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Foreword

Planning is an important function of management. A thought out plan helps in managing the resources- human, finance, material, time etc.- in an efficient and effective manner. Master Plan is a tool to plan a city.

It has been experienced that city governments are not much interested in preparation of Master Plan. That's why a little number of cities in India has developed their Master Plan. Even the cities which have formulated their Master Plan they many a time fail to implement it effectively. For want of a plan, most of the cities witness haphazard growth and mushrooming of slums, shanties, jhuggi jhopris etc. which are not suitable for living. These habitats lack even bare minimum civic services.

The JnNURM therefore mandates to formulate a perspective plan for 25-30 years with five yearly CDP. The analysis shows that CDPs prepared by many city governments do not fit in with the Master Plan. It seems that CDPs have been hurriedly developed to get the central assistance. This is not a healthy sign for planned city development. The main objective of preparing CDP is to adopt inclusive planning- city for all and city by all. The mandatory requirement of preparing CDP shows the importance of having a Master Plan by the city.

I am thankful to Dr. H.S. Anand, Secretary to Govt. of India in the Ministry of Housing & Urban Poverty Alleviation on whose inspiration this booklet has been developed. It discusses many aspects of urban planning practices in the country and highlights the contents of a model Master Plan. Present critically analyses of many interventions in this regard. I am sure it may be of same help as policy input.

RCUES, Lucknow
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Preface

Cities and towns are vital for economic progress and wealth generation. It is in these locations that the division of labor is apogee. Urbanisation is afoot speedily all over the world. In 2007 the world became urban, while India is expected to cross the half mark in 2041. Thus it is evident that cities impose, and will continue to impose, in an increasing measure disproportionately heavy burden on space and earth's eco-systems.

The concentration of population in urban areas is causing complex problems before the city governments. The decreasing absorption capacity of agriculture is pushing rural poor towards urban centers for making their livelihood. The poor people migrating from rural areas in search of better employment opportunities and quality of life squat in a place which is not fit for human living. The mushrooming of slums in cities is causing hazards not only to people living there in but also to the people living nearby. The haphazard growth of urban areas and peri-urban areas is defacing the face of urban India. Absence of effective and workable city planning is one of the major causes for such a scenario.

Master Plan has been adopted as a legal tool to plan a city, regulate the services and infrastructure and control the haphazard growth of the city. But only a few major cities in the country have formulated their Master Plan. Master Plan is a broader frame work under which city is allowed to develop. But the experiences are not to the expectations. Many cities for various reasons have not followed their own Master Plan. In the light of the functions earmarked for urban local bodies under the 12th Schedule of the Constitution, the Govt. of India got UDPFI Guidelines prepared to be adopted by the state governments but many states have favored not to follow the suit. Again under JnNURM, the Govt. of India has made CDP as a pre-requisite for availing the central assistance but many of the CDPs are not commensurate to the Master Plan.

In this back drop, this booklet has been developed with an aim to highlight the need, importance and contents of a model Master Plan.

Master Plan and Zoning Regulations

1. Introduction

- 1.1 India has been going through rapid urbanization since independence. Since 1950, urban population of the country has increased manifold, though urban content has been recorded only about 27.8 per cent at the dawn of the 21st century. The number of urban settlements, especially million and mega cities has gone up. Many of our mega cities are on way to become meta ones. During these years, however, our attitude to these urban centres has been 'confused'. On the one hand, the country sees them as 'engines of growth', not only creating skills and wealth for the nation but also generating employment for waves of distress migrants from rural areas. On the other hand, these urban centres have also generated the 'most brutal and inhuman living conditions' with large sections of the citizens living in squatter settlements. The desperate lack of sanitation, drinking water, health and education services leads to the abject degradation of human life.
- 1.2 After six decades of planned efforts for development and changing socio-political context in the country, the country is still at the threshold of evolving a suitable Development Strategy for the 21st century, the century of cities, although JnNURM, UIDSSMT and IHSDP have been launched with a mission moded development strategy. It is the experience of the past that development programmes have indirectly contributed to the concentration of development in the big cities. It has resulted into an imbalanced pattern of growth from all aspects of development such as economic, social and ecological.
- 1.3 Development should really have 'people' in mind and not the goods. However, it is easier for the economic planners and

decision makers to plan development in terms of 'goods' rather than 'people'. It is because of this situation that plan targets, industrial location and development policies ultimately help the concentration tendencies of economic activities and people into the big cities. If on the other hand the concentration is on the 'real good of the people' and consider 'development' as the tool for the same, the pattern could be different.

- 1.4 In the context it would be necessary to think of a spatial system which can generate and sustain more balanced development. This would of course also mean a reallocation of resources for creating an articulated net-work of development centres integrated into a national system of production and distribution which will provide access to economic and social opportunities for a majority of the population. In this sense, 'trickledown of benefits' from major industrial centres may not be sufficient and the new development strategy will have to focus on a more equitable distribution of wealth rather than merely increasing gross national product. It might be therefore necessary to spreading the benefits and effects of development more into the interiors with the help of other settlements of various sizes. Such a shift of development strategy particularly emphasizing the growth of small and medium size towns and cities to offer markets, service and storage facilities, light labour intensive industries, processing local materials and based on appropriate technology, energy saving and promoting social welfare etc. would mean best use of available resources and manpower and would mean balancing development between rural and urban sectors.
- 1.5 Both the rural and urban developments together represent a continuum of entire national socio-economic efforts and there is no neat way of breaking the linkages between urban settlements and their rural hinterlands as they actively depend on each other. The studies point out that rural development will certainly reduce migration to the cities. There is evidence that more successful rural

development programmes will encourage migration of the economically surplus population from the country side to the cities as available land is limited and can't simply offer jobs to all in agriculture sector. The better educated, healthier and younger members of the rural population will like to migrate. With this perception the former President of the country Dr. A.P.J. Abdul Kalam advocated the innovative PURA (Provision of Urban amenities in Rural Areas) scheme.

- 1.6 The PADCO study (1975) points out that urban development should not be mistaken as that of primate cities only but should have a broader concern for the full range of urban issues from big to small settlements and that the issues in both rural and urban development should be considered together. The essential tasks for this purpose will be husbanding of existing resources to upgrade the quality of urban life and aggressive and imaginative use of urbanization to increase the total national resource pool. Therefore the Constitution of the country provides for an integrated local planning by associating the peoples' representatives and constituting two-tier planning units- District Planning Committee (at the district level) and Metropolitan Planning Committee (in the cities having population of more than 10 lakhs and spread over in two or more districts).
- 1.7 Urbanization will therefore have to be assisted and used as a tool for development and the settlement planning and development policies will have to be accordingly adopted to bring in maximum of social change at the minimum of efforts. In fact, industrialization, modernization in agriculture and urbanization should be treated as three inseparable factors in the development process.
- 1.8 Miller (1974) emphasised that location in space of economic activities is as important as the economic activities themselves are. Development can be self generating if appropriate investments are

concentrated in space and then the development effect is spread further. The provision of urban facilities and services in location away from existing cities can generate significant growth impulses for the particular geographical area. The ability to programme and locate industry, infrastructure and other facilities in a situation provides the chance to structure the space-economy so as to maximize the distribution of development benefits to all the society.

- 1.9 The much ambitious schemes of Jawaharlal Nehru National Urban Renewal Mission (JnNURM) for select large and important cities, and Urban Infrastructure Development Scheme for Small & Medium Towns (UIDSSMT) and Integrated Housing & Slum Development Programme (IHSDP) for other small and medium towns have been launched by the Government of India. These mission-moded and urban-reforms- based schemes aim for developing basic physical infrastructure on the basis of well-conceived city planning besides strengthening the democracy at local level and bringing decentralized, transparent, responsive and citizen-friendly government at the grass-roots level.
- 1.10 In order to provide optimum environment for physical, social and mental development of the millions for achieving the objective of economic development with social justice as stipulated in Five Years Plan, the country is thus engaged in the development of natural and human resources. The transfer of the results of the financial investments to be incurred in the plan programmes for the common man demand proper coordination between sectoral plans and the implementation programmes. The success of the environmental and economic planning depends upon optimum location of different agricultural, industrial and socio-economic functions in space for achieving an integrated area development plan in rural and urban settlements and planning of new growth centres. The settlement planning is thus very important for orienting future development.

2. Planning Practices

- 2.1 Planning practices involve the decision regarding the location of development projects and identification of places for investment as broadly outlined in the sectoral and planning programme at national and state levels. Physical planning is responsible for translating the broader economic policies by optimum location of different socio-economic functions. Integrated area planning and balanced regional development demand that all settlements should be studied in relation to their physical potentialities and new development centres should be identified so that the optimum system for an area as a whole is not disturbed.
- 2.2 Planning for provision of different functions at least for the minimum working, living, and recreational standard has become a guiding principle for policies and programmes of the country. It is however ironical that after having created a mess of our habitats we are abandoning them without a clear vision of the habitat of tomorrow. We have destroyed our own habitat without creating any clear alternative before us. The Government of India realized the complexities and therefore has mandated the preparation of Perspective Plan for 30 years with a five yearly break-up in the form of City Development Plan as a pre-requisite for accessing financial assistance by 63 cities selected for physical infrastructural development under JNNURM. The remaining cities covered under omnibus schemes of UIDSSMT and IHSDP have to develop their Vision Plan, but not as a pre-condition.
- 2.3 Urban Planning practice has moved a long way from its traditional overwhelming attention to architecture and engineering. It is now increasingly addressed to economic, social and political issues. A generalized model of the planning process applicable to any of the our levels of plans which are appropriate for our situation, suggests a ten-stage process. In stage 1 the problems and issues are

identified, the purpose of planning and goals for the plan are defined and the approach and methodology of the study in relation to the problems are decided. This helps in defining the planning objectives. In stage 2, all data relevant to the planning problems required for preparation and evaluation of the plan are collected. The stages 3 and 4 deal with analysis of data, projecting the future and forecasting the basic planning requirements. In recent years the use of mathematical models with computer has opened up prospects of rational methods of analysis and exploration. In stage 5, the constraints like financial and other resources and legal and institutional limitations need be identified. A review at this stage may modify the objective of stage 1.

2.4 To make the plan making exercise in stage 6 realistic and meaningful, the stage 5 should also evolve, on the basis of the objectives, a set of criteria to be used in the planning and design process. The alternative plans are formulated in stage 6. In stage 7, the internal consistencies of alternatives are to be checked and tested. It is to be pointed out that testing is different from evaluation as, in the testing stage the feasibility of the plan is examined from technical, legal and administrative points of view. In stage 8, evaluation is to be made for a number of feasible and implementable alternative plans on the basis of analysis of merits and demerits (benefits and costs). The stage 9 is the stage for taking decisions and selecting the preferred plan. The last stage (10) of the planning process is plan implementation, monitoring and review and also suggesting mid-term corrections, if necessary.

2.5 The planning technique for plans of the first levels, should be of a 'scenario writing' type. The inventoring action should comprise of collection and consolidation of data from secondary sources. Census reports should be able to provide major socio-economic information which may be supplemented by information furnished in reports prepared by different socio-economic and statistical research organisations. The physical information should primarily

consist of landuse, landform, transportation data, water supply, drainage and sanitary information. This should be available from the existing base maps, interpretation of aerial survey maps, drainage basin maps and from the various concerned functional organizations.

- 2.6 Based on the analysis of the existing scenario and considering the deficits and deficiencies, future alternative scenarios should be constructed. For this purpose, broad estimates of future population with spatial distribution, future employment pattern, need for social and physical facilities and services should be made for the given time horizon. In making these estimates state level policies and strategies relating to employment, urbanization and urban development should act as the primary guide. Based on these estimates alternative plans for the future structure of activities and settlement should be prepared and evaluated with relevance to a pre-determined set of criteria for taking decision regarding the preferred structure. The technical and analytical procedure to be adopted for sectoral master plans should be different for different sectors.
- 2.7 In the case of traffic and transport sector, for instance, the long-term system plan should aim at establishing relationship between transport and landuse through the use of mathematical models to project the future options of landuse-transport combinations with a view to selecting the preferred transport structure. Master Plan on transportation should evaluate alternative networks for techniques for network analysis, transit route structure, optimization study, evaluative studies etc. should be made in the planning exercise. Alternative scenario writing should be supplemented and followed by definitive plans of alternative systems for this level of plan.

3. Comprehensive Master Plan

- 3.1 The Master Plan describes the broad vision for the city's future. It is the core physical that directs all development activities in any city. It guides where and in what for development occurs in the community and frames the city's capital improvement projects. It is used to test the appropriateness of both public and private development proposals. During the life of the plan, designs are made on landuse issues and budget priorities. These decisions are judged by the extent to which they correspond with the Master Plan. Thus the Master Plan is a compilation of goals, policies and recommendations for each of the subject areas it covers. Goals are conceptual broad and long range. Policies are the guides to the achievements of the goals. Recommendations define the specific actions needed to accomplish the over all goals as well as the policies.

3.2 Underlined Principles

- 3.2.1 The following should be the planning principles for providing the foundation for the specific goals and policies:
- i. Projects the character of its neighborhoods;
 - ii. Develops a sense of a cohesive community that overcomes physical barriers and links neighborhoods;
 - iii. Fosters a vibrant town center that has a distinctive character;
 - iv. Provides a diversity of integrated transportation option;
 - v. Emphasizes its parks and open spaces;
 - vi. Respects the natural environment and historic resources, and promotes the responsible, sustainable use of natural resources for present and future populations;
 - vii. Provides a high level of community services and facilities;
 - viii. Maintains a safe and secure community;
 - ix. Encourages a broad range of housing styles and prices;
 - x. Promotes active community involvement in planning and city government;
 - xi. Recognizes the diverse nature and needs of the community;

- xii. Encourages a strong and diverse local economy;
- xiii. Establishes a supportive environment for advanced technology, technological industries, and institutions of higher learning;
- xiv. Recognizes unique position of the city;

3.3 Legal Authority of the Plan

3.3.1 The preparation of the Master Plan is the legal responsibility of the Urban Local Body or Development Authority having jurisdiction over the city area. The plan must include the following elements:

- i. Statement of goals, objectives, principles, policies, and standards
- ii. Land use plan element including urban growth areas
- iii. Transportation plan element
- iv. Community facilities plan element
- v. Mineral/natural resources plan (if appropriate)
- vi. Identification of areas of critical State concern (if appropriate)
- vii. Sensitive area element/environmental quality
- viii. Recommendations for implementation encouraging the following:
 - (a) Streamlined review of applications for development, including permit review and subdivision review within the areas designated for growth in the plan;
 - (b) The use of flexible development regulations to promote innovative and cost-saving site design and protect the environment; and
 - (c) Economic development in areas designed for growth in the plan through the use of innovative techniques.

3.4 Land Use Policies

3.4.1 A master plan should retain a mixed land uses that meet housing needs, protect the quality of life for residence and enhance cities tax based upon Smart Growth principles and regional cooperation. The major policy should be as under:

- i. New development should positively impact the quality of life for existing residents, and contribute to making at a unique and special place to live and to raise a family.
- ii. In accordance with Smart Growth principles, new growth in city should be concentrated in inner town area to reinforce the need for town center to serve as heart of the community.
- iii. Continue to protect residential areas adjoining growth areas by providing buffer and transition areas.
- iv. Promote private and public development of the Town Center (part of a separate Town Center Master Plan).
- v. Ensure new growth does not occur without adequate public facilities, especially schools, health centres and other civic services.
- vi. Ensure a mix of housing types and price ranges to meet diverse needs of different sections of the city's population, with an emphasis on the importance to owner-occupied housing, especially to EWS/Poor with tenurial right.
- vii. Foster greater cooperation/coordination between the city, the State, the village, and
- viii. Economic development efforts should focus on attracting and fostering high-tech and related businesses to locate and prosper in city.
- ix. Citizen involvement and residents' interests should be given priority in the development process.
- x. Encourage residential land use within the city so that the "Jobs to Houses" ratio is reduced.

3.5 Transportation

3.5.1 The master plan should provide a multi-modal transportation system that enhances accessibility and mobility while protecting neighborhoods and the environment. The influences of land use in historically significant areas and the environment must be taken into account in developing a comprehensive transportation system for any city. Multi-modal refers to a system in which various modes of transportation are competitive. The use of multiple modes is encouraged and transfers between modes are facilitated.

3.6 The Environment

3.6.1 The goal of the master plan should be to integrate the protection of the environment in all public and private development and land use decisions to promote the health and safety of and enhance the quality of life for the citizens of the city. The policies should be to support and implement the environmental guidelines, to implement environmental programmes that will protect and enhance the city's natural resources and ensure that environmental impact from development are limited or mitigated, to support and implement storm water management within existing neighborhoods, work to mitigate noise, maintain, enhance and preserve the city's urban greenery and establish a goal for canopy coverage, and pursue sustainable practices to protect environmental quality and natural resources for the use of present and future generations.

3.6.2 Protection of the natural environment is an important goal for any city because it is necessary to maintain and enhance the quality of life of its citizens. It must be taken into consideration in all public and private development decisions because protection and enhancement of the natural environment is an integral part of a community's fundamental social health.

3.7 Community Facilities

- 3.7.1 Community facilities include the infrastructure and other systems that provide various services to the city. These include the services associated with the community safety (police and fire protection) health, water, sewerage or general well being (schools, libraries, care facilities).

3.8 Historic Preservation

- 3.8.1 The master plan of any city should protect the city's physical and cultural heritage and encourage heritage tourism through historic preservation. The policy should be to identify the historic resources as visual and physical reminders of the themes and periods in the city development, preserve, protect and maintain the physical and environmental integrity of an increased number of historic resources and develop and encourage programmes that lead to the enjoyment and appreciation of city's historic sides and that encourage heritage tourism.

3.9 Housing

- 3.9.1 The goal should be to provide broader economic selection and home ownership opportunities for owners, renters of every age group as well as urban poor. The policies should be:
- i. Encourage the maintenance and upgrade of existing housing stock;
 - ii. Encourage the construction of housing close to the work centres;
 - iii. Encourage the construction of housing alternatives for an aging population – may need economic incentives or flexible zoning options for development variances for this to occur;
 - iv. Encourage multifamily housing in mixed-use areas of development;
 - v. Create a balance between different housing types;

- vi. Promote policies and practices that are non-discriminatory in the rental housing stock and that preserve neighborhoods, recognize historical significance, encourage affordable and accessible housing, and consider the impact of land use;
- vii. Increase opportunities for homeownership for persons of all income levels including urban poor;
- viii. Maintain an appropriate mix of ownership and rental opportunities in the city;
- ix. Encourage construction of innovative and unconventional housing types, including but not limited to live-work units and loft housing.

3.10 'Jobs to Houses' Ratio

- 3.10.1 The jobs to houses ratio (J/H) is the description of how many jobs are available to those who live in a specific areas. It is desirable to have a balance between the two. However, it would be very difficult for the City to have a one to one balance between jobs and houses. Having a number of businesses within a municipality helps to divide the tax burden between the residential taxpayer and the business community. If ample local jobs are available, more people have the opportunity to work within the community, thereby shortening their commuting time. This would not only help alleviate traffic congestion but would increase the amount of leisure time for the workers. Obviously, affordable housing, safe neighborhoods, and pleasant surroundings are also necessary to make a community a desirable place to live.

3.11 Residential Neighborhood Planning Areas

- 3.11. It is important to identify the individual residential planning areas that make up the city, acknowledge the distinctive identity of each neighborhood and evaluate special conditions. Although residents identify the city as their home their most important identification is

often with their individual neighborhoods. The master plan should therefore maintain and create the best possible residential neighborhoods that are safe and served by a good multi-modal circulation system. The policies should be to review existing neighborhoods plans to ensure they reflect current conditions, goals and policies, develop new appropriate neighborhoods plans, develop appropriate mechanism so that priorities and concerns of neighborhoods are communicated and understood by city government, promote and facilitate strong neighborhood associations, establish pro-active neighborhood advocacy programmes promote communication between neighborhoods develop neighborhood recreation programmes maintain and expand open areas/parks/playgrounds, establish neighborhood linkages with access to shopping services etc., develop neighborhood walk ways that are safe, continuous lighted and that connect neighborhoods with the town center workplaces schools, shopping centers, parks and public transit.

3.12 Economic Development

- 3.12.1 Economic development is a means of strengthening cities valuable existing economic base while providing a balanced commercial mixed and a diversified economy. Local business and industries help to sustain and improve the quality of life of citizens by providing a wide variety of jobs contributing to the tax base and promoting a positive image for the city.
- 3.12.2 The master plan should have goal to develop a sustainable economic base by retaining and attracting business while balancing the needs of both the business and residential communities and considering the effects of the economic development of the environment and the history of the city. The policy should be to:

- i. Attract businesses that will yield the highest economic benefits to the city and its citizens without accruing negative environmental issues or stressing the resources and infrastructure that support them.
- ii. Ensure compatibility of industrial and commercial uses with nearby residential areas.
- iii. Encourage an appropriate balance of office, retail, industrial and residential uses and an emphasis on mixed-use development.
- iv. Encourage commercial redevelopment.
- v. Create and encourage diversity and opportunities for small businesses.
- vi. Encourage increased transit utilization, improved traffic circulation and better pedestrian and bikeway access and circulation.
- vii. Promote local tourism as a tool for economic development.
- viii. Foster continued cooperation/coordination between the city, and educational institutions to maximize workforce development opportunities.

3.13 Recreation, Parks and Open Space

- 3.13.1 It is widely recognized that parks and recreation systems make an essential contribution to quality of life. Recreation and parks services play an important role in helping city sustain the quality of life that residents appreciate and support. This quality of life includes living in safe communities with access to parks and facilities that encourage healthier lives and healthier communities and involves all age segments in positive leisure time activities. The master plan should therefore promote participation by all city citizens in diverse, interesting and high quality recreational and leisure opportunities in safe, modern and well maintained parks and facilities.

3.13.2 The policy should be to:

- i. Provide high quality, accessible and affordable recreation and cultural services including the following areas: parks, facilities, programmes, environment, urban forestry and special events.
- ii. Ensure that sufficient indoor and outdoor facilities are available to meet the space needs for recreation, arts and community programming.
- iii. Provide an exemplary park system that exceeds national acreage standards and offers a diversity of geographically distributed facilities and amenities.
- iv. Offer diverse recreational, educational, social, cultural and community activities for all ages with quality leadership in safe, pleasant environments.
- v. Undertake ongoing planning and development functions.
- vi. Pursue opportunities for partnerships in all service areas.

4. Shortcomings/Hindrances

- 4.1 As already discussed the Govt. of India has asked the city government in select 63 towns to develop a perspective plan for 25-30 years with a City Development Plan for five years as a pre-requisite to be eligible to get central assistance under JnNURM. Under UIDSSMT and IHSDP the towns have to prepare vision plan for planned development of their city. These plans are in addition to Master Plan and are meant for getting central assistance. Master Plan is a legal document provided under State Acts for guiding and controlling the development of a town. The preparation and implementation of a Master Plan consume a lot of time and money hence only a few cities have got their Master Plan prepared. In view of the urgency and importance of planned urban development, the Govt. of India requires the preparation of City Development Plan.

4.2 An analysis of CDP of various cities depicts many contradictions between Master Plan of the city and the CDP. The CDP should be in the overall frame work of the Master Plan. The Master Plan on the other hand should not only be a land use plan but should consist of infrastructure and services plan. Generally the Master Plan in the country suffers from following shortcomings and hindrances:

- i. A few cities in the country have Master Plan to plan, control and regulate their development;
- ii. The cities having Master Plan are generally not able to update their Master Plan. Many Master Plans are neither workable nor functional;
- iii. The preparation of Master Plan consumes a lot of time due to cumbersome process and constraints;
- iv. A lot of time gap is found between formulation of a Master Plan and its actual implementation. The delay defeats very propose of the Master Plan;
- v. There is no scope for consultation with public and other city stakeholders. Only a ritual is fulfilled by inviting objectives. Even the people at large are not interested in any such exercise.
- vi. The responsibility for formulating the Master Plan lies with the development authority and/or town country planning department. There is lack of coordination between the plan formulation authority and the city government. This uncoordinated makes the master plan often in workable.
- vii. In many states desired commitment and willingness, on the part of political executives are not available. This stalls the implementation of the Master Plan;
- viii. In many cities a lot of changes in landuse are made in Master Plan at the implementation stage to suit the interests of political masters;

- ix. Most of the Master Plans have simply become the landuse plan and do not reflect services, transportation and other facilities;
- x. In post-JnNURM scenario, most of the CDPs are not commensurate to the Master Plan. CDPs are found too ambitious and do not fit in within the overall framework of the Master Plan of the city;
- xi. The planning authority as well as city government generally lacks required technical input, finances and administrative support in the process of formulating and implementing a Master Plan;
- xii. Many Master Plan fail to accommodate the needs, expectations and aspirations of the people at large in the name of technicality and professionalism.

5. Suggestions

5.1 Following are certain policy inputs to make a Master Plan comprehensive, workable and functional:

- i. All the cities with population of one lakh and more should have their Master Plan.
- ii. The Master Plan should not be confined only to municipal area or development area but peripheral area should also be covered.
- iii. The planning authority and city government should develop Master Plan in a joint venture.
- iv. The people and other stakeholders should be associated at all the stages by organizing public consultations extensively.
- v. A good Master Plan should have infrastructure and service plans as well.
- vi. In every area whether residential, commercial or industrial land should be reserved for EWS/LIG and Urban Poor. On every 10-100 houses/plots for HIG category and 100-200

houses/plots for MIG class, 10-20 and 40-60 houses/plots respectively should be constructed/reserved for service providers (belonging to EWS and poor classes). Thus provision should be made for reserving plots/land for urban poor in all the areas in a scattered manner.

- vii. The city planning should be inclusive and not segregative. It means allocation of lands in every zone should be for all sections of the society and not in a segregative manner.
- viii. In every zone some land should be reserved exclusively for storage and disposal of urban waste.
- ix. Every zone should have a play ground in addition to parks etc.
- x. CDP/Vision Plan should be prepared under the overall framework of the Master Plan of the city.
- xi. The government at the state and local level should show the political commitment and administrative willingness to formulate and implement a Master Plan.

6. Contents of a Model Master Plan

A good Master Plan should consist of the following:

Chapter I: Introductory

- Concept
- Need
- Importance
- Rationale

Chapter II: Existing Conditions and Developmental Issues

1. Physical characteristics and natural resources
 - a. Location and regional setting
 - b. Climate

- c. Existing generalized landuse
 - d. Environmentally sensitive areas
 - e. Heritage, sites, buildings and areas
- 2. Demography
 - a. Existing population, migration and household characteristics
- 3. Economic base and employment
 - a. Formal sector
 - i. Primary: urban agriculture, mining, quarrying, etc.
 - ii. Secondary: industries, trade, commerce, etc.
 - iii. Tertiary: transport and other services
 - b. Informal sector and urban poverty alleviation, informal trade, commerce, transport, household industries.
- 4. Housing and shelter (both formal and informal)
- 5. Transportation
 - a. Mode of transportation-by road, rail, air, water as the case may be
 - b. Network of roads, railways, waterways and their interrelationship with major activity nodes
- 6. Facilities like:
 - a. Education
 - b. Health care
 - c. Recreation
 - d. Religious
- 7. Infrastructure
 - a. Water
 - b. Energy
 - c. Drainage
 - d. sanitation
 - e. refuse and solid waste disposal
 - f. Communication
 - g. Police protection
 - h. fire protection

- i. Cremation and graveyards
- 8. Any special problem like disasters, both natural and man-made.
- 9. Resources
 - a. Fiscal
 - b. Manpower
 - c. Land
- 10. Development management
 - a. Institutional set-up
 - b. Legal support
 - c. Inter-department cooperation
 - d. Integration of development efforts
- 11. Major policy issues

Chapter III: Projected Requirements

- a) Extent of the local planning area (must include peri-urban)
- b) Population
- c) Economic base and employment
- d) Housing and shelter
- e) Transportation
- f) Facilities
- g) Infrastructure
- h) Resources
- i) Land
 - i. Shelter
 - ii. Commerce and trade
 - iii. Industries
 - iv. Public and semi-public facilities
 - v. Open spaces
 - vi. Roads and streets
 - vii. Infrastructure

- j) Special activities, if any, like tourism or pilgrimage which result in increase of floating population and demand for facilities and infrastructure

Chapter IV: Development Aims & Objectives

1. Development of economic base and employment generation covering:
 - formal sector
 - informal sector
 - special sectors like tourism and pilgrimage
2. Infrastructure development covering:
 - utilities like water supply, electricity, sewerage, drainage; refuse collection and disposal;
 - facilities pertaining to education, health, recreation;
 - services like communication (postal and telephone), protection (police, fire) and others;
3. Housing and shelter development
4. Transportation
5. Environmental protection
6. Spatial development covering:
 - proposed generalized land use indicating direction, growth of the settlement and its components like residential, commercial, industrial areas, open spaces
 - network of roads
 - major activity nodes
 - conservation of environmentally sensitive areas, historic sites and monuments and tourism
 - phasing of spatial development
7. Implementation and monitoring
 - priorities and
 - monitoring mechanism
8. Capacity building for
 - fiscal
 - manpower and
 - land resource mobilization

Chapter V: Existing Conditions and Policy Issues

1. Delineation and assessment of general characteristics of the city influence region including settlement hierarchy, functional specialization and interdependence
2. Issues related to decentralization of economic activities, if any
3. Issues related to renewal of old and dilapidated areas
4. Issues related to mass transportation and its interface with major activity nodes

Chapter VI: Projected Requirements

As a basic principle the projected population and economic activities in case of large cities should be a function of environmental and infrastructural sustainability of the city. Through policy initiatives the unsustainable activity project should be diverted to the other settlements in the city region. Sustainable and the relevant projected figures for the city should be adjusted accordingly.

Chapter VII: Policies and Priorities

Additional policies and priorities regarding:

1. Economic activities in the context of the city region including dispersal of activities, if any
2. Informal residential areas/slums and unauthorized colonies
3. Renewal/upgradation of old dilapidated formal and informal areas
4. Intra-city mass transportation system and its interface with land use pattern and location of major activity nodes

Chapter VIII: Provision for Shelter for the Urban Poor

Every zone-residential, industrial and commercial should have provision of land for service providers including urban poor. In residential zone mixed housing should be provided.

Chapter IX: People's Participation

People in general should be involved at all the stages of master plan preparation starting from survey and data collection to allocation of zones for various uses.

Chapter X: Environmental Impact Assessment

Every landuse should be environmentally sustainable. Environment should not be distorted in the name of development. Development and environment should go hand in hand for ensuring sustainable development.

Chapter XI: Spatial Impact Assessment

Every type of landuse must be assessed from social, occupational and environmental angles.

Chapter XII: Implementation

The change in landuse at the time of implementation should be restricted. Such a change is forced due to delay in implementing the Master Plan.

Chapter XIII: Financing and Fund Flow

The master plan should reflect on the sources of financing the projects and availability of funds before hand in a realistic way. The non-availability of finances constrains the implementation.

Chapter XIV: Monitoring & Review

Every stage should be monitored by a committee having people's representatives. The Master Plan at every stage should be renewed.

Annexures-Relevant City Maps

Master Plan should annex detailed city maps showing various facilities, characteristic etc.

7. Conclusion

- 7.1 Although India is a least urbanized country and its urban content at the dawn of the 21st century is less than thirty percent, its urban population has increased more than six times during the last one century. The country having solitary metro town in 1901 had 35 such towns in 2001 and is expected to cross 50 marks in 2011. The 423 class-I towns (towns having population of one lakh and more) contain about 2/3 of the urban population of the country, whereas the 35 larger towns inhabit more than 1/3 of the total urban population.
- 7.2 The country is now facing the problem of concentration of population in larger urban areas. With less than 1/3 of its population living in urban centers the country records about 15% of its population living in slum areas and about one fourth in the object poverty. The city governments have miserably failed to provide clean drinking water, proper housing conditions, minimum basic services including health and education to its about half of the urban population. Many city areas are even not fit for human habitation.
- 7.3 The city governments are also not competent-professionally, financially, technically, politically, administratively to manage the

city affairs. In the name of specialization many parastatals have been created to undertake capital intensive and profit earning city functions. The municipalities have become service providing organization. Many state governments have not implemented the 74th Amendment to the Constitution in spirit and thus city governments are not capable to play the role of a third partner in the federal structure of the country.

- 7.4 The new economic policy initiated by Government of India in 1991 has led to make the cities as 'engines of growth'. The economic activities are centered around the city areas and the human resource for speeding up the wheel of development is drawn from the informal residential areas inhabiting by migrants from rural areas. If the country intends to increase its GDP it has to provide basic physical infrastructure and services to the city dwellers, who play a pivotal role in economic development of the country.
- 7.5 To reduce the migration from rural areas to the urban areas, the country has to adopt two-pronged strategy-providing urban services in rural areas and planned city development. The effective rural development will encourage migration of prosperous rural people and not the poor ones to urban areas. The inclusive city planning helps developing a city for all. Planning a city leads to plan the whole country. Master Plan being the main instrument for the city development holds its own importance and relevance. Hence every effort should be taken to develop a comprehensive Master Plan which is people's plan and is workable and functional.

References and Further Readings

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Master Plan & Zoning Regulations

Summary

Master Plan is a legal tool to plan, regulate the services and infrastructure and control the haphazard growth of the city. Master Plan is a broader frame work under which the city is allowed to develop. But a few cities in the country have Master Plan.

Even in the cities which have Master Plan they have failed not only to control the unplanned growth within the city and in peripheral areas, but also to assimilate the deprived classes of people. The time lag between formulation and implementation is too long and delay in implementation some times leads to changes in landuse, thus defeating the purpose of the Plan. More so, the community participation is found always on margin.

Under the JnNURM strategy for developing infrastructure in select cities, the Government of India has mandated the preparation of City Development Plan (CDP), for the period of five years under the overall perspective plan for 25-30 years. Many city governments hurriedly prepared CDP to access the central assistance. The analysis of CDPs reveals that many CDPs are not in conformity to the Master Plan of the city.

The module suggests the preparation of Master Plan for all the class one towns. Master Plan should cover the development area (not limited to municipal area), including peri-urban areas. The Master Plan should not be treated as a landuse plan but should consist of infrastructure and service plan as well. The module advocates adopting inclusive housing and not the segregative one. Inclusive housing means for every 50-100 plots belonging to HIG category 10-20 plots for service providers should be reserved. Like wise, for every 100-200 plots for MIG classes some 40-60 plots for service providers should be allotted. Similarly plots for EWS/poor/service providers should also be reserved in zones earmarked for commercial and industrial sectors. In such way an assimilative urban society may be developed. Segregative planning develops a border line between many sections of the society.

The module suggests a model of comprehensive Master Plan on the lines of one recommended by UDPFI guidelines.