs have not even been set up in most states. The Committee recommends that the MPCs/DPCs be operationalised and made the focal point for all activities related to regional planning. It is vital to have a certain number of eminent citizens on these Committees."

11.3.3 Unified Metropolitan Transport Authority

"The Unified Metropolitan Transport Authority (UMTA) proposed under the National Urban Transport Policy (NUTP) for all cities with population above 1 million should serve as the technical arm of MPCs/DPCs, assisting in transport related planning. Urban Development Authorities, currently involved in city planning, should serve as technical secretariats to MPCs/DPCs and assist with aspects of regional planning. Regional plan prepared by MPCs/DPCs should integrate into state governments' spatial and socio-economic plans."

"In accordance with a structural plan for the region prepared by a Metropolitan Planning Committee, the constituent ULBs of the area must prepare their development plans. The municipal legislations should define a plan process which is genuinely participatory and a process of plan ratification must also be laid out. The current Master Planning models treat transportation as a residual Transportation needs to be integrated with land use to take advantage of agglomeration economies and minimize likely congestion diseconomies. This must include provisions for housing for the poor along transit corridors so that they can avail of public transportation. Integration becomes possible if there are institutions that can coordinate the planning and management of land and transport investments. Examples from around the world, such as the Land Transport Authority in Singapore, Translink in Vancouver, and Transport for London have successfully demonstrated this."

11.3.4 Conversion of Agricultural Land

"As cities grow and expand, agricultural lands surrounding them need to be converted to non-agricultural use to meet the demands of housing and commerce. Conversion of agricultural land to non-agricultural use falls under state a land revenue laws. These laws discourage alienation and non-agricultural use of farm land. The growth of urbanization and progress of industries and services sectors have increased the demand for conversion."

The rules for conversion as prescribed as prescribed under the old laws are restrictive, and as a result, proposals for conversion face many obstacles. This is also a major source of corruption."

11.3.5 Peri-urban Growth

"In the peripheral areas of fast-growing urban agglomerations, which grow faster in the unregulated land unauthorized periphery than at the core, the Town and Country Planning legislation should lay down clear and simple guidelines for the rural hinterland of towns. The panchayats should be able to sanction buildings and impose a modicum of orderliness in the growth of village habitations and prevent them from becoming the slums of future urban areas."

"The committee believes that city planning should be an integral function of ULBs. To the extent that Development Authorities are engaged in local planning, this function should be transferred to ULBs. Earlier when there were no Development Authorities, ULBs (at least the large ones) had a planning and infrastructure development function. It was only during the 1970s that this function was severed from ULBs. Whatever the justification at the times, it is difficult to see its logic in the present context."

11.3.6 Town Planning Schemes

"A common practice for and development by public intervention is through land readjustment schemes which compensate original owners of acquired land in kind, by returning portions of the serviced developed land. Such schemes have been used very efficiently in Korea, Taiwan, Japan, Australia and West Germany. The Town Planning Schemes (TPS) of Gujarat is an example of land acquisition that does not get mired in court cases and leaves dispossessed and uprooted families in its wake. Under the scheme, once the area to be urbanized is identified in line with the strategic development plan, further land use planning and development is done by the Municipality."

"Land readjustment Schemes like the TPS of Gujarat are examples of citizen participation in the supply of land for infrastructure development at no cost to the local body. Ahmadabad and Surat have completed more than 100 such schemes each, covering 300sq.km and 137sq.km respectively. Under the schemes, after the development authority of a town or city has drawn up a strategic development plan, the expansion area is divided into number of smaller areas, typically between 1 and 2sq.km each. These small areas are then developed through a framework of participative planning for infrastructure, with land owners being kept well informed at all stages of the project."

"In another successful land readjustment model, landowners from a particular community organized themselves to set up the Magarpatta Township Development and Construction Company, which prepared a city plan for Magarpatta, an integrated township on the outskirts of Pune. They came together on a common platform as partners in town planning i.e. land development for housing, infrastructure and other public purposes. The Magar farmers pooled their land with each landowner becoming shareholder in the company in proportion to the value of his/her land in the total, with the land cost being determined as a percentage of sale proceeds as and when accrued. The result is that Maharashtra has got an eco-city within the precincts of Pune. The town manages its own municipal services and yet pays its taxes to the Municipal Corporation. In course of time, a solution will have to be found for bringing Magarpatta within the folds of the federal democratic regime with accountability of elected representatives to the citizens."

11.3.7 Planning FSI

"The vertical dimension of land is even more important. Floor spaces index (FSI) is one of the most abused terms in the Indian Urban Planning System, and the allocation of FSI in Indian cities is seldom made rationally. Restricted FSI and density norms have led to sprawling cities with spiralling costs of infrastructure development. Judicious use of FSI in the creation of 'compact cities' is extremely important. An examination of intra-city economic functions is needed in order to design appropriate policies to maximize efficiencies. This would require spatial planning that supports (and is not inimical to) economic efficiency and market responsiveness."

11.3.8 Inclusion and focus on the Poor

"An important area of planning which warrants special focus is housing for the poor. The housing needs of the poor and low income groups are not likely to be met by the play of market forces alone. But the solution also does not lie in the government engaging in building housing colonies for the poor. Better land management, good infrastructure, access to subsidized credit, and private players, all have a role in providing the solution. Financial sector reforms, coupled with innovations in project development and project management, can make the low income sector attractive to private players. Development of clarity in land titles will also have a big impact on housing for the low income population."

"Master Plans, with a 20 year perspective, are rather restrictive and do not address the housing problem of the poor effectively. There is need to have a re-look at the land use

model and allow mixed land use which could solve a part of the housing problem. Land along transport corridors could be used for housing the poor. This would provide then better access to transport."

11.3.9 Public Private Partnerships

"Large private companies are already tapping the market potential at the bottom of the pyramid for a number of sectors, but the low income housing sector has yet received due attention. New players are beginning to enter the market and substantial policy support will have to be provided to address the huge shortage of low income housing. Rental housing for low income groups must be encouraged. The committee believes that an approach which creates an enabling environment for investing in low income housing will help alleviate the shortage. PPPs should be explored to help manage the scale of the challenge."

"Besides providing for urban services of universal standard norms for the entire population of India, the committee recommends that certain funds be set aside for investing in re-zoning, re-planning, renewal, and redevelopment of urban areas where considerable efficiency and improvement to services can be affected through these efforts. This will include schemes to redevelop slums. While the JnNURM provides for this, it has failed to implement the same. The proposed Committee on land reforms could also recommend how the allocation for redevelopment activities must be spent." ("Report on Indian Urban Infrastructure and Services")

11.4 City Development Strategy

A significant city-based study was made in Hyderabad (United Nations Human Settlement Programme (UN-HABITAT), 2004. This was titled City Development Strategy Hyderabad. While the study was specific to Hyderabad, many of its observations and conclusions have nation-wide relevance.

Its treatment of urban traffic and transport was especially comprehensive. It observed:

In almost all cities in India, "the city's expanding population and the need to support such a population in transport has largely been answered by an increase in the number of private vehicles". Since the road length has not kept pace with vehicle increase, "traffic congestion has increased leading to endless transportation gridlocks. Interestingly there is a declining trend of using bicycles." It further added, "Traffic congestions have reduced journey speeds in the city and there are huge delays at intersections. Parking has emerged as a major concern with indiscriminate parking of vehicles. There is increasing vehicular

noise being generated in the city and environmental pollution is definitely on the rise. The monitoring of pollutants such as hydrocarbons, carbon mono-oxide and total suspended particulate matter has revealed that they generally exceed the normal thresholds affecting the ambient air quality of the city."

The study suggested a three-pronged strategy to deal with traffic and transportation issues. They were as follows:

11.4.1 Short-term strategy

Short-term measures such as intersection improvements, signalization, lane markings, delineators and signs should be taken up on a continuous basis as the travel characteristics alter quickly on account of natural growth and land use changes. Planning development of access areas to public transport systems, creation of lane and traffic discipline would also be ongoing practices.

11.4.2 Medium term-strategy

Medium term action plan aimed at development of traffic infrastructure over a perspective plan period of 5-10 years is required to bring about enhanced and efficient carrying capacity of entire system. These measures typically would comprise infrastructure project for network improvement such as parallel roads, link roads, slip roads and bridges. They would also include grade separation, alternate transportation system such as MRTS, restructuring of bus transportation system to a direction based strategy. In place of multiple destination based approach, and assignment of complimentary roles to such system as BRT (Bus Rapid Transit).

11.4.3 Long-term strategy

Long term action plan should aim at development of structure plan for the urban area with transit as one of the lead components, which will direct urban growth so as to bring about a structural fit between transit infrastructure and urban growth. This will also examine a comprehensive multi modal public transport system to bring about the most optimal mix of commuting within the urban area and thus providing a sustainable transit solution. New facilities should be created to improve level of service and to cater to increased population.

11.4.4 Intersections, Signals, Markings, Bus Bays and Pedestrian Crossings

One of the major factors in traffic flow efficiency is the performance of intersections. This is an area of immediate interventions and can be implemented with small

investments. Additionally the 100 signalized intersections must be linked with a suitable area traffic management system and should be integrated with surrounding municipal areas. In view of mixed nature traffic in Hyderabad is necessary to standardize the lane markings, edge markings, median markings, pedestrian crossings, parking zones, traffic delineators and traffic signs over a length of 200 kms. Similarly, 252 bus bays that have been identified should be commissioned for convenient bus stoppages without impeding traffic. For pedestrians, it is necessary to increase their protection through provision of guardrails, zebra crossings, and pelican signals of through grade separations.

11.4.5 Parking Management

Excessive population densities, heterogeneous traffic and commercial development along all major roads have aggravated parking problems in Hyderabad. A proper parking policy that looks at users-pay principles is imperative. Off street parking complexes for private vehicles at 22 important nodal points in the city are required to ease traffic congestions by releasing precious carriage way. There is an urgent need to streamline intermediate public transit vehicles at major trip attraction centres by provision of suitable designed IPT hubs. Similarly, there is a need for providing parking space to private bus operators. The norms of parking space for private and public buildings should be revised.

11.4.6 Roads and bridges

Given that the percentage area covered by roads is a mere 6 percent of the total area, road widening helps improve channel capacity by adding more area to circulation channels. The past work of the city in this regard is laudable and should be pursued further. Nine critical link roads have been identified as alternate paths that shall help traffic distribution. This should be taken up. Important barriers of free flow of traffic in the urban areas are river Musi and railway lines. It is essential that these barriers should be punctured at as many points as possible to improve connectivity. In this regard, at least four new bridges are needed.

11.4.7 Public Transit System

A good public transit system for a city cannot be overemphasized. It eases traffic congestions by reducing dependence on private transport, brings down vehicular pollution, contributes to the economy and helps the urban poor to save time and money and optimize their efficiency. Hyderabad intends to pursue a combined rail and bus system by integrating road based public transportation system through a powerful bus feeder network. It is proposed to develop feeder bus routes and services to improve access to the stations and thus encourage people to use the proposed MRTS.

11.4.8 Safety and Environment

The requirements of safety demand that there must be a recording of accidents, their analysis followed by remedial measures. Safety audit must be a compulsory activity. Enforcement and road building authorities must enforce rules, provide engineering solutions and inculcate good driving habits through proper driving license and training. Similarly, pollution monitoring and strict enforcement of vehicle pollution levels is mandatory to improve the environment.

11.4.9 Transport and the Urban Poor

A cheap and efficient public transportation system will help in provision of affordable accessibility to the poor and would enable a higher economic order for the city. A proper policy aimed at structuring the IPT in the complementary role to the existing public transit system would enhance employment opportunities for a poor and also improve the accessibility options. This will also lead to a situation of inter modal efficiency. ("CDS Hyderabad, 2004)

A further analysis of urban transport needs has been appositely made by Jha & Siddiqui in *Towards People Friendly Cities*. The analysis brings out the need for pro-poor transport. It states,

"Transport and communication systems of a city replicate the arterial system of the human body and support a city's life in the same manner. All cities need to move their own citizens and those of others for interaction and work, and keep themselves and others supplied with goods for a variety of uses. They need to organise such movements and supplies in a manner that minimises travel, cost and pollution; and maximises convenience, speed, safety and comfort. The more the optimisation of these factors in a city, the more efficient and competitive that city is. And yet, transport and communication is not a stand-alone component of urban infrastructure. It cannot be planned in splendid isolation, and needs complete systemic integration into the overall city Plan. In fact it needs even wider integration, because these systems cannot be cut off at merely city levels but need to take into account the entirety of the transport and communication networks that impact on the city and networks that the city impacts.

To make matters more complicated, transport in our country and cities is multi-modal. It reflects our national socio-economic fabric. Unfortunately, there has been an overwhelming concern in many cities to provide very expensive infrastructure for private

motorised transport. While the requirement of such infrastructure cannot altogether be rubbished, its preponderance to the exclusion of others would be undesirable. For the more we try to add infrastructure that merely aids private motorised transport, the more anti-poor the city becomes. And as we have seen elsewhere, anti-poor postures rebound on a city and erode its very foundations. On the other hand, the more we allow all modes of transport on to our narrow roads, the more chaotic the traffic and the more inefficient the city becomes.

While it is true that everybody is on the look out for ways to cut travel time, there is still a large proportion of those who need to commute to and from work. The 'thelawala' (hand-cart users), the manual labourer and the blue collared factory worker, all walk or ride a bicycle, or take a bus to work. They are integral to Indian cities. For instance, the 'thelawala' is a great city asset for moving goods from one place to another over short distances at competitive cost. But he functions at a much slower speed by using the same road that a truck, car or bus uses. Eliminating such people from work through mechanisation reduces employment opportunities of the poorest, leading to heightened social tensions, theft and crime. But permitting slow moving modes of transport on roads slows down mobility and makes the city less efficient and competitive.

Transport, naturally, must think of containers, buses, trucks, cars, taxis, two-wheelers and luxury coaches. But it must perforce think of the pedestrian, the head-load carrier, carts, bicycles and three wheelers as well. Just as we argued that housing and enterprise must provide for the poor and the lower middle classes because they are integral to the city, so also city transport must provide for the mode of travel that links their place of residence to their place of business. In view of the apparent conflict between poverty and efficiency, the primary task in transport and communication planning, as in other aspects of urban planning, is to reconcile the interests of different socio-economic groups, and in the process, find a solution that maximises the interests of all as far as possible.

Such transport planning must begin by an attitudinal change, which thinks of heightening city efficiency by reducing travel through optimum work output in the minimum time. This would happen when various urban sectors are integrated in the land use plan in such a way that a majority of interactive requirements are satisfied within reasonably sized settlements. That is exactly why small scale manufacturing and services, markets and offices ought to be combined with residential use. That helps immensely both the city and its citizens, because the settlement reaches high levels of self sufficiency; the economy is a gainer in time and travel cost; and the poor men and women are gainers because of

reduced travel time and cost and stress. Additionally, it favours sustainability because it cuts down volumes in transport and pollution. With rapid advances in information technology, and the informational city almost a reality, reduction in travel is even more achievable. These advances need to be reflected in all future urban planning.

Despite these changes, however, fairly sizeable levels of transport will still be required. The second attitudinal change that is necessary therefore, is to think of transport primarily as moving people – all kinds of people – rather than as moving vehicles. Hence those modes of travel that transport maximum people with least cost and pollution, and maximum community speed coupled with safety, along with the largest economy in the use of space, must receive priority. Cities must perforce give serious thought to investments in public transport and making it efficient and viable. They must also probe the possibilities of rail based transport financed through commercial exploitation of urban land and airspace at rail terminals.

In Indian cities, roads need to be much wider to accommodate many modes of traffic. This is possible by increased percentages of urban land to be earmarked for road use and by the combination of open spaces of a city as far as possible with roads, allowing requisite openness and yet necessary use. But to allow each to optimise his or her services, there must be reasonable segregation of incompatible modes of traffic as far as possible. From the experience of vehicular pollution and its disastrous impact on city health, towns must necessarily promote the bicycle by making cycling safe and pleasant.

11.5 Development Plan and Housing

We have seen that housing is a key component of any city. However, its provision for all sections of society, especially the poor has been difficult. The overall subject finds comprehensive analysis in a Base Paper prepared for Government of India (R Jha, 2008). It states,

"When one deals with the question of tenure, it is evident that the city must start with a vision to provide housing to all its citizens. "Housing For All" therefore appears to be a common refrain in all housing policies put out by states and cities. Realising this vision, however, requires such 'strategization' that would primarily allow the shelter need of various categories of citizens to be converted into demand. In other words, every one requires housing, but everyone should be able to buy it. This further means that there would have to be enough housing stock; the stock would have to be diverse so as to address needs of diverse citizens and their ability to pay. In a city, this would translate

into different kinds of tenures, but broadly bisected into two: ownership and rental. The availability of both these kinds shall have to be promoted. Even more important, these tenures must be formally available. In a nutshell, therefore, a solution to the issue of tenure lies in the satisfaction of two prerequisites: availability and affordability."

11.5.1 Availability and Affordability

In regard to availability the DP can help in the following ways:

"City plans earmark land for different purposes. These include land for economic activities, for open spaces, for public purposes and for residential use. In view of the on-going process of urbanization, it would be necessary to earmark sufficient land for residence and business. While business areas need greater compactness for economies of scale and productivity, residential areas need densities that are compatible with healthy and decent living for all sections of citizenry. It would therefore be possible to allocate less horizontal space for economic activities by allowing higher floor space utilization.

11.5.2 Maximizing land for residences

A fresh review ought to be made of lands earmarked for open spaces. It is likely to transpire that there is excessive land that is left unused in urban areas. While this may be a contentious issue, what needs to be remembered is that Indian cities must develop their own benchmarks that fit our demography and with which we could live. Pressures on urban areas in Indian cities would be high during the next few decades, and this will have to be kept in mind in deciding upon planning norms.

A similar fresh review ought to be made of land allocated for public purposes. A study needs to be made of how such spaces could be put to intensive use by adopting the principle of shifts, or wherever possible, multiple uses. More educational activities, for instance, could be run from the same premise at different hours, such as a primary school during morning, a secondary school during afternoon and capacity building courses during night. A city's productivity depends on such activity planning in which optimum utilization of space plays a critical role.

All lands that emerge from such economies would have to be brought under residential use. Housing and core city infrastructure must be the first charge on lands, especially all government and municipal lands. Minimum density norms would be worked out and set and utilization of land below such density norms would have to be avoided. Cities would have to prescribe a maximum size of plots rather than merely minimum size, and only a

few exceptions to this rule for valid reasons would have to be made. Urban land is scarce and shall therefore be put to optimum use. These rules would attract all land, including Government and private land. Government lands are known to have inefficient use. These comprise lands belonging to Railways, Defence, Ports and other State and Central Government lands. The bungalows of civil lines and of cantonments, and very large areas sparsely used in Indian cities are poor strategy for availability. They need to change.

In cities, those who hold large chunks of land would have to put these to use in a time frame. Sufficient supply of serviced land is a precondition to availability. Speculation on land allows windfall gains to be pocketed; it constricts supply and fuels prices by creating scarcity. This would obviously have to be brought to a halt. Policies, therefore, need to be devised that lead to substantial reduction in urban land speculation. A suitable vacant land tax is an eminently sensible option.

Zoning of land in a manner that exacerbates scarcity would be strictly avoided. Thus lands in cities zoned as agricultural when there is housing scarcity is not acceptable. Such zoning could only be favoured from the point of view of development that moves from the centre to the periphery to allow planned infrastructure to reach areas thrown open to development. But the dismantling of agricultural zoning in due time is essential to prevent any scarcity of shelter.

While the largest possible pool of land within city limits is forced into the housing market, peri-urban lands need to be similarly planned and held for release as populations expand or prices rise. Institutional mechanisms obviously need to be in place for undertaking such planning.

Availability in cities is not merely a factor of horizontal space but also a factor of vertical construction. Cities tend to get higher as they get bigger. The question is how high the city should be allowed to go and when should horizontal expansion be replaced by vertical growth. While several factors may be considered to answer these questions, and there would still be debates on the pros and cons of height versus width, it would be widely acceptable to state that vertical growth is additional space found within the limits of a city. Hence its exploitation is an intelligent way of aiding availability.

11.5.3 Minimum Threshold for FSI

In line with efficient and optimum use of land, a minimum threshold for FSI rather than a maximum cap is a desirable objective. It could further be said that the rich prefer high rise

apartments, as height reduces dust, allows more air play and provides better view. The poor on the other hand find height uncomfortable, as height raises costs of both capital and maintenance, and they find expenses of running elevators and lifting water burdensome. A flexible cafeteria approach in FSI for different income groups would be a wise policy that moves from the model of high density and low rise for the poor to low density and high rise for the rich.

To get a fair idea of housing requirement, it would be important to prepare a population profile of a city and the housing requirement worked out in terms of affordability. Based on such a profile, different packages would have to be prepared and be supported through appropriate strategies. Apportionment of housing land and construction would thereafter have to be done with a view to availability and affordability.

11.5.4 Shelter for the Poor

In regard to the poor, it is now evident that their informalization is not an acceptable way of providing shelter to them. Apart from additional costs that get imposed on the poor, it does not allow them a decent and settled life to pursue activities that would allow them upward mobility in life. Besides, informalization is existence outside city law, and this would get increasingly attacked and challenged by groups of people in courts. The solution lies in formally housing the poor. The central importance of urban planning and the urban legal framework related to land that have so critically and adversely impacted the lives of the poor fully justifies that these constraints be investigated. Based on these investigations, a modified set of urban laws and planning tools should be proposed to redress the constraints imposed upon the poor. It follows from the above that the investigations will firstly look at the current set of legal constraints that keep the poor out of urban land both for the purposes of shelter as well as for enterprise. Secondly, it will look at urban planning tools that adversely impact the urban poor. Thirdly, it will look at the institutional framework that would need to be customized to support the urban poor in acquiring for themselves shelter, enterprise and services. As a fourth component of the strategy, city-based development control regulations would be analysed to discover ways in which these supplement the state laws informalizing poverty. These investigations would yield a model law, an urban plan preparation methodology and a model set of city regulations that are sensitive to the needs of the urban poor. These could then be replicated through state laws and city regulations in various states of the country.

11.5.5 Housing and Affordability

Affordability of housing essentially means keeping prices of housing units within the reach of all sections of citizens. Quite logically, different groups of citizens would be able to afford those kinds of housing that fit their pockets. From this angle, citizen-clients need to be divided into several more categories than the traditional categories fitting people into HIG (High Income Group), MIG (Middle Income Group), LIG (Low Income Group) and EWS (Economically Weaker Sections). A better method would be to structure these groups on the basis of salary brackets and the corresponding housing costs that they would be able to afford for ownership (based on the accepted principle of affordability being 60 times the monthly income) or rentals that they would afford to pay.

Since prices of land would vary widely from city to city and from time to time, and so would the costs of labour and material, these prices would have to be constantly watched and revised and appropriate and timely interventions would have to be made to keep prices in the determined affordable ranges. Quite clearly, tough interventions in systems governing the urban land market would be warranted. At the same time, what is affordable would become a variable from city to city, given the cost variants, especially of land. Having determined housing segments and their affordability, a strategy would be injected to bridge the gap between market costs and corresponding affordability, wherever they exist. The gamut of interventions would look at all possible steps that help reduce costs in order of their priority and the ability to administer those interventions. Through such steps, it would be possible to maximize the number of people who can formally be provided with ownership or rentals. This alternative to the current urban development paradigm that limits opportunities for the poor to gain access to land and rights to its development, leading to the creation of informality in the first place, ought to be vigorously dismantled. This would be in the interest of cities since every poor household gives some money to someone to stay informally somewhere. It is therefore wise to seek to convert such illegal rent-seeking to a legal rent paid to city exchequer.

In a market as diverse as housing, there is a role for all providers and facilitators – Government, the private sector, cooperatives, non-governmental organizations as well as partnerships amongst these various players. The natural inclination of the private sector would be to move into those segments where profit would be large and transactions easy. The non-governmental organizations would find working for the poor the most comfortable, cooperatives could work across various segments. Government would have an all encompassing role of facilitator across segments, but with a greater concern for serving the cause of equity."

11.6 International Practice: The Smart Code vis a vis Indian DPs

It would be worthwhile looking at international practices in regard to preparation of Development Plans and DCRs as well. It is seen that cities across the world, especially in the developed world, pay a lot of attention to aesthetics, form and shape of the city. While the city may be efficiently planned, it adds to the city if it also looks nice and pleasing to the eyes. An examination of the Plans and development control regulations of such urban local bodies show that these are specifically provided for. The Smart Codes applicable to US cities make this amply manifest in the ‘Authority and the Intent.’

The Authority of the Smart Code states, “This Code was adopted to promote the health, safety and general welfare of its citizens, including protection of the environment, conservation of land, energy and natural resources, reduction in vehicular traffic congestion, more efficient use of public funds, health benefits of a pedestrian environment, historic preservation, education and recreation, reduction in sprawl development, and improvement of the built environment”.

The Intents of the Smart Code specify the objectives related to the Region, the Community, the Block and the Building as well as the Transect. The Intent for the Region, for instance, states “That the Region should retain its natural infrastructure and visual character derived from topography, woodlands, farmlands, riparian corridors and coastlines.” Further “That Affordable Housing should be distributed throughout the region to match job opportunities and to avoid concentrations of poverty”. In the Intent for the Community, the Smart Code states “That within neighborhoods, a range of housing types and price levels should be provided to accommodate diverse ages and incomes”. Further, “That Civic, institutional, and Commercial activity should be embedded in downtowns, not isolated in single-use complexes”. Moreover “That a range of Open Space including Parks, Squares, and playgrounds should be distributed within neighborhoods and downtowns”. In regard to the Block and the Building the Intent states “That buildings should provide their inhabitants with a clear sense of geography and climate through energy efficient methods”. Further “That Civic buildings should be distinctive and appropriate to a role more important than the other buildings that constitute the fabric of the city”. (Smart Code, version 9.2. Municipality)

The Smart Code, it is further seen, provides for particular kinds of public and private frontages and standards for the façade of the building, that is the exterior wall of a building that is set along a frontage line or a ‘Lot line bordering a Public Frontage’.

Facades facing Frontage Lines define the public realm and are therefore more regulated than the Elevations (an exterior wall of a building not along a Frontage Line) facing other Lot Lines. It is interesting to note that the Smart Code does not believe in all out uniformity and standardization of Rules. There is sufficient customization depending on the requirements of a specific area or building across Transect Zones (areas on a Zoning Map). Further, the provisions of the Smart Code are not always mandatory. This is beautifully stated in the following manner, “ Provisions of this Code are activated by ‘shall’ when required; ‘should’ when recommended; and ‘may’ when optional”.

11.7 Development Plans and Public Consultation

The non-transparency of DP processes has been a major point of criticism. The reasons for opening up the process have been cogently argued by Jha & Siddiqui. "Since city planning is a complex matter and deals with a variety of issues encompassing almost all aspects of human life, the Development Plan calls for the widest kind of participation and consultation before and during its preparation. Merely calling for objections after publication of the draft is not consultation – it is simply a ritual where substantial inputs of quality, width and breadth are not possible. As city plans are made once in two decades and set the direction in which the city would move for the next twenty years, they leave an indelible stamp on the future course of a city for generations. It is therefore imperative that the widest possible informed consultations precede and accompany the planning process. While the 74th Amendment does demand popular participation, this may not be as professionally informed as desirable. Hence in the interests of a quality Plan, total transparency and informed public debate are called for, not mere suggestions and objections after the Plan is published.

Plans under preparation or undergoing revision need to be discussed on public platforms comprising professionals, men and women from the fields of education and health, from NGOS, Chambers of Commerce, and industry. Slum dwellers, landowners, builders, and several such bodies that wish to meaningfully contribute to the future well-being of the city must also be consulted. Further, this consultative process should be coextensive but not coterminous with Plan preparation, and even after the draft is published, objections would continue to be entertained. Interaction after the draft plan is like a critic commenting on a *fait accompli*. Only interaction before the finalisation of the Plan is true consultation."

11.8 Development Plan and Prioritization of Tasks

The implementation of a comprehensive Development Plan in the stipulated period is a difficult proposition, even for rich cities. Having a sanctioned Development Plan is merely the first step. Items of the Plan require to be prioritised in the light of the charter of duties of the civic bodies, starting from the most obligatory functions and ending with the least important discretionary responsibilities. The priorities also need to be examined from the point of view of the city's strategies about retaining its strengths and building its competitive advantages. Prioritisation would afford two indications. Firstly, it would clarify the thinking of the city and allow allocation of moneys in order of importance. Secondly, in the event of a cash crunch, there would be a clear indication about what responsibilities to retain and which ones to drop.

11.9 DP and Mindset Change

Urban planners and administrators need to eschew their regulatory mindsets and rise to the developmental needs of cities. It is this reengineering that will in fact, allow successful regulation of tenable urban laws. Years of experience and empirical observation reveal quite explicitly that laws are readily obeyed not because they exist, but only when they are perceived to be just, reasonable and facilitative of pragmatic social living. Unreasonable laws are despised, resented, breached and ignored. The propensity of people to break them is inversely proportional to the ability of the State to implement them. In turn, the ability of the State is influenced by the volume of wilful dissidents. The larger the number of law-breakers, the smaller the ability of the State to discipline them. The plight of urban laws is for all to see, observed more in the breach than in compliance.

11.10 DP More Comprehensive

The Plan requires to be more comprehensive in tackling vital city issues like housing, markets, solid waste management, transport, education, health and pollution. We have already covered the issues of pro-poor housing and the informal market in some detail and would now like to stress that Development Plans must consider the different kinds of people with different income capacities that are likely to live in the city, and provide for them accordingly. From this point of view, cities need to pour more marketing wine into their planning bottles and use concepts of segmentation and customisation. The acceptance of these concepts and their actual translation into Plans and building codes will make towns, their infrastructure, housing and transportation affordable to a wide spectrum of people, breaking the stereotype of the heartless town and making it more people-friendly.

Plans must tackle the management of solid waste, and that comprises collection, segregation, transportation, treatment and disposal. The integration of these activities and their meticulous delineation in the Plan is vital for a city's health and hygiene. City governments need to work towards an arrangement that prevents piling of garbage on streets and street corners. Collection must be provided for within residential and commercial premises, and transported quickly and efficiently; and city councils should encourage citizens to do their own imaginative and permissible thing for the collection and disposal of waste, wherever possible. At the same time, city Plans must earmark collection centres in several expanding directions to allow convenience, speed and cost effectiveness in future collection, transportation and treatment.

11.11 DP and Mixed Use

Similarly, zoning concepts need another look to align them with Indian realities, keeping the average town dweller in mind. While some amount of segregation cannot be avoided from the point of view of industrial and chemical hazards, excessive noise, and environmental considerations; one must remember that the average town dweller is doubly enabled if he can either combine work with his living premises, or live close to his work place. We in India do not have a workforce that can afford personal motorised transport, nor can most cities afford a mass rapid transit system, like in the West. As a consequence, regimented segregation wreaks havoc with very small scale and household industries and forces them to become unviable only on that account. A city simply cannot afford to segregate all economic activity from residential areas.

Let us therefore accept that the typical Indian city is not amenable to formal and neat packaging. We should aim at viable, integrated, compact, clean and healthy cities rather than spectacular, opulent, motor-driven, sparsely populated, spread out, precision towns. Looking at an Indian city, we should be able to say this is an all-embracing, vibrant, liveable and people-friendly city rather than a beautiful, rich, quiet and peaceful one.

While no one would argue against the importance of lung space, gardens, playgrounds and good air, there is no case for taking it so far that city growth gets totally disoriented, unrelated to existing circumstances. A pragmatic awareness of the social and economic contours of a place is always a better basis for planning than abstract and ideal notions of openness and space. The problems of openness can then be partly offset by varying floor space indices, marginal spaces and lung spaces to maximise land availability and optimise its building potential for the greater public good.

11.12 Customization of DCRs

DCRs "need to be realistically customised, with a view to maximising use of land within cities and allowing a place for all sections and economic strata of society by addressing the question of affordability. In the light of the needs of the poor, we have already suggested in the Chapter on Housing, the desirability of a step-by-step approach in building and Town Planning regulations. This would mean setting up of adjustable standards on a sliding scale permitting gradual improvements in housing and infrastructure that would eminently suit the pockets of the poor that permit incremental spending alone."

Summary

Urban planning is need of a revised strategy. A number of very sensible suggestions have been made by Committees, global consultants and urban experts. The use of modern technology in plan preparation, a good data base, preparation of an implementation plan along with DP, harnessing of resource generating instruments and planning tools such as town planning schemes, special focus on issues of the urban poor, such as shelter and transport, an eye for aesthetics, the adoption of modern planning methods such as smart code and empowering urban local bodies need to be urgently brought into force.

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CHAPTER 12

TESTING OF HYPOTHESES, SUMMARY, CONCLUSION AND RECOMMENDATIONS OF THE STUDY

Introduction

There are two broad ways to dissecting and analyzing a city. The first is to consider the city as a crafted product. This involves its conceptualization and concept plan, its detailed land use plan and its infrastructure engineering. The second is to look at how it is run, pointing largely towards its governance aspects. While much of the focus with regard to cities has been on the governance aspects, this research attempts to look at the more ignored side of the cities - that is their planning aspects. For this purpose, a set of hypotheses was framed and a group of cities in Maharashtra were selected that are of varied demographic sizes and at different stages of their developmental life. The set of hypotheses and the results of the test are detailed in the following paragraphs. They are followed by chapter summary, conclusions and recommendations of the study.

12.1 TESTING OF HYPOTHESES

The research began with a set of hypotheses that made certain basic assumptions about city planning in Maharashtra. These were that

- i. the current urban planning benchmarks will not sufficiently respond to the unfolding urban dynamics in the State,
- ii. the conceptual backdrop to current urban planning glosses over the emerging urbanization of poverty that will continue to 'unplan' cities through 'informalization' and growth outside plan,
- iii. the execution of urban plans in the given time frame will remain highly improbable through current methodologies and practices, and
- iv. the present development control regulations of cities are hugely inadequate to deliver livable cities.

With a view to test these hypotheses, this research took stock of the planning process in Maharashtra with particular reference to the five research cities. The provisions of the Maharashtra Regional and Town Planning Act were recounted and an historical view of urban planning was taken. For a clearer understanding, the process of preparation of

development plan and its development control rules were traversed. Stock was also taken of poverty planning in Maharashtra in the context of cities, infrastructure planning and the challenges countenanced by cities in Maharashtra.

The research then got into the development plans and development control regulations of the five research cities, the land use plan proposed in their development plans and the amendments to plan and development control regulations. These provided insights into the processes and the status of these plans.

The research paid special attention to the phenomenon of urban poverty and the treatment of urbanization of poverty in development plans and development control regulations. The phenomenon of slums drew greater focus and so did the provision of basic services in slums. A detailed study was made of the national five year plans, the draft slum policy and the attempts in Maharashtra and research cities in the provisioning of shelter vis a vis development plans. The research also delved into the questions of the informal economic sector and analyzed the national policy on urban hawkers, court judgments on hawking and the reaction of research cities to this phenomenon.

Critical Examination of Hypotheses: We may now take up each hypothesis and critically examine whether it can hold itself in the light of the data that was brought into play.

Inferential Analysis

12.1.1 Hypothesis 1: The current urban planning benchmarks will not sufficiently respond to the unfolding urban dynamics in the State.

The urban planning benchmarks that the State of Maharashtra has adopted deal primarily with certain public amenities that need to be provided to city dwellers. These are in regard to education, health, transport, markets, public services and utilities. An analysis of these urban planning benchmarks that are currently used revealed that firstly, they were neither comprehensive enough, nor exhaustive nor adequately responsive to the socio-economic dynamics emerging in cities. They did not provide norms for many of the activities that cities must perform and would need land parcels to engage in those activities. A most glaring omission is solid waste management that requires wide-ranging benchmarks right from collection, segregation to transportation, treatment and disposal. Globally, solid waste is collected off streets and in a manner that is least intrusive and does not create eye

sores and health hazards. Since the planning benchmarks do not deal with this in detailed and decentralized fashion, cities collect their garbage on streets and have no decentralized system of transportation, treatment and disposal.

Similarly, Development Plans in Indian cities were seen economizing on roads. None of the cities studied showed roads exceeding 15 % of land area devoted to roads and most of them were closer to 10 per cent. This is highly inadequate, especially in Indian conditions, where cities have a wide variety of multi-modal traffic and a proliferation of all kinds of vehicles. Since BRTS would occupy one lane on either side, the width of roads for passage of other kinds of vehicles needs to be much wider than what they are seen to be today. The paucity of space for mobility is further compounded on account of limited space for parking and parked cars tend to eat into the carriage width of roads. Hence, as cities become larger, they are facing larger and larger traffic bottlenecks, more travel time and added environmental pollution. The problem arises out of the lack of planning benchmarks for roads, buses, parking and rail-based systems.

The problems of housing also seem to emanate from perfunctory treatment of planning benchmarks for housing. The current norms are extremely broad. Housing zoning earmarks certain per centage of land for housing. Some land for economically weaker sections is specifically provided. However, the planning benchmarks do not seem to have been decided on the basis of an all-inclusive analysis of the socio-economic profile of the city, segmentation of the population on the basis of their economic strengths and the housing affordability of each group and the delineation of land accordingly. As a consequence, large populations struggle for a decent living place and the housing market ends up loaded in favour of the rich and the higher middle class.

The needs of the poor were especially found lacking, either in respect to their shelter or livelihood. While it is true that land use plans find it difficult to get into many of such areas, it is incumbent that the planning process must get to the grinding details at the planning stage. These shortcomings become evident as cities develop beyond the plan into informal settlements and informal enterprise.

The above cited features are evident in city after city with scarcely any city hoping to claim to be an exception. It could therefore be safely assumed that this particular hypothesis seems to be in a large measure borne out by the facts on ground and the empirical evidence across cities.

12.1.2 Hypothesis 2: The conceptual backdrop to current urban planning glosses over the emerging urbanization of poverty that will continue to 'unplan' cities through 'informalization' and growth outside plan.

All cities that were studied showed that urban poverty is on the increase. At the same time, there was evidence in all cities that urban poverty was being informalized and was being pushed into slums. The slums in general lacked in access to basic services of potable water, sanitation and hygiene. The slum dwellers faced longer hours in transportation and had poor access to health and education. While there were some works done in the area of the provision of basic services, the backlogs became larger with the rise of slum population as provisioning could not keep pace with the informal growth. Despite such a trend noticeable for several decades, planning for the poor continued to be outside the walls of formal planning, primarily under the Slum Act. In none of the research cities, urban poverty was given any substantial consideration in the DP. Both its key requirements – provision for shelter and for informal enterprise – have been referred to only in the passing. Efforts have been mainly in the area of resettlement rather than on upfront settlement. As a consequence, cities have found themselves saddled with larger and larger percentages of slum population, increasing number of hawkers resulting in the greater unplanning of the planned process and mounting growth outside of the development plan. This has been a phenomenon across cities and not limited to a few exceptions.

While the 74th Amendment Act to the Constitution listed 'slum improvement and up gradation' as well as 'urban poverty alleviation' in its 12th Schedule, a fresh out of the box thinking on these aspects does not appear in evidence. This is despite the fact that current methods in operation have not offered any long-term and tangible solution to the issue of poverty. Resettlement has been the key concept practised, meaning thereby to allow new slums to be formed and then devote energy to their orderly resettlement. This policy evidently has resulted in more slums and an unending job of resettlement. Similar has been the policy in regard to hawking. The most significant feature of municipal reaction to this problem has been piecemeal tackling of hawking zones as hawkers rise in numbers, and make do with carving out fresh areas for hawkers by compromising on footpaths, open spaces, pedestrian spaces and other conveniences.

All this has happened outside the planning process. And this has been the rule rather than exception. In the absence of any comprehensive amendment to urban law on planning,

Development Plans have not been able to deal with this issue. And this has quite naturally further radiated to development control regulations that are part the Development Plan. They lack in any specific tools of implementation that would be customized for the poor. Since the Development Plans have scant consideration of the needs of the poor, it only follows that the development control regulations (being part of the Development Plan) would not have specific tools of implementation that would be customized for the poor. Their concerns with proper planning and the need for avoiding undue congestion have led to regulations that disallow very small constructions or activities such as hawking. Slums are, therefore, not allowable under DCRs of cities. Neither is hawking, since it does not find reflection in Development Plans. Whatever infrastructure/service provisioning happens in slums is under the Slums Acts and not under the MR&TP Act, where slums remain outside plan. Similarly all hawking in the cities happen outside the provisions of the DP and DCRs. Hence in a sense, slums and hawking are activities violate the DP/DCRs and find little place in the urban rule book.

Hence the hypothesis that urbanization of poverty will continue to 'unplan' cities through 'informalization' and growth outside plan finds support both from the current planning rule book and the ground scenario tellingly appearing on ground.

12.1.3 Hypothesis 3: The execution of urban plans in the given time frame will remain highly improbable through current methodologies and practices

Development Plans are required to be fully implemented within a period of twenty years. The study of implementation of development plans across research cities revealed that despite the statute requiring the complete implementation of Development Plans within a period of twenty years, no city appeared to be anywhere close to the target. It came out that Plan preparation itself in every research city was mired in delays, sometimes very long delays. This has been compounded by inordinate hold-ups at the approval stage at the State Headquarters. The outcome has seen massive growth in the meanwhile in the cities making plans largely redundant for the planned development of cities. Further, land acquisition for amenities provided in the development plan remained difficult, primarily on account of costs of acquisition. Every research city was found struggling to acquire land on account of resources and procedures. While TDR had partly solved part of the financial problems of urban local bodies, institutional resources of these bodies to tackle land acquisition remained weak. Every research city had a huge backlog and was struggling with acquisition of amenity land.

The lands also got mired in legal issues and the ULBs were found wanting in defending their interest in the law courts. Legal weaknesses were compounded by lack of technical manpower in ULBs, especially planning professionals who could concentrate on plan formulation and implementation. Without an exception, the planning teams were understaffed and non-integrated with implementation wings. Amendments to law that allow a landowner to give purchase notice to the local bodies, meaning thereby compelling the ULB to buy the land in a time frame or surrender it has pressed the panic button in municipal councils. There is evidence to show that ULBs have lost lands on this account. This means that vital amenities have disappeared from the Plan.

The financial commitment to the implementation of development plans was found weak at all levels. While the municipal resource base was weak, even the scarce resource it had was primarily spent on matters other than the development plan. Despite its significance DP implementation was not the first charge on municipal budget. The State exercised a stranglehold on the municipal tax domain, disallowing the imposition of fresh taxes not forming part of the taxes approved by the state. The ULBs themselves were loath to enhance rates of taxes and kept these at very low levels for political reasons. State financial support to municipal bodies was meagre and nothing was specifically earmarked for expenditures mandated exclusively for DP implementation. The central finance commissions also did not have much to offer to the cities. The JNNURM was the first central scheme to allow a substantial share of central grants to flow to ULBs. But they had conditions attached and they in any case were available to only a very limited number of cities.

Such meagre support had to be assessed in the backdrop of actual costs of operationalizing the DP. It was found that no city would be able to manage to implement even a fraction of its DP in the given time frame with the kind of resources at its command. This got reflected through an analysis of the current level of municipal services provided by ULBs and the norms set by GoI. Moreover, the ULBs had not strategized anew. Thus its use of land instruments for operationalization of DP was marginal. The use of PPP mode advocated by GoI, experts and others had been largely ignored and this had not touched any of the core areas of municipal services. A host of factors, not least the attitude of the municipal masters to resist any dilution of their monopoly have led to the failure of many of the initiatives undertaken by municipal management. There has been a consistent stand on their part that implementation of the development plan must continue to be in the grip of municipal monopoly as in the past.

Nor were cities willing to allow private participation in areas where that could be forthcoming and cities continued to hold on to municipal monopoly in the provision of services. Its use of land instruments for operationalization of DP was marginal.

All the above factors quite conclusively establish the hypothesis that the execution of urban plans in the given time frame will remain extremely unlikely through current methodologies and practices.

12.1.4 The present development control regulations of cities are hugely inadequate to deliver livable cities.

Developmental Control Regulations of a city have a unique significance as instruments for translating a plan on ground. They specify details of how a structure would be built, how much of land would be built on, how high would the building go and what safety norms would be observed. They should also try through DCRs to make the cities look neat and aesthetically possess form and shape. Cities across the world, especially in the developed world, pay a lot of attention to aesthetics, form and shape of the city. An examination of the development control regulations of ULBs in the developed world shows that these are specifically provided for. DCRs have been seen to determine in cities, especially in Europe and USA the kind of uniformity and aesthetics, form and shape a city would show to the beholder. With newer developments impacting cities such as construction technological innovation, green technologies, water preservation and new energy solutions, it is the DCRs that bring them in practise by mandating their use. Recent additions have been rain water harvesting structures, incentives for use of green technologies, provision for fire safety in tall buildings, specified width of stairways etc.

While there has been some movement in some of these areas, the study revealed that DCRs in research studies were quite weak in specifying aesthetic designs, intelligent use of SI and design for amenities and sufficient safety as well as parking considerations. Design was never a conscious primary consideration in the way our cities are being planned. As a consequence few Indian cities have a decent form and shape. This emanates from the inadequacies of DCRs. Constructions have no appealing pattern or design, plots have odd shapes, infrastructure as a consequence has to fit the kind of development that would happen. As a result, no city gives an appealing look. This is because no such thing is necessitated on account of the existence of regulations that mandate the observance of shape and form. Aesthetics has been entirely alien to Indian cities.

FSIs for cities are one of the most important elements prescribed in the DCRs. Our study shows that there has been an overwhelming concern to keep FSI as a low, flat and uniform benchmark in Indian cities. This has not helped in either bringing down costs, or controlling density or protecting environment. A more imaginative use of FSI to serve the purposes of planning is expected. But this has not happened. Instead, the instrument appears to have got manipulated to the advantage of certain sections of the business without reaping benefits to the common citizen.

Our study further tells us that Indian DCRs have not been careful in design aspects of various amenities such as footpaths, road signage, safety requirements of public places and numbering of streets. Footpaths do not follow any standard design, nor are there standards specified for signages. Sufficient safety requirements are not always built in to the rule book. In many cities it is nightmarish to find out the location of a place on account of haphazard and complicated numbering.

As cities grow, newer requirements of planning and regulation crop up. So does technology impact on what a municipal body does or prescribes. The planning process did not appear alive to these changes. Wherever cities finally reacted and brought in changes, massive undesirable development had already happened and could not be undone.

In the cited background, it could therefore be concluded that the hypothesis that the present development control regulations of Indian cities would struggle to deliver liveable cities that would have a reasonably satisfactory quality of life finds substantive support in the study.

Overall, therefore, it could be concluded that all the four hypotheses seem to have passed substantial scrutiny and have emerged positively through their testing.

12.2 SUMMARY OF THESIS (ALL CHAPTERS)

12.2.1. Chapter 1 deals with a treatment of sociological theoretical perspective. It begins with the perspectives of Marx and Engels and comes down to the 21st century with special reference to Tonnies, Durkenheim, Simmel, Weber and the Chicago School. It deals with the contemporary theoretical perspectives of Geddes, Park, Wirth, Hoyt, Castells, Giddens, Harvey and others. It also gives an account of Indian sociologist, social effects of urbanization and urbanization in 21st century. In regard to urban policy in post independent India, it traces the main policy landmarks during each five-year Plan, the

enactments in regard to urban issues, the JNNURM and a review of these initiatives. It then states the hypotheses and objectives of the study.

12.2.2. As regards research methodology (Chapter 2), the choice of data and their collection methods have significant implications upon research findings. This research deploys a specific methodology that comprises the choice of research design, data sources, data collection techniques and analytical techniques.

A research design is a structure crafted for the purpose of investigation. It provides an overall guidance for the collection and analysis of data of a study. In this study, the descriptive research method was employed as it allows the generation of factual information in regard to the study and a comprehensive analysis of an existing situation in an economical way. For this research both primary and secondary data were gathered. Primary data were derived from the answers of the participants to the questionnaire. Secondary data were obtained from published documents and literatures. These included survey data and documentary data, many of them unpublished and prepared by urban local bodies or state organizations for internal use. The use of secondary data was central to this research as these were available directly from the most reliable source - the ULBs, State organizations and world organizations. Numerical data and statistics are the main substance of quantitative instruments. On the other hand, qualitative approach generates verbal information and holistic analysis. The researcher opted to integrate the qualitative approach with the qualitative method for this study.

The researcher prepared a questionnaire that was circulated to a select group of knowledgeable respondents who could add value to the research with their insightful replies. They either answered the questions in writing listed in the Questionnaire or gave answers in person or over the telephone. For this research, the study population comprised a total of 15 respondents. Apart from municipal employees, those working in the town planning department of the State under the Directorate of Town Planning and the State's Urban Development Department. The survey questionnaire was used as the main data-collection instrument for this study. The element of anonymity associated with the questionnaire survey technique greatly enhanced candid and honest replies from the participants. For the research judgmental sampling was used. The researcher chose the participants who were considered as the best source of information pertaining to the cities under study and inferentially to the subject of this research as explained in previous paragraphs.

Collected data was then processed, analyzed and presented. Wherever possible, tables, pie charts and bar graphs were used. The data collected by the researcher was analyzed using both the inductive analysis and deductive analysis techniques. The research followed a four-stage process. The first stage devoted itself partly to an overall literature survey and use of secondary data to provide the context of the research. The second stage attempted a detailed study of the 'operationalization' of the development plans and the development control regulations of cities on ground. The third stage analyzed their content, consequences and the deficits that they contained or created. The fourth devoted itself to possible strategies that could help provide solutions for bridging the deficits.

12.2.3. Chapter 3 has an introduction to the study and deals with trends in urbanization. The global trends of urbanization have strengthened over the last fifty years, making the twenty-first century the "Century of the City". In 1950, only 29% of the world's population lived in urban areas. By 2030, almost 61% of the world's population will be urban. The developed world displayed the first signs of urbanization; these western countries today are the most urbanized. They also broadly happen to be the ones with the highest GDP per capita. In the coming decades, countries in Asia and Africa will witness the highest urbanization. By 2050, Asia alone will host 63 per cent of the world's urban population, while Africa will host nearly a quarter. Almost all future population growth in Asia will be in towns and cities. Asia will dominate the list of world's largest cities. 16 of the world's 24 megacities will be located in Asia. Many factors have propelled urbanization. Geography, technological progress and state policy in regard to economic development, migration, ethnic conflict, famine, better quality of life, natural population multiplication from within cities have been some of the most important.

Cities in India are categorized under the Constitution as nagar panchayats, municipal councils and municipal corporations. The Census definition of towns The Census towns require them to satisfy the three criteria of a minimum population of 5,000, at least 75 per cent of male working population engaged in non-agricultural pursuits and a population density of at least 400 persons per sq km. As per the provisional Census Report 2011, of India's 1.21 billion people, its urban population stood at 31.16 percent (Census 2011). This accounted for world's 17.5 per cent population, second only to China. India's headcount now is almost equal to the combined population of the United States, Indonesia, Brazil, Pakistan, Bangladesh and Japan put together. Natural multiplication, the emergence of new towns, expansion of existing towns and migration fuelled urbanization. Within India, Tamil Nadu, Kerala, Maharashtra and Gujarat are more than 40 per cent urbanized while Arunachal Pradesh and Himachal Pradesh are less than 10

per cent urban. While Class 1 cities dominate India's urban demography, the growth of metro cities is significant. In the process of India's urbanization, the urbanization of poverty has been one of the principal trends.

Maharashtra has the largest urban population among states in terms of absolute numbers and this now stands at 5.08 crores. Most of Maharashtra's urbanization has been driven by the Mumbai metropolitan region, Thane, Pune and Nagpur. The urbanization of poverty in Maharashtra in the form of slums has gone hand in hand with the process of urbanization. As per Census 2001, Maharashtra had 1.06 crore people in the slums, with Mumbai sharing 58.2 lakhs, Nagpur 7.3 lakhs, Pune 5.3 lakhs and Nashik 1.4 lakhs. Larger numbers are emerging from Census 2011.

Mumbai is India's largest city and currently ranks as the fifth largest in the world and is destined to become the second largest city on the globe after Tokyo. It moved from a population of about 30 lakhs in 1951 to 125 lakhs in 2011. The city has also grown denser and now ranks as the densest city in the world with a population of 28,508 persons per sq km. Its slum population is more than half of its total population living in just about 6 percent of land area. Pune is India's eighth largest city and the second largest of Maharashtra. It moved from a population of about 5 lakhs in 1951 to 37.8 lakhs in 2011. It has a population density of around 15400 persons per sq km. In 2001, a total of 13.75 lakh persons were slum dwellers forming 57.83 percent of the total population. Nashik is among the fastest growing cities in the State and in India. It moved from a population of about 1.5 lakhs in 1951 to 11.52 lakhs in 2011. It has a population density of about 4360 per sq km. The slum population in Nashik, however, is surprising low. The city had a total slum population of 2, 14,769 in 2001. Kolhapur is one of the growing cities in Maharashtra. It moved from a population of 1.36 lakhs in 1951 to 5.79 lakhs in 2011. It has a density of 7565 persons per sq km. There are 54 slums in Kolhapur with 11.60% of the city's total population. Baramati, a 'B' class municipal council has a population of about 55,000 in 2011. It has a population density of about 11,000 per sq km.

As the Indian economy moves up the growth trajectory with greater trade and investment, there would be a resultant decline in the dependence of population on agriculture. This would suggest that migration from rural to urban areas is likely to be an important factor contributing to the process of urbanization of the Indian economy. However, urbanization in the sense of simply having people move to cities does not guarantee growth. The latter depends on the nature of urbanization and on the absolute quality of urban opportunities.

After recording a growth rate of 5.5 per cent per annum during 1981-2001, there was acceleration in India's GDP growth to 7.7 per cent per annum during 2001-11. The rapid economic growth has brought about a considerable structural transformation in the country's economy. The share of agriculture in the GDP declined from 34 per cent in 1983-84 to about 15 per cent in 2009-10. The share of services in the GDP went up from 40 per cent to 57 per cent and there was some increase in the share of construction, while the share of industry remained unvarying at 20 per cent. Evidence also shows higher levels of per capita income with higher levels of urbanization and greater 'metropolization' of Indian cities.

As economies move to a more mature phase of development, they become more knowledge-based and service-oriented. Notwithstanding the IT revolution and death of distance' arguments, there are aspects of agglomeration and the resultant spatial concentration which remain intrinsic to the industry and services sectors. Cities, migration, and trade have been major catalysts of progress in the developed world over the past two centuries. These stories are now being repeated in the developing world's most dynamic economies. Growing cities, ever more mobile people, and increasingly specialized products are integral to development. In industrialized economies, economic activity in urban areas accounts for as much as 80 per cent of GDP. The urban share of economic activity in less-developed economies is typically around 50 per cent. In India, in 1999-2000, cities and towns contributed 51.7 per cent to the GDP, and the share is estimated to be around 62 per cent in 2009-10.

Preparing India's cities for a rapid growth scenario will require a paradigm shift in planning for urban infrastructure and reforming the institutions for service delivery. Regional and urban planning have an important role to play in generating new spaces and in rejuvenating existing city spaces so that a healthy socio-economic environment can be created in which the fast-growing urban population of India can live with higher standards of public service delivery and contribute to growth. Unfortunately, in the past, there was no deep engagement with planning in the urban sector, and socio-economic planning was not linked to spatial planning. A beginning was made with the 74 Constitutional Amendment Act of 1992, which mandated the setting up of elected municipalities as institutions of self-government' thereby creating political space for ULBs. The concentration of the Amendment, however, was more on the governance aspects of a city and less on its planning aspects.

It is quite evident that as the Indian economy engages in major structural transformation, planning for urbanization assumes enormous importance, because that is where the future of India lies. The study delves into the current status of such planning and derives on the basis of the emerging urbanizing scene, the inadequacies in the planning process.

12.2.4 Background to urban planning in Maharashtra is discussed in Chapter 4. This chapter highlights the urban planning is complex since it involves organizing many lives and multiple activities in a highly compact land mass with high density. In its comprehensive form, urban planning comprises land use, socio-economic and environmental planning for economy, efficiency, sustainability and an acceptable quality of life. Since the dynamics of towns lead to an on-going expansion, urban planning cannot be a one-time activity, but needs to continuously respond to upcoming challenges. India, in the modern era, has borrowed substantially from urban planning ideas of the west. Even for the west, however, this underwent a learning process. There was a time that western cities were poorly planned and quality of life was dismal and there was large growth of unsanitary slums. Significant legislation was later passed to make cities more planned and livable.

Urbanisation is a twentieth century phenomenon in India and so are urban laws, as we know them today. In the earlier part of the twentieth century, town planning was considered a part of municipal functions. With the growth of bigger cities, improvement trusts were created that took up ambitious city schemes, but with time they were merged into municipal bodies. A number of town planning laws were passed in the first half of the twentieth century. Ultimately, a three-tier planning process was established. At the apex of macro planning is the Regional Plan, which looks holistically at a city or a group of closely knit cities along with the hinterland, aiming at balanced regional growth. The Regional Plan is followed at the second level by the Development Plan treating an entire city as a unit and looking at it comprehensively. Reservations for public purpose are a significant element of DPs. At the bottom is the Town Planning Scheme, which takes up part of a city for the purposes of micro-planning, and providing an implementation tool.

Coupled with the Development Plan are the Development Control Rules which lay down the details and the working tools of how development and construction would be permitted and controlled. Access, layouts, open spaces, area and height limitations, lifts, fire protection, exits and parking requirements are stipulated. FSI, TDR, accommodation Reservation are important concepts contained in the DCRs. The urban planning process in Maharashtra traverses several stages. The local urban body declares its intention to

prepare a Development Plan. The State then appoints a Town Planning Officer to assist the ULB in the preparation of the Development Plan. Based on surveys and data collected, the Town Planning Officer prepares a draft plan. This is then presented to the ULB. The draft plan is then published and objections and suggestions are invited. A Planning Committee considers these and makes recommendations. The General Body of the ULB then considers the Planning committee's report. The Plan is then submitted to the Government which sanctions the plan with or without modifications.

Poverty in India, as in the entire developing world is rapidly acquiring an urban face. This is known as the urbanization of poverty and has been accompanied by the informalization of poverty. They together impose overwhelming legal and institutional constraints on poverty, negatively impacting shelter, livelihood, health, education, human dignity, access to basic services, credit, and any chance of integration into the city and upward mobility in life. In many fundamental ways, almost all these infirmities turn out to be a factor of land tenure. However, under the Indian Constitution, the role of the Central Government is limited. The principal urban function rests with the States. Maharashtra has pioneered a number of innovations in regard to tenure to slum dwellers. The Maharashtra Slum Areas (Improvement, Clearance and Redevelopment) Act of 1971 was the oldest in a series of legislations in the country and provided for protection against eviction. The recently announced State Housing Policy talks of providing adequate lands for the weaker sections in close proximity of cities, towns and rural areas. It advocates inclusionary zoning provisions for low income group housing in private layouts. It emphatically states that security of tenure would be the basis of all rehabilitation/redevelopment options and that government lands would be offered after redevelopment to cooperatives on occupancy or lease-hold basis. For crafting such change, the Policy indicates legal and regulatory reforms, the erection of an institutional framework, a housing sector regulatory commission, encouragement to foreign direct investment, a special township policy, redevelopment of run down areas and dilapidated buildings.

The job of providing infrastructure facilities in cities of Maharashtra has primarily been the job of municipal entities. It has been the common experience, however, that municipal bodies find it increasingly difficult to meet the rising requirements of cities. Money from JNNURM to some cities has been of assistance. But they have been insufficient. Other cities have had even greater resource crunch. One good indicator is the performance of the cities in terms of implementation of the Development Plan. The average

implementation percentage in the State hovers around the one-fourth mark and no one city has exceeded 35 percent.

It is evident that on account of urbanization, the cities of Maharashtra face enormous challenges. These are challenges of rapid demographic expansion, of planning, of traffic and transportation, of parking, of collection and disposal of waste, of general order and security, of governance, of infrastructure, of resources, of globalization, of poverty and of the allocation of land and resources between the tripod of economy, environment and equity. It is also obvious that cities would have to be the primary area of attention in regard to the well-being of the State.

12.2.5. Principal features of the DPs and DCRs of select cities indicates that the City Development Plans are investment plans enabling the city to qualify and draw finances from JNNURM and UDISSMT that are GoI schemes to the A class cities and towns. For the purposes of this thesis, we shall exclusively deal with the statutory Development Plans (Master Plans) under the MRTP Act and draw from the City Development Plans only relevant data. Every municipal body under the MRTP Act 1966 must prepare a Development Plan for the area under its administrative jurisdiction. Development plans enable planning for orderly development of a town. The Development plan includes an existing land use map of the entire area within the municipal boundary with a report of various surveys, statistical data and analysis of information. A procedure is prescribed under the MR and TP Act for its preparation. With a view to easily distinguish different land uses, planners use different colours in maps.

Mumbai Development Plan

Mumbai has a physical area of 437.71 sq km. Its first Plan extended up to 1981. This plan could not meet met time lines; it faltered on infrastructure and amenities proposed could not fructify. The Second Development Plan was prepared for the period of 1981-2001 and suffered from similar shortcomings as the first one. Despite the currency of the second DP till 2013, a fresh Plan is already under preparation. The current land use Development Plan has to contend with Coastal Regulations of GoI and the Regional Plan of MMR. Part of the DP are the Development Control Rules of Mumbai. They comprise definitions, the process of building approvals, FSI computation, parking Spaces. Subsequent interpolations in regard to Resettlement & Rehabilitation, information technology, textile mill land and heritage have been made. **12.6.2 Pune Development Plan**

Pune has an area of 243.96 sq km. It prepared its first DP in 1966 and a 'revised' Development Plan was sanctioned in 1987. This is currently under revision. Its current land use has about 42 per cent residential. The DCRs permit the use of TDR and accommodation reservation. PMC has so far cumulatively been able to implement the sanctioned DP to the extent of 28.5%. Quite clearly timelines of the DP have not been met and town planning schemes have not been implemented despite being framed. Slums have proliferated and populations have mounted.

Nashik Development Plan

Nashik has an area of 268.22 sq km. Its DP was prepared in 1988. Of the 524 reservations in the DP, NMC has developed 101 sites. While this is better than many cities it still falls short of targets of the DP. The DCRs of Nashik now incorporate the provisions of TDR and accommodation reservation. An analysis of the prospective land use with the older DP provisions shows that more land is being committed to developable use and open areas are substantially decreasing. It is evident that development would take its toll on openness in the city.

Kolhapur Development Plan

Kolhapur city has an area of 66.82 sq km. The first DP for the city was sanctioned in 1977. The plan was later modified and is under implementation since 2000. As population pressures have increased, the area allocated for development has doubled with a proportionate reduction in the non-developable area. The city has only 3.55 percent of the total area allocated to open spaces, well below the mandatory 10 percent. Kolhapur is facing problems such as treatment of sewage, developments in the Red Zone and unavailability of space for solid waste management. Of the total reservation of 386 sites for public amenities, only 7 sites have been implemented. The municipal authorities reported that the DP is not necessarily a reference point when the annual budgets of the municipal corporation are framed.

Baramati Development Plan

Baramati, a "B" class municipal council, had its first DP sanctioned in 1967 and revised in 1977 and 1991. The DP for its extended area got sanctioned in 1983. Currently, the two DPs (old area and extended area) are under sanctioning process. The DP had a total reservation of 38 sites. Of these, the Municipal Council has developed 7 sites. This puts the development percentage at 26 % in a total period of twenty-one years since the

approval of the Plan. The Council has adopted the Standardized Building Bye-laws and Development Control Rules for B and C Class Municipal Councils approved by GoM.

12.2.6. Current status of DPs and DCRs in terms of Urbanization of Poverty shows that poverty in the country was declining. This invited the criticism that unrealistically low poverty estimates were engineered and led to the setting up of the Tendulkar Committee in 2009 to make realistic poverty estimates. The Committee estimated India's poverty at 37.2 % of the total population. Over the past several decades, poverty in India has rapidly acquired an urban face, recognized as the 'urbanization of poverty'. Deprived of a proper urban habitat, the poor are being pushed into **slums**. And in their search for employment, they find refuge in the **informal sector**. Urbanization of poverty has thereby been accompanied with the **informalization** of poverty.

Slums.

The Pranab Sen Committee, appointed by GoI, defined a slum as "a compact settlement of at least 20 households with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions. It stated that the country's slum population had grown by 17.8 m in the last decade. The Committee projected the slum population in 2011 at 93.6 m, up from 75.26 m in 2001. The Sen Committee put Maharashtra at the top of the chart with around 18.15 million slum dwellers in 2011, followed by UP (10.87 million), TN (8.60 million), West Bengal (8.50 million) and Andhra Pradesh (8.10 million). Among cities, the numbers stood at 8.68 m for Mumbai (around 55 percent), 1.37 m for Pune (around 45 percent), 2.14 lakhs for Nashik (around 19 percent), 56,235 for Kolhapur (about 12 percent) and 3,774 for Baramati (around 7 percent). Quite clearly, the larger the city gets, slums become a greater percentage of its total population.

Shelter.

The critical issue in shelter for the poor is non-access to land on both counts of availability and affordability. Today, about 25 million households in India- 35 percent of all urban households- cannot afford housing at market prices and around 17 million of these households live in slums. While a number of policy pronouncements, five year plan documents, a draft national slum policy and governmental schemes have tried to address the issue of tenure, there is no finality in the matter. Meanwhile, other factors such as globalization are making inclusiveness in cities extremely difficult. Attempts at rehabilitation and shelter provision through additional FSIs have also been made. But they have had limited success and the numbers in slums have continued to swell.

Informal Sector.

The informal sector comprises persons engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. The informal sector in many urban centers is assuming proportions that are larger than the formal. However, the sector is ravaged by constraints of land, capital and a host of regulations about rentals, labour, registration, licensing and bookkeeping.. A National Policy on Urban Street Vendors has been recommended by Government of India in 2009. Court rulings also support the issue of livelihood of vendors. While several states and cities have moved forward to find space and solution to the issue of hawking, efforts have been piecemeal and no real solution to street vending has been found.

Deficits in Urban Planning vis a vis the Urban Poor.

It is clear that in Indian cities the issue of slums and hawking are both becoming huge concerns. The root of the problem is quite clearly the deficits in urban planning and the reluctance to both recognize the issue of urban poverty and the need to find adequate space for their living and their enterprise. The DPs show complete lack of poverty planning. Secondly, India's cities have not planned for affordable housing. Very little intervention and housing stock is being currently created by States and their parastatals. EWS Housing reservations have been miserly; and even those lands reserved have not been used for the purpose reserved. In the area of mobility, there has been inordinate emphasis on facilitating free movement of cars. Public transport finds little treatment in Development Plans. It is quite consequential that the development control regulations (being part of the Development Plan) would not have specific tools of implementation that would be customized for the poor. They disallow very small constructions or activities such as hawking. Slums are, therefore, not allowable under DCRs of cities. Neither is hawking. While policy pressures and judicial pronouncements are pressing change, the overall conclusion would be that the efforts in this direction are too weak, too slow and too fragmented to make any dent in the sphere of urban poverty. Slums are growing, the hawkers are struggling, transport remains predominantly car driven and social infrastructure generally denies the existence of the poor. The Report on Indian Urban Infrastructure aptly summarizes the poverty deficits of urban planning. It states, "The master planning system has not focussed on spatial planning for the urban poor to provide them 'a place to live', 'a place to work', 'a place to sell', and public transport to move from one place to another."

12.2.7. Operationalization of DPs and DCRs. The central significance of a Development Plan for the planned growth of a city and its desired quality of life cannot be overemphasized. An ideal Development Plan seeks to articulate and satisfy the needs of a city's population - economic, infrastructural, recreational and environmental. The development control rules seek to manage and regulate property development in such a manner that it conforms to the orderly development of land to create sustainable human settlements. In view of the criticality of DP, the process of making it should be grounded in consensus. The DP must also integrate with other plans. Plan implementation also requires that municipal bodies be empowered, as per 12th Schedule, to do their own urban planning. And if and when the States provide them with this function, they should have adequate manpower.

Land Acquisition for DPs

The DP, in the course of mandating land use earmarks lands for infrastructure and public amenities. The operationalization of such activities would require land acquisition at huge costs. Transfer of Development Rights (TDR) has been a good instrument for this purpose which facilitates getting land without budgetary provisions and cash outgoes. However, land acquisition still remains a problem due to encroachments, lack of legal, institutional and manpower resources and political obstruction.

Financial Support to Operationalization of DPs

It is widely observed that Development Plans are primarily land use plans and do not get into the financials of its implementation. Cities have not done any detailed implementational analysis that prioritizes provision of public services and matches it with resources. Nor have ULBs made DP the first charge on municipal budgets. The revenues that flow to the municipal bodies from the State are few and very meagre and states have not acted upon the advice of the State Finance Commissions. Central financial aid through CFCs has been equally weak. The JNNURM has shored up the finances of some municipal bodies but they are not directed primarily towards the operationalization of DP. In the circumstances, if a stock is taken of all finances available to a ULB the burden it carries for implementing DP, it is quite clear that it is in no position to fund the operationalization of DP. The cities, therefore, have to look for alternate mechanisms such as the use of land instruments. The most important of these are landpooling mechanisms of Town Planning Schemes, FSI (Floor Space Index), TDR (Transfer of Development Rights) and Accommodation Reservation.

DP and PPPs

The use of PPPs could be especially useful in the provision of several public services. In cases, where the land owners, whose lands bear reservations for public amenities, are willing to partner with the ULB, a PPP model could be employed. The model would allow the municipal body to get the service provided at a reduced cost because of private investment in a public service, expecting to be compensated by a stream of revenue that the private developer could tap. Municipal monopoly over service provisioning in a city cannot work because of a combination of several municipal deficiencies – the paucity of time, the inability to attract talent and serious money constraints. In view of these limitations, it is essential that municipal bodies give up insistence on monopolizing service provision and embrace partnerships, especially with land owners. If, for instance, land owners whose lands are reserved for schools want to partner with reputed institutions and provide primary schools, ULBs should accept such proposals as long as the basic parameters of a primary school are met.

DP and Urban Poverty

The operationalization of Development Plans has been sharply hit by the growth of urban poverty in the form of slums and informal enterprises such as hawking. Such informalization needs to be prevented if the Plan and indeed the city must survive. What is required is the adoption of a planning ethos that raises the equity concerns to be a central cross-cutting theme in all urban planning processes.

Re-engineering DP

It is clear that Development Plans have to be re-engineered as more than mere land use plans. This necessarily means widening the scope of planning beyond land use, and to get into the area of how plans shall be implemented. This requires the consideration of implementational tools - land instruments, land pooling, FSI and TDR, accommodation reservation, budgetary support, private investment, PPPs and any other method that could be available. Together they should allow a comprehensive support system that allows the operationalization of the Plan in the given time frame. Since all citizens are stake-holders in the Plan, an institutional shift is demanded from a government driven and controlled initiative to a governance-oriented enterprise where it becomes a collective city effort. The Constitution (seventy-fourth) Amendment Act has laid great emphasis on municipal empowerment. Its 12th Schedule lists urban planning as the very first function to be performed by urban local bodies. However, ULBs continue to be in the clutches of the State. The State both in the domain of finances as well as functions continues to be the arbiter.

12.2.8. Provision of major non-social Municipal Infrastructure

Water Supply and Sewerage

Water supply in Indian cities is characterized by many inadequacies. Less than universal coverage, intermittent supplies and poor quality are some of the most prominent features. With the continuing expansion of city limits, the challenge of delivering water in Indian cities is growing rapidly. Many large Indian cities have to source water from long distances due to exhaustion or pollution of nearby sources, thereby increasing the cost of raw water. Poor maintenance and inadequate replacement lead to technical losses in the distribution network. Errors in metering, unbilled water consumption and plain theft contribute to commercial losses. All this leads to high levels of non-revenue water. High levels of commercial and physical losses in distribution are compounded by the unwillingness of local/state governments to levy adequate user charges. Water utilities in India are typically able to recover only 30-35 per cent of the O&M cost. Poor quality of water means that large amounts have to be spent subsequently by consumers on treatment of water-borne diseases.

In regard to water availability in research cities, all cities have water provided daily throughout the year which puts them in an exceptional category of cities in India. Of the four, Pune appears to be the best provided whereas Baramati has the least hours of water supply. The real situation, however, may be camouflaged on account of averages. There are areas in all cities that depend on tanker water or receive very little water. Evidence suggests that the supply reduces as we move outwards from the core of the city towards the fringes. The challenge of sanitation in Indian cities is acute. With very poor sewerage networks, a large number of the urban poor still depend on public toilets. Many public toilets have no water supply while the outlets of many others with water supply are not connected to the city's sewerage system. Over 50 million people in urban India defecate in the open every day. The problem of sanitation is much worse in urban areas than in rural due to increasing congestion and density in cities.

It is estimated that the lack of waste water treatment leads to over \$15 billion spent in treating water-borne diseases in India. Often, polluted water is allowed to leach untreated into surface and ground water bodies. In the Ganges Basin alone, there are 223 towns and cities that generate 8250 million litres of sewage each day, of which about 2500 million litres is disposed directly into the Ganges without treatment and 4250 million litres into its tributaries.

Solid Waste Management

The average generation of solid waste from Indian households is significantly below the developed countries. Yet, management systems set up by Indian cities cannot cope with this waste. (Boxes 2.6 and 2.7). The problem begins with the non-segregation of biodegradable waste from the rest by either households or by municipalities. The collection of the garbage from dumpsites is haphazard, processing is not undertaken and disposal rules are not followed. The Municipal Solid Waste Rules were put in place in 2000 but their enforcement has been poor.

Urban Transportation

Problems arising from inadequate investments in urban transport and roads have been exacerbated by the increasing concentration of economic activity and human settlements. Indian cities are increasingly faced with the twin challenges of providing adequate road space for future use and improving the poor condition of existing roads due to the neglect of maintenance over the years. Current road designs do not adequately provide for facilities such as footpaths and cycle tracks. The available road space gets encroached by shops, street vendors, and on-street parking. The variety of vehicles on roads moving at different speeds without any demarcated lanes adds to challenges of urban transport.

The highly inadequate and poor quality of the public transport system in Indian cities not only poses a major challenge to realising the growth potential of the economy but also has adverse impact on the health and well-being of the people. Long hours spent on road journeys, lives lost in road accidents, and air pollution are only some of the effects of the acute problem of transportation facilities in and around cities. The motor vehicle population in India has increased 100 times from 1951 to 2004, while the road network has expanded only eight times. Road capacity has come under stress for all these reasons. The share of public transport is estimated by the Government of India at 22 per cent and has been decreasing over the years. The share of buses decreased from 11 per cent in 1951 to 1.1 per cent in 2001. Most city bus services, operated by state-owned public entities, make losses and do not have the resources to renew their fleets.

12.2.9 Deficits in non-social Municipal Infrastructure Planning

Water

Indian cities seem to be lacking in a strategy for integrating land use and water planning based on the principle of total water cycle management. Additionally, in the context of

regional urban planning, land use decisions do not fully take into account where the necessary water will come from, and at what cost.

Deficits in Water Planning

Lack of coordination is also evident among departments such as irrigation, agriculture, urban development, rural development and industries. At the city level, while water conservation measures are somewhat reflected in DCRs, these are happening too slowly. In the interim, properties are coming up without adherence to these revised norms. Moreover, no city in the country could boast of a 24 by 7 water system with tap water completely potable. Nor are cities recycling water. The inadequacies of DPs and DCRs are seen in repeated road-cutting for laying water pipe lines leading to enormous costs. Given this lack of non-integration, it would be safe to assume that the current planning practices at the regional and city levels would fail to adequately answer water woes of cities.

Sewerage and sanitation

The sewerage deficit in cities is one of the largest. This is more on account of the high costs of treatment and very low recovery. It is clear that if cities struggle to receive water dues, recovery of sewerage dues is even more difficult. And in this situation, providing sewerage services is a far thought. The consequence is that most cities in the country have no sewerage network and many households do not have sewerage connections. Most sewage treatment plants are non-functional leading to dumping into rivers and streams, thereby compromising the drinking water of human settlements downstream. Since densities of cities are increasing, the problem of sewerage is getting worse. The situation in regard to toilets was equally poor.

Solid Waste

Since the MSW Rules 2000 mandated by the Supreme Court, solid waste management has been at the top of the agenda of urban local bodies. However, waste collection itself is still struggling, segregation is still a far cry, transportation has a question mark and scientific disposal is almost completely absent. It is quite clear that the urban planning process in our country is oblivious to the needs of solid waste management.

Urban Transport

There has been a phenomenal growth of motor vehicles. In larger cities they have been rising four times as fast as population. These results have essentially come out of a

misplaced emphasis on a plan for moving vehicles rather than a plan for moving people. This has led to a neglect of public transport. For the urban poor, the cost of traveling in search of livelihood opportunities within the city centre is rising and the time spent on traveling is climbing as the poor get pushed out on the periphery of cities and in the peri-urban areas. The cheaper modes of non-motorized transport such as walking and cycling have become hugely perilous. A more innovative concept in transport has been the bus rapid transit system. Unfortunately public transport has sadly been neglected.

City Roads

Road planning in Indian cities appears to be in very unfortunate shape. Their quality is poor and there is constant digging. Footpaths are also constantly in a state of disarray, making it very difficult for the elderly to use them. Most roads in cities do not have storm water drains and the ones existing are choked rendering them ineffectual. These problems lead us to conclude that these are largely on account of deficits in the planning of roads in the land use plan. These deficits in the plan process need to be plugged. In their absence, cities will continue to have sub-standard non-social municipal infrastructure.

12.2.10. Deficits in Planning and Development Regulation

City planning is designed to subserve a balanced development of its economy, and its environment (quality of life) and achieve these goals with equity. Planning should enable the ULB to prevent undesirable development and to provide as far as possible resources required for infrastructure and amenities. The Development Control Rules spell out what can be done in terms of development.

Deficits in Development Plan

It is seen that in each case the preparation and approval of a Development Plan has taken inordinately long – sometimes more than a decade. Cities in India have been growing at great pace – some of them witnessing decadal growth rates of 40% to 50%. If the planning process of such regions and cities takes so much time, it is made redundant by substantial growth in the meantime, outside the Plan. A further disturbing trend has been part approvals given to Development Plans. Apart from causing unnecessary delays, it brings into the approval process unwanted practices. Planning processes in the country make limited use of available modern technology such as GIS and its applications that have revolutionized urban planning. In a country and in a state like Maharashtra, where urbanization is happening at pace, the slowness of technology adoption in urban planning is a big disadvantage. Preparation of Plans also suffers from lack of transparency. Peripheral urban areas in many instances are currently left out of the DP

process. The planning norms used immediately outside the plan area are ad hoc and more rural than urban. Their merger into urban areas later makes them permanently blighted areas on account of their haphazard growth. There has been criticism that apart from delays in plan preparation and approval, there are deficiencies in approach. “Planners who have been trained as architects plan space, with little emphasis on ‘planning’ people. Since all city land comes under the land use plan of the Development Plan, their non-utilization consequentially results in the freezing city activities. Most of these are critical physical and social infrastructure. Development Plans also have a difficult amendment process and the inability of the Plan to match the speed of city dynamics makes it a lame duck.

In view of the facts of universal need of housing, coupled with issues of universal availability and affordability, a Development Plan needs to get into details of such analysis. This would require not merely futuristic demographic projections, but also segmenting the projection into income groups and housing that would be affordable to each. The DP also needs to proactively consider how affordability can be aided by land use policies and development control regulations and how incentivization through policy instruments could happen. Based on these calculations, housing land would have to be divided up into lands that each segment of population would require. Unfortunately, a DP does not get into the grind of such detailing. Since housing is almost entirely left to market forces in a city, the market responds to only such housing demands that have high profitability.

Urban plans in India have been subjected to a great deal of extraneous pressures and manipulations that have little to do with public interest. Examples of such interference can be seen in the fastening of reservations on urban lands. Indeed, land reservations in a Plan have unwittingly become a tool of great reward and punishment for landowners. Urban planning processes in the past have also left large planning gaps. There has been inordinate increase in pollution, mainly on account of the phenomenal increase in vehicles and vehicular pollution, partly because cities do not have a well integrated transport systems knitted into the land use plan. Solid waste management is a key function and yet, this activity is not integrated either in the Development Plans or the Development Control Rules of the cities. Development Plans have been highly deficient in poverty planning. The Development Plan and DCRs do not have policies or regulatory systems that could engage with informality that already exists. Nor is there a forward thinking on ways and means that would allow the reduction of informality. This must rank as one of the key deficits of urban planning. The non-recognition of informality poses a huge challenge to the Development Plans as growth takes outside of it and tends to destroy the very fabric of a Development Plan.

Despite a multiplicity of vehicles and vehicle types, city planning has tended to economise on the land that gets put to road use. Nor have DPs gone into a good mobility plan. A Development Plan casts a legal liability on the Municipal Council to acquire all the designated sites within a period of ten years. While the JNNURM is the first major effort by the GoI in supporting metropolitan cities, the analysis of the financial burden of DP on ULBs made earlier makes it abundantly clear that the current rate of support from the Centre and States is marginal. Even after such methods are pressed into service, municipal monopoly over service provisioning in a city would not work because of a combination of several municipal deficiencies - time, talent and money. In view of these constraints, it is essential that municipal bodies give up the insistence on monopolizing service provision and embrace partnerships, especially with the owners of land.

Deficits in Building Bye-laws

DCRs and building bye laws have shown little concern for form and shape in cities. The TP scheme that allows reengineering of plots has almost been abandoned in Maharashtra as a planning instrument. Further, the adherence to a uniform FSI throughout the city has not had salutary impact either on affordability, or to density or to quality of life. Laws on encroachments on land have been weak and poorly defended.

12.2.11. New Strategies for addressing Planning and Development Regulation Deficits

Level of Plan	Planning Authority
Regional Plan (Metropolitan Areas)	Metropolitan Planning Committee (MPC)
District Plan	District Planning Committee (DPC)
Peripheral Plan	PCM/DPC/ULB
Structure Plan	ULB
TPs/Local Area Plan	ULB

In regard to urban planning the above cited strategy appears appropriate. It is also important that the Regional Plan/District plan should be ready in one year and the State Government should approve them within six months. Failing this, the Plan was to be deemed approved.

The Development Plan should comprise an implementation Plan. The plan period of 20 years should be broken into five year action plan with investment commitments. In regard

to reservations, reservations should be fastened on lands of owners who had multiple holdings. Use of FSI/TDR and accommodation reservation should be harnessed for land acquisition. Levy and recovery of value based betterment charges could be credited to a city development fund and budgetary provisions were to be made at the time of reservations themselves. A detailed mechanism for *implementation of Development Plan through town planning schemes* was an eminently sensible option. The Municipal Acts to make *implementation of the Development Plan mandatory*. Digitization of Survey Sheets and application of GIS and information *technology* for regular updation of survey records was important. The devolution of planning function to local governments by empowering MPCs to create statutory metropolitan plans and transferring local urban planning powers to municipalities was the need of the hour.

A high quality plan requires reliable data base. India's cities need to improve the country's data in such fundamental subjects as land availability and usage, population growth and movement, job mix and its prospective evolution, and income mix and forecast changes in that mix. There must be use of latest technology such as use every GIS mapping of existing land use. The Central Government should focus on the first wave of urban planning reform on the 65 largest cities (including 2 metropolitan regions). Local governments should create their own 20-year city development plans based on the new metropolitan or district master plans. Unified Metropolitan Transport Authority (UMTA) proposed under the National Urban Transport Policy (NUTP) for all metropolitan cities should be set up. Judicious use of FSI in the creation of compact cities is extremely important.

An important area of planning which warrants special focus is housing for the poor. In regard to the poor, it is now evident that their informalization is not an acceptable way of providing shelter to them. The solution lies in formally housing the poor. The central importance of urban planning and the urban legal framework related to land that have so critically and adversely impacted the lives of the poor fully justifies that these constraints be investigated. Based on these investigations, a modified set of urban laws and planning tools should be proposed to redress the constraints imposed upon the poor. Land along transport corridors could be used for housing the poor. This would provide then better access to transport. A cheap and efficient public transportation system will help in provision of affordable accessibility to the poor and would enable a higher economic order for the city. A fresh review ought to be made of lands earmarked for open spaces. It is likely to transpire that there is excessive land that is left unused in urban areas. All lands that emerge from such economies would have to be brought under residential use.

It is seen that cities across the world, especially in the developed world, pay a lot of attention to aesthetics, form and shape of the city. They provide for particular kinds of public and private frontages and standards for the façade of the building, that is the exterior wall of a building that is set along a frontage line or a 'Lot line bordering a Public Frontage'. Facades facing Frontage Lines define the public realm and are therefore more regulated than the Elevations (an exterior wall of a building not along a Frontage Line) facing other Lot Lines. It is interesting to note that the Smart Code does not believe in all out uniformity and standardization of Rules. There is sufficient customization depending on the requirements of a specific area or building across Transect Zones (areas on a Zoning Map). Further, the provisions of the Smart Code are not always mandatory. This is beautifully stated in the following manner, "Provisions of this Code are activated by 'shall' when required; 'should' when recommended; and 'may' when optional". Some of these ideas need to creep into our urban planning ethos.

12.3. Conclusions of the Study

This research has been undertaken in the light of global trends of urbanization, India's own urbanization trends and similar trends in Maharashtra. This is in the belief that India's urbanization is critical to its development, backed by global empirical evidence that economies multiply as nations urbanize. It is quite clear that the twenty-first century is the century of cities. While the developed world has already gone through its process of urbanization, this is currently happening in the developed world. Research has shown that countries with high human development are generally the most highly urbanized. In India, cities are home to about 350 million people, and this percentage is set to grow with years. India's processes of urbanization therefore, supported by a young and growing population has a great potential if it can get its urbanization right.

Getting urbanization right, however, is very largely dependent on getting urban planning right. The plan laid the foundations that would determine how good or bad the city as a product would be. This research took stock of the planning process in Maharashtra with particular reference to the five research cities. The provisions of the Maharashtra Regional and Town Planning Act were recounted and an historical view of urban planning was taken. The process of preparation of development plan and its development control rules were traversed. Stock was also taken of poverty planning in Maharashtra, infrastructure planning and the challenges countenanced by its cities. The research paid special attention to the phenomenon of urban poverty and the treatment of urbanization of

poverty in development plans and development control regulations. The phenomenon of slums drew greater focus and so did the provision of basic services in slums.

The deficits that came to the fore were the following:

The current planning process put too much of decision-making in the hands of the State Government and too little in the hands of the municipal bodies. Municipal Empowerment, continued to be a mirage. Plan preparation in every research city has witnessed delays, sometimes very long delays. This has been compounded by inordinate hold-ups at the approval stage at the State Headquarters. The outcome has been massive growth in the meanwhile in the cities making plans largely redundant.

The development plans were found wanting in terms of quality and accuracy of mapping and plotting. This was on account of manual errors since plan preparation did not employ the latest technology available that is globally in use. Plan preparation was found to be a non-transparent process. Serious deficiencies in such transparency were a frequent subject of discussion.

Land acquisition for amenities provided in the development plan remained difficult, despite TDR, primarily on account of costs of acquisition. Every research study had a huge backlog and was struggling with acquisition of amenity land. The lands also got mired in legal issues and the ULBs were found wanting in defending their interest in the law courts. Laws on encroachment were weak and municipal bodies struggled to get encroachments removed from valuable lands. The urban local bodies studied lacked in technical manpower especially planning professionals who could concentrate on plan formulation and implementation. Without an exception, the planning teams were understaffed.

The financial commitment to the implementation of development plans was found weak at all levels. Despite its significance DP implementation was not the first charge on municipal budget. The State exercised a stranglehold on the municipal tax domain, disallowing the imposition of fresh taxes. The ULBs themselves were loath to enhance rates of taxes and kept these at very low levels for political reasons. State financial support to municipal bodies was meagre. The central finance commissions also did not have much to offer to the cities. The JNNURM was the first central scheme to allow a substantial share of central grants to flow to ULBs. But they were available to only a very limited number of cities. It was found that no city would be able to manage to implement even a fraction of its DP in the given time frame with the kind of resources at its command. The ULBs themselves had not strategized anew. Thus its use of land

instruments for operationalization of DP was marginal. The use of PPP mode had been largely ignored. There was a consistent stand on the part that municipal masters that implementation of the DP must continue to be a municipal monopoly as in the past.

In any of the research cities, urban Poverty has not been given any substantial consideration while development plans have been framed. Both its key requirements – provision for shelter and for informal enterprise – have been referred to only in the passing. Efforts have been mainly in the area of resettlement rather than on upfront settlement. As a consequence, cities have found themselves saddled with larger and larger percentages of slum population, increasing number of hawkers resulting in the greater unplanning of the planned process.

The development plan seems to broadly go into land use, but does not get down to the details of planning. Globally, the development plan follows a three-stage process. It begins with a conceptual master plan, followed up by a detailed master plan. Such detailed exercise is missing in the State's planning process, leaving it an unfinished product not capable of proper implementation.

Apart from this, several key features appear to have very perfunctory treatment in the Plan. The foremost example is solid waste. A detailed analysis of the collection, segregation, transportation and treatment of waste is completely missing in all development plans. If public transport is now the perceived necessity of every city and if rapid bus transport is the preferred option of GoI, the development plans ought to have been quick to react and modify their traffic and transportation plans accordingly. However, this has not been done. As a consequence, cities are struggling to redesign their roads to accommodate a BRTS.

There are planning gaps in the housing strategy of the development plan. Earmarking residential areas is not enough. The democratic profile of any city shows that there would be various economic sections in a city that will require housing with variable affordability criteria. Since housing needs to be made available and affordable to all citizens, residential land must take into account the total requirement of each economic group, work out the densities permissible in each and vary DCRs so that the affordability aspect is adequately addressed. In the absence of such detailed analysis, housing in cities is currently almost completely driven by the market. Development Plans in Indian cities were seen economizing on roads. None of the cities studied showed roads exceeding 15 % of land area devoted to roads and most of them were closer to 10 per cent. This is

highly inadequate, especially in Indian conditions, where cities have a wide variety of multi-modal traffic and a proliferation of all kinds of vehicles. The paucity of space for mobility is further compounded on account of limited space for parking and parked cars tend to eat into the carriage width of roads.

A plan is as good as its ability to get itself implemented. And this ability depends upon the ability to finance its implementation. Here, one of the first weaknesses is that this has not been a consideration in the planning process. Our financial analysis has shown that the plan is way beyond all urban local bodies to implement. Given the paucity of resources, town planning schemes have been an innovative mechanism of implementation of parts of DP. But its use was more or less abandoned. Neither have the municipal bodies innovated in the use of land instruments. FSI and TDR have been used in some municipal corporations. A host of other land instruments also exist and could be profitably used in implementing the Plan. But the progress in this direction has been extremely tardy.

12.4. Recommendations of the Study

The above deficits have been well summarized by Ban Ki-moon, UN Secretary General, in his foreword to the Global report on Human Settlements 2009 when he states that “evidence from around the world suggests that contemporary urban planning has largely failed to address these challenges”. In the cited background, it is quite clear that a new, innovative strategy ought to be devised. The old formulations, given the context, will not solve the problems of cities. Some of these steps that need to be urgently taken are the following:

The Global Report on Human Settlements 2009 states that “in some parts of the world, national planning is very dated and is still shaped by colonial planning legislation.....one important reason underlying the failure of urban planning in developing countries is, in part, the importance of foreign models and approaches. ” This is true of India as cited earlier. The Report further adds that”planning systems in many parts of the world are not up to the task of dealing with the major challenges of the twenty-first century, and need to be revisited.... Revised planning systems must be shaped by, and be responsive to, the contexts from which they arise, and must be institutionally ‘embedded’ within the practices and norms of their locale”. In view of the above, urban planning laws in India must be substantially rewritten to answer the questions that are arising in our cities with solutions that are true to Indian ethos.”Innovative planning ideas will only have an effect if they articulate closely with the institutional arrangements, and cultural values and

norms of the context in which this is taking place”. (The Global Report on Human Settlements 2009, Planning Sustainable Cities, Pgs 211, 212,215,216).

If urban planning has to be done afresh, it is evident that planning professionals of a high order with planning material that comprises modern thinking and state of the art technology would be required. However, “In many developing and transitional countries, planning curricula, just like planning legislation, have not been updated for a long time and are unable to produce planning professionals that are able to address current and future urban challenges effectively”. Hence “planning requires strengthening through stronger professional organizations and networks, more effective planning education, better urban databases and more robust planning research”. (The Global Report on Human Settlements 2009, Planning Sustainable Cities, Pgs 216, 217).

The phenomenon of urbanization of poverty clearly shows that cities are witnessing high informal growth. This is true of the research cities, especially the larger ones. As the Global report points out, much of urbanization will be “informal and incomes will be generated largely through the informal economy.....it is clear that those cities and towns which are able to plan where and how this new settlement takes place will be in a far better position in decades to come.” In this background, “planning has to seek ways to promote social integration and cohesion”. Unfortunately, “conventional urban planning approaches are not designed to engage with informality, and by contrast, actively seek to formalize the informal sector. This formalization process frequently destroys livelihoods and shelter, and serves to exacerbate exclusion, marginalization and poverty. The notion that the poor have to step outside of the law in order to survive in cities is an appropriate one”. Since contemporary planning is “based on spatial interventions that assume a far higher level of affluence than is the case in most developing countries, it fails to accommodate the way of life of the majority of inhabitants in rapidly growing and largely poor and informal cities, and thus directly contributes to social and spatial marginalization.....An important task for planning is to devise new forms of regulation that serve to protect both the rich and the poor, while at the same time guiding urban growth in efficient and sustainable directions.”

Looking at how multifaceted cities are and how thorny they become as they grow, there can be no disagreement that city planning is a highly complex matter and deals with a huge array of issues that include in their fold almost all aspects of human life. Given its intricacies and the kind of views that individuals may have on varying and vexatious city subjects, the Development Plan clearly calls for the widest kind of participation and

consultation before and during its preparation. Merely calling for objections after publication of the draft is not consultation – it is simply a ritual where substantial inputs of quality, width and breadth are not possible. An analysis of these responses from the people has shown that these are generally from those who stand to lose from the proposed land use of their properties in the Plan. Some are on behalf of citizen's organizations. The mass of the population shows scant interest in the Development Plan preparation process.

As city plans are made once in two decades and set the direction in which the city would move for the next twenty years, they leave an indelible stamp on the future course of a city for generations. It is therefore imperative that the widest possible informed consultations precede and accompany the planning process. While the 74th Amendment does demand popular participation, this may not be as professionally informed as desirable. Hence in the interests of a quality Plan, total transparency and informed public debate are called for, not mere suggestions and objections after the Plan is published. Plans under preparation or undergoing revision need to be discussed on public platforms comprising professionals, men and women from the fields of education and health, from NGOS, Chambers of Commerce, and industry. Slum dwellers, landowners, builders, and several such bodies that wish to meaningfully contribute to the future well-being of the city must also be consulted. Further, this consultative process should be coextensive but not coterminous with Plan preparation, and even after the draft is published, objections would continue to be entertained.

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