HANDS ON GUIDE :
URBAN PLANNING & HOUSING

ABOUT THE BOOK

This book is to serve as a guide to all those public spirited men and women who may want to participate effectively in the planning of their cities, environs and habitat. A study of this book will equip them as well as the students and practitioners in urban planning and development to understand, comprehend and visualize the results of urban planning. The book provides guidelines for planning of regions, cities, projects for habitat, evaluation of planning proposals and the entire governmental approach to physical planning.

It provides some food for thought to the state legislators. They can examine the effectiveness of the laws they helped to enact or those in the pipeline in the context of known examples of legislation that has succeeded or failed. To the policy makers, there are guidelines with reference to the overall urban scene in the country. To the enforcement agencies like the local government authorities, there are lessons in dealing with problems of low income housing to resolve the issues with equity.

This is not a text book dealing with physical planning or development. It hopes to guide the reader in dealing with physical planning and development issues in the context of similar problems already dealt with by the author. The issues dealt with in the book are the result of my 52 years of experience in dealing with regional and city planning problems and urban development issues during my working with organizations like the Delhi Development Authority, Asansol Planning Organization, New Capital Project of Gujarat, Housing & Urban development Corporation of India and other private sector organizations.

It is not the objective of this book to 'teach' urban planning or development process to the reader. It is to demonstrate to the reader through examples how issues can be tackled or have been handled with the results. It is for the reader to draw conclusions and choose an optimal path to resolve issues that he wishes to tackle.

The essence of my experience as consultant with various organizations like the Tata Consultancy services, The World Bank, City & Industrial development corporation, Mumbai Metropolitan region Development Authority, Institute of Town Planners, India, and a number of government and non-government committees dealing with urban issues is reflected in the writings of this book.

Prakash Madhusudan Apte

January 2014

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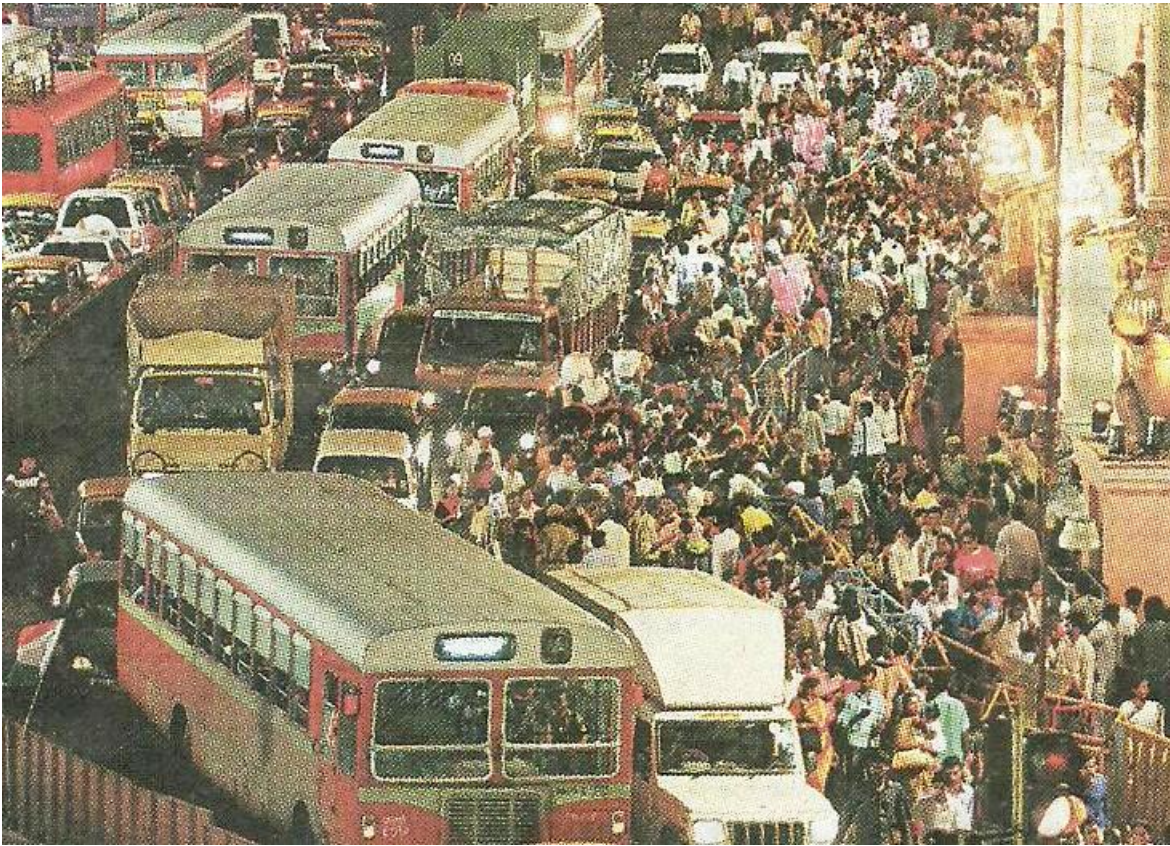
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HANDS ON GUIDE : URBAN PLANNING & HOUSING

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Preface

A few years back, the state government of Goa, India published a regional plan for the state. In this plan the land of the entire state excluding the forest land was declared as "urban". In my 52 years of professional experience as an Urban Planner I have not come across such a "bold" plan! Unlike residents of most other states in India, Goans are a highly educated, informed, proud and enlightened people. There was almost a mass movement against this "sacrilege" and what many Goans described as "rape" of their motherland!

The protest and anger was perhaps unexpected by the power and money hungry politicians who were caught napping and had to beat a hasty retreat by withholding approval to the regional plan. A "Goa Bachao" (Save Goa) movement was started. The initiators of the movement invited me to deliver a lecture, suggest guidelines for the preparation of a regional plan and conduct a workshop at Panaji. It was a surprise to find over 200 people enlists for the workshop which I conducted. For the first time in my life I experienced real public participation in "planning"!

It has been an unforgettable experience and I cherish the memories. It motivated me to write this book to serve as a path finder to all those public spirited men and women who may want to participate effectively in the planning of their cities, environs and habitat. A study of this book will equip them as well as the students and practitioners in urban planning and development to understand, comprehend and visualize the consequences of urban planning. The book provides guidelines and stimulates new thinking for planning of regions, cities, projects for habitat, evaluation of planning proposals and the approach to physical planning.

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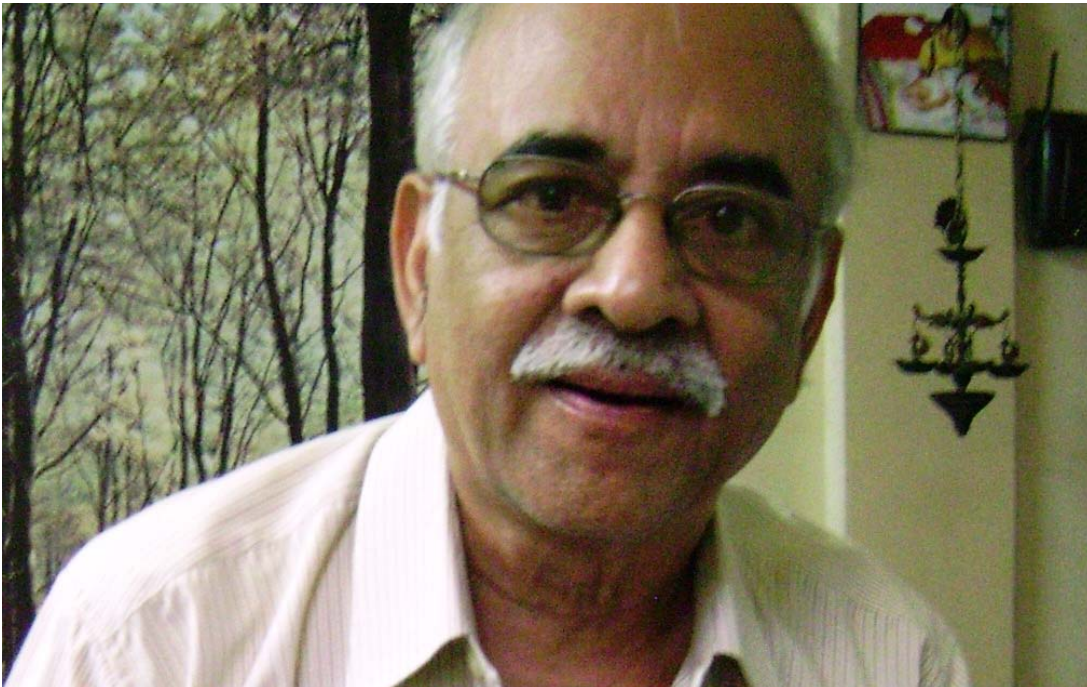
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1

Formulating an Urbanization Policy: India's example

Introduction:

With the recent rapid strides of the Indian economy, acceleration in the urbanization trend can be safely predicted. Every economy undergoing such rapid growth has witnessed higher levels of urbanization as is taking place in China. Do our towns, cities and metropolitan centers have the institutional structures and resources to manage this transition? Even if urbanization is an inevitable outcome of fast economic growth, should the policies be formulated at the expense of building sustainable rural communities? Or should the policy interventions be targeted to create a system with centers of prosperity spread across the country? What could be the 'pillars' of our Urbanization Policy?

Creating Multiple Centers of Prosperity

It is easy to view urbanization as the root cause of malaise affecting our cities. We therefore need to tailor our urbanization policies to create a harmonious interface with our rural areas. Urban centers have the advantage of economies of scale and scope in offering a range of services to the citizenry that are uneconomical to provide in the vast rural hinterland. The percentage of India's urban population is close to only 30%. Within this segment, the vast majority are concentrated in cities with a population of over a million and especially in our large metropolitan cities.. This has led to unbalanced development wherein our metropolitan areas are becoming ungovernable with uncontrolled growth, and our smaller cities lack the wherewithal to deliver even basic services.

This calls for a two-pronged approach where we focus on consolidating growth and delivering better services to people in metropolitan areas but at the same time plan & develop new, smaller cities to become the engines of future growth. But given the socio-political structure that has emerged in our established metropolitan cities, where competing power centers jostle for resources and influence, the task of bringing real change is difficult and could be painstakingly slow.

The options available to planners in this sphere range from building satellite townships, creating new planned cities and managing the growth of rapidly expanding cities through investments in institutional capacity building, developing industrial corridors and even building private townships where even the traditional municipal functions can be privately managed. We need to evaluate the options and follow appropriate ones for optimizing the full range of opportunities available to us.

Map of India showing major cities

Cities need to fulfill the economic, security, environmental, spatial, and other needs of people to create a sense of identity and build long-term sustainability. An essential step in this process is the creation of an enabling environment and a long term 'global' policy so that successive governments (irrespective of their political hue or ideology) take an ecosystem-centric view of urban development. For the cities to harness the human potential of the urban immigration, they must focus not only on

promoting industries that take advantage of the resources available but also on taking steps to create new opportunities

we need to expand the options available to people so that the large metros do not remain the only meaningful choice available to live an urban life. For the foreseeable future though, the large metros may continue to play a dominant role in our economy and in creating a vast marketplace that will be at the apex of a multi-tiered, Indian urban system. The trends in recent years have shown that a city like Delhi, which has a large degree of control over the generation and usage of funds, has had far better payoffs than places like Mumbai, which fill the coffers of the state government but do not get commensurate investments back. Our cities are our greatest assets and we have the opportunity to either harness the urbanization trend to create more centers of prosperity or go down the path of metro-centric growth which can lead to an urban disaster.

Not Mere Urban Development

There exists a dual relationship between economic growth and urbanization – while urbanization is an important side-effect of economic growth, it is at the same time essential to sustain economic growth. The Indian growth story however does not quite conform to this dictum. Despite India's recent rapid economic growth, the pace of urbanization has been slower than the economic growth. This is primarily a result of rural exodus to metropolitan cities. While the metro cities have appropriated a large chunk of urban development resources, they suffer from inadequate government policies, improper governance models, bureaucratic inefficiency, and lack of systematic urban planning. The problem being multifaceted, requires multi-pronged efforts based on a critical analysis.

Urbanization in India is mostly oriented towards major cities, leading to the evolution of 'two India' – the rich urban India and the poor rural India. The evolution of metro-centric growth and how it has affected the rate of urbanization are very important questions that may help in understanding how rural and urban economies interact to influence urbanization.

The rural economy in last few years has been highly unstable due to decrease in agricultural productivity and lack of opportunities in the organized sector; urban centers on the other hand have witnessed rapid growth. This has resulted in skewed growth and a massive rural-urban migration. While the rate of migration increased, the rate of urbanization is not keeping pace and as a result cities other than metropolitan centres are no longer able to offer employment to all unskilled labor migrating from rural areas.

It is therefore imperative for a developing country like India to improvise an inclusive economic policy and link it with urbanization policy to reduce rural urban migration, which adversely affects urbanization. To this effect the government has tried to make amends by programs like Jawaharlal Nehru National Urban Renewal Mission

(JNNURM) and the National Rural Employment Guarantee Act (NREGA) to facilitate inclusive and equitable growth, but the gap still persists.

What is required is economic empowerment of rural areas by reducing their dependence on agriculture and increasing the availability of opportunities in other organized sectors in rural settings; skills development and infrastructure improvement. This will facilitate growth of self sustaining rural economies capable of offering employment to rural laborers thus reducing rural-urban migration and making urbanization a broad-based phenomenon not restricted to metropolitan cities.

Another important issue which could facilitates rapid and efficient urbanization is – 'decentralization of governance', especially devolution. This increases the accountability and responsiveness of local authorities and helps them tailor development activities, to local needs, thus speeding up the process of urbanization. The 74th Constitutional Amendment was enacted to implement this initiative. However, due to discretionary allocation of functions and insufficient allocation of executive control to the local authorities the local bodies have become ineffective, contrary to what was envisioned. Merely assigning the responsibility does not automatically enable local bodies to design projects and implement them. They require planning and resources support.

The government transferred developmental responsibility to local authorities without empowering them economically or raising their resource generating capacity. Though not a big issue for larger cities, (due to better & larger recourse and access to state funds), it adversely affected smaller cities by increasing their dependence on external funds which in turn affect infrastructure development thus limiting their growth. Moreover, the government has also failed to strengthen the management skills and capabilities of these bodies to help them manage this change. The government therefore needs to work towards delegating increased and substantial control to the local bodies, enhancing their skills to make this model of governance successful.

The government also needs to continuously and increasingly invest in infrastructure projects (transportation, electricity, water resource management etc.). This will enable equitable and sustainable urbanization and subsequent economic growth. It, however, requires financial planning (resource allocation) especially at the level of small cities and rural areas that are incapable of generating adequate funds for infrastructure projects. This can be achieved either through government funding, external institutional financing, or through community involvement.

What India needs is a futuristic urban policy that facilitates financial resource management, skills enhancement, improved governance, and infrastructure development- and not mere urban development; to tackle issues affecting India's urbanization process.

2

Formulating Regional Plans

Urbanization:

The phenomenal growth and subsequent metamorphosis of cities has brought about extensive disruption and change in the urbanization process increasing the complexity of resulting urban problems. Due to rapid urbanization, the change from 10% to 30% of the population living in cities of 100,000 or more, which took 79 years in England and Wales, took only 66 years in the United States, 48 years in Germany, 36 years in Japan and 26 years in Australia! This shift from the rural areas to city has resulted in a growing increase in the absolute numbers so that in Asia, Africa and Latin America some 200 million people made this move in the last ten years alone.

The complexity and urgency of the resulting urban problems have produced varied responses. It is argued by many Planners that these problems can be tackled only if the territories involved are made larger still and the problems are attacked more "broadly". The argument, is valid in the context of rapid progress in the field of Transport and Communications and the resulting mobility of goods, people and thoughts.

Genesis of Regional Plans:

The economists, while taking an overall view of development of a country realized the need for a 'balanced' regional development based on optimization of resources in 'natural' regions. Attempts were thus made at Regional Planning, based on natural resources; river valleys, industrial growth, tourism and so on. In this approach, the economy and function of the urban centres is delinked from that of the region and the region is viewed as an independent entity in the context of a balanced economic development of the whole state or the country.

The shift of population from rural to urban areas; most pronounced in the rural hinterland of large metropolitan cities initiated a thought process amongst the physical planners leading to identification of the 'influence zone' of large cities and resulted in the beginning of 'Metropolitan Regional Planning'. In this stream of thought large cities are perceived as 'Magnets' attracting the rural population with

lure of jobs and urban amenities. The 'Pull' factor is thus considered a dominating parameter in the delineation of the 'influence zone' or 'Region' of a large city.

It was however soon realized that the migration of the rural population to the urban centres could also be due to a 'Push" factor within the rural region resulting from inadequate exploitation of resources leading to economic backwardness. Soon the need to look into the economics of the hinterland of cities was recognized to reduce the 'Push' factor and relieve the burden of immigration into the city. The emphasis however continued to be on the city as the 'Foci'.

Two fundamental questions therefore arise that need to be addressed in any exercise of formulating regional Plans;

i)   are the cities to be 'left out' as 'physical problem units' and the whole region looked at as an economic entity contributing to the development of the nation/state and hence in need of a motivational development strategy?

ii)   is the regional plan to be viewed as A context or THE context for the problems of the city or cities which it encompasses?

Formulating a Regional Plan:

The regional plan therefore needs to have as its starting point, decision on basic parameters to be considered for delineating its geographical extent. If the spatial development strategy for a region is to create a poly-nucleated structure through development of growth centres, it may be rational to "assemble" the influence regions of these growth centres and check whether the boundaries so created match with the possible boundaries of a resource or metropolitan region. A very serious consideration of the parameters that define the region is definitely called for in the formulation of a regional plan.

On the other hand, the boundaries of a region could be decided on the premise that, the propensity exhibited by a Metropolitan complex to grow as an uninterrupted overspill in areas transcending the city's administrative limits would, by itself alone, provide an immediate justification for extending land use planning beyond the city limits. In such an exercise, the focus will be on a metropolis.

Such a delineation of a metropolitan region has to take into consideration the degree of importance of a metropolis in terms of its national/international status as a growth centre. On the other hand it is possible to view the boundaries of a metropolitan region, not as the hinterland of a city but as a micro-region contributing substantially to the economy of the state and the nation.

In this context, two important questions that one could address are:

1) Whether it is possible to have an open ended development strategy considering the growth potential of a region,

2) Can the "top-down" approach to project the growth potential of a metropolitan region be used to define a geographical unit that contributes to, or has a pronounced impact on the state/national economy?

Regional development strategy:

There is a need to understand clearly what is meant by balanced development of a region. Does it mean that access to socio-economic facilities and physical utilities is more or less equal to the entire population? If so, what do we mean when we talk of need for conservation and ecology which may require 'tolerating' the imbalance in physical development?

The regional plan is often viewed as a frame work (apart from being an instrument of land use planning and development control) for effective regional development and management on a continual basis. Using it as a frame work would mean rigidity in development and management since a pre-determinant frame work is liable to be viewed as an end in itself and not amenable to continual change and modification.

The important objective of any physical planning i.e. 'to promote effective citizen participation in the process of development' cannot be achieved by its mere statement in the plan. It is the failure of planning bodies to achieve this objective which continually makes the politicians demand such participation through elected representatives, of which, the 74th Constitution amendment in India is a result.

Land use policy, Land use Plan & Development control:

While a regional plan may aim at facilitating increasing investment by private sector in infrastructure and other development, any specific land use policy evolved must be responsive to market potential, or else recourse to a 'land use plan' as an instrument of development control could in itself be a detriment to investment by private sector and market oriented decision making.

The 'land use' approach raises a number of questions:

1. Is it possible to evolve a 'homogeneous' region by making the planning boundaries of all the urban/growth centre within a region co-terminus?

2. What policy instruments can a regional plan propose to stop spread of urban sprawl in to the "green zones"?

3. Does zoning of land on either side of important transport arteries connecting growth centres further encourages ribbon development and nullify the expected benefits of better surface transport links between growth centres?

4. Does defining of a protected zone around places of tourist/religious centres destroy their sanctity, serenity and peace by actually motivating and encouraging informal growth around such centres?

5. Is it possible to consider filling up of creeks, ponds and low lying lands to create large recreational areas, in the process providing controlled sanitary fill areas for solid waste generated by the urban centres within the region? (This will of course require detailed environmental impact studies and retention of water courses to drain off the lands.)

6. In any regional planning concept, should the main emphasis be on inter urban links between growth centres by mass transport systems rather than intra-urban transportation systems?

7. How can the 'rural' areas within a region be more 'productive' to Supplement and complement the urban economy?

8. What is the weight age to be considered for preservation of Environment and conservation?

Recent international events have demonstrated the fact that nations tend to give priority to their economy and physical development over the considerations of conservation of environment. But in a developing economy, the emphasis on environment, ecology and conservation has to be carefully weighed against development benefits and blind following of measures adopted by developed nations in this regard could be at the cost of our national interests.

Suggested approach:

The context for a flexible and evolutionary regional plan could therefore consist of:

a) Integration of historic resources:
   Creation of symbols, landmarks and spaces easily identifiable with the region to instill a sense of belonging and pride

b) A strong transport and communication structure and 'rural/ agricultural' mosaic as the basic physical depiction of the plan:
   A possible network of regional linkages, main arteries for mass transport routes, air-rail-road transport terminals could define the basic structure for the regional plan.

c) Proposals for absorption of immigrants within the fabric of the cities in the region without economic and social disruption and easy access to services by all:
A well defined very high density low technology residential area reserved for absorption of immigrants in the cities along mass transportation routes and transport terminals can ensure flexibility in planning and development.

d) Policies with quantifiable parameters for industrial location and creation of jobs:
Clear policies on location specific (along mass transport routes, in rural areas etc.) parameters for building space for industries, that will result in creation of jobs.

e) Policies for taxation and revenue generation to make regional administration a financially viable proposition:
Clearly defined policies on taxation based on performance, load on services and disturbance to the living environment rather than ratable/capital values of properties, taxation for non-development leading to speculation, taxation of all agricultural lands, vacant or built properties on the basis of accessibility to urban services and amenities, unearned income sharing and performance standards for city administration in terms of percentage of revenue spent on developmental and non-developmental expenditure.

f) Receptivity to new technologies for infrastructure advances:
A continual review of urban services in their technological context to assess quantifiable and visible benefits to the entire populace in the region and not to a chosen few in the urban areas.

g) Enforceable standards of performance:
Clearly defined and documented enforceable standards of performance in all activities carried on in the region.

h) Concern for the environment:
Protection of environment through environmental impact assessment of all developmental works and the costs for their mitigation without reducing benefits from development.

A regional plan formulated along these principles would be supportive of the rural as well as urban functions and perhaps achieve a balance in its growth.

3

Regional Planning Methodology: Example of Goa

Current Scenario of regional planning in Goa

The abuse of the proposed Town Planning Act, some time back, by politicians in Goa resulted in a popular turmoil. Both the existing and proposed acts aim at 'direction and control' of planning & development wherein direction to development is considered to be the exclusive function of the State.

This direction is evolved through a prescribed procedure that practically precludes user participation in its formulation except for inviting objections and suggestions on the draft plan. While the direction is more 'holistic' in approach the control is at the micro level; many a times oblivious of the total perspective. It does not consider it necessary to canalize growth in desired direction through incentives. Controls, prohibitions and penalties rather than direction, incentives and rewards are the bulwark of the current development management system.

73 rd & 74 th Constitution Amendment in a nutshell

The 73rd and 74th Amendment to the Constitution of India aims at establishing a democratic decentralized administration through local bodies to ensure economic and social justice. The Amendment has sought to give power to the people to plan for themselves and decide on their developmental priorities. It provides for:

Formation of 'Grama Sabha' (Village Assembly) in every village with powers of general supervision over the elected village 'Panchayat' (Village administration) and the power to accord approval to the annual plans of the panchayats.

Formation of three tier Panchayats i.e., District Panchayats, Panchayat Unions and Village Panchayats

Uniform composition of the urban bodies throughout the country

Criteria for categorizing urban local bodies like Town Panchayat, Municipalities, City Municipal Corporations.

Formation of District Planning & Metropolitan Planning Committees.

Provision of urban services and maintenance of assets is now the responsibility of the Urban Local Body. The Twelfth Schedule (items 1, 2, & 3 of the Act significantly enhanced the role and functions of ULBs by including functions such as: Urban planning including town planning; regulation of land use, construction of buildings and panning for economic and social development.

Need for Regional/Perspective Planning:

Under the Town Planning acts in most of the States, the responsibility for preparation of development plans rests with the local governments like Municipalities, Municipal Corporations etc. though in majority of cases the function has been traditionally performed by the State Town Planning departments. In that respect the enactment of 74th Amendment does not substantially alter the situation. Hence, in most states 1 or 2 additional acts have been enacted providing for creation of District Planning & metropolitan Planning committees. That being the case, there is no need to amend the existing acts except for providing for preparation of long term/perspective regional plans more in the nature of socio-economic and physical planning policy documents to provide an overall framework within which the local governments can prepare physical development or land use plans. The act therefore can be amended to lay down parameters or the process for defining a planning region and the mechanics of its planning

The defining of a region is for the purpose of preparing a development policy document which would help to raise the living standards of the people – socially, physically and economically. The people are the settlements – rural or urban. Hence, what aspects would lead to development and consequent up gradation in the living standards of the people in these settlements have to be identified at this stage.

This mechanics of preparation of Regional or Development plans must ensure a total bias for "development through planning" rather than the present approach of "planning restrictions in the hope of development". In short, it is necessary to work out a mechanics by which the development plans that emerge are "action" plans rather than "restriction" plans, they "motivate" and "facilitate" development rather than lead to "speculation" and "freezing" of development, they define clearly a strategy for the hinterland rather than lead to 'no man's land' situations and clearly indicate how resources can be raised to achieve the intended actions rather than only state pious objectives irrespective of the realities of the situation in terms of the settlement's capability to raise resources for the intended development; involve the private sector much more in achieving the developmental objectives rather than rely heavily on public sector and ascribe a 'coordinator' role to the public agencies than that of the primary investors.

Need to Develop a Participatory Planning System in the new Act

There is a need for a shift from the earlier bureaucratic style of plan making and approval to accord due importance to the citizens who are the most valuable source

of input in anticipating future needs and rationalizing developmental priorities. The identification of stakeholders, evolving a city development strategy (CDS) meeting with them and sharing the conceptual plan and getting their inputs through working group meetings is the crux of the participatory approach to planning

Unlike in the past when plans were handed down from the state government, local governments now have to identify problems affecting their regions, set their own objectives and make on their own regional/town/village plans. There is a need to develop systems that can support and encourage participation in the planning process by all the stakeholders. In order to contribute to the implementation of this system, the government must promote more advanced usage of spatial information utilizing GIS technology. Development of more interactive methods, easy accessibility and presentation of information related to town/regional planning in clear easy to understand formats based on Geographic Information Systems (GIS) and the Internet technologies to aid local governments in regional planning through presentation and sharing of information related to planning among all the stakeholders. A basic database containing various regional spatial data together with a system to integrate, manage and present all the varied data has to be studied and a prototype developed. Visualization and analysis of the actual and future situations in the regions are some methods that can promote general awareness, identification of problems, causes and solutions as well as support consensus building among the stakeholders and thus contribute to regional planning and strategy formulation process.

The recent thrust of Government of India to upgrade urban infrastructure and basic services through a comprehensive scheme - National Urban Renewal Mission by developing City Development Plans (CDPs) through a community consultative process is a step forward endorsing and recognizing participatory method of urban planning as a precursor to any sustainable city development strategy.

Regional/Town Planning for Goa

The regional plans therefore need to have as a starting point, decision on basic parameters to be considered for delineating their geographical extent. If the spatial development strategy for a region is to create a poly-nucleated structure through development of growth centres, it may be rational to "assemble" the influence regions of these growth centres and check whether the boundaries so created match with the possible boundaries of a resource region. A very serious thinking on the parameters that define the region is definitely called for in the formulation of regional plans. An open ended development strategy can be evolved considering the growth potential of a region,

The state of Goa has fairly distinct geographic regions ,The western coastal region (Tiswadi, Bardez, Salsete & Mormugoa) having 22% of the area but over 50% of population, the mountainous Region having 35% of total area and the Interior hilly region with 43% of the area (of which over 30% has dense forest cover). Each of
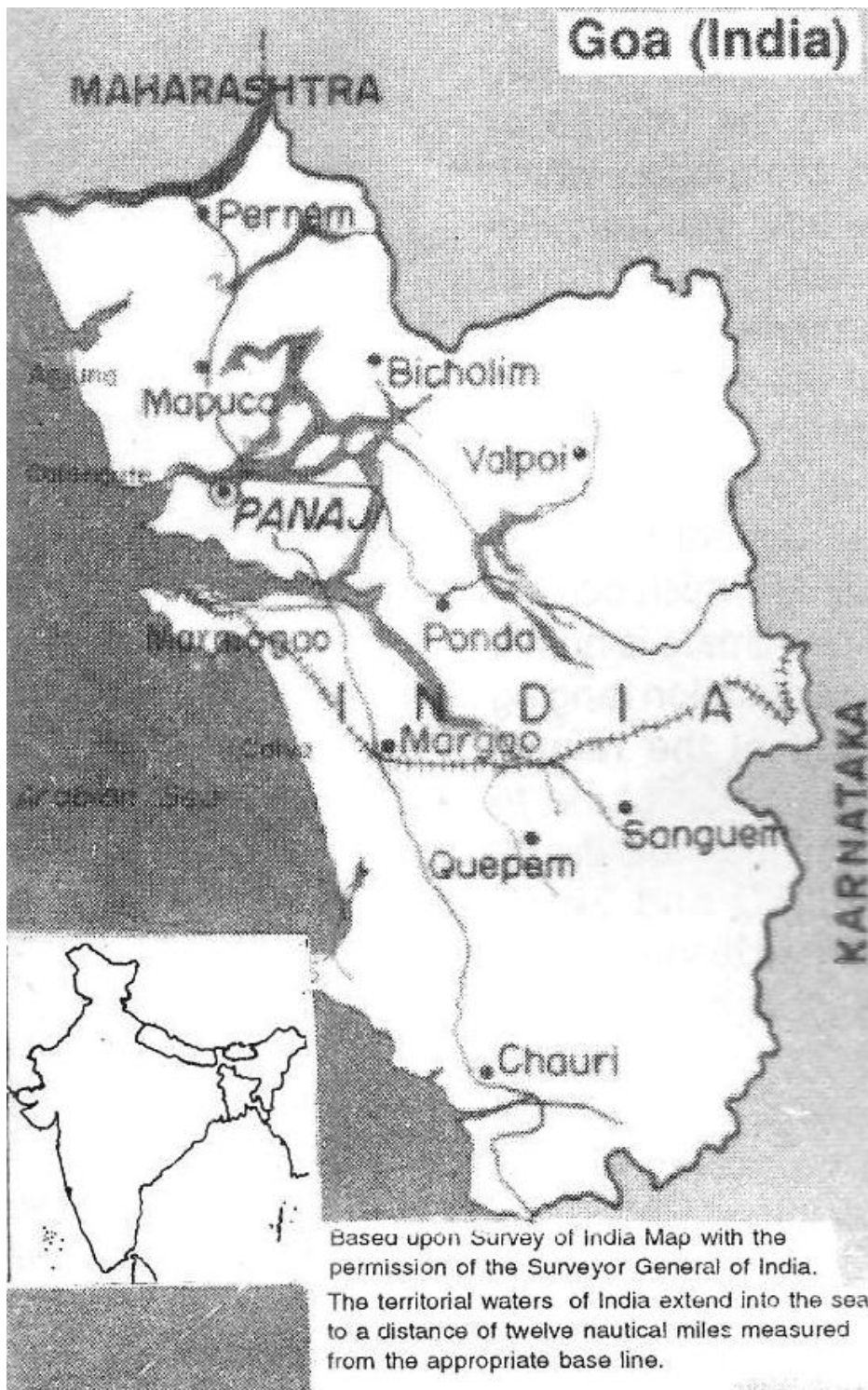
Map of Goa

these regions has distinct characteristics and require to be planned taking onto account its geography, topography, natural resources, urban/rural settlements,

economic and tourism potential etc. As a first step, these regions should be defined and delineated by considering the administrative boundaries of villages which are the smallest unit for planning under the constitution amendment. There could be, in addition, 1.a coastal sub-region consisting of ecologically sensitive areas, 2 a forest region consisting of dense forest pockets, 3.river valley regions consisting of the areas along the major rivers and .4 Heritage regions consisting of concentration of historically significant monuments

The regional plan has to be viewed as a loose framework (and not as an instrument of land use planning and development control) for effective regional development and management on a continual basis. Using it as a physical development plan is liable to be viewed as an end in itself and not amenable to continual change and modification.

Guiding Principles for Sustainable Spatial Planning in Goa:

1. Promoting territorial cohesion through a balanced social and economic development of regions

Spatially relevant decisions and investments could be based on a polycentric development model. This means that while the attractiveness of urban areas and cities should be developed the attractiveness of structurally weak regions for economic investment should be strengthened. For example, the region having most forest cover in Goa could be made "inviolable" for building development and eco or adventure tourism could form the basis for its growth. To achieve this, regional and local authorities should be put in a position to actively implement spatial development policy. This requires increased involvement of citizen and societal groups in spatial development planning.

2. Encouraging development generated by urban functions and improving the relationship between the town and the countryside.

Urban-rural partnerships have an increasingly important part to play, in particular in the fields of balanced structure of the regional framework, development of public transport networks, revitalization and diversification of rural economies, increase in the productivity of infrastructures, development of recreation areas for urban dwellers/tourists and the protection and enhancement of the natural and cultural heritage. A condition for efficient urban-rural partnerships is good co-operation on a basis of equity between the local authorities in both areas .

3. Promoting balanced accessibility in the regions

. The transport network has to be developed, as a prerequisite for ensuring good accessibility anywhere In the interests of achieving a regionally more balanced development, links between small and medium-sized towns as well as rural areas and transport centres (railways, motorways, navigable waterways and ports, airports

or intermodal centres) should be improved. Regional accessibility must also be increased through the elimination of missing intra-regional links. Considering the growth of traffic flows, integrated strategies taking into account the various transport modes are necessary. The lower environmental impact of railways, waterways and maritime transport should be taken into account. It means that, rather than developing an elaborate road network that may lead to increased private vehicles, even single track rail linkages and waterways must be encouraged.

4. Developing access to information and knowledge

The explosion of information media (IT, Computers, telecommunication) is one of the most significant phenomena reshaping society and its territorial structure. Particular attention should be paid to all regions to make sure that access to information (particularly GIS information) is not restricted by physical and other constraints. Telecommunications networks should be improved and extended to cover the whole area particularly the smallest administrative unit-the village. Encouragement should be given to the establishment of on-line data banks, for products, skills and tourism, to enable all regions to market themselves

5. Reducing environmental damage

Environmental problems that may result from inadequate co-ordination of sectoral policies or local decisions have to be prevented. Certain activities like mineral exploration need to be totally prohibited from specific regions. To this end, spatial planning policy must give support to preventing or mitigating various kinds of environmental harm by promoting less damaging agricultural or forestry practices, encouraging more environment-friendly forms of transport and energy systems,

6. Enhancing and protecting natural resources and the natural heritage

Goa is rich in natural resources and both natural and built environment heritage. Natural resources contribute not only to properly balanced ecosystems but also to the attractiveness of regions, their recreational value and the general quality of life. They must, therefore, be protected.

Integrated strategies for managing water resources should include protection of surface and ground water and monitoring use of fertilizers and irrigation, In order to protect the quality of drinking water from underground and surface sources, The four major rivers of Goa could be developed as independent river regions to retain their natural beauty and encourage river related sports.

It is essential to ensure that any expansion in water supply networks is matched by an equivalent increase in drainage and sewage treatment and disposal facilities.

Spatial planning policy is concerned with re-establishing and conserving ecosystems including ecological networks, as well as wetlands and coastal belts, which form part

of such networks. The coastal areas along the almost 100 km. Length in Goa should form a separate region extending to at least 1000 mts. inland and one km. in the ocean. Special attention must be paid to sensitive as well as high ecological value surfaces and spaces. In order to achieve this objective, various ecological elements, needing restoration, or buffer zones must be identified.

7. Enhancing the cultural heritage as engines of development

Increasing the appeal of localities and regions for investors, tourists and the general public by enhancing the cultural heritage makes an important contribution to economic development and to creating regional identity. Spatial development policy should contribute to integrated management of the cultural heritage conceived as an evolutionary process protecting and conserving the heritage and taking into account the needs of modern society. Many areas contain monuments, their identification and the development of common approaches to conservation, restoration and use should be part of a special area plan within a region. Harmony and creativity in the spatial relationship between modern architecture, urban design and the traditional heritage of Goa will go a long way in promoting tourism.

8. Developing energy resources

Spatial development policy should support the promotion of renewable energy sources as coherent, environment-friendly systems and the development of energy transport networks. .

In view of the high levels of energy consumption in the current economic development process, priority must be given to more efficient use of the energy and facilities already available. The energy efficiency of conventional electric power stations should be improved.

9. Encouraging high quality, sustainable tourism

Spatial development policy should be aimed at using the development opportunities provided by tourism, in particular in the case of disadvantaged regions. Priority should be given to developing forms of high quality and sustainable tourism. In that regard, urban and spatial development policies play a particular role. Generally, what is needed is a thorough understanding of ecosystems and of the number of visitors an area can support, as well as new control instruments (regional impact assessments). Forms of "soft tourism" that are carefully adapted to local and regional circumstances, such as eco-tourism, can offer a vital opportunity for development which should be exploited in the future. The flow of tourist into the urban centers needs to be diverted to heritage areas for adventure, sports, mountain climbing, bird watching etc.

10. Alleviating the impact of natural disasters

Natural disasters such as earthquakes, hurricanes, flooding, and landslides cause considerable damage with serious consequences for people's lives and health, the economy, the settlement structure and for landscapes.

Preventive measures should be taken by spatial development policies aimed at limiting the extent of damage and at making the settlement structure less vulnerable. This should include, for example, measures in the field of land use and building.

11 Management of Land sustainability

Land resources are used for a variety of purposes which interact and may compete with one another; Therefore, it is desirable to plan and manage all uses in an integrated manner. Integration should take place at two levels, considering, on the one hand, all social and economic factors (including, impacts of the various economic and social sectors on the environment and natural resources) and, on the other, all environmental and resource components together (i.e. air, water, land, geological and natural resources)

12. Protection of the Atmosphere

Concern about climate change and climate variability, air pollution and ozone depletion has created new demands for scientific, economic and social information to reduce the uncertainties in these fields. Better understanding and prediction of the various properties of the atmosphere and their effect on eco-systems, as well as health impacts and their interactions with socio -economic factors, is needed

13. Management of Fresh Water

Water demands are increasing rapidly, for irrigation, for industry and for domestic consumption. The holistic management of freshwater as a finite and vulnerable resource and the integration of sectoral water plans and programmes within the framework of regional economic and social policy, are of paramount importance. Rainwater harvesting policies for urban areas need to be incorporated in spatial planning. .

14. Management of the Coastline/Saltpans

The coastal area contains diverse and productive habitats important for human settlements, development and local subsistence. More than 57% of Goa's population lives in the coastal region. Coastal resources are vital for local communities. At the same time it is necessary to protect the coasts from urban encroachments and abuse by excessive tourism promotion.

15. Conservation of Biological Diversity

Biological resources constitute a capital asset with great potential for yielding sustainable benefits. Decisive action is needed to conserve and maintain genes, species and ecosystems, with a view to sustainable management and use of biological resources. Capacity building within the local government bodies for assessment, study and systematic observation and evaluation of biodiversity is necessary

16. Promotion of Sustainable Agriculture

There is a need to integrate sustainable development considerations with agricultural policy and planning.

17. Management of Waste

Unsustainable patterns of production and consumption are increasing the quantities and variety of environmentally persistent wastes at unprecedented rates. The trend could significantly increase the quantities of waste produced. A preventive waste management approach focused on changes in lifestyles and in production and consumption patterns can reverse current trends.

Regional Plan Context:

The context for a flexible and evolutionary Regional plan could therefore consist of:

a) Integration of historic resources:

Creation of symbols, landmarks and spaces easily identifiable with the region to create a sense of belonging and pride for the region.

b) A strong transport and communication structure and 'rural/ agricultural' mosaic as the basic physical depiction of the plan:

A possible network of regional linkages, main arteries for mass transport routes, air-rail-road transport terminals could define the basic structure for the regional plan.

c) Proposals for absorption of immigrants within the fabric of the cities in the region without economic and social disruption and easy access to services by all:

A well defined very high density low technology residential area reserved for absorption of immigrants in the cities along mass transportation routes and transport terminals can ensure flexibility in planning and development.

d) Policies with quantifiable parameters for industrial location and creation of jobs:

Clear policies on location specific (along mass transport routes, in rural areas etc.) parameters for building space for industries, etc. that will result in creation of jobs.

e) Policies for taxation and revenue generation to make regional administration a financially viable proposition:

Clearly defined policies on taxation based on performance, load on services and disturbance to the living environment rather than ratable/capital values of properties, taxation for non-development leading to speculation, taxation of all agricultural lands, vacant or built properties on the basis of accessibility to urban services and amenities, unearned income sharing and performance standards for city administration in terms of percentage of revenue spent on developmental and non-developmental expenditure.

f)Receptivity to new technologies for infrastructure advances:

A continual review of urban services in their technological context to assess quantifiable and visible benefits to the entire populace in the region and not to a chosen few in the urban areas.

g) Enforceable standards of performance:

Clearly defined and documented enforceable standards of performance in all activities carried on in the region.

h) Concern for the environment:

Protection of environment through environmental impact assessment of all developmental works and the costs for their mitigation without reducing benefits from development.

A regional plan formulated along these principles could be supportive of the rural as well as urban functions and perhaps achieve a balance in its growth.

Suggested Contents of a new Town Planning Act:

The new Act must be an enabling instrument to help:

• Develop a vision statement for the Region/city/town through consultations –to guide the preparation of physical development plan and its implementation

• Identify a set of projects for implementation through a structured public consultation process

• Prepare a phasing plan for these projects with municipal stakeholders

• Integrate these projects into the municipal budget , to make them financially viable

• Prepare area specific urban design guidelines for specific areas – slums, inner city, heritage precincts etc.

• Demarcate areas to be developed as Town Development Schemes (TDS) for the next 5, 10 and 20 years based on people's consensus and needs

• Build capacity of the Urban Local Bodies (ULB) and create a process to review the plan every year and make appropriate modifications if required

• Ensure that the informal sector are a part of the planning process

Planning Methodology.

• Liaising with the State Government: Support has to be garnered from the state government to undertake the participatory process to give it formal validity

• Orientation of Municipal Officers and Elected Representatives: Conducting training workshop for local government officials and elected representatives

• Preparation of high quality base maps: Using geo-coded satellite imagery from National Remote sensing Agency (NRSA) good quality base maps have to be prepared. Maps having plot level details need to be digitized and overlaid on the imagery to correlate both. The maps and drawings with property boundaries, building typology, settlement densities, public utilities, land use etc. have to be used as a tool on which the community can expresses their concerns. These drawings can be put up at strategic locations of the towns to elicit maximum participation, people's concerns/issues should be mapped and recorded by professionals present on various facilitation points in the village/town/city.

• Data Collection and Stakeholder Consultation: The backbone of participatory town planning is the public consultation for capturing the resident's view of town and its development road map. Extensive public consultations should be held. The awareness about the intervention has to be created through distributing pamphlets, issuing press releases and in the form of advertisement in the local TV channels.

The data to be collected will broadly be about:

- o Population, Topography and drainage , Environmental features-rivers, canals etc, Land development/ land use zoning
- o
  Road network and transportation , Water supply, sewerage and drainage, Solid waste management
- o
  Social amenities and facilities, Housing & Informal Sector
- o
  Heritage and tourism sites

-
  Legal and institutional framework
-
  Urban design and built-form
-
- • Preparing Conceptual Plans: Based on people's suggestions and feedback a draft conceptual plan and a development road map could be prepared for villages/towns/cities. The main contents of this draft could be primary road network, Land use zoning, Building control regulations and areas for future expansion.

• Preparation and presentation of final plan: Based on the collated data a draft development plan can be prepared and presented to concerned local bodies and government officials. Suggestions from these agencies can be incorporated and thereafter, the modified plan can be sent for sanction to the competent authority.

Local Knowledge and information needs to be respected for effective implementation and sustainability: The plan should be based on local knowledge and resources, the plan should reflect community needs (of all socio-economic groups), priorities and should be bankable.

Plan should have a phased implementation programme: The participatory process raises people's expectation and therefore it is imperative that the plan includes a investment strategy which identifies resource needs, potential areas for tapping resources

Participatory urban planning is a democratic process, which supports the 74th Constitutional Amendment Act that gives powers to the local authority, especially in planning and development by involving people at all levels. A new Town Planning Act that can incorporate these principles can go a long way in fulfilling the aspirations of the people and hopefully not lead to abuse by politicians.

4

REFORMS IN URBAN PLANNING LEGISLATION:
A CASE OF MAHARASHTRA

Maharashtra has been a pioneer in the field of Town Planning. A comprehensive Town Planning Act of 1954 prescribed making of Town Development Plans. Despite the commendable planning legislation, the town planning scenario in the State is far from satisfactory. The current process of preparing city development plans is time consuming and long drawn. Development plans are close ended. There is no provision for improving the financial health of a local authority. There is no obligation to implement the plan. The Development Plan when sanctioned is rarely translated into annual action plans. There is no statutory provision for wide public consultations before preparation of a plan. Legislative provisions regarding preparation of Development Plans therefore need a major re-orientation. A two stage planning process is desirable wherein the first stage will be preparation of a structure plan for the city and the second stage will be preparation of Area Plans or Sector Plans. The two stage planning process consisting of the Structure Plan and Action programmes could be a solution to the dilemma of effective city planning. Changes to facilitate such a planning process in the current statutory city planning system can best be brought about by suitably amending the current Town Planning Act for this purpose.

History:

Maharashtra has been a pioneer in the field of Town Planning. The Town Planning Act of 1915, introduced the concept of 'Town Planning Schemes' for implementation of improvement projects for Towns. Two inbuilt features of the T.P. Scheme were, plot reconstitution and betterment recovery provisions. The Town Planning Schemes however gradually came into disrepute mainly due to in-ordinate delays in their finalization which were caused by administrative bottlenecks than any inherent inadequacies in the law.

A comprehensive Town Planning Act of 1954, prescribed making of Town Development Plans including land use zoning, reservation of lands for amenities and facilities, infrastructure provisions for the projected population and control of all future development within the city limits. Town Planning Schemes were retained as a tool for the implementation of the Development Plans. Planning was made an obligatory duty of the Municipal Authorities.

In 1966 a new dimension, Regional Planning, was added to the planning system in the State to take into account the rural-urban continuum and provide for balanced regional growth. Despite the theoretically commendable planning legislation made available by these Acts, the town planning scenario in the State is far from satisfactory.

Inadequacies of City Development Plans:

The current process of preparing city development plans is time consuming, long drawn and the plans so made become redundant by the time these are approved by the government for implementation. The main deficiencies in respect of the City Development Plans are:

Development plans are close ended, depict an end state picture for a town and therefore cannot quickly respond to the dynamic situations and economic needs of the people.

The development plans are often prepared without considering the quantum of funds that can be allocated by the local body for implementation. There is no provision for improving the financial health of a local authority and creating a dedicated development fund.

While it is obligatory for a local authority to prepare a development plan, there is no obligation to implement it. The annual budget of local bodies does not include regular provisions for plan implementation.

After a Development Plan is sanctioned it is rarely translated into annual action plans by making budget provisions for the implementation of each year's program. A capital investment plan is not prescribed as an essential component of a Development Plan.

Public participation in preparation and implementation of the development plans is confined to filing of objections mostly by people whose land is affected by one way or another in the plan. Private sector participation in DP implementation is not given much attention. There is no statutory provision for public consultations widely before preparation of a plan

Need for change in legislative provisions:

Legislative provisions regarding preparation of Development Plans need a major re-orientation. The Development plans should not be seen and conceived as end state pictures. City Development Planning should be a two stage process. The first stage should be a broad vision for the city, defining the principal aims that the Plan seeks to achieve. The second stage could be the detailed plans for sectors of the town in which reservations for area level amenities can be included.

The apathy of the Municipal Authorities towards Plan implementation also needs to be overcome. It would be necessary for this purpose to make very clear and unambiguous provisions compelling the Local authorities to take steps to translate the Development Plan into a series of programs for implementation, to make budget provisions every year and to prepare and submit to the government and disclose to the citizens, every year a 'Status Report'.

The exclusion of people for whom plans are meant from the process of plan making is a glaring lacuna which needs to be addressed.

Means of generation of resources for the implementation of plan need to be prescribed in the legislation. The Development Charge prescribed under the act is static, responsive neither to land value appreciation nor to the escalation in costs and has no relation to land value appreciations resulting there-from.

Suggestions for change in Legislative Provisions:

A Change in the approach and rationalization of the planning process is required to overcome the procedural lacunae.

A two stage planning process is suggested wherein the first stage will be preparation of a structure plan for the city and laying down a framework for achieving the broad goals and objectives. The Structure Plan should spell out the broad city development policies as also the broad land use zoning and a system of major roads. It can also provide for site reservations for city-level amenities with their area requirements and impacts on surrounding development.

Second stage will be preparation of Area Plans or Sector plans for detailed development/improvement etc. to fit in and promote the structure plan objectives. The minor roads and the public sites for local area needs should come in the short term Action Plans and can be covered by town Planning Schemes which would ensure land loss equalization and also raise resources for implementation.

Such splitting up of the development plans could solve the problem of delays and financial resources for implementation. The purpose of controlling future development can be achieved by restricting planning in the first stage (Structure Plan) to land use zoning, a set of development control rules and proposals for new roads and road widening. A series of positive action programs for improvement or development promotion can then follow in the second stage.

There is considerable logic in looking at the city development plan making as a two stage process as above. The process should start with the visualization and crystallization of the goals. The 'structure plan' should spell out the broad steps and the direction of actions necessary to achieve the goals and objectives. It should be prepared in close consultation and with active involvement of the citizen groups.

The splitting up of the Development Plan into; a long term 'Structure Plan' and a detailed, short Term action programmme to translate the policies of the Structure Plan, to be taken up on a five-year basis should be the basis of the revised legislation for Town Planning. The current utility of the 'comprehensive' Development Plans is restricted to control of future development. The 'Reservations' by and large have remained only on paper except in Mumbai and Pune where reserved sites have been procured through the new concept of Accommodation Reservation and Transfer of Development Rights (TDR) mechanism.

A two stage planning as above, consisting of the Structure Plan and Action Programmes could be a solution to the dilemma of effective city planning. The 'land loss equalization' aspect of the TP Scheme may not be effective in existing built up areas. But betterment contribution and avoidance of acquisition under the L.A. Act could make them a much more attractive alternative compared to all other methods of DP implementation in closely built up areas of the city. The current legal provisions about the T.P. Schemes have many shortcomings. In streamlining the Town Planning activity in general, modifications will be required mainly in the procedures and the time taken to complete these.

Content of City Development Plans: changes necessary:

The city planning exercise is to be effective in improving the quality of life in the cities, it has to be realistic, participatory, seeking citizen co-operation, capable of fulfilling people's aspirations and Innovative. The 'static' nature of the city development plans can be remedied by making planning a two stage process. The first stage should be a structure plan or an 'outline development plan' depicting the planners' and the citizen's vision of the future city form and proposals in respect of broad land use zoning including lands to be protected from the environmental point of view, major proposals in respect of traffic and transportation, designations in respect of city level utilities, and the Development Control Rules.

It should then be followed by the second stage planning of more detailed proposals for all sections of the town which would consist of access roads and sites for area level needs of the residents such as play-grounds, garden, municipal dispensaries, neighborhood level markets etc. The translation of the second stage planning on ground should utilize the 'land loss equalization' aspect wherever feasible and cost recovery from beneficiaries. Direct cost recovery according to a suitable formula to be prescribed under the Act itself could be the simplest and effective for this purpose. The implementation of the area level proposals could be through 'Town Planning Scheme' mechanism.

Over ambitious standards for public facilities should be replaced by rational standards and reducing the categories of purposes for which 'reservations and designations' are necessary. These should be followed in the preparation of the 'second stage' planning exercises for all the sectors of the town.

To remove the neglect of implementation on the part of the Municipalities, the act should make it obligatory for the municipalities to break up the structure plan' into a number of 'area plans' and to chalk out detailed area planning schemes according to a program. The statute should provide for such programming to follow the sanction of the Development Plans and should also make it obligatory for the Municipalities to prepare annual 'Town Planning Status' reports and to submit them to the Government and the public.

The resistance to 'inter-personal inequities' can be overcome through town planning scheme mechanism which will enable 'give and take' of lands of the participating land owners. This will be somewhat difficult in the already built up sections of the town. But in such sections there could be possibilities of compensating the loss of land through Transfer of Development Rights.

The problem of 'finance' for implementation can be overcome if the town improvement works are carried out by recovering the cost from persons who stand to benefit from the provision of improvement of infrastructure and/or amenities. This is by no means an untried mechanism. In England it goes by the name of 'infrastructure impact fee'.

All these changes in the current statutory city planning system can best be brought about by suitably amending the current Town Planning Act for this purpose. The 74th Constitutional amendment has made Metropolitan Regional Planning the function of Metropolitan Planning Committees (MPC) and the District Regional Planning, the function of the District Planning Committees (DPC). The haphazard development currently takes place on the outskirts of the existing towns could be controlled by the extension of land use planning to these areas. How the actual implementation of the infrastructure development proposals in such areas is to be carried out would be a matter of administrative decisions.

Conclusion:

A revised Town Planning Act in Maharashtra should provide for multi-level planning as under:

- Regional Plan for Metropolitan Areas and District Plans for other areas not included in metropolitan regions;
- Structure Plans for the Town Areas;
- Local Area Plans at Ward Level/Block Level and
- Peripheral area Plans for fringe Areas – outside Municipal Limits.

Participation of people and community groups, professionals, and general public should be incorporated in the act itself by a evolving a structural system for this purpose. This will ensure that the current 'Top Down' approach to urban planning is reversed and it will emerge from the needs of the people and their aspirations.

5

LEGISLATIVE SUPPORT FOR CITY DEVELOPMENT PLANS

A socially desirable and physically fruitful development management system for any local authority can be only as effective as the frame work of legislative support within which it has to ultimately operate to implement physical development plans. A general study of the existing situation in the state of Maharashtra in India, clearly brings out the fact that under the present system of 'direction and control' of development:

     i.   Direction to development is considered to be the exclusive function of the State.

     ii.   This direction is evolved through a prescribed procedure which practically precludes user participation in its formulation.

     iii.   While the direction is more 'holistic' in approach, the control is at the micro level; many a times oblivious of the total perspective.

     iv.   It is not considered necessary to canalize growth in desired direction through incentives.

     v.   Controls, prohibitions and penalties rather than direction, incentives and rewards are the bulwark of the development management system.

A study of the legislation in Maharashtra, affecting implementation of development plans indicates that, while these provide an adequate frame work for planning, designing and controlling projects; these do not provide adequate basis for;

Powers to encourage planned development.
Powers to raise resources for development.
Powers to encourage private investment.
Coordinating with other authorities.
Implementation and control of projects.
Evaluation and change.

Personnel training for development management.

M.R.T.P ACT 1966:

The Maharashtra Regional and Town Planning Act provides the basic frame work under which local authorities can plan and design development. Yet, the methodology prescribed under the act precludes both; the user participation in the formulation of plans and matching of 'need based' action plans with an overall perspective. The basic objectives of the Maharashtra Regional and Town Planning Act (MRTP) which came into force in 1966 are:

- a. Planning the development and use of land in regions established for that purpose.
- b. Making better provision for the preparation of development plans for towns and cities.
- c. Creation of new towns by means of development authorities.

- d. Establishment of regions :

Defining the planning region & Mechanics of planning a region

I) The act does not lay down any parameters or the process for defining a planning region. By implication, practice and precedent, the defining and delineation of a region is done by the state town planning department.

The defining of a region is for the purpose of preparing a development plan which would help to raise the living standards of the people – socially, physically and economically. The people are the settlements – rural or urban. Yet, what aspects would lead to development and consequent up gradation in the living standards of the people in these settlements are neither identified at this stage nor considered relevant to the delineation of region. The assumptions being, that an overall increase or improvement in the socio-physical-economic facilities in a geographically homogenous region would or should automatically lead to up gradation in the living standards of people in the human settlements. This, in spite of the many studies, including that of Chandigarh, which point out at the non-percolation of any benefits to the surrounding region from the investments in the urban area !

Thus, fundamentally there is a need to define in the act itself, the methodology for delineation of a region. This has to be a two way process wherein, taking development of the settlement as the determining criteria, the inter-linkages between settlements should be quantified and mapped to determine homogeneous settlement regions. It should then be possible to compare and interface the regional configurations so obtained with that decided by the existing approach to arrive at a more rational defining of regions which will then have a definite development bias.

This approach, of defining a region based on inter-linkages in terms of developmental needs of human settlements, will also shift the emphasis from "planning for overall development" to "directing specific development possibilities" by identifying inter-linkages between human settlements – rural as well as urban. It is only from such a 'centrifugal' approach that a more realistic assessment and planning for the uses of land can be made, leading to a kind of development that will have a direct bearing on upgrading the living standards of the people in the human settlements in a rationally identified region.

ii).   Mechanics of planning a region:

While in a state committed to social welfare, it may be imperative to take on the responsibility of planning for development; it is not necessarily competent to carry out the function with a 'paternal' attitude. If planning is for the people, their participation should be in the process of planning itself, in determining the goals and objectives and not merely commenting on a plan of action prepared by the State.

Yet, it is only the post facto "objections and suggestions" kind of mechanism that is laid down under the act. As a result, a group of "specialists" in physical-economic planning decide what is desirable in terms of development options for millions of people in a region. Thereafter, the plan is open to suggestions by the people but there is no vigorous effort to reach the people and explain the proposals.

If it is accepted that, planning is for the people, to upgrade their standards of living and is to be oriented towards development, then participation by the people in the determination of the developmental approach, the plan and the system of implementation; is quite essential. This is true of both the Regional plans and the Development plans for human settlements.

In the preparation of a Regional plan, the process must be actively participative by the representative organizations of the people and the development forces like the Chamber of Commerce, Associations of Industries, Private building sector, Financial Institutions, Associations of Transporters, Manufacturers, Professionals etc. Only through such Institutional participation a development strategy can be evolved.

In case of preparation of Development plans for specific human settlements, the plan should be an assemblage of the felt needs of the entire populace, represented by ward or area committees, the selection and organization of which should be a very important and basic task of the planning authority. The final plan can thus be far more action oriented, having emerged from the felt needs of the people and not a restrictive document of planning proposal prepared by a group of specialists.

Even after its emergence, the development plan proposals have to be widely publicized, and all sections of people actively encouraged and motivated to discuss its ramifications in all its facets. Only after such a wider and grass root involvement

of the people in deciding development options for their own immediate environment, can legal sanction be sought for such a document.

This proposed mechanics of preparation of Regional or Development plans, by its very approach ensure a total bias for "development through planning" rather than the present approach of "planning restrictions in the hope of development". In short, it is necessary to work out a mechanics by which the Development plans that emerge are "action" plans than "restriction" plans, they "motivate" and "facilitate" development rather than lead to "speculation" and "freezing" of development , they define clearly a strategy for the hinterland rather than lead to 'no man's land' situations and clearly indicate how resources can be raised to achieve the intended actions rather than only state the pious objectives irrespective of the realities of the situation in terms of the settlement's capability to raise resources for the intended development; involve the private sector much more in achieving the developmental objectives rather than rely heavily on public sector and ascribe a 'coordinator' role to the public agencies than that of the primary investors.

Thus, the basic frame work in the form of MRTP Act is available but its methodology for planning may have to be altered to make it development promotion oriented as also to give it a slant of need based planning rather than idealistic design.

The Municipal Corporation Act 1949:

The Bombay Provincial Municipal Corporation Act is basically a frame work for day to day functioning of a local authority and emphasizes the aspects of implementation and control of projects.

Unlike most other acts which describe the specific objective of the act rather than merely the mechanism proposed to be established under it, the Bombay Municipal Corporation Act, 1949 describes as it objective, "to provide for the establishment of Municipal Corporation in certain cities with a view to ensure a better Municipal Government for the said cities".

The objective itself being the establishment of a Municipal Corporation – the mechanism for achieving 'a' purpose – the act quite naturally concerns itself mainly with the constitution, organization, staffing, finance, management and working of the corporations. This bias for an organization probably stems from the fact that traditionally, a Municipality is associated with the function of only looking after those services and facilities which is not the responsibility of any single individual or private institution. Even when cities grew to be metropolises, the view point about Municipal function was not changed. As a result, the Municipal Corporation only became an enlarged version of a Municipality.

A realization slowly came in the last 25 – 30 years that the problems of the growing cities cannot be solved by an organization with this traditional Municipal function. Out of this realization were born the Metropolitan Planning Authorities and the Urban

Development Authorities to promote orderly, desirable growth. Thus, in many Metropolitan areas, we have at least these three authorities – Municipal Corporation, Planning Authority and Urban Development Authority operating simultaneously without entirely satisfactory results. The multiplicity of organizations dealing with different components of the total developmental process has created more problems than it was hoped to solve.

The obligatory duties of the Municipal Corporation limit its role to construction and maintenance of such facilities as

    i.   Roads,
    ii.   Water supply,
    iii.   Sewerage – garbage removal,
    iv.   Fire fighting,
    v.   Schools,
    vi.   Public places, markets etc.

Its, discretionary duties enable it to undertake promotional activities such as,

    i.   Welfare programmes for citizen,
    ii.   Housing,
    iii.   Provision of services like transport, milk,
    iv.   Promoting companies, cooperative societies for providing services in the city,
    v.   Acquisition of land and its development,
    vi.   Management of facilities.

Obviously, if the primary function of a local authority is to ensure a desirable physical growth of the city it must undertake or promote activities that will ensure such growth. Therefore, the basic objective of the Municipalities or Municipal Corporation Act should be the orderly and planned growth of the city in harmony with its environs and the local authority has to be empowered to undertake or promote all such activities as will ensure this objective.

Specifically therefore, there is a need to amalgamate the obligatory and discretionary functions as described in the present act with a view to facilitate a proper, planned development of the city. As provided under Chapter XX of the Act, whereby a Municipal Corporation can establish or acquire a Transport Undertaking, similar provisions could be made to deal separately with the following basic functions of city development, viz.

    i.   Planning and regulations.
    ii.   Development and promotion.
    iii.   Maintenance and repair.
    iv.   Taxation and finance.

All these structural changes are quite feasible within the framework of the present act to make it development oriented.

In the absence of an enabling frame work either in the MRTP Act or any other legislation, it does not specifically provide for the promotional aspect of development management. To a large extent therefore, its scope in terms of raising of resources for development is also limited by the predominance of the control function. There is hardly any reference to innovative system for resource raising which could only flow out of a promotional approach to development.

The Slum Improvement Act:

The Maharashtra Slum Areas (improvement clearance and redevelopment) Act 1971 is on the other hand a piece of legislation with adequate potential to promote and encourage development particularly for the economically disadvantaged. Its provisions regarding declaration of slum areas, execution of works of improvement, redevelopment of areas, acquisition of land, granting of tenancy rights to occupants irrespective of type of ownership of land, makes it an extremely useful piece of legislation very relevant to the conditions obtained in India. Perhaps it is for this very reason that the Act does not seem to have been operated upon as extensively as it should or could be!

M.M.R.D.A Act:

The Mumbai Metropolitan Region Development Authority Act (M.M.R.D.A. Act) is of peripheral interest as far as evolving a development management system for local authorities is concerned. It does, like the MRTP Act, provide a broad frame work but does not go beyond in evolving a system for promotion of development through public participation.

At the present juncture, it is felt that basic changes may be required to be made in the MRTP Act in its prescription for planning and designing, in the Bombay Provincial Municipal Corporation Act to provide for promoting development through a facilitator role and raising resources through innovative measures and incorporating the Maharashtra Slum Areas Act as an integral part of it to provide a better legislative support for implementation of development plans.\

Urban Planning in India : A New Strategy

 Urban planning as currently practiced in India is mostly concerned with planning the use and development of land in cities for the benefit of the Politicians, Bureaucrats and the Developers. Development is merely a euphemism for land exploitation. The 74th Constitutional Amendment is a mere "paper tiger' that promises decision making authority to the elected representatives of the people, but in reality is

fragrantly violated by promulgation of notifications by the state government to permit land development to suite the politician.

Perception of Urbanization

"India lives in villages" an oft-repeated adage needs to be modified to read 'India dies in its villages' as evidenced by suicides by farmers in Maharashtra. The First Five Year Plan declared, "..equality and social justice will have little content unless the production potential of the community is substantially raised." All the subsequent plans visualized the role of cities in raising the 'production potential'(economic goods) totally ignoring production of food grains. Our Minister in charge of Agriculture had shamelessly advised the agriculturists to "leave" agriculture and take up other occupations! According to him, food, after all, can be purchased and imported from other countries. Creation of Special Economic Zones was important even at the cost of agricultural lands.

The Seventh Five Year Plan observed, "Urbanization is a phenomenon which is part and parcel of economic development in general. Certain activities are best performed in agglomeration of people. Planning of urban development should essentially be supportive of the economic development in the country, state or sub-region, be it in agriculture…. It is important to time investments in urban services and shelter to coincide with investments in agriculture… Industrial location policy must be made to sub serve regional and urban planning." In practice urban development was encouraged at the cost of rural development and agriculture

The Task Force on Planning of Urban Development appointed by the Planning Commission asserted in 1983 "It would be idle to imagine that rapid rise in rural population through demographic growth can be absorbed in agriculture and still ensure growth of productivity and total production." Such one sided view that did not include agro-based industry and production systems as "Agriculture" was responsible for destroying the importance of agriculture and plan allocations for it and belittled the contribution of Agriculture to the development of a country. The Eighth Five Year Plan identified small and medium towns as the thrust areas as important links between the village and the large cities. The mid term appraisal of the 11th Five Year Plan emphasizes healthy growth of smaller towns TO EASE THE PRESSURE ON METROS and NOT to be the service centres for the rural areas!

LandPolicy
Urban planning in India is largely concerned with exploitation of land. The Indian Constitution recognizes acquisition, holding and disposal of property' as a fundamental right. This ideology was negated by the enactment of Urban Land (Ceiling and Regulation) Act 1976.

Delhi Master Plan, Chandigarh, Gandhinagar and Navi Mumbai were all based on public ownership of land for the urbanizable land. In Chandigarh & Gandhinagr however an attempt was made to retain the rural character around the new towns by

the enactment of the 'Periphery control Act'. Unfortunately in case of Chandigarh the bifurcation of the state of Punjab by creation of Haryana necessitated establishment of new capitals for both states putting an end to the periphery control act. In case of Gandhinagar, either the imbecility or greed of the Consultants to the Gandhinagar Urban Development Authority resulted in declaring the entire area between Ahmedabad & Gandhinagar as "Urban" destroying not only the character of the new capital city but also the rural hinterland. Public ownership of the land within the city limits of Gandhinagar thus failed to achieve the land policy objectives.

Current Perspective of Urbanization and Urban Planning

The Eleventh Five Year plan states that "cities will be the engines of economic growth and the realization of an ambitious goal of growth in GDP depends fundamentally on making Indian cities much more livable, inclusive, bankable, and competitive." What about the villages? Can those not be the engines of economic growth? It should be noted in this context that the World Development Report - 2009 clearly states that …even people who start their lives far away from economic opportunity (cities) can benefit from the growing concentration of wealth in a few places. The way to get both the benefits of uneven growth and inclusive development is through economic integration.

The New Paradigm

The Statement of Industrial Policy, 1991 that heralded India's economic liberalization stated "Government will continue to pursue a sound policy framework…. spread of industrialization to backward areas of the country will be actively promoted through appropriate incentives, institutions and infrastructure investments." This high sounding statement was a precursor to establishment of the Special Economic Zones. These SEZs, in time, became the authorized land grab by private entrepreneurs gobbling up the agricultural lands and uprooting and throwing the agriculturists out of the only skills that he knew for generations and filling up the cities with the migrants divested of their agricultural lands and income. Why did the "great" Indian urban planners never tiring of advocating land assembly schemes not think of applying the same principle to the establishment of SEZ by making the farmers active partners in the projects that would have given them a prosperity linked income along with a minimum homestead land to carry on agricultural occupations like vegetable farming and dairy development?
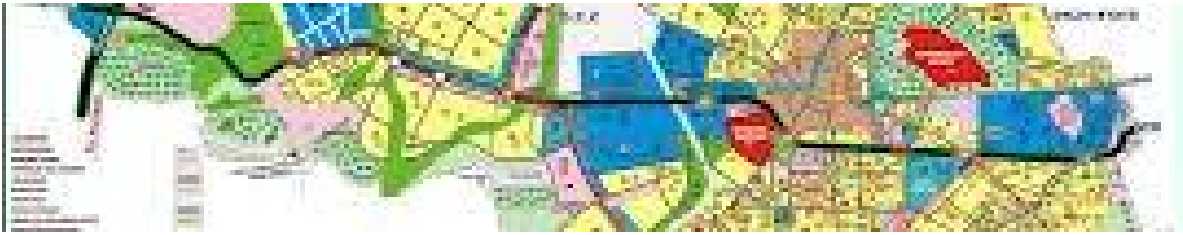
6

THE MASTER PLAN: A SEARCH FOR ALTERNATIVES

CITY PLANNING: A Historical Perspective

Historically, the physical form of cities has been shaped by the economic, social and political forces of a society. Identifying this evolution by terms like organic and inorganic, irregular and geometrical, formal and informal, medieval and classic, simply describes the form without the substance. The degree of awareness of a people about their   living environment and their urge to modify it to suit their requirements forms the substance of a city plan. The societal conditions therefore can play a major role in shaping the physical form of cities. Though greatly separated in time and space, how conditions in two societies can be similar is illustrated by the state of   the   cities of fourth century Greece and in the Metropolises of India today!

During the fourth century in Greece, there was evidence of growing indifference toward   the responsibility of government. Accustomed to Liberty the people were taking it for granted and were inclined to allow affairs to run themselves. Freedom   guaranteed by democracy was coming to mean that `people has the right to do what it pleases'. Some people were, in the words of Demosthenes,   "even building private houses whose magnificence surpasses that of certain public buildings".   Well-to-do citizens spent more of their time in their country villas,   whereas   the   common people   found   the difficulty of earning a livelihood more absorbing than participation in public affairs. The middle class was disappearing and a wide gap was growing between   those with money and those without it.

Gustave Glotz a historian writing in the twenties (1929) about the Greek city and its institutions in the fourth century; gives the following description of the alarming developments of this period: "But in Greece as a whole, there existed almost everywhere   a glaring contrast between the   equality promised   by the constitution   and the inequality created by social and economic conditions. The power of   money   was spreading   and   corrupting morality....Agriculture   was

commercialized to such an extent that by progressive eviction of small peasants and the concentration of estates in the same hands the system of large estates was recreated. Rhetoricians, advocates and artists, who had formerly reckoned it a dishonour to commercialize their talent, now felt no scruples in selling their goods as dearly as possible. Everything could be bought, everything had its price, and wealth was the measure of social values. By gain and by extravagance fortunes were made and unmade with equal rapidity. Those who had money rushed into pleasure-seeking and sought every occasion for gross displays of luxury. Men speculated and rushed after money in order to build and furnish magnificent houses, to display fine weapons, to offer to the women of their family and to courtesans jewels, priceless robes and rare perfumes, to place before guests and fashionable parasites wines and dishes prepared by a famous chef, or to commission some popular sculptor to carve their bust.

Plato, the Greek Philosopher described what happened to public affairs when "love of money left no one the smallest space in which to deal with other things, to such an extent that the mind of each citizen, passionately absorbed in this one purpose, could attend to no other business than the gain of each day". Politics also was a business concern; the most honest worked for a class, the others sought for themselves alone the profits of power and barely concealed their venality. We are dealing with a time when "riches and rich men being held in honor virtue and honest men are at a discount", when "no one can become rich quickly if he remains honest. "Those who, citizens by right of birth, hold the opinion are people who will desert the public good in order to run after their personal gain, since for them it is not the city which is their country, but their fortune".

There were innumerable hardships suffered and endured by the people of the Middle Ages, but in the early towns they did not lose the sense of intermingling. Each man had the feeling of being an active citizen in his community. In the physical form of the cities the centerline and the axis symbolized the mighty power of the monarch. With the nineteenth century came the dawn of the machine age. The gridiron plan for the cities was the beginning of a sterile urban character, brought on in the wake of the machine age. The city was a business proposition, and it must pay dividends. Land took on a new value. Commercialism with its entourage of shops, hotels, offices, entertainment and residential development, traffic and transportation descended upon the city. The execution of a plan for a city could be accomplished only by freezing its form into a preconceived and inflexible mould. Brazilia (fig1) and Canberra are two glaring examples of such exercises. With such monumental cities came an urgent need for regulation primarily to maintain the aesthetic character of the cities.

THE REGULATING MECHANISM:

A century before the Golden Age of Athens, a Greek Philosopher, Heraclitus, said, "the problem of human society is to combine that degree of liberty without

which law is tyranny with that degree of law without which liberty becomes license".

Regulations over city building were not new in the annals of history, King Hammurabi confided his rules of justice in 2,000 B.C. The Greeks had regulations pertaining to the building of dwellings. The Romans established height limits for tenements. Towns of the middle Ages adopted various regulations like the restrictions against fire hazards and projecting upper stories. Zoning was created as an instrument with which to control the use of land in urban areas. Zoning became a vital part of the urban planning tools. City planning was first an urge to improve the esthetic pattern of the urban environment. Then zoning made of it a statistical exercise. But regulations did not improve the environment of the common people which should be the basic purpose of city planning.

The house a family lives in, is the common denominator of the city. It was increasingly realized, particularly in the developed countries that housing has to become the principal instrument to attain that objective, because it brings into focus the social, economic and esthetic aims and needs of the urban population.

Fig. 1
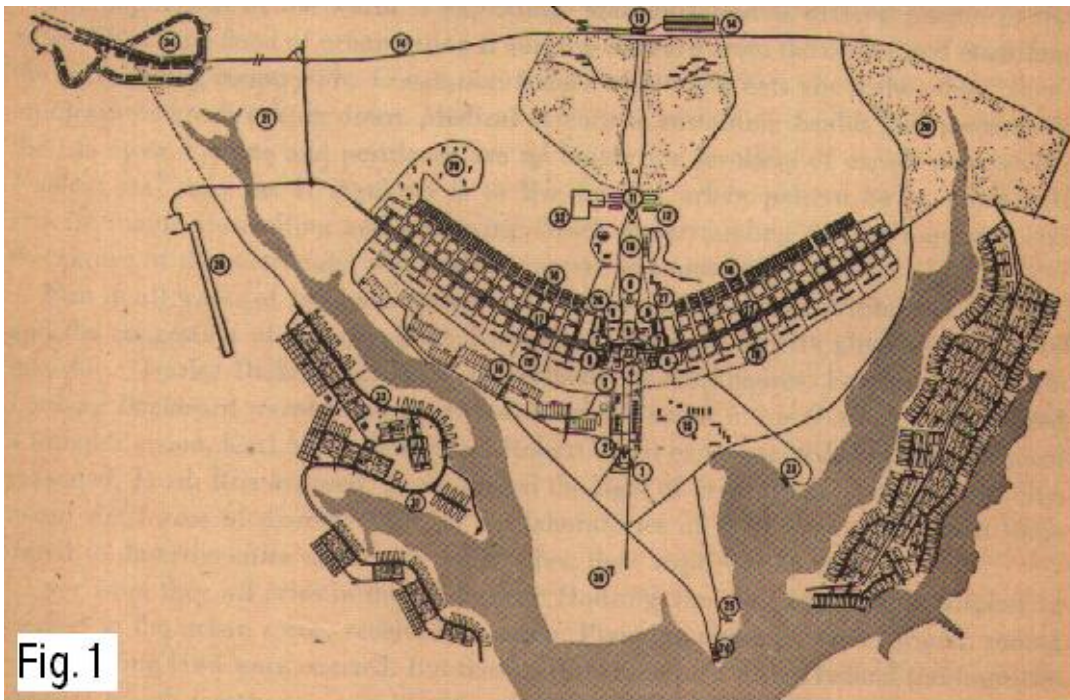
1 Freezing the form into a preconceived mould : Brazilia : Brazil

The housing programme in England had given strong impetus to enactment of the Housing and Town Planning Act of 1909 which, later became the Town and Country Planning Act of 1932. This was a comprehensive piece of legislation. Local authorities were not only empowered to prepare and enforce

plans for the urban area, but typical of the British pride in their rural countryside, the Act provided for the preservation of rural areas and important buildings. The Town Planning Acts in India have followed this model. Mature policies of land acquisition by cities in the Scandinavian countries resulted in progressive participation in the supply of housing by private enterprise via the public utility societies and housing co-operatives. The Act of 1901 of Holland required that every city with a population of 10,000 or more prepare a comprehensive town plan, in which new areas for housing were to be allocated.

What determines the physical form of the city? Who are the city builders? They are in fact the multitude of people and institutions, private or public, who invest in urban property and improvements. Some share by their investments of capital in physical improvements for conduct of profitable enterprise; others through their payment of taxes for the public services that make urban investment feasible. The city form emerges from the initiative and enterprise of all these people; acting individually and in groups. However, the people are guided by a set of standards and not from some preconceived model of the future city, however brilliant or inspired. This set of standards is the law.

THE REAL PLANS FOR OUR CITIES ARE THE STANDARDS PRESCRIBED BY LAW - THE BUILDING AND DEVELOPMENT CONTROLS THAT REGULATE THE DEVELOPMENT OF URBAN LANDS. CITY BUILDING IS GUIDED BY THE MAXIMUM QUANTITY AND MINIMUM QUALITY THE LAW ALLOWS. Laws form an integral part of the whole planning process.

State Town Planning Acts are a form of special enabling legislation. They generally establish state agencies to co-ordinate planning functions at the state level in addition to agencies for local planning activities. Such acts describe the functions and the process for each city and town to prepare a development plan for the area under its jurisdiction. These acts usually call for the preparation of a Development Plan, list its scope and specify the methods for its adoption and enforcement.

Another form of enabling legislation is that which creates new agencies in the states, and cities to cope with problems of a particular nature. New Towns, Housing and urban development and slum improvement acts are of this type, local agencies being created with powers conferred upon them to engage in the programmes prescribed in the statute.

THE CITY: A Complex Organism:

The modern city is a complex organism. "It is a great human enterprise serving the material and spiritual needs of man. It is a segment of land on which the people have selected their places to live and to work, to learn and to trade, to play and to pray. It is a mosaic of homes and shops, factories and offices, schools and libraries, theatres and hospitals, parks and play-grounds, meeting places and government centers, fire stations and post offices. These are

woven together by a net work of streets and transportation routes, water, sanitation and communication channels".

To arrange all these facilities `properly' as the city develops is the function of the Master Plan. The city is a sensitive organism. A change in one part affects other parts of this structure. For example, new homes mean more traffic on the streets, more customers that encourage new shopping, more children in the school, more water for the people, more revenue in taxes. Yet, growth does not always mean strength and prosperity for the community. It depends upon the standards a community prescribes to maintain the balanced use of urban lands and resources. The term "Master Plan" has been applied to almost every scheme for property development from an individual plot to a large estate, a shopping centre, or a city. I would like to use the term "General Development Plan" which identifies long-range comprehensive planning by a government agency as foundation for overall land development policies. I have adopted the term "General Development Plan" to distinguish it from the rigid codification of land uses that typifies a "Master" Plan.

THE GENERAL DEVELOPMENT PLAN:

The General Development Plans as I understand it, should be a guide to orderly city development to promote the health, safety, welfare, and convenience of the people of a community.
It should ORGANIZE and COORDINATE the complex relationships between urban land uses. It should CHART A COURSE FOR GROWTH AND CHANGE. It must express the AIMS and AMBITIONS of a community, delineating the FORM and CHARACTER it seeks to achieve. It must reflect the POLICIES by which these goals may be reached. It has to be responsive to CHANGE and, to maintain its validity in time and space must be subject to CONTINUAL review. (The Development plan of Bombay the premier city of India prepared first in 1967 was reviewed after 25 years and has been approved only in 1994!)

It should direct the physical development of the community and its environs in relation to its social and economic well-being based on careful and comprehensive surveys and studies of present conditions and the prospects of future growth. The General Development Plan should represent a set of IDEALS, the AIMS and AMBITIONS of an urban community. How many of our Master Plans can even claim to have kept in view these considerations? Our Master Plans have become a ritual of physical planning exercise devoid of concepts, imagination or ideals. They are statistical exercises leading to engineering solutions of accommodating X number of people in Y acres of land with a transportation grid and sprinkling of amenities!

THE CITY PLANNING DISCIPLINE:

LE CORBUSIER'S `The City of Tomorrow and Its Planning' was for long considered as one of the most important documents of modernism and a dominant guide to "rational" urban design. In the literature of planning history, both architectural and planning theorists have held it as a great attempt to justify a scientific approach to solving urban problems. He opens the book by stating, "Geometry is the means, created by ourselves, whereby we perceive the external world and express the world within us. Geometry is the foundation".

The modern city, Le Corbusier defines, by the presence of straight lines. He states "A modern city lives by the straight line, inevitably; for the construction of buildings, sewers and tunnels, highways, pavements. The circulation of traffic demands the straight line; it is the proper thing for the heart of a city". The model urban renewal plan which conforms to the straight line is, for Le Corbusier and other planners, Baron von Hausmann's reconstruction of the boulevards of Paris. Despite his undisputed eminence as an Architect his concept of a city was still a prisoner of form and not substance!

We the practitioners of urban planning have long considered urban planning as an empirical, quantitative and technical discipline. We have held that it consists of the empirical analysis of land and real estate economics, transportation patterns, site planning for individual buildings, environmental impacts, population and housing demographics, and a quantitative projection of the results of all these forces. The discipline of urban planning focused on solving problems of urban sanitation, housing, and traffic. The traditional training of urban planners was based on the assumption that "politics" must be excluded from administration, and only the "scientific" study of problems could produce the best result. The training in urban planning shared the assumptions about the supremacy of science over art.

In recent times the incorporation of social sciences into urban planning has radically changed urban planning's historical relationship to architecture and urban design which was primarily responsible in the concept of the `Physical Development Plan' or what has been generally called the `Master Plan'. City Planners are trained in social sciences, economics, and problems of their specialization e.g., land-use regulation and zoning, transportation or economic development. Using these skills, planners have prepared Comprehensive Development Plans. Over the years, planning practice changed to acknowledge and expand the participation of citizens in the regulatory and planning processes. Though, in India this aspect of the new planning process is still limited to `publication' of `Master Plans' and inviting `objections and suggestions'.

Recently there has been a great deal of discussion about the relationship between planning processes and political influence as well as about the politics of the planning process itself.

THE PLANNING OBJECTIVES:

`A Development Plan' or the `Master Plan' is a plan for the `proper' and `orderly' development or redevelopment of a city. The word `development' has been defined in the Indian Planning Acts as `carrying out of any building, engineering, mining or other operations over or under the land of making up any material change in its use or in the use of any building standing on it'. The `Master Plan' is not an end in itself. It must be essentially a policy instrument. It should provide the basis to accomplish certain aims and objectives such as

a)   Creating an environment which is functional, efficient, Healthy and aesthetically satisfying as a setting for human Activities;

b)   Promoting the larger interests of the community as a whole;

c)   Coordinating physical, economic, social- cultural and political Forces that affect the development of a society;

d)   formulating long-term and short-term action programmes;

The basic elements of a `Master Plan' (Fig.2) as we see it today are:

a)   Land use:- Areas designated for residential, commercial, industrial, socio-cultural, recreational, administrative and other uses.

b)   Circulation:- The net-works of road and streets, railways, water-ways and air-ways, terminal facilities, transit systems, etc. for the movement of people, goods and services.

c)   Utilities, Services and Facilities:- The desirable location, size and other particulars of public utilities like water supply, sewerage, electricity, transport, fire-fighting and community facilities including education, health, recreation.

d)   Civic Design:- The design of important elements in the city such as the civic centre, the central business district, shopping centres, and cultural areas. The civic design determines the aesthetic quality of the townscape.

e)   Open spaces:- The location and extent of necessary open spaces like   parks, play- grounds, stadiums, gardens etc.
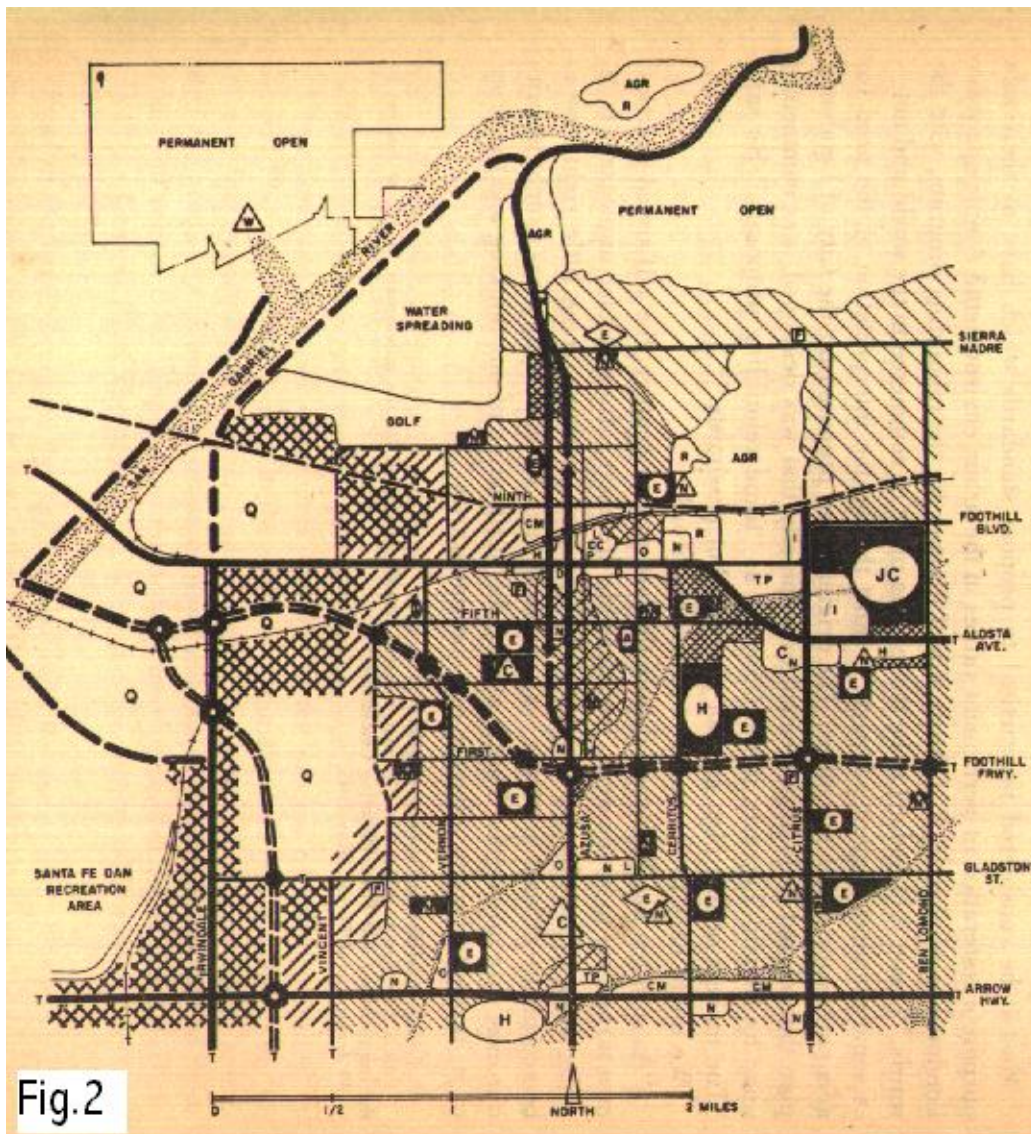
Fig.2

3: Basic elements of a Master Plan: Azusa General Plan : U.S.A.

The Master Plan for Gandhinagar, the New Capital of Gujarat   (Fig.3)   is a classic example of harmony   between the   `monumental'   as well   as `social' considerations. It placed the Governmental function on the axis as in Chandigarh but unlike it surrounded it by residential development making it more `accessible'  to people. It has a grid iron pattern yet an informal internal road system   unlike that in Chandigarh.  It  `mixed' the workers in public and private sectors effectively in the residential areas   as   against   creating Government   housing   colonies   as   in Chandigarh.   It   followed the   historic street pattern of the Gujarat town in   its

residential cluster development (4) It created a natural vista along the river and integrated it with the town's open space system (5).   It tried to create `images' of the city for the   residents. Yet with all its ingenuity it can hardly be called as   a great success in city planning!

2 Guide to orderly City development :Gandhinagar Master Plan : Gujarat India

THE STATE OF ART:

City planning's aim has always been to reduce the chaos of   city development, to make it a functional whole through:

> *   Better distribution of land-uses through a control over their location.

> *   Betterment of housing conditions for the lower income groups.

*   Reducing congestion of people, traffic and buildings.

*   Improvement of circulation, by road, rail or air traffic, water and sewerage etc.

Fig.4
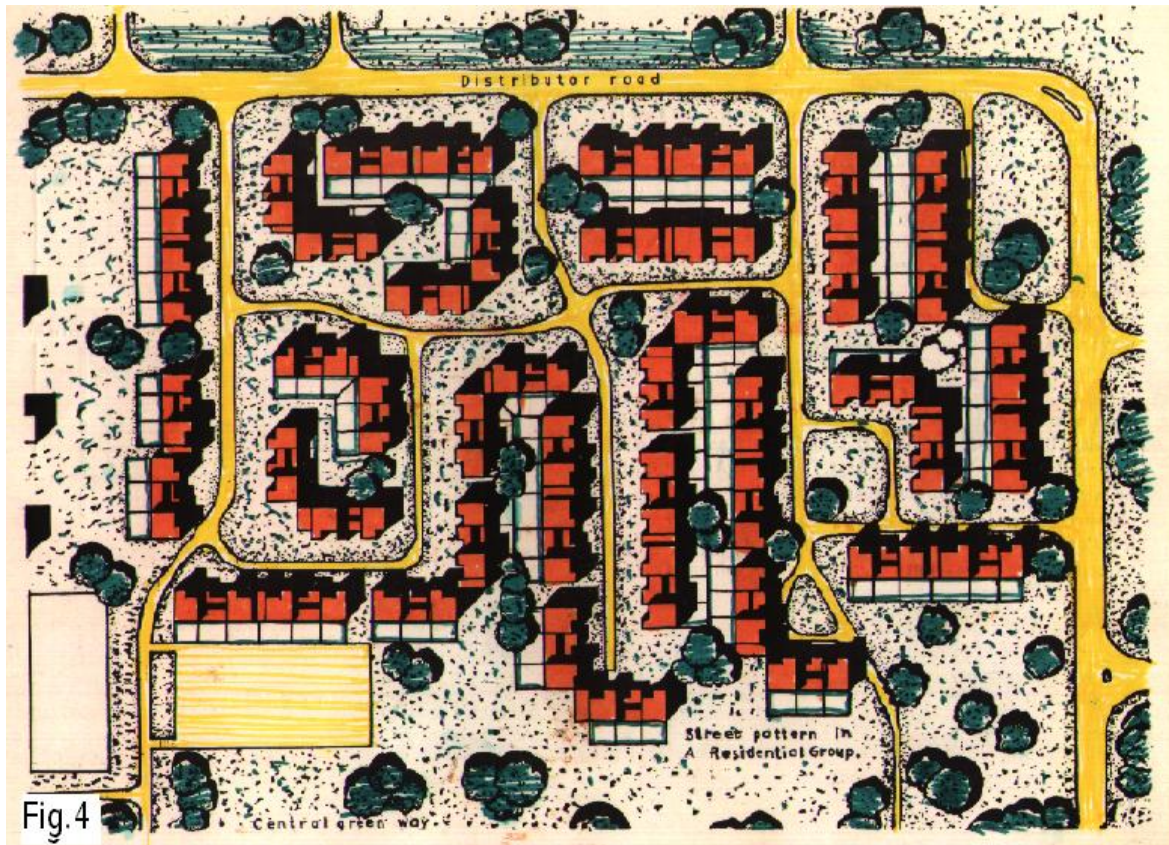
5 Residential cluster in Gandhinagar new Capital City : Gujarat : India

Across the twentieth century, particularly in the United State of America city planning became increasingly more abstract, concerned with process and function, while its focus on physical form withered and died. If we trace the development of rational decision-making processes in the theory of planning, we see its level of abstraction advancing from simple means-ends analysis in which there are many means and routes to the one and only ideal Master - or comprehensive Plan; to multiple choice mechanisms in which it was recognized that there are many routes and many ends, and that choices along the decision route determined what ends could or could not be achieved.

Hence, planners began to focus on how to guide these decisions, questioning how to obtain the necessary information about urban dynamics in order to develop early warning strategies, and relocating the advisory function inside

the government. At this point its primary focus on physical city form began to disintegrate and disseminate.

Fig.5   Central vista
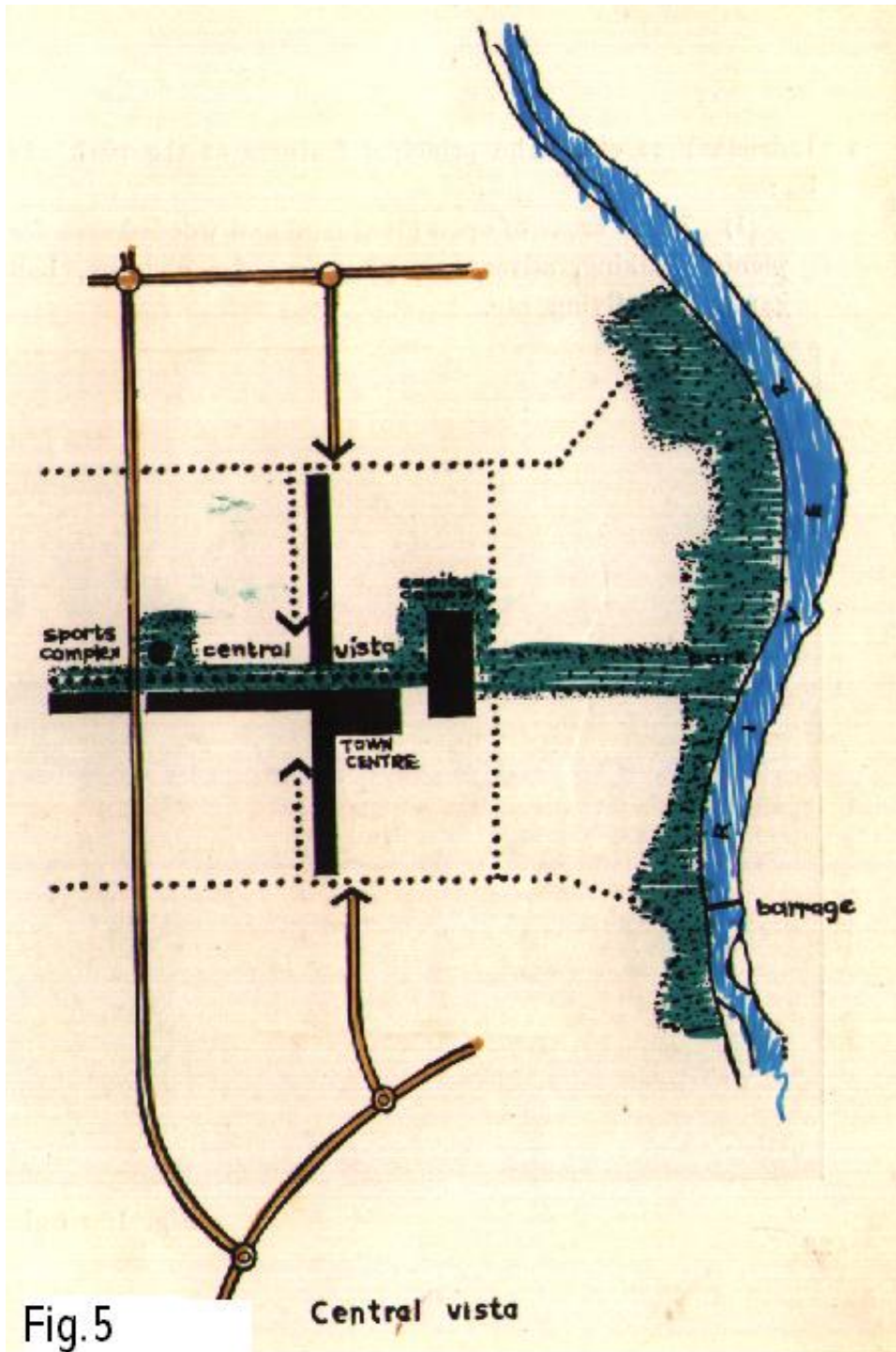
4: Civic Design ; important element in the City : Gandhinagar ,Gujarat: India

With the advent of computers and data banks, city planners began to develop simulation models of urban development; most often related to transportation models based on location theories, which minimized the journey to work, or models of the real estate market used to predict which neighbourhoods would likely decline and which would develop according to various public strategies, subsidies, and regulatory interventions. It appeared that city development could be guided by automatic decision-making machines, regulated by information flow, feedback loops, context dependent variables and strategies.

If Paris was the capital of the nineteenth century, and New York that of the twentieth Century, then Tokyo, they proclaim, as the first high-tech city will be the capital of the twenty-first century. On a man-made island in Tokyo Bay a $12 billion teleport of office buildings, cultural halls and telecommunication station is envisaged, a bridge to connect this island to the shore where a self-contained village, River City, is being erected, containing hotels, shopping malls, theatres and high-rise condominiums. More projects are on the drawing boards, most of them to be located in Tokyo Bay. All of this is reminiscent of Kenzo Tange's "Tokyo 1960" city plan in which he foresaw that cities of the 10 million population class were becoming consumption cities, their per capita income already far beyond that which was necessary to satisfy basic needs.

THE NATURE OF THE PROBLEM:

Despite all this futuristic visions, there is a widely held view that planning methods over the last few decades have not succeeded in producing a satisfactory physical environment. These methods have resulted in a proliferation of land-use plans, traffic studies and economic and demographic surveys. While, more recently, sophisticated computer-modeling techniques have been used for optimizing the land-use matrix, all this has not had a positive bearing on the way in which the city dweller actually perceives, uses and enjoys his environment.

The physical structure of many of the slums in India, the traditional Favela (shanty-town) system of Brazil, or the `Barriadas' of Peru, for all their ad-hoc construction and unsanitary conditions have a physical and perhaps more importantly a socially coherent structure. Based upon principles of self-determination in terms of both physical and social development, they contrast markedly with the residential development plans of State Housing Authorities. There are general lessons to be learnt from the urban organization of the slums, Favelas and Barriadas as there are from the example of the urban structure of Florence or Jaisalmer.

The phenomenal growth and subsequent metamorphosis of cities which universally accompanied the industrialization of countries brought about extensive disruption and change in the urbanization process and resulting urban

problems. The distinctive `S-curve' of urbanization was first exhibited in Britain, where a period of gradual city growth in the late eighteenth century was followed in the nineteenth by dramatic increases, which, by the end of that century, subsided.

This cycle is now being displayed in the urbanization process in India and other countries. In Britain the most rapid rise in the proportion of people living in cities of 100,000 or more lasted from 1811 to 1851 and in the United States from 1820 to 1890. In general, the rate of this urbanization has increased as time has passed, so that the change from 10% to 30% of the population living in cities of 100,000 or more, which took 79 years in England and Wales, took only 66 in the United States, 48 in Germany, 36 in Japan and 26 in Australia. At the same time, this proportional shift from the rural areas to city has been accompanied by a growing increase in the absolute numbers involved. It has been estimated, for example, that in Asia, Africa and Latin America some 200 million people made this move in the last ten years alone.

The urbanization of a country is said to be completed when about 80% of its population is accommodated in its cities, a stage reached in Britain at the beginning of the twentieth century. Yet the period of dramatic growth was not then followed by stability. On the contrary, the cities of fully urbanized countries have continued to undergo violent transformations as they have attempted both to contain internal contradictions inherited from the first stage, and to accommodate new sources of instability.

THE ECONOMIC BACKGROUND & SOCIAL IMPLICATIONS:

The Economist J.K. Galbraith has remarked that all the problems of the city can be solved by a sufficient application of money. Such a view of the city as a thing to be improved or cured by financial means, ignores the fact that the city is itself a financial device, so important to the national economy that some authorities would regard the latter as little more than the sum of the urban economies it comprises. The city of Mumbai is a glaring example. The economic functions of the city are so fundamental to its purposes that their symbolization in terms of land values almost represents the physical urban form of the city. The form of the modern city tends towards a three- dimensional representation of land values, most graphically illustrated in the case of Bombay. Land value model constructed for the city of Mumbai, (Fig.6) illustrates the fact. A general pattern of urban land values, provides a vivid picture of urban structure with ridges of higher value radiating from the centre, and punctuated by local peaks along their way.

Where the `highest use' is shopping and commerce, its sensitivity to differentiations in traffic flow, visibility, widths of streets, breaks in plot frontage and so on, produces a definite interrelationship between urban

form and land values. This particular responsiveness of shopping uses to surrounding pressures makes their distribution another important indicator of urban structure.

Fig.6
6 Commercial and Residential Property Rate Model : Mumbai, India
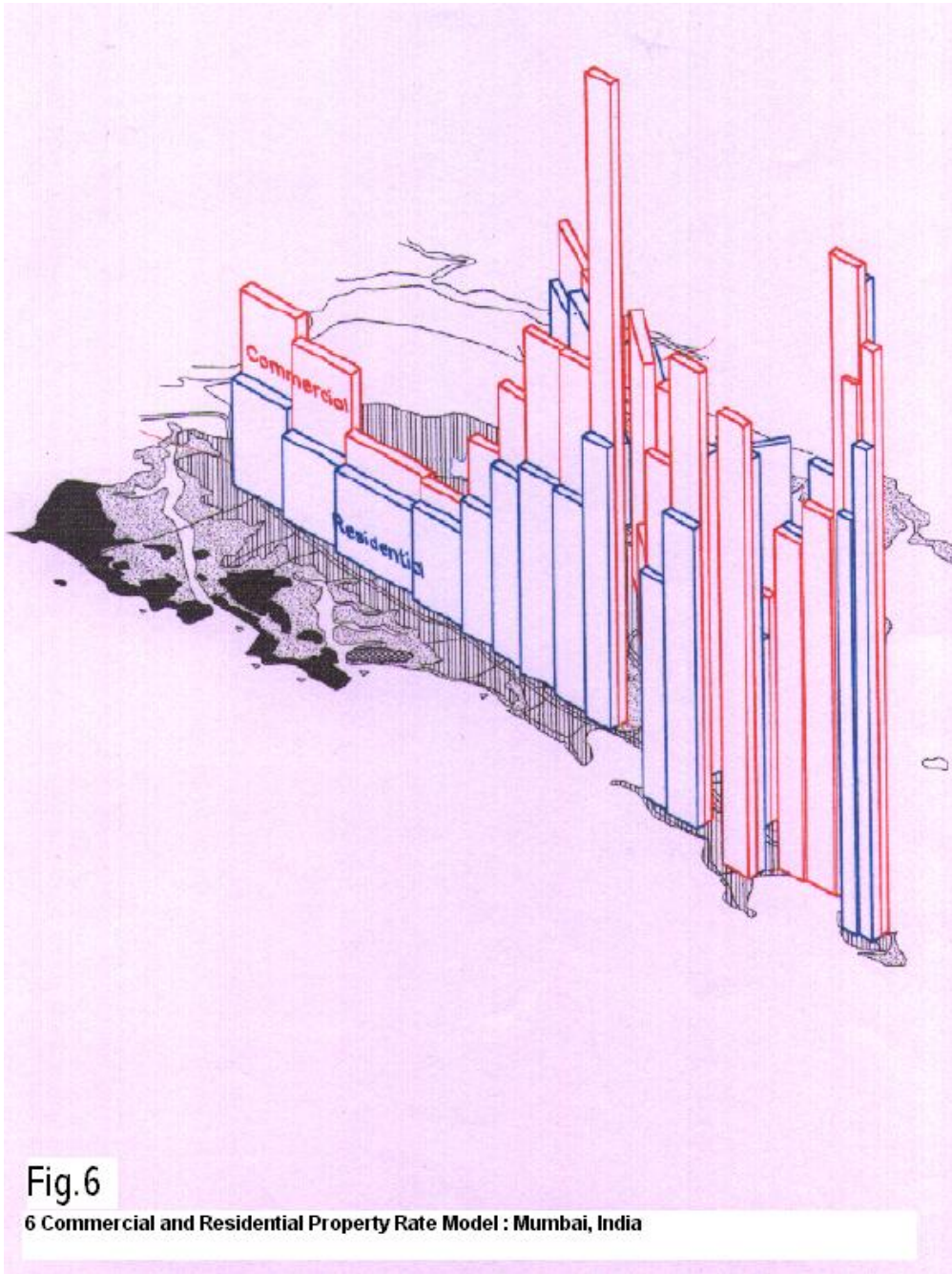
The streets leading to the local railway stations, bus terminus or other points of congregation are an apt demonstration of the results of such pressures in our cities. Small shop units proliferate freely through the residential areas. Their location as `corner shops' at all significant street corners, their clustering at more important cross-roads, and their grouping as continuous chains along the main roads, provides an eloquent representation of the patterns of movement through the community. For the same reasons, shopping uses are often the first to reflect dynamic shifts in the pattern of the city economy, a major source of urban problems.

Certain uses and certain social groups are more able to respond rapidly to new circumstances, while others react slowly. Thus, the new extensions in our cities; first residential, then shopping, and then industrial and other commercial uses take advantage of the new low-cost, accessible locations. The more affluent and thus more mobile social groups have benefited most from these relocations while the poor continue to cluster around the work centres in the central or district business centres as seen in most of our metropolitan cities in India. It is this tendency of dynamic change in a city to discriminate against its weaker parts which has militated against allowing economic law to act unimpeded as the dominant urban structuring principle.

Melvin Webber has suggested that, in order to repair the short comings of this land value price mechanism, town planners use the methods of civil engineers rather than economists, evolving three basic techniques which are directly analogous to those in engineering - the technical standard, the master plan and the land-use regulation. The temporary success of these methods in some areas of a city hides the fact that they are only appropriate for what Rittel and Webber have described as `tame' problems, with clear ends in sight. Most urban issues however are `wicked' problems, which are impossible to formulate or to solve definitely, and are thus poor subjects for such methods. Accompanying the differentiated economic pattern of the city is a social pattern based upon a corresponding inequality of location and access to services and amenities. And if the former structure is most vividly revealed by the distribution of land values, so the latter has historically been articulated by that of population densities.

THE MASTER PLAN:

The difficulty and urgency of urban problems have produced correspondingly exaggeratedly simple, sweeping, once-and-for-all responses, and attempts to implement such responses have in turn compounded the problems. This curious reservation of the simplest solutions for the most complex problems is a long-standing characteristic of much urban planning. Among the earliest techniques used by planners to intervene in the development of the city, it was zoning which laid the basis for such an approach. For, while the physical

separation of land uses had undoubted environmental justifications, it resulted in a radical simplification of the problem.

A more fundamental critique of attempts to simplify the problem has been offered by Christopher Alexandar, notably in his essay `A City is not a Tree', in which he argued that such attempts were based upon a mistaken appreciation of the structural relationship of the city's elements which typically take the form of semi-lattices.

The tree-like structure of most modern plans, from Clarence's Greater London Plan and Tange's Tokyo Bay to Le Corbusier's Chandigarh, represents a `trivially simple' case of the semi-lattice structure, and one in which `life will be cut to pieces'.

THE REGIONAL PLAN:

In the last few years it has been argued by many city planners that city problems have assumed such proportions and complexity that these can only be tackled if the territories involved and problems entailed are made larger still and can therefore be attacked more "broadly". The argument, though valid in the context of the rapid progress in the field of Transport and Communications and the resulting mobility of goods, people and thoughts; the modalities adopted for its elaboration raise doubts about its validity. In fact, some thinkers in the west have called it `escapism from intellectual helplessness'! "A region", somebody has wryly said, "is an area safely larger than the last one to whose problems we found no solution". Such observations point to the tendency of the planners when faced with a particularly confusing problem to think in terms which they hope will lead to a realizable solution, even if those terms do not necessary correspond to the actual parameters of the
problem. As urbanism encompasses so many aspects of society, each one the subject of a separate discipline that it is difficult to understand the entire urban development process through interdisciplinary research as is being attempted by our planners today. Instead we should try to understand the disciplinary contribution through a study of the urban development process or what I would call `urbanism'.

THE FUTURE FRAMEWORK FOR `MASTER PLANS:

The context for physical planning decision has much to do with the future of construction and infrastructure technologies. At the Congress of the International Society for Communications, Technology and Mobility, the theme was how the information economy would affect urban form and structure. There were demonstrations of new inventions of the 21st century. Examples included automated programming systems for all forms of vehicles, satellite-linked TV/Telephone systems of wristwatch size (capable of locating and

communicating with anyone in the world), and concentration of communications networks in "intelligent" buildings serving entire regions.

In the offing is new cost efficient and environmentally sound infrastructure and building technologies. These will replace the outdated, but currently standardized technology. Innovations include photonics (light/laser paths replacing electrical wiring and cabling), biotechnology (new inorganic materials for technological purposes), and microelectronics, (expanding and replacing human intelligence). Applications include factory produced modules (replacing on-site structural systems for buildings); pre-programmed, 3-dimensional people movers (replacing vertical and horizontal systems of elevators and escalators); self-contained, biotechnological waste disposal systems (eliminating plumbing and sewer systems), and automated personnel and group transport systems (replacing fossil fuels). Given the accelerated rate at which new technologies are being absorbed into the mainstream, there will be significant changes in infrastructure requirements of central business districts of our cities over the next twenty or thirty years. Even today, in developed countries there is a growing reduction in clerical and middle management workers commuting to CBD's.

Employees are opting instead for home-based computers connected to large data processing units, and communicating to other home-based workers by computer modem and facsimile.

In the last few years with the liberalization of economic, fiscal and trade policy of India there has been a quantum leap in the transfer of technologies from the developed world to India. As a result, the proliferation of the latest know-how-technology and information from the developed world to our country is quick and strong. While it has its own advantages in terms of keeping pace with the new technologies, it has robbed, the developing nations of a valuable tool; that of `learning from experience of others in order to avoid their mistakes'.

The implications of such future technologies for the physical planning and urban design process have to be understood. What may be considered as an absolutely essential infrastructure requirement for the development process today, may well be out of date soon. The era of the "master plan' with fixed and designated land uses, densities and transportation relationships has to give way to flexibility in all long range planning, integrating the old and new in a continuum of change, with possibility of stable phases at every stage of development and continual updates for adjustments with changing circumstances.

The paralysis that can accompany the inflexible Master Plan approach can be observed in most of our cities in India where the unintended effect of the rigid and fixed urban structure has resulted in proliferation of slums and deterioration of the living environment. The segregation of uses and the zoning approach has not deterred the proliferation of shopping and commerce

into residential areas, industry into the shopping areas and shrinking of open spaces to house the immigrants to the cities. All our Master Planning activities of last 50 years has not had the desired effect and in fact we find our cities in greater distress both quantity and quality wise in the provision of civic amenities, facilities and infrastructure. The quality of life in all respects has deteriorated and there is no sense of `belonging' amongst the residents of the cities displayed by frequent outbreak of violence and wanton destruction of civic property and facilities. There is no more a sense of place.

The physical, historic and cultural qualities that form an area's identity, are severely lacking. The demolition of historic, architectural buildings, while seeming to make economic sense in the short term, has often resulted in an irreplaceable loss of urban character. New development proposals are passed without an assessment of the potential environmental impacts and costs for mitigation. These costs should be calculated and built into the sanction process for development and into the long range plans for infrastructure.

THE NEW MASTER PLAN:

Kevin Lynch identifies "dimensions of performance" for cities, which constitute a quantifiable philosophy for the building arts, urban planning and design of human settlement. These dimensions form a logical, empirical and to some extent, culturally-dependent basis for the urban planning process:

> Vitality - the relation of form of biological health. Measured by the degree to which the settlement supports the survival of the species.

> Sense - the relation of form to perceptions and cognitions of the user. Measured by tests of recognition and recall.

> Fit - the degree to which form and capacity are adequately matched to the desired actions of the users. Measured by observation of behaviour setting, using qualitative and quantitative standards for analysis.

> Access - the quantity, diversity and distribution of people, activities, resources, places and information. Measured by standards considered necessary to a "normal life".

> Control - the regulation of ownership, occupancy, use, appropriation, modification and disposition. Measured by the degree to which the control is responsible, capable and open to potential users.

The context for a flexible and evolutionary development plan framework therefore should consist of:

a) A strong transport and communication structure and open space mosaic as the only physical depiction of a master plan:

   A possible network of regional linkages, main arteries for mass transport routes, pedestrian areas, air-rail-road transport terminals would define the basic structure for the city.

b) Proposals for absorption of immigrants within the fabric of the city without economic and social disruption and easy access to services by all: A well defined very high density low technology residential area reserved for absorption of immigrants to the city along the mass transportation routes and terminals can ensure flexibility in planning and development.

c) Self operating building and development codes based on incentives in terms of extra development rights:
   Defining `plot packages' in terms of the possible building envelope may obviate the need for elaborate building codes and rules, combined with incentives in the form of additional floor space for amenities and services provided for the city.

d) Policies with quantifiable parameters for industrial location and creation of jobs: Clear policies on location specific parameters for building space for industries, offices, etc. that will result in creation of jobs.

e) Policies for taxation and revenue generation to make the city administration a financially viable proposition:
   Clearly defined policies on taxation based on performance, lead on city services and disturbance to the living environment rather than ratable values of properties, taxation for non-development leading to speculation, taxation of all vacant or built properties on the basis of

   accessibility to city level services and amenities, unearned income sharing and performance standards for city administration in terms of percentage of revenue spent on developmental and non-developmental expenditure.

f) Concern for the environment:
   Protection of environment through environment impact assessment of all developmental works and the costs for their mitigation.

g) Receptivity to new technologies for infrastructure advances:

A continual review of city level services in their technological context to assess quantifiable and visible benefits to the society and not to a chosen few in the city (like concreting of roads).

h)   Enforceable standards of performance:
Clearly define and document enforceable standards of performance in all activities carried on in a city including area licensing for personal vehicles

i)   Integration of historic resources:
Creation of symbols, landmarks and spaces easily identifiable with the city to create a sense of belonging and pride for the city.

The `Master Plan' should reflect and translate these priorities and incorporate them in the land use, growth, human service, and access and circulation patterns.

TOWARDS AN `INVISIBLE' MASTER PLAN:

This raises issues regarding the changing roles and responsibilities of the public and private sectors. The public sector should now move into a facilitator role regarding the use of privately held development rights, while the private sector should take leadership in the provision of infrastructure and amenities for the entire community and not only the users of the development. Whereas the former model was for the public agency to assemble and clear the land, and wait to see if developers were interested in the potential, we as city planners should increasingly act as the motivators, promoters and negotiators of new development. The Master Plans of tomorrow therefore should be facilitators of exploitation of privately held development right for the common good of the citizens with minimal intervention by way of a physical development plans but with maximum guidance of the development through economic, fiscal; taxation, employment and industrial policies that are quantifiable, area specific and enforceable through motivation rather than enforcement, promotion rather than compulsion and negotiations rather than control.
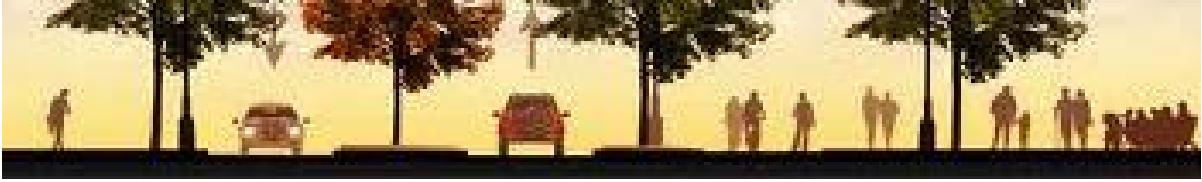
7

Plan Implementation and Enforcement

Synopsis

The need to achieve effective public participation in the preparation of development plans has been discussed among the planning community for a long time. However, no concrete recommendations have been made so far. The situation continues in absence of bold and innovative suggestions to improve or rectify it. In most of the states of India, physical development plans have been prepared for a number of towns and cities. There are hardly any inputs in their preparation either from the common people for whom the plan is made or from the organized sector or Professionals. There is no mechanism under the present town planning acts to obtain CONSTRUCTIVE INPUTS from these stake holders. The first requirement to achieve public participation in the preparation of development plans and incorporate public partnership in its implementation is to totally REFORM TOWN PLANNING ACTS. A basic change may be brought about in the acts governing the preparation of development plans by requiring the City Government to prepare not a Master Plan but only a Skeletal plan. The planning authority should make available this "Skeletal" plan on a website as also a hard copy free of charge to Institutions, Professionals, NGO's, general public to **PREPARE A SPECIFIC PLAN**. The detailed land use plan will in fact be prepared or suggested by the stake holders themselves. Such plans, then can be collated by a committee of experts and transformed into a regular development plan showing proposed amenities, land use etc. Thus it should be possible to derive from a plethora of representative bodies, individuals and experts their perceptions of what the city should be! While implementing the plan, the local government should, as far as possible adopt a **separate Revenue accounting and application system. In simple terms it will mean that revenues collected under a specific head will have to be, by and large, spent on that head only. There will not be a pooling of all revenues and allocation as per the 'might' and 'pulls' of any individual elected representative or politician.**

Introduction:

The need to achieve effective public participation in the preparation of development plans, simplify the content and procedure of their preparation, evolve new and

'tamper proof' method of their implementation has been discussed among the planning community for a long time. However, no concrete recommendations have been made so far by the Institute of Town Planners to the State Governments. This is mainly due to the fact that all these issues are dealt with in the various town planning legislations in the states of India. Though it is realized that the most progressive of these 'Acts' have not achieved effective or meaningful public participation in plan preparation, and implementation is riddled with political and governmental interference, the situation continues in absence of bold and innovative suggestions to improve rectify it.

Need for Change in Planning Procedure:

It is high time, that a serious discussion is initiated on this important issue. In most of the states of India, physical development plans have been prepared for a number of towns and cities. There are hardly any inputs in their preparation either from the common people for whom the plan is made or from the organized sector or Professionals. In my experience of working on two of the Planning Committees for the finalization of the development plans for Mumbai and Vasai-Virar sub-region, I found, with few exceptions, that only petty personal considerations bring individuals or developers before the committee with objections or suggestions.

Granted that in India there is far less public awareness about the effect of physical development planning on the life of common man, is something lacking in our procedures for plan preparation and implementation?

Public Participation:

The common man, as is evident from objections and suggestions heard at the planning committee meetings, is greatly concerned with the fate of the parcel of land/ property he owns as a result of the plan, and to an extent with the facilities provided/ not provided in his area of residence. The associations of shopkeepers/hawkers/petty business men are concerned with how the plan affects their place of business; the commuter is concerned with facilities for public transport, the transport vehicle owners with facilities for parking, loading /unloading and the environmentalists with the flora and fauna. The associations of slum dwellers are concerned with the fate of their colonies, the NGOs with whatever cause they claim to serve and propagate. All of them have OBJECTIONS to the plan! There is no mechanism under the present town planning acts to obtain CONSTRUCTIVE INPUTS from these stake holders.

Problems of Plan Implementation: Need for Public Partnership

When prepared and approved, these development plans may languish because of inadequate support from the political leaders as well as common man and **lack of resources.** The resources for the implementation of the physical development plans are rarely identified neither is the method to harness them. Frequently parcels of land reserved for public amenities like playgrounds, gardens, community centers remain desolate and get encroached upon slowly by slums or private uses. Later there is demand and political pressure to change the land use to whatever is the encroachment! All due to not developing the land for the designated purpose in the plan which in turn is due to lack of fiscal resources. Such a situation would not arise if identification, quantification and means of raising resources to implement the development is an integral part of plan preparation or **PUBLIC PARTNERSHIP is identified and incorporated in the plan implementation programme.**

Need for Change in Town Planning Legislation:

Despite a feeling expressed at various seminars that the process of making the development plans needs to be far more transparent and encourage public participation, there is no change in the laws governing preparation of development plans to achieve this purpose. The first requirement to achieve public participation in the preparation of development plans and incorporate public partnership in its implementation is to totally **REFORM TOWN PLANNING ACTS** in all the states by preparing a Model town planning act for plan preparation and implementation.

An Innovative Suggestion:

In preparing such an Act an innovative approach is required to be laid down for formulation and implementation of our city development plans. I suggest that, a basic change may be brought about in the acts governing the preparation of development plans by incorporating the following.

The designated planning authority should prepare only a "SKELETAL" plan indicating the following content only:

a) The extent and direction of development of the city,
Based on population trends, projections and the role that the town is likely/required to play in the regional context, the urban geography, availability of land and future regional transport network, the directions and quantum of growth for a 10 year period can be indicated.

b) Location for land uses not in harmony with residential use, such as, industry, warehousing, and transport terminus, solid and liquid waste disposal sites etc.

Instead of locating all land uses, only those which may require special considerations like preventing noise, water and air pollution, proximity to other population centres or regional transport arteries should be indicated with their preferred locations.

c) Sites/areas/buildings for conservation as heritage,

Conservation areas like natural features (rivers, lakes, hills, mines, and ecologically sensitive areas), historical monuments or places, heritage sites should be clearly demarcated as uses to be retained.

d) Major traffic and transportation structure in the context of (a), (b) and (c) above and proposed residential uses,

The skeletal plan should delineate only the major transport arteries in the context of the uses like transport hubs, conservation areas and sites for potentially hazardous uses along with areas where potential migrants can be accommodated

e) Requirement of public amenities in terms of number/areas in various sectors/wards of the city.

Considering the affordability criteria the planning authority can decide parameters for essential public amenities like educational, health, recreation and community facilities, and their location and describe these in the plan.

Preparing the Development Plan:

Having prepared such a "skeletal" the planning authority should make available this "Skeletal" plan on a website as also a hard copy free of charge to Institutions, Professionals, NGO's, general public to **PREPARE A SPECIFIC PLAN**. For this purpose the skeletal plan should be available on the 'internet' which can be down loaded and used as a base map. Thus the detailed land use plan will in fact be prepared or suggested by the stake holders themselves. Following type of institutions can be considered to be invited to submit their own version of development plan by way of regular maps.

a) Chambers of Commerce and Industries,
b) Institution of Engineers,
c) Institution of Architects,
d) Institution of Town Planners,
e) NGO's, (only those which have a city wide programme
f) Private consultants concerned with city development,
g) Professional bodies.
h) Any organization professing interest in the development of city, etc.

These institutions should be asked to submit their plans superimposed on the basic skeletal map prepared by the planning authority. Certain amount of financial

grant/assistance could be given to them by the Planning Authority. All those who submit such plans should also give their assessment of resources required to achieve the suggested development and whether they can themselves develop/provide any part of amenities, facilities proposed by them.

After receipt of such plans, these can be collated by a committee of experts and transformed into a regular development plan showing proposed amenities, land use etc. Thereafter, suggestions can be invited again from individuals, local level NGOs, public on those parts of the plan which they feel may affect their lives. These plans may be at the ward or 'moholla' (city ward) level. At this stage the individuals will have an opportunity to incorporate local level amenities, roads or any other features they may consider as appropriate to their day to day lives. They can also at this stage indicate if their local organizations, donors or Philanthropists can contribute in creating this infrastructure and amenities, partially or totally or simply create a fiscal corpus to be handed over to the local government.

Thus it should be possible to derive from a plethora of representative bodies, individuals and experts their perceptions of what the city should be!

Resource Planning:

After having gone through this process perhaps, the plan can be published and public hearings held for,
      1 city level planning proposals,
      2 ward and sub-ward level planning proposals.

While implementing the plan, the local government should, as far as possible adopt a **separate Revenue accounting and application system. In simple terms it will mean that revenues collected under a specific head will have to be, by and large, spent on that head only. There will not be a pooling of all revenues and allocation as per the 'might' and 'pulls' of any individual elected representative or politician.** In such a system parameters will be fixed for the percentage of revenue to be spent on administration including salaries. This is of paramount importance because in the current system of pooling of all revenues, it is astonishing to find that almost 82% of the revenue income is spent on **SALARIES** leaving only 12% of the budget of the local government for developmental expenditure!

Only in this manner can we achieve a participatory approach to actual plan making from the people who are affected by the development plan and effectively privatize the process and achieve public partnership in the implementation of our city development plans

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SPECIAL ECONOMIC ZONES: THE INDIAN SCENARIO

INTRODUCTION

Most developing countries in the world recognized the importance of facilitating international trade for the sustained growth of the economy and increased contribution to the GDP of the nation. India was one of the countries in Asia to recognize the need for an Export Processing Zone (EPZ) model in promoting exports. Asia's first EPZ was set up in Kandla in 1965. A Special Economic Zone policy was announced in the Export and Import (EXIM) Policy 2000. Under this policy, the designated duty free enclave was to be treated as foreign territory only for trade operations and duties and tariffs. No license is required for import. Manufacturing, trading or service activities are allowed. Though this was a sound policy which worked well for over 35 years; due to the ill advised insistence of a ministerial team that visited China and was shown the 'glorious' success of the SEZ in 'Shenzen' province; the Government of India enacted the SEZ (Special Economic Zone) Act in February 2006.

"SEZ" is a geographical region that has economic laws more liberal than a country's typical economic laws. It is a tool to accelerate the trade capacity , and to promote rapid economic growth by using tax and business incentives to attract foreign investment and technology. At last count there are about 3,000 SEZs operating in 120 countries. By offering privileged terms, SEZs are supposed to attract investment and foreign exchange, spur employment and boost the development of a region. Until January 2007, the Government of India had given final approvals to 237 SEZs and in-principle approval to about 165 zones.

The SEZ Act: A License to kill?

The SEZ Act was purportedly enacted to provide an internationally competitive and hassle free environment to manufacture products for exports. Yet, the units in the Zone are not subjected to any minimum export performance requirements! SEZs are deemed to be foreign territory for the purposes of trade operations, duties and tariffs! This provision undermines the sovereignty of local governance systems and is also against the spirit of 74th Amendment to the Constitution of India, and concentrates power in the hands of the Development Commissioners at the State level who are the Bureaucrats subservient to their political masters who in turn are controlled by

the big industrialists! The Act violates the right to livelihood of people, who are being forcibly displaced for implementation of SEZ projects.

The logic claimed for creating a Special Economic Zone is to offer infrastructure and other facilities that cannot be provided quite so easily across the country as a whole like, assured electricity, good transport links and more flexible labour laws. It is presumed that the investment that may come into a special zone will be over and above what would have taken place in the normal course. Yet, to date, there is no feed back study in India to conclusively show that the SEZ policy has given any fillip to growth in employment, production, exports or value addition or increase in GDP! The primary attraction of an SEZ is the tax benefits that are offered. According to the statement of the country's Finance Minister, it is substantial, Rs 158,000 crore.! As a result however, the SEZ can become and is fact becoming a tax-dodge!

Paradoxically, in this country where corruption is rampant and 'laws' are more evident in being 'evaded' than 'complied with'. units are allowed to be set up in SEZ for manufacture of goods and rendering of services :-

1. On self-certification basis without any verification about the authenticity of their claims.
2. Though the units in the Zone are required to be a net foreign exchange earner they are not subject to any pre-determined value addition or minimum export performance requirements.
3. Offshore banking units are allowed to be set up in the SEZs.

The policy provides for setting up of SEZ's in the public, private, joint sector or by State Governments. It is also envisaged that some of the existing Export Processing Zones would be converted into Special Economic Zones. Accordingly, the Government has converted Export Processing Zones located at Kandla and Surat (Gujarat), Cochin (Kerala), Santa Cruz (Mumbai-Maharashtra), Falta (West Bengal), Madras (Tamil Nadu), Visakhapattnam (Andhra Pradesh) and Noida (Uttar Pradesh) into a Special Economic Zones. In addition, 3 new Special Economic Zones were approved for establishment at Indore (Madhya Pradesh), Manikanchan – Salt Lake (Kolkata) and Jaipur and have already commenced operations.

SEZ Rules:

The SEZs Rules provide for drastic simplification of procedures and for single window clearance on matters relating to central as well as state governments. Rules provide simplification of procedures for development, operation, and maintenance of the Special Economic Zones and for setting up and conducting business in SEZs. This includes simplified compliance procedures and documentation with an **emphasis on self-certification**; single window clearance for setting up of an SEZ, setting up a unit in SEZs and clearance on matters relating to Central as well as State Governments; **no requirement for providing bank guarantees**; contract manufacturing for foreign principals with option to obtain sub-contracting permission

at the initial approval stage; and **Import-Export of all items through personal baggage**. There are many Incentive/ Facilities to SEZ Developer. 100% FDI (foreign direct investment) is allowed in many cases. Income Tax benefit under (80 IA) to developers for any block of 10 years. Duty free import/domestic procurement of goods, exemption from Service Tax /CST. Custom and Excise duties are exempted for SEZ enterprises in many situations. . State governments simplify the labor/environmental laws for SEZs. Single window clearance mechanisms will be evolved for the benefit of the units with in SEZ.

In short, the SEZ areas are De-Jure and De-Facto foreign territories where the promoters can merrily indulge into unabashed profiteering actively aided and abated by the central and State Governments!

Repercussions of SEZ

The Industry (manufacturing as well as real estate) has taken advantage of these benefits. In the guise of establishing SEZ there has been rampant misuse of the SEZ provisions for "official" evasion of income tax, sales tax, custom duty, use of SEZ lands for commercial exploitation by the barons of industry. Land for SEZs have in many cases been acquired by state governments at depressed prices using the coercive provisions of the Land Acquisition Act under the guise of 'public purpose' and transferred to private promoters. A recent example of this form of state intervention is the acquisition of 50 acres of prime land near Visakhapattnam by the Andhra Pradesh Industrial Infrastructure Corporation and its subsequent sale to the ill reputed Satyam Computers Limited at a throwaway price for setting up an IT SEZ. Developers stand to make huge profits from the land when the government subsequently (covertly) revokes the SEZ status. However the government for obvious reasons and under pressure from Politicians has not considered it important to restore the land to the original owners if and when the SEZ is de-notified!

The Hidden Agenda!

The zones themselves are often close to metropolitan areas like Mumbai or Navi Mumbai and other large or metropolitan cities and are being acquired as these are highly lucrative real estate development propositions. Instead, why the option of facilitating conversion of existing and new industrial areas in the country as a special economic zone was not considered? Because if it were, that would rob the Politician-Bureaucrats-Technocrats (PBT) combine of generating kickbacks when private industrialists acquire large tracts of land and oust the farmers who for generations have known no other occupation than farming and agriculture! Given the monetary compensation they are found to have spent it away in frivolous expenses and liquor and ultimately flocked to the cities in the slums giving a 'bonus' to the politicians of captive vote banks!

Informed Opposition to SEZ:

A people's movement for scrapping SEZs in Goa for the last two years has forced the state government to demand that the 3 SEZs that have been 'notified' in Goa be scrapped. The central government, however, has maintained an adamant stand citing the lack of an exit clause in the SEZ Act. Surprisingly, the lack of such a clause did not deter the government from finding ways to accede to the requests of private promoters!

The Special Economic Zone (SEZ), probably has become the most controversial economic reforms announced in recent time. While some consider it as India's supersonic engine of growth, others (including this Author) consider it as the latest land grab instrument in the hands of the industrialists aided by the Politicians.

Issues to address:

Serious issues about displacement and rehabilitation, employment generation, foreign investment, primacy of agriculture over industry and alternative models of development need to be addressed immediately in the context of the SEZ concept. Dharavi in Mumbai, for example, said to be the largest slum in Asia is in fact a vibrant economic zone producing a variety of goods, from pottery to branded snacks. It also provides essential services, like recycling waste. But it is all in the informal sector. That is why the government does not recognize it. And Instead of remodeling it, is hell bent on removing it so that the Builders, Politicians and overseas Developers can exploit the strategically located land for commercial use and reap a harvest of astronomical profits!

Performance of SEZs so far

The first SEZs (under the SEZ Act) were notified in mid-2006, and by March 2008 there were 206 of these zones. How did these zones perform with respect to the stated objectives of exporting goods and services, bringing in foreign capital and creating employment?

According to government figures for 2007-08, these 206 SEZs attracted a capital of Rs.69,000 crores including Rs.5400 crores of Foreign Direct Investment (FDI); they provided direct employment to 98,000 workers; and exported goods and services valued at Rs.5200 crores. But most of these SEZs were in the IT/ITES sector, a sector that already enjoyed special tax and customs treatment and was rapidly expanding even before the SEZ Act came into being. If the SEZ policy was framed with a view to promoting investments and exports in manufacturing and services other than IT/ITES, then the relevant statistics look much worse.

Non-IT/ITES zones accounted for direct employment of only 32,000 workers, exports of Rs.1800 crores and FDI of Rs.3800 crores in 2007-08. These exports were less than 0.3 per cent of India's total exports, and less than 4 per cent of total FDI inflows. India's need for employment generation was estimated by the ILO a few years ago to be at least 10 million jobs a year!. Against the backdrop of these

numbers, it is obvious that the performance of the SEZs has not been in line with the stated policy goals so far.

The 'other side' of SEZ

The lack of economic activity in most SEZs leads to the suspicion that many promoters were incapable of attracting economic production units to their SEZs and were merely acquiring them as real estate assets and relying on loopholes in the law to realize their value at a later date. This suspicion is only reinforced by the number of real estate developers in the who have been advertising SEZs and collecting large sums from the market in public issues of shares.

A second issue is the lack of foreign direct investment in the SEZs. The FDI inflow of about Rs.3800 crores for 2007-08 was focused on goods and services for the domestic market, with the exception of IT and IT enabled services. FDI always looks at the competitive advantage of a country before investing. China today has become the manufacturing hub of the USA, having established itself over the past 25 years. India will have to displace exports from China to the US to increase its manufacturing exports to that country. Can India compete with China's specialization in cheap manufacture in areas other than its traditional exports?

Persisting with the folly:

But even in this situation where the existing SEZs are unable to sustain themselves and are now looking up to the government for support and concessions, the central government continues to entertain new SEZ proposals. State governments are also not far behind, with coercive land acquisition activities in full swing.

In Karnataka, the state owned Karnataka Industrial Area Development Board (KIADB) has been acquiring land to turn the Mangalore SEZ from a petrochemicals zone to a larger multi-product zone despite strong opposition from local communities. In Andhra Pradesh, the government has been working closely with a private developer, acquiring a major portion of the land for the Kakinada SEZ using the Land Acquisition Act, and employing brute force to evict farmers who have resisted handing over their lands to the developer.

Despite all the debate and assurances on land acquisition and rehabilitation issues, acquisition continues with the help of the Land Acquisition Act framed in 1894!

The Chinese Model that Failed:

The SEZ ideas that worked in Communist China cannot be transplanted so well in Democratic India. The fundamental difference is that in China all land is owned by the State and there is no private ownership. In India historically land is privately owned and the farmer is fiercely attached to his land, emotionally and economically.

China first set up some SEZs in the late 1970s in Shenzen. But what has been the cost to China? Will similar cost not be applicable to India also?

China has to feed 22 percent of the world's population on only 7 percent of land. Despite this daunting problem, **between 1996-2005, "development" caused diversion of more than 21 percent of arable land to non-agricultural uses,** chiefly highways, industries and SEZs. Per capita land holding now stands at a meager 0.094 hectares. In just thirteen years, between 1992 and 2005, **twenty million** farmers were laid off agriculture due to land acquisition. China is now paying a huge cost in terms of environment destruction, soaring crime rate and exploitation of its working class, mainly migrants. In 2006, the United Nations Environment Programme designated Shenzen as a 'global environmental hotspot', meaning a region that had suffered rapid environmental destruction.

While export-driven policy for economic growth has helped China touch record growth figures, the income gap is widening and rapidly approaching the levels of some Latin American countries. Exports play a significant role in boosting GDP. However in the case of India, **with a sizeable domestic market, the choice lies with the producer to either export or supply to the domestic market. Household consumption in India at 68 percent of the GDP is much higher than that of China at 38 percent, Europe at 58 percent and Japan at 55 percent which is a great strength for the domestic manufacturing industry of India.**

Can SEZ work in India?

Need for a Holistic Approach:

The issue is not really SEZ. We need to take a holistic approach to the issue of development. Though 65% of the Indian population is dependent on agriculture- it includes horticulture, dairy, fishery, vegetable production, and all agriculture related activities that produce FOOD for human sustenance- its contribution to GDP is only18%. If more and more agricultural land is converted for non-food production activities like SEZ can India survive?

The current food production of the country is about 215 m. tons barely adequate to feed the current population of 125 crores. This population is expected to double by around 2045 and will require food production of 450 m .tons. The land is a fixed commodity and land usable for food production keeps reducing this country's population will literally starve!

Mismatch between investment and needs:

Though there is need to increase the food production the rate of investment in agriculture reflected by the rate of growth is 2% to 3% in agricultural sector as against over 8% in Industrial and service sector! Thus creation of more SEZs will widen this mismatch and indicates wrong priorities in national investment policy.

The Indian Farmer: A dispensable commodity?

An issue that has been cleverly skirted around is the rehabilitation of the farmers displaced by the SEZs. The issue is not physical dislocation only. The ruse of employing one person from each farmer's family in the SEZ is pure eye wash as it is not known whether that person continues in the employment or is sacked as soon as the requirement of "Local employment" is verified on paper by the corrupt government officials! The Indian farmer has historically known no other occupation than agriculture. When he is uprooted by the SEZs not only occupationally but also physically, what does he do except migrating to the cities? Do our urban areas have the infrastructure capacity to hold such large scale migration? Instead why can't the urban land pooling model (used for town planning schemes be used for SEZ lands?

All the lands can be pooled together and a parcel carved out which had communication and transport access where each farmer will not only have a homestead land but also a patch for vegetable gardening, an orchard and for dairy and poultry. The farmer will thus not loose his roof over the head have a piece of land to carry on some agricultural, poultry and dairy activity and will become a share holder in the SEZ enterprise. Yes, this is possible but our greedy politicians and industry barons and developers do not want to loose even an inch of the land that they want to convert in to a gold mine to be sold for real estate development!

The severe depression in the developed countries has dissolved dreams of rapidly building up exports. With the prospects of massive unemployment in its export zones and the fear of civil unrest, China is embarking on a major program to direct production towards satisfying internal rural markets. The serious risks inherent in export based development model are becoming clearer by the day. The Government of India cannot close its eyes to this reality and must scrap or completely restructure its SEZ policy.

Balance between Agriculture and Industry.

In India, with 65 percent of the population dependent on agriculture as a means of livelihood, industry ought to be complementary to agriculture. Through SEZs however, industry is being promoted at the cost of agriculture. Resources spent to create SEZs could build instead better infrastructure for agriculture and help raise food production to feed the increasing population as discussed earlier. The SEZs are being granted approvals, with no studies being carried out on social environment impact and damage, water scarcity, loss of forests and biodiversity and other common lands, and environmental pollution." **The very legislative framework of SEZs makes it a draconian Act that promotes large scale privatization and monopoly of resources in the hands of a few private developers at huge costs to the State exchequer as well as the economy and environment. This is nothing but Authorized Land Grab to benefit private developers and get huge kickbacks for the PBT (Politicians, Bureaucrats & Technocrats) combine!**

9

DEVELOPMENT PLAN: A TOOL FOR MANAGING URBAN GROWTH

The concept of a development plan for managing urban growth is based on my experience, of planning the new Capital City of Gujarat, review of the development plans of Mumbai and of Vasai Virar Sub-region and my assignments with the World Bank.

It may be argued that the use of a development plan of a city as a tool for managing urban growth is an age-old concept. Inherent in this assumption is a (mis)understanding about the word "management". Had development plans been used for managing urban growth, we may not have found ourselves in the kind of urban chaos that we find today. The inflexible Development Plan approach has resulted in proliferation of slums and deterioration of the living environment. (Refer to Brazilia and Gandhinagar as against organic growth of Ahmedabad or Mumbai – 'Khotachivadi' which even today is quoted as good examples of community organization.)

Management is defined as planning, organizing, implementing, controlling, monitoring and evaluation. The city development plans are being used today, only regulation and control, strictly following the land use and other provisions and hardly for management of growth. Management of urban growth is neither preconceived/perceived or planned nor implemented and rarely monitored and evaluated. Management therefore, is "whatever happens"

While the physical form of cities is normally shaped by the economic, social and political forces of a society, it is the degree of awareness of the people of their living environment and their urge to modify it to suit their requirements that can give impetus to the process of managing urban growth. Because of the misconception that management (as it was perceived) of a city could be accomplished by freezing the city form into a preconceived mould that the development plans became an end in themselves. Even Le Corbusier's ideas of city planning, despite his undisputed eminence as an Architect, were a prisoner of form and not substance.
The basic elements of a normal `Development Plan' are:

(i)   Land use
(ii)   Circulation
(iii)   Utilities, Services and Facilities
(iv)   Civic Design
(v)   Open spaces

If these elements become rigid and fixed, then it leads to merely controlling the physical development in a city without taking cognizance of changing situations and requirements of the people and the economy. Instead, it is necessary to establish a dynamic relationship between these basic elements so that while their location and quantum undergo a   change over a period of time, their mutual relationship is maintained. (The concept of crisis management has to be interwoven in the plan and that too by preempting the likely crisis situation and not after the crisis).

To be a tool to manage urban growth, the development plan has to be rescued and freed from this current - inflexible mould and redefined to keep pace with time and changes in the economy, technology and aspirations of a society. The formulation of such a flexible urban growth strategy has to take cognizance of the societal context.

Pawan Varma writing in his book "The great Indian middle class" states:-

"Before independence, there was the cause, whose expression created leaders; then there were the leaders who, because of the cause they espoused were in the reach of power, but had the capacity to deny it should that be necessary for the cause; then there were, even after Independence, both the cause and the leaders, inextricably linked, neither diminishing the other; and finally there was the leader, whose will subordinated all causes. Ideology could be made to serve narrow, personal ends, and that to do this was both justified and effective.

There was a time, in the years after 1947, when a politician would hesitate to ask an upright bureaucrat to do something which was not according to the spirit of the rule book. And if such an order was given, a bureaucrat would ask for it in writing, and then record his reasons for opposing it, unconcerned about the consequences. But, in tandem with the decline of ethical standards in society as a whole, the much vaunted 'steel framework' of the bureaucracy had long since ceased to be invincible. In fact, contrary to popular perception, it was not the unethical politician who first corrupted the bureaucrat; it was the ambitious bureaucrat who, quickly falling in tune with the changing times, first indicated to the politician that for the right rewards he was willing to be corrupted. From then onwards it became much easier to build the politician-bureaucrat condominium on the strong foundations of mutual gain, whether pecuniary or otherwise."

One might argue that in such a societal context the (so called) management of urban growth can be achieved only by recourse to our present day inflexible development

plan which presumably leaves little to the discretion of the politician or the bureaucrats and hence can at least control/regulate urban growth if not manage it!

To what extent such an assumption tests right? De-reservation of plots meant for public amenities, granting of excessive F.S.I. to projects at random, construction of road fly-over or concretization of roads not necessarily because these measures benefit the city, clearly demonstrate that, irrespective of the inflexibility of the regulating mechanism of a development plan, public good can be sacrificed for private gains. (Example of scheme to beautify Marine Drive, area licensing for cars and emphasis on mass transport our planning is elitist. Why not cycle tracks or bus lanes?)

Our Development Plans have become a ritual of physical planning exercise devoid of concepts, imagination or ideals. They are statistical exercises leading to engineering solutions of accommodating X number of people in Y hectares of land with a transportation grid and sprinkling of amenities!

The people no doubt need to be guided by a set of standards, but not from some preconceived model of the future city, however brilliant or inspired. The Urban regulation parameters for our cities are the standards prescribed by law - the building and development controls that regulate the development of urban lands. These laws form an integral part of the tools of the development planning process. Presently, city building is guided by the "maximum quantity and minimum quality" such laws allow. A century before the Golden Age of Athens, a Greek Philosopher, Heraclitus, said, "the problem of human society is to combine that degree of liberty without which law is tyranny with that degree of law without which liberty becomes license".

MANAGING URBAN GROWTH:

Two words frequently used to describe change in the way we live are "global" and "technology". As the issues change, planning must also change in the way it responds. As technology changes the ways we live and work, it will also change the nature of the challenges for local governments and therefore call for new ways to meet those challenges. (Role playing by city managers and planners to constructively approach likely problems rather than indulge in mere criticism).

The context for physical planning decisions have much to do with the future of construction and infrastructure technologies and how the information economy would affect urban form and structure. With the liberalization of economic, fiscal and trade policy of India there has been a quantum leap in the transfer of technologies from the developed world to India automated programming systems of vehicles, network of intelligent buildings, photonics laser path replacing electric wiring, biotechnology self contained waste disposal units. The implications of such future technologies for the physical planning and urban design process have to be understood.

In such a flexible strategy, housing has to become the principal instrument to attain a direction to growth because it brings into focus the social, economic and aesthetic aims and needs of the urban population. The house a family lives in, can become the common denominator of the city.

To be able to manage urban growth in the context of the current situation of globalization and exploding information technology, it is necessary to concentrate upon and relate as well as Juxtapose rationally; five important areas of urban activity viz. commerce, safety, health, education and community. A brief look at these five different areas will demonstrate how the changing nature of problem calls for new ways of thinking about the role of a development plan as a tool to manage urban growth.

Commerce:

Most of our cities today contribute substantially to the national economy through the trading activity (including manufacturing) that thrives there because of proximity and existence of financial institutions. The relationship this activity has – in the context of changing technology, like e-commerce, – with the residential component of city can and should give a quantitative direction to its growth. This is a highly dynamic relationship and should not be tackled by the conventional method of zoning.

Health:

City health issues include adequate and safe drinking water; solid and liquid waste disposal and control of contagious diseases. These three issues are examples of ways the nature of the problem or the shape of the best solution could sometimes lie outside the jurisdiction of the city. A development plan for a limited area could therefore hardly be able to address this issue. Moreover changing technologies like rain harvesting, self contained sewage disposal units and solar energy can change the way we plan the urban growth. (Instead of prevention, there is today a great emphasis on cure and under the guise of health care elitist hospitals are occupying large area of urban land.)

Education:

Failure to properly respond to the education issues will tend to permeate other issues such as work force and safety. This local perspective is counterbalanced by the global growth of what is called "distance-learning", and even distance working as is already happening in the developed world where many office workers work from home using computers and hence can afford to stay way from the main city. (The N.G.O.S are doing a great job by going to the children at railway platforms and in the slums.)

Community:

The degree to which people feel a sense of connectedness to others is important. The extent to which the dialogue within the city can be framed in terms of "we" rather than "they" makes a difference in the way problems are perceived and solutions are framed. Community issues include cultural and economic diversity, unemployment, hunger and homelessness. (Today there is no dialogue as plan making is also an elitist exercise and the people who help implement it – The Architects are never consulted.)

Safety:

Crime has become inseparably connected to drugs, drug trafficking, extortion and terrorism crosses all lines – at city, state and national levels. Thus, it has become impossible and impractical to separate the local crime issues from the national crime issues. A strategy to fight this menace has to be interwoven in the fabric of a developing plan by way of creation of employment and recreational opportunities for all and not only for the elite. (Here also the regulation function takes precedence, 4 policemen at a junction to catch offenders but when traffic lights are on blink they are nowhere to be seen.)

To facilitate and manage the growth of all such components, as the city develops, should be the objective of a Development Plan.

Instead of addressing such contemporary issues, planning methods over the decades have resulted in a proliferation of land-use plans, traffic studies and economic and demographic surveys. While, more recently, sophisticated computer-modeling techniques have been used for optimizing the land-use matrix, all this has not had a positive bearing on the way in which the city dweller actually perceives, uses and enjoys his environment.

The city is a sensitive organism. A change in one part affects other parts of this structure. Growth does not always mean strength and prosperity for the community. It depends upon the standards a community prescribes to maintain and manage the balanced use of urban lands and resources. The economic functions of the city are so fundamental to its purposes that their symbolization in terms of land values almost represents the physical urban form of the city. The form of the modern city tends towards a three-dimensional representation of land values, most graphically illustrated in the case of Bombay.

If a development plan is to be used as a tool for managing and not merely regulating urban growth then:

It should ORGANIZE and COORDINATE the complex relationships between urban land use and provide for their constant readjustment over a period of time,

It should CHART A COURSE FOR GROWTH AND CHANGE, always keeping in view the societal context,

It must express the AIMS and ASPIRATIONS of a community, delineating the CHARACTER it seeks to achieve by a far more pro-active participation of the people in plan making than the mechanism of calling for suggestions and objections that exists today.

It must reflect the POLICIES by which these goals may be reached; in fact, a policy frame work must be the main bulwark of a development plan.

It   has to be responsive to CHANGE and, to maintain its validity in time and space must be subject to CONTINUAL review, unlike in today's context when plans remain rigid for 10-20 years (Bombay development plan was revised after 24 years (1967 – 1991)).

The plans should be capable of being implemented by conversion into long term and short term action programmes and projects with supporting policies.

THE DEVELOPMENT 'PLAN': TOOL FOR MANAGING URBAN GROWTH

A 'flexible' and 'evolutionary' development plan as a tool for Managing Urban growth could therefore consist of:

a)   A strong transport and communication structure and open space mosaic as the only physical depiction of a master plan:
A possible network of regional linkages, main arteries for mass transport routes, pedestrian areas, air-rail-road transport terminals would define the basic structure for the city.

b)   Proposals for absorption of immigrants within the fabric of the city without economic and social disruption and easy access to services by all:
A well defined very high density low technology residential area reserved for absorption of immigrants to the city along the mass transportation routes and terminals can ensure flexibility in planning and development.

c)   Self-operating building and development codes based on incentives in terms of extra development rights:
Defining `plot packages' in terms of the possible building envelope may obviate the need for elaborate building codes and rules, combined with incentives in the form of additional floor space for amenities and services provided for the city.

d) Policies with quantifiable parameters for industrial location and creation of jobs:
Clear policies on location, (specifically along mass transport routes, around open spaces etc.) parameters for building space for industries, offices, etc. that will result in creation of jobs.

e) Policies for taxation and revenue generation to make the city administration a financially viable proposition:
Clearly defined policies on taxation based on performance, load on city services and disturbance to the living environment rather than ratable values of properties, taxation for non-development leading to speculation, taxation of all vacant or built properties on the basis of accessibility to city level services and amenities, unearned income sharing and performance standards for city administration in terms of percentage of revenue spent on developmental and non-developmental expenditure.

f) Concern for the environment:
Protection of environment through environmental impact assessment of all developmental works and the costs for their mitigation.

g) Receptivity to new technologies for infrastructure advances:
A continual review of city level services in their technological context to assess quantifiable and visible benefits to the society and not to a chosen few in the city (like concreting of roads and vehicular flyovers for private cars).

h) Enforceable standards of performance:
Clearly defined and documented enforceable standards of performance in all activities carried on in a city including area licensing for personal vehicles etc.

i) Integration of historic resources:
Creation of symbols, landmarks and spaces easily identifiable with the city to create a sense of belonging and pride for the city.

Such a Development "Plan" should reflect and translate these priorities and incorporate them in the basic structure and circulation patterns. The Development Plans of tomorrow therefore should be facilitators of exploitation of privately held development right for the common good of the citizens with minimal intervention by way of a rigid land use plan but with maximum guidance of the development through economic, fiscal; taxation, employment and industrial policies that are quantifiable, area specific and enforceable through motivation rather than enforcement, promotion rather than compulsion and negotiations rather than control.

10

Institutional Framework for New Cities

Urban Management

Urban management has been assuming greater importance as it involves tackling the major problems that the citizens face. The UNDP in 1997 defined the following principles associated with the concept of good governance which are widely accepted
a) Participation
b) Rule of law
c) Transparency
d) Responsiveness
e) Consensus orientation
f) Equity, Efficiency & Effectiveness

New Cities
A new city is a planned human settlement from its inception and is typically constructed in a previously undeveloped area. There are many such cities in the world. Abuja in Nigeria, Naypyitaw, new capital of Myanmar, some satellite towns in HongKong, Petaling Jaya and other towns in Malaysia, Chandigarh, Gandhinagar & Navi Mumbai in India, Pagcor City in Philippines, Tapiola in Finland, Karlsruhe in Germany, Victoria in Romania, Tres Cantos in Spain, many New Towns in U.K., Adelaide and Canberra in Australia, to name just a few. Most of these were built by the state/local/National governments under an enabling legislation. But many (in U.K. and U.S.A.) were built by private initiative and finance.

The institutional framework for the establishment, development and management of these cities was mostly derived from the existing local /state/national legislation providing for establishment of Urban Local Bodies (ULB) for those cities. Even the cities that were developed by private initiative were administered by framework designed under native laws and rules. This consisted of elected bodies in those countries that have a democratic system of self government.

It is critical that cities devise **institutional framework** for themselves that satisfy the requirements of good urban governance. These requirements are however prescribed in the laws governing ULB in the relevant countries. In India for example the functions of planning and administration are delegated to the LUB under the 74th-

75th amendment to the Indian Constitution. Most such legislation normally prescribes the obligatory and optional functions of these bodies.

Objectives for Institutional Framework

For example, the new capital of Gujarat, Gandhinagar, (which I planned) was established under a framework of "Capital Project" created by the state government. But once established, an elected body under the municipal act took over the functions of development. To keep a control over its development the state government created the Gandhinagar Urban Development Authority (GUDA) that in turn engaged external expertise. The experts, either by design or imbecility, have sought to obliterate its identity and special features as the capital city and merge it with Ahmedabad as its suburb. This clearly indicates lack of foresight in installing an institutional framework that would have nourished the basic objective of the city as the Capital of Gujarat

Similar is the case of Navi Mumbai that was established by the City & Industrial Corporation of Maharashtra (CIDCO) but later became a self administered city with a LUB established under the state municipal act. The basic objective of the city, to wean away the flow of migration to Mumbai, was sidelined and the administrators viewed its development merely as a municipal town. This is also indicative of lacuna in the Indian Administrative Service (IAS) that could not keep in step with the need for innovations in the institutional framework for new cities in the current global context.

A third example of a new city is Lavasa near Pune in Maharashtra. It is developed as a hill resort by private entrepreneurship. Yet, for its institutional framework it does draw upon the state legislation and government orders by notification. To that extent it is a Private Public Partnership project. It would have been and still would be of interest to watch how the concept of an elected body (as mandatory under the constitution) would work despite most of the obligatory functions being discharged by a private body. The model of Institutional framework that might evolve for the city could be a lesson in PPP in ULB management.
A fourth example is from Honduras in South America called Charter Cities.

Charter Cities

In 2011 the Honduran legislature has taken the first big steps towards the creation of what it called "special development regions". It has passed a constitutional amendment making them possible and approved a "constitutional stature" that creates their autonomous legal framework. On December 6th, the Honduran president, appointed the first members of the "transparency commission", the body that will oversee the new entities' integrity.

Finding new worlds

The road to a Honduran Hong Kong will be long and rough. The development regions, they say, will allow policies to be tested on a small scale. If their laws and institutions make them an attractive place to live and do business, people will move there. They could also provide healthy competition for the government and spur reform.

The Honduran regions are modeled on a concept called "charter cities" developed by Paul Romer, an economics professor at New York University. The principle is simple: take a piece of uninhabited land big enough for a city of several million, govern it by well-tried rules and let those who like the idea move there. The aim is to replicate the success of such places as Hong Kong, not as colonial outposts but as models of development.

Mr Romer is best known for his insights about technology, chiefly the "new growth theory" that he helped develop in the 1990s. This adds ideas—particularly technological know-how—to the inputs of land, labour and capital that in traditional economic theory are needed for growth. More recently he has focused on the rules of open science and governance systems.

Today his main interest is "meta-rules": how to move from bad rules. "What types of mechanisms will allow developing countries to copy the rules that work well in the rest of the world?" he asks. The idea of setting up a charter city echoes the way that big companies adapt to change. They often set up new divisions unencumbered by old rules. These can be dramatic successes. Target, America's second-largest discount retailer began life as an internal start-up but eventually took over its parent company, Dayton Hudson. A clean slate allows government authorities to experiment with laws and governance or copy those that have worked elsewhere, says Mr Romer.

Boots not ballots

More fundamentally, Mr Romer argues, when people vote with their feet to come and live in a charter city, they opt in to its rules, in a way that makes possible a new form of governance: neither authoritarian nor fully democratic. For this reason he wants rich countries to oversee the administration of charter cities, in particular the judicial system and the police. This would not only protect them from interference by the host nation but avoid a common problem in poor countries: that elected leaders, once in office, abuse their power to entrench their rule and enrich themselves.

Honduras has not adopted Mr Romer's ideas wholesale, although the project as planned still enjoys his strong support. The Honduran charter cities will remain legally intertwined with the local judicial system. Although nominated by the cities' governing authorities, judges must be approved by a two-thirds majority in the Honduran legislature. Lawmakers will also need to ratify the region's laws.

Perhaps the most important feature of the new venture is the "transparency commission", a kind of board of trustees that appoints the governors, supervises their actions and is meant to make sure that the entities are beyond reproach. At least one new region will be big—about the size of Hong Kong (some 1,000 square kilometers). Most revenues will not come from taxes (which are capped at 12% for individuals and 16% for corporations) but from leasing land to investors. And democracy will be introduced gradually. Only when the transparency commission deems that the time is ripe will citizens be able to elect the members of the "normative councils"—in effect, local parliaments.

This aspect of the plan is just one of those attracting heated criticism. Some find the explicit (if temporary) rejection of democracy repellent. They believe that the project is especially misplaced in Honduras, a country crippled by weak state machinery The new entity may suck tax revenues and talent away from the rest of the country, critics fear. Another worry is that the new entities may prove more like Macau than Hong Kong: easy prey for gangsters, money-launderers and other shady characters.

Wanted: people

The regions are supposed to be open to anybody, but the inflow of people may have to be controlled. What is more, success or failure will depend not just on good rules, but on the social norms that are established by its first inhabitants, explains Mr Romer. The key, he says, is to begin with a core of people who share certain new norms—rather as when William Penn attracted people to Pennsylvania who were committed to his charter's legal promise of freedom of religion. Once the norms are well established in a community, subsequent immigrants will adapt to them.

Many uncertainties remain about both the theory and the practice of charter cities, and about whether a small and troubled country like Honduras is the right place to start. Mr Romer's response is that if his ideas can work there, they can work anywhere.

Governing Principles for a New Institutional Framework
Current national policies and the state legal framework does not support the needs of the new cities. Taking a cue from these three models what could be the governing principles for an institutional framework for the new cities? Obviously those would be the ones that the present framework lacks. These could be;

Livability as the basic deliverable by the city government

Sustainability in development of socio-economic infrastructure

Accountability in urban governance.

Financial structuring to help cities tap resources in the region, encourage local capital markets and private sector participation,

Access to serviced land so essential for the shelter programmes of the urban poor

Constructive and continual citizen participation

Capacity development for city governments to understand the more complex and diverse financing structures available to them, and to implement reform within their current politico-economic environment.

Systems coordination for identifying strategic priorities

Capacity to create Special Purpose Vehicles (SPV) to deliver services economically and efficiently.

Reduction of carbon footprint

To make these as the governing principles of the institutional framework for the new cities –and for that matter for existing cities as well- politically unpalatable, and seemingly un-democratic fundamental changes may have to be made in our legal instruments. As the Greek philosopher Heraclitus had said. "The problem of human society is to combine that degree of liberty without which law is tyranny and that degree of law without which liberty becomes license". The ex-prime minister of Malaysia Mahathir was perhaps echoing similar thoughts in his recent address to the elite as a leader who transformed Malaysia from being a small rubber exporting nation to one of Asia's super economies. Malaysia, incidentally has established many new cities in the last 40 years.

Reforms in the Institutional Frame work for New Cities and Urban Local Bodies

The citizens are caught between short sighted politicians who are only concerned with winning elections and wield power for their personal gains and the present day bureaucrats who these days consider themselves accountable only to the politicians. Therefore the failure of the current institutional framework of the Urban Local bodies in providing efficient and effective governance calls for reforms in the framework at least for the new cities. It may require administrative reforms, process decentralization of powers, transparency and accountability mechanisms, e-governance initiatives and a restructuring of the institutional framework for the new cities.
The new institutional framework must essentially be evolutionary, dynamic, and responsive to the rapid changes taking place in the global environment and the market place.

11

Managing Cities: An Innovative Approach for Mumbai

Bombay or Mumbai as it is now called, is the capital of the state of Maharashtra, and the largest and most populous city of India. Bombay was renamed Mumbai in 1996. The city is multicultural and multiethnic in its composition and is seen as a melting pot for people from all walks of life, cultures, faiths and beliefs. The total area of the city is 440 sq. km or 170 sq. miles. The population of Mumbai in January 2012 is approximately 12,704,022. (Extrapolated from a population of 13,922,125 in 2008 and a population of 12,478,447 on August 11th 2011.)

Administration:

The Bombay Municipal Corporation (BMC) was created in 1865. Within a year, the Corporation had run up a debt of Rs. 140,000 (US $ 2545). This financial responsibility kept on multiplying until, in 1871 concerned citizens, led by Sir Pherozeshah Mehta, drafted a Municipal Act, which was passed in 1872.The Act provided for a Municipal Corporation and a Town Council. Half the members of the BMC and three quarters of the members of the Council were to be elected by the people. The rest were to be government appointees.

Currently, Mumbai is administered by the Municipal Corporation of Greater Mumbai (MCGM) which is the largest of all local municipal corporations in South Asia. Its titular head is the Mayor who has few executive powers. The voting for the municipal corporation and the post of mayor takes place every five years. The real executive power of the corporation is vested in the Municipal Commissioner, an Indian Administrative Service (IAS) officer appointed by the state government. The MCGM is in charge of the civic needs and infrastructure of the metropolis. Mumbai is divided into a number of municipal divisions, each overseen by an Assistant Municipal Commissioner for administrative purposes. The corporators (councilors) of the administration are voted through a popular vote and most state political parties field their candidates. Mumbai is divided into 24 municipal wards, all of which have their individual councilors. The councilors, like the mayor are elected for a period of five years.

The duties of the Corporation are set out in the Bombay Municipal Act, first passed in 1872, and amended on various later occasions. It is applicable to the municipal area of MCGM

1. Development and repair works of roads and flyovers in Mumbai city proper and in all other parts of Greater Mumbai and beautification of public parks, beaches and lighting of the roads.
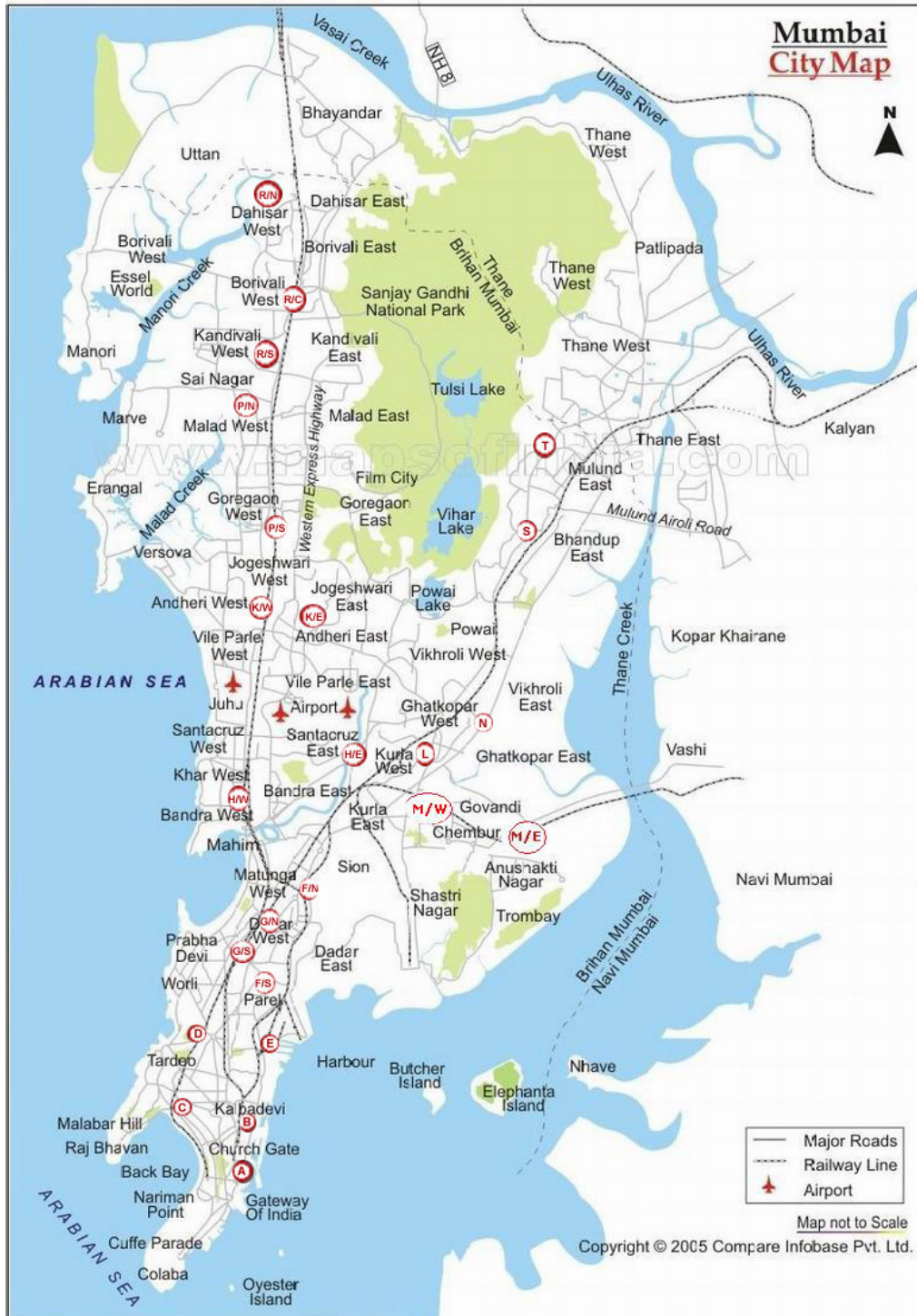
Map of Mumbai

2. Maintenance of health and sanitation related issues. Provision and upkeep of public toilets, garbage collection, sewerage system, hospitals and health centers.

3. Supplying clean drinking water to the city's population.

4 Registration of birth, death and other statistical records related to population.

5. Implementation of rules for city planning and construction of buildings.
The metropolis is composed of two revenue districts in Maharashtra, each district under the jurisdiction of a District Collector. The collectors are in charge of property records and revenue collection for the state government.
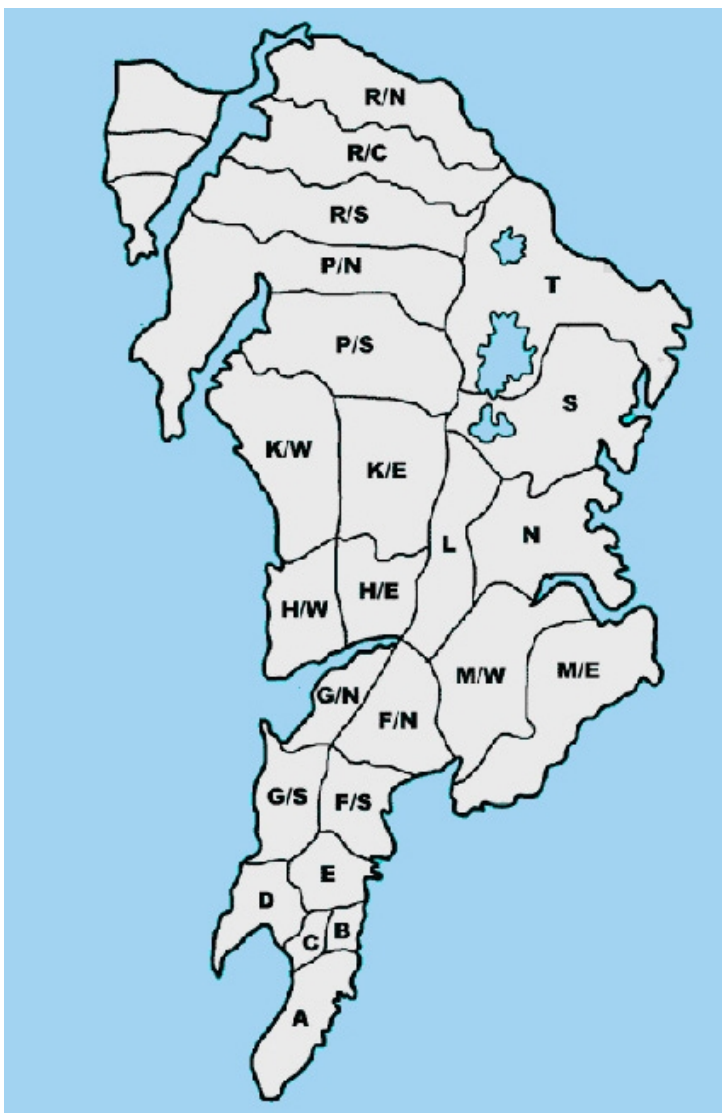
Mumbai map showing Municipal wards

Like other metropolises in India, the Mumbai Police is headed by a Police Commissioner, an Indian Police Service (IPS) officer. The Mumbai Police comes under the state's Home Department and is not under the control of the MCGM. Mumbai is divided into seven police zones and seventeen traffic police zones, each headed by a Deputy Commissioner of Police. The Traffic Police is a semi-autonomous body under the Mumbai Police. Mumbai is the seat of the Bombay High Court, which has under its jurisdiction the states of Maharashtra, Goa and the Union Territory of Daman and Diu. Mumbai also has two lower courts, the Small Causes Court, for civil matters, and the Sessions Court for criminal cases.

Mumbai contributes six seats to the Lok Sabha (India's Lower House of Parliament) and thirty-two seats to the Maharashtra state Legislative assembly.

Mumbai – one of the largest megacity in Asia

Mumbai is one of the ten most populous cities in the world and the most populous in India. It is not only the richest in India but also has the highest per capita income in Asia. It is an important administrative and financial centre accounting for more than 70% of capital transaction for India's economy. A majority of the population in Mumbai (over 42%) lives in slums despite the city having a high per capita income.

Economic structure

Mumbai is the premier economic center in India and is the headquarters for most of the major industrial houses, financial corporations and corporate giants. It houses major financial establishments like the Mumbai Stock Exchange and the Reserve Bank of India (RBI). Mumbai is the financial and commercial capital of India generating more than 6% of the country's GDP. It is an industrial centre that contributes about 10% of factory employment, 25% of industrial output and 33% of income tax. In addition, more than 20% of India's foreign trade takes place in Mumbai. The city has a per capita annual income of US $ 2,840 which is 3 times the national average. The city is also home to 5 of the Fortune 500 companies.

Culture

Mumbai's culture is a blend of different regional cultures of India. It has diverse cosmopolitan lifestyles offering different kinds of foods, entertainment, and festivals. It is home of Indian cinema. The city's historic architecture is a blend of Gothic, Indo-Sarcenic, and other contemporary styles. Religion is an important aspect of social life of its people. Mumbai is multi-religious with Hindus making 67.39%, Muslims making up 18.56%, Buddhists 5.22%, Jains 3.99%, Christians 4.2%, Sikhs 0.58%, whiles Parsis and Jews makeup the rest.

City Governance
The issue is whether the existing Commissionerate System of an elected Municipal corporation with a Mayor and a state appointed Municipal Commissioner

as Chief Executive has been able to provide a leadership at the city level or isthereaneed to look at other options such as a Mayoral System in which a directly elected and empowered Mayor plays the role of the Chief Executive .Other models include Mayor in Council system or the system of an appointed city Manager who delivers his management services for a contract period. Thus, in instituting reforms in administrative system for MCGM, the following options can be considered:

Status Quo

Mayor-in Council [Kolkata pattern]

Directly elected Mayor with Mayor-in-Council

If the basic purpose of any reform is to make the city governence cost effiective, customer friendly, transparant, a financially viable and one window operation, none of the above alternatives can work. At present MCGM spends 62% to 68% of its revenues (taxes paid by its millions of residents) on salaries of its employees and has only about 32% of the revenue left for services delivery and development works. No amout of tinkering with its structure can remedy this basic malice. What is needed is a system that will have;

a. Important basic services professionalized/corporatised,
b. Transparency and accountability,
c. Customer based governance,
d. Online grievance redressal system,
e. Efficient municipal financial and reporting system & evaluation,
f. A single coordinating authority for the city.

Deficiencies in the city governance of Mumbai.

In Mumbai, public goods and services delivery system has been declining both in terms of quality and quantity. It has lost the capacity for the delivery of services either out of negligence or lack of financial and physical resources . Owing to the focus on short term planning to meet imminent requirements by the political parties controlling the administration of MCGM, it has ignored the challenges that it would face in the long term future and neglected the function of deploying resources (physical,financial and manpower) for attaining higher levels of service. Likewise, resource generation is fraught with inefficiency and corruption, resulting in declining capacities of management. This has led to an increasing perception that Mumbai is experiencing overall decline, particularly intermsof the quality of living environment and therefore there is a need to look at options. This led to experimenting with the Mayor in Council concept for an year or two without any favourable result.

With the advent of globalization, international investment flows are directed

towards   efficient   and   cost   effective locations.
While several developing country cities offer cost-effective
factor inputs like land and labour, provision of a good quality of living environment is
also becoming an important contributing factor. Hence, unless this situation is
remedied Mumbai may not be able to achieve its "vision" of a world city. It is
important to understand the role played by political institutions in Mumbai that
control the administratrion of the city in many respects and dominate the delivery of
public goods and services.

Political institutions based on democratic principles are supposed to
ensure service delivery   and overall development, as there is   an   unwritten
understandingbetween people   and   elected   representatives   to act in the   intere
st of   general public.   This representative democratic means of allocation of
goods and services by the political constituents has been considered a better option.
However this supposedly good system does not work the way it is assumed to work,
primarily because of the bureaucracy, or the executive, which actually holds sway
over the service delivery.

These bureaucries have been hindering the delivery and distribution of public
goodsand services. As a result, the delivery process becomes   slow and
does not cater the needs, especially in terms of basic services. Bureaucracy, it
is claimed,has been an
impeding factor to development, with the level and intensity differing amongst
cases,as it
has become subservient to political parties in powerrather than general public.
The citizens are therefore caught betweenshortsighted politicians, who are con
cerned aboutwinning elections (and obtainingpower over resources), and bureaucr
ats, who are only accountableto politicians.This explains the classic governmental fa
ilures in the provision of goods and services.This deviation of the players of democr
atic institutions from what they have been assigned to perform has resulted in
loss of public faith in the present system of city governance.

The budgeted expenditure of the Municipal Corporation of Greater Mumbai (MCGM)
for 2012-13 is Rs. 26,581 crore (US $ 5316.2 m.). If Mumbai were a commercial
public limited company, by the size of its assets and revenue it would be in the top
35 business firms in India. Its budgeted expenditure is 2.1% of the total expenditure
for India as a whole as per Union budget 2012-13. Much of the quality of life in
Mumbai or the lack of it has to do with how MCGM manages its resources. There
are certain basic issues that need to be paid great attention by the city governments
to achieve both high quality service delivery and prudent financial management.
How does the MCGM fare in tackling these issues?

City Revenue & Expenditure

City governments in India have demonstrated poor collection efficiency in respect of
property and other taxes, and have been equally remiss in settling contractor

payments. Besides playing havoc with cash flows, some of these delays result in losses. Long outstanding receivables on the asset side and short-term liabilities in the form of contractor payments on the liabilities side have often left city governments in a tight cash crunch. More than one state government has been guilty of delays in remitting funds to their city governments. The municipal commissioner of MCGM, in his budget speech (2012), indicated that receivables from the state government amount to more than Rs. 2,100 crore, (US$ 400 m.) which is 8% of the budget size for 2012-13. MCGM's capital receipts for 2011-12 have been revised downwards by more than 50% and, consequently, the capital expenditure had also to be curtailed by 28%, presumably at the cost of better infrastructure for Mumbai.

Financial Management

Financial management of city governments very often is relegated to simply annual budgeting and managing working capital. Financial statements comprising of income and expenditure statements and balance sheets or other performance data do not form the mainstay of municipal financial management. MCGM is no exception. As a result, financial decisions, such as investments in infrastructure and raising of debt are not taken based on the balance sheet or assessed for their impact on the balance sheet. The balance sheet reflects the financial health of an entity and needs to be managed closely especially in the case of MCGM that needs to spend large amounts on civic infrastructure.

Targeted spending for optimal results

The purpose of spending by city governments is better civic service delivery to citizens at reasonable prices through a sustainable model. Given competing priorities and financial constraints of city governments, efforts need to be made to ensure that focus is not on the extent of budgetary spending, but instead on service outcomes (a basic tenet of any commercial operation). A good start could be to link budget estimates with service-level benchmark targets set for the forthcoming year. This will ensure that funds find their way to where they are needed most. Only a standardized and timely performance reporting framework can properly report, monitor value-for-money spending by a city government.

The WorldBank and UNDP define several key issues of good urban governance in this context. These are:
1 decentralization,
2 integration of the poor and marginalized of the city with the main stream,
3 environmental sustainability, mobilisation of municipal finance,
4 transparency, better municipal management and capacity building.

Improving Service Delivery Mechanism: Professionalization of Civic services

Attempts at governance reforms in the MCGB therefore must essentially relate to:

Delivery of commoditties like public goods and services(e.g.,watersupply and sanitation where user charges are levied and recovered.)
Efficiency improvement and professionalism.
Developmental service (e.g. health and education services)
Improvements in municipal services.
Regulatory services (e.g., licenses, permission and planning):
Structural changes and use of information technology

Transperancy and accountability-Customer focused governance

In order to create a world class city, the governance systems have to beimproved si gniicant focusing on better service delivery, transparency andaccountability. How ever, implementation failures arise from the wrong or misinterpretation of the rules/ guidelines, which, thecity cannot afford. The complexand massive needs of a city like Mumbai can onlybe fulfilled by using cutting edge technology and progressive management techniques.
However the MCGM even if remodelled or its governance restructured may not be able to deliver the goods due to the multiplicity of authorities operating in the area apart from the state governments 'finger in every pie'!

Creation of a single coordinating authority

There are multiple agencies concerned with the city development
(e.g.,Mumbai Metropolitan Region Development Authority (MMRDA), Municipal Corporation of Greater mumbai (MCGM), Maharashtra State Road Development Corporation (MSRDC), Maharashtra Indistrial Development Corporation (MIDC), Maharashtra Housing & Area Development Authority (MHADA), Slum Redevelopment Authority (SRA), Police department etc.working independently without any coordination, and many a times in conflict with each other,leading to lopsided development and poor service delivery. The need to have a single coordinating authority is felt particularly during crisis such as flooding or other forms of natural or man made disasters.

Managing Mumbai: A New Concept

We need to move away from the current scenario of City Governance through the Maharashtra Municipal Corporations Act towards City Management through a democratic but user participatory system. It cannot be done by merely changing the system of governance. To put into place a user friendly management system the planning ethos and system for the city will have to undergo a sea change by evolving a development strategy amenable to privatized management of the city.
This proposed mechanics of preparation of a city Development plan, by its very approach ensures a total bias for 'development through planning', rather than the present approach of 'planning restrictions in the hope of development'. In short, it is necessary to work out the mechanics by which the Development Plans that emerge, are *action plans* rather than *restriction plans*. It is important that they motivate and

facilitate development rather than lead to speculation and freezing of development. The plans should define a strategy for the hinterland rather than lead to 'no-man's land' situations. It is essential that these plans clearly indicate how resources can be raised to achieve the intended actions rather than only state pious objectives, oblivious of the realities of the situation in terms of the city's capability to raise resources for the intended development.

Unfortunately, in the current scenario, the real plan for a city is the standards prescribed by the DC (Development Control) regulations. The building and development controls that regulate the developments on land in Mumbai are guided by the maximum quantity and the minimum quality the DC regulations allow! The city councilors themselves, neither have a vision for the city nor feel the need for one. Their primary interest seems to be to maximize the use of land by indiscriminately increasing the Floor Space Index (FSI) at the cost of the citizens' welfare.

A new development plan for Mumbai should ideally have a radically different approach and be an assemblage of local level citizen-oriented projects. First, development plans need to be prepared for each ward based on the fullest possible public participation, which could be readily forthcoming as the people in each ward can comprehend and perceive the development of the area they are familiar with and are interested in. This would entail completely scrapping the top down approach followed so far.

Represented by ward or area committees, Mumbai's development plan should be an assemblage of the felt needs of the entire populace. The selection and organization of the area committees should be a very important and basic task of the planning authority. The final plan can thus be far more action oriented, having emerged from the felt needs of the people and not a restrictive document of a planning proposal prepared by a group of specialists.

At the city level, the plan should be perceived not as land use or zonal planning, but as redevelopment of urban pockets to minimize land coverage without increasing FSI and thus maximizing open spaces. The plan can then be coalesced at the city level by experts, keeping in mind the vision of the city and then broken up again into projects for each ward. To avoid pitfalls while preparing the development plan for Mumbai, the city councilors could ensure that the General Development Plan for Mumbai organizes and coordinates the complex relationships between urban land uses at the ward level.

Even after its emergence, the development plan proposals have to be widely publicized, and all sections of people actively encouraged and motivated to discuss its ramifications in all its facets. Legal sanction can be sought for such a document only after such wide and grassroots level involvement of the people is enlisted in deciding development options for their own immediate environment.
In addition, the plan should chart a course for growth and change for each ward and express the aims and ambitions of the community at the ward level. Moreover, it

must delineate the form and character it seeks to achieve at the city level and reflect the policies by which these goals may be reached. It is of utmost importance for planners to be responsive to change by a continual review and not a time interval review, thus maintaining validity in time and space and not a mere revision every five years by law.

New development proposals cannot be approved without an assessment of the potential environmental impacts and costs for mitigation. These costs should be calculated and built into the sanction process for development and into the long range plans for infrastructure. The context for a flexible and evolutionary development plan framework for Mumbai at the city level could consist of:

1. A strong transport and communication structure and open space mosaic as the only physical depiction of a master plan: a possible network of regional linkages, main arteries for mass transport routes, pedestrian areas, air-rail-road transport terminals to define the basic structure for the city
2. Proposals for the absorption of immigrants within the fabric of the city without economic and social disruption and easy access to services by all: a well defined very high density low technology residential area reserved for absorption of immigrants to the city along the mass transportation routes and termini to ensure flexibility in planning and development;
3. Self-operating building and development codes based on incentives in terms of extra development rights: defining plot packages in terms of the possible building envelope may obviate the need for elaborate building codes and rules, combined with incentives in the form of additional floor space for amenities and services provided for the city;
4. Policies with quantifiable parameters for industrial location and creation of jobs: clear policies on location, specific parameters for building space for industries and offices, that will result in creation of jobs.
5. Policies for taxation and revenue generation to make city administration a financially viable proposition: clearly defined policies on taxation based on performance, load on city   services and   disturbance   to   the   living environment rather than ratable values of properties, taxation for   non-development leading to speculation, taxation of all vacant or built properties on the basis of accessibility to city level services and amenities, unearned income sharing and performance standards for city administration in terms of   percentage   of   revenue   spent   on   developmental and non-developmental expenditure.
6. Concern for the environment: protection of the environment through environment impact assessment of all developmental works and the costs for their mitigation.
7. Receptivity to new technologies for infrastructure advances: a continual review of city level services in their technological context to assess quantifiable and visible benefits to society and not to a chosen few in the city (like concreting of roads).

8. Enforceable standards of performance: clear definition and documentation of enforceable standards of performance in all activities carried on in the city, including area licensing for personal vehicles.
9. Integration of historic resources: creation of symbols, landmarks and spaces easily identifiable with the city to create a sense of belonging and pride in the city.

Such a framework for the city's development can facilitate its governance/management through decentralized management units for each ward. These units can be incorporated as private companies with a board of directors comprising of the representatives of the stakeholders from mercantile, commercial, residential, social and other fields of activity in the wards. Under 40(1B) of the Maharashtra Regional & Town Planning Act (MRTP), the state can appoint such a company as a Special Planning Authority (SPA) and delegate to it all the functions of a Municipal body as in case of the Lavasa new town near Pune in Maharashtra where a model for management of a city's infrastructure through a private company already exists as in the steel city of Jamshedpur in the state of Bihar in India.

An urban management dream

Cities in the west have dabbled for years with privatization, but few have taken the idea as far as Sandy Springs, a suburb of 94000 in Atlanta, Georgia U.S.A. Since the day it incorporated, in 2005, it has handed off to private enterprise just about every service that can be evaluated through metrics and inked into a contract. It is a town built almost entirely on a series of public-private partnerships.

Sandy Springs does not have a fleet of vehicles for road repair, or a yard where the fleet is parked. It does not have long-term debt. It has no pension obligations. It does not have a city hall, it rents! The town *does* have a conventional police force and fire department, in part because the insurance premiums for a private company providing those services were deemed prohibitively high. But its dispatch center is operated by a private company. The entire operation is housed in a generic, one-story industrial park, along with a restaurant and a gym. And though the place has a large staff, only seven including the city manager are on public payroll. The people here work for private companies through a variety of contracts.

If one wants a business license, speak to a woman in a multinational company based in Coventry, England. To build a new deck in one's house, chat with an employee of the Collaborative, a consulting firm based in Boston. For any issue about trash collection talk to the URS Corporation, based in San Francisco. Even the city's court, is handled by a private company, the Jacobs Engineering Group of Pasadena, Calif. The company's staff is in charge of all administrative work, though the judge is essentially a legal temp.

Does the Sandy Springs approach work? It does for Sandy Springs, says the city manager, who points not only to the town's healthy balance sheet but also to high

marks from residents on surveys about quality of life and quality of government services. But that doesn't mean "the model" can be easily exported

Some examples of such privatized management of a city's infrastructure exists in India also in Kolkata & the steel city of Jamshedpur in Bihar.

Nabadiganta Industrial Township Authority

Nabadiganta is part of the Salt Lake City on the eastern side of Kolkata. The Salt Lake City was conceived as a counter magnet to Kolkata much on the lines of Navi Mumbai acting as a counter magnet for Mumbai.

The Govt. of West Bengal considered it imperative to constitute an Industrial Township under Section 385A of the West Bengal Municipal Act, 1993. A notification was issued to this effect on 31st January 2006 and a new Township Authority called "Nabadiganta Industrial Township Authority" came into being.

The Principal Secretary, Municipal Administration, is the Chairman of the ITA board. Among the members there are representatives of the industries (which are mainly IT industries) operating in the area. Currently these include Deloitte and Touche Consulting India, PricewaterhouseCoopers, WIPRO Technologies and Cognizant Technology Solutions India Pvt. Ltd.

The ITA manages municipal services such as property tax collection, water supply, sewerage, health, street-lighting, beautification, town planning and solid waste management. The township is spread over 432 acres

Jamshedpur

In the steel city of Jamshedpur,(population 1,337,131) the Jamshedpur Utilities & Services Company (Jusco) manages the city's water, power, sewage, roads, municipal services, solid waste management and integrated township maintenance. Jamshedpur is the only city in South East Asia to be selected by the United Nations to participate in its Global Compact Cities Pilot Programme.
In 2004, Jusco was formed by hiving off the town division of Tata Steel, which had been providing all municipal services to the township since it was set up in 1907. Today, its 1,322 employees also handle public health, horticulture services, planning, engineering and construction, and run a 24-hour helpdesk within the 14,000-acre township area.

Water-supply
Water services is Jusco's crowning achievement, not just for Jamshedpur's seven lakh people, but also for Tata Steel, Tata Motors, Timken, Tata Cummins, Lafarge and other enterprises that are present in Jamshedpur. The company supplies quality tap drinking water and treats 60 million litres of waste water each day at its two sewage treatment plants.

The company has a unique 'river to river management' concept, through which the town's wastewater, after treatment and testing, is pumped back into the river. Jamshedpur is one of very few cities in India that treats 100 per cent of its wastewater. This has reduced pollutant discharge by 98 per cent. "We proudly say that you can drink water straight from the tap in Jamshedpur; you can't do that in most other parts of the country," Paul says proudly.

Jusco has installed state-of-the-art electromagnetic bulk meters at strategic locations to continuously monitor water flow and losses on a real-time basis. Over the last three years, potable and industrial water losses have come down by more than 20 per cent and 30 per cent respectively. Over the years, close monitoring, conservation measures, aggressive loss reduction programme and water harvesting together have reduced water production in spite of enhancing the customer base by more than 20 per cent
.
A Geographical Information System (GIS) has been developed to get detailed knowledge of Jusco's underground utility assets. The GIS has helped to establish the asset database and enable the company to plan future network rehabilitations and expansions. The GIS technology also helps Jusco in improving preventive maintenance and in identifying the source of customer complaint for quick redress.

Not surprisingly, Jusco's expertise is valued outside Jamshedpur too. The company recently won the bid for the development and management of water supply and sewerage systems for Sector V, Salt Lake, Kolkata on a 30-year build-operate-transfer contract. It has also secured other water projects outside Jamshedpur including at Haldia, Muzaffarpur, Bhopal and Turamdih mines for the Uranium Corporation of India in Jharkhand.

Power

The power distribution services department serves 60,000 customers — domestic, commercial and industrial. While the national average per capita annual consumption of electricity is 530 KWH, Jamshedpur's average is 800 KWH and growing at 4 to 5 per cent per annum. Jusco is among the lowest-tariff power providers in the country.

Jusco has also obtained the power distribution license for Saraikela-Kharsawan district, which is contiguous to Jamshedpur. This will be the first such district in the country where two power distribution companies will operate in the same area and customers will have the right to choose.

Health-services

The company's public health and horticulture services department provides

preventive health care to the citizens of Jamshedpur, handles horticulture activities and also disposes of municipal solid wastes.

Preventive health care includes immunization, vector control, epidemiological surveillance, health education, and also veterinary services including sterilization of stray dogs. Horticulture services include tree plantation and upkeep of the city's 22 parks, as well as roadside and roundabout gardens. Conservancy services involve cleaning of streets, markets and residential areas, apart from solid waste management.

Roads

Jusco's planning, engineering and construction department strives to carry forward the legacy of the original township designers, FC Temple and Dr Koeningsberger. It designs and builds residential bungalows, apartments, hostels, schools, institutes, hospitals, etc. It also provides architectural, structural and construction services to Tata Steel and other companies.
One of its prime responsibilities is the 524-km road network in the Tata Steel command area of Jamshedpur. Other projects include the laser fountain at the city's Jubilee Park and the new Mohan Ahuja Badminton Stadium, the cable tunnel project for Tata Steel, a 2 XT-900 oxygen plant for Praxair India, drinking and clarified water pipeline project for Tata BlueScope Steel, and an indoor stadium at Keonjhar in Orissa.

Single window help desk

The Jusco Sahyog (cooperation) Kendra is a 24x7 single-window contact point, implemented in early 2005, for logging and tracking customer complaints for services provided by Jusco. It has helped revolutionize the delivery of civic and allied services in Jamshedpur. It has significantly improved management of customer complaints thereby delighting the customer, which is evident from the results of the latest Customer Satisfaction and Quality of Life survey conducted by AC Nielsen ORG-Marg.

Paul is not content with being the man who manages one of India's best-run cities. He feels Jusco's biggest challenge is to upgrade the quality of services that it provides, apart from growing beyond Jamshedpur. "We would like to grow and be a leader in the infrastructure sector, particularly the water and sanitation area. We believe the sector will grow, and we have nearly 100 years of experience," he says.

Land-development

A 90-acre auto ancillary SEZ at Adityapur in Jharkhand is being developed by a consortium of Jusco and Gammon Infrastructure, which won the bid for its development and subsequent operation for lease tenure of 90 years. A special

purpose vehicle named SEZ Adityapur Ltd (SEZAL) will execute the project, along with the Adityapur Industrial Area Development Authority.

Jusco aims to provide the very best to its customers. The people of Jamshedpur seem to think so too — the town recently voted against setting up an elected municipal corporation to run the city. "We are planning to make the new company, as good at managing a town as Tata Steel is in making steel," Tata Steel managing director B Muthuraman had said when Jusco was first set up. The company seems to have lived up to those words already.

Managing Mumbai as a private enterprise:

Assuming that a "Mumbai Management Corporation " can be created let us examine how it can deal with the 'mandatory' functions of the Mumbai Municipal Corporation as prescribes in the state act.

Can we apply the model of Jamshedpur and view Mumbai as a conglomerate of small cities? Each ward of the city can be viewed as a unit for which a private company can be formed to manage its infrastructure. Such 24 companies of the 24 wards can be the units of a holding company that will decide by consensus and direct the objectives of the companies to a common goal of Mumbai's overall development.

Water Supply:
The functions related to the capital works of source, plants & equipment, distribution system can be taken over by the corporation and the maintenance of the distribution system in each ward can be looked after by the subsidiary of the corporation at the ward level. Necessary works can be outsourced to private contractors.

Power:
This is already being looked after by private companies viz. Tata Power and Reliance Power companies which are responsible for source. Plant & equipment and distribution as well as collection of bills for the consumption.

Primary Education & Health Services:
Since the State government is already paying for the expenses of all students from below poverty line families, this service can also be out sourced to charitable educational institutions. Health services can be farmed out/outsourced to private health care providers

Roads, Sewerage and solid waste management:
The work of building new roads, flyovers, bridges and their maintenance can be outsourced to state owned special agencies like the Maharashtra road development corporation; liquid & solid waste management can be outsourced to private companies.

Revenue collection:
This can be fruitfully handled by private companies as in case of the city entry tax collection system.

Land Development:
This can be done by private developers on contract basis

Managing Mumbai as a private development corporation
Those with knowledge and expertise in formation and conduct of private enterprise need to look at such a concept in all seriousness and come up with viable options for management of the city of Mumbai.

12

Urban Fringe: Financing and Management of Infrastructure

Synopsis

Urban fringe areas lie at the interface between urban and rural, in some form of transition. The majority are on the fringe of established urban areas. The diversity of residents, land uses and economic activities means that fringe urban areas are seen in different terms and are valued in different ways by diverse groups of people and organizations. Residents in fringe urban areas are averse to integration with the City as they feel that they would lose financially as they would be liable to local government taxation. Government at present is ill-equipped to provide adequate services (sewerage, water, waste collection and disposal etc.) in peri-urban areas. The current institutional framework for service provision specifically addresses urban and some rural needs, but there is no specific institutional framework for the special needs of fringe urban areas. The objective should therefore be to provide affordable service infrastructure and safe services in order to ensure maintenance of minimum health standards in accordance with the requirements for evolution to urban status in due course. Preparation of an infrastructure Profile would identify the present status of infrastructure services, the shortfalls, future requirements and the physical and fiscal provision required to provide universal access to a minimum level of services. The major Urban Basic Services in fringe Urban Areas would include, Water availability at predetermined standards, Sewerage and sanitation (Solid waste collection and disposal) Roads and street lighting, Public transport (bus service) and Environmental services. In order to examine various options for financing of these, it may be necessary to prepare a detailed bankable project. Project preparation comprises of detailing the project/s for provision/upgrading of Urban Infrastructure. The objective of project preparation is to structure a project for institutional financial assistance that can be leveraged to attract private sector participation. There has to be an integrated approach in planning for these services as these are many a times interdependent. Adequate supply and delivery of Urban Basic Services in fringe Urban areas can mitigate and alleviate many of the problems of the city and the city

dwellers which has to, in the long run absorb the population of these areas. However care must be taken simultaneously to ensure that the costing and user charges for this infrastructure, till its integration with the city, is affordable for the population it serves and the system capable of being managed by a local body.

What are Fringe Urban Areas?

Fringe urban areas lie at the interface between urban and rural, in some form of transition from strictly rural to urban and are often places in crisis. They commonly comprise a mixture of encroached farming land, older settlements surrounded by new developments, industrial sites and slums. These areas often form the immediate urban- rural interface, and may eventually evolve into being fully urban. The majority is on the fringe of established urban areas, but they may also be clusters of residential development within rural landscapes. Typically, they are outside the responsibility of city authorities. They are the places where the greatest pressure on the natural resources, on poor people's livelihood strategies, on access to land, and on public amenities takes place. It is the place where the farming household and the urban migrant and/or slum dweller meet head on – the former diversifying into more urban based livelihood strategies, the latter moving where new job opportunities are likely to be. Rural local authorities, who are responsible for managing fringe urban areas, lack both the capacity and the resources to manage their unplanned development; while urban governments are not necessarily keen to take them on.

The diversity of residents, land uses and economic activities means that peri-urban areas are seen in different terms and are valued in different ways by diverse groups of people and organizations. Some of the typical values are:

For the poor: places where it is easier to build shelters and to occupy land for agriculture.

For industry: sources of materials essential for urban life: water, brick-clays, sand and gravel, limestone and timber

For the middle class: a potential residential zone for houses in a rural setting, with golf courses and other recreational facilities.

For local government: the fringes of urban areas are often a site for locating landfills, waste dumps, peripheral freeways, airports or noisy and toxic industries.

For conservationists: the site of valuable protected areas, forested hills, preserved woodlands, important wetlands or mangroves, and major coastal ecosystems.

For education and human well-being: the place of the first contact urban people have with major areas of natural vegetation and biodiversity.

Typical Characteristics

Fringe urban areas are outside formal urban boundaries and urban jurisdictions which are in a process of urbanization and which therefore progressively assume or have all or some of the following interrelated characteristics:

Fast and unplanned growth resulting in, amongst other things, negative environmental health issues and environmental degradation

Unclear/ duplicated jurisdiction in planning, land tenure and land transfer.

Lack of clearly defined and enforceable Residential title to land

Lack of planning and building guidelines and regulations for urban services

Inadequate service infrastructure to meet even basic needs.

A significant proportion of residents are in lower income categories.

A breakdown in traditional forms of administration

A fear that a change of tenure status could diminish the vested powers of traditional leaders in those areas.

Infrastructure and planning

These areas suffer from lack of development planning and control, waste disposal, access to protected water supplies in the informal settlement areas, agreement on appropriate planning standards consistent with affordability of clients and capacity of planning authorities, clarity of planning and development jurisdiction, application of planning and building guidelines and regulations, and provision of urban services, social infrastructure and inefficient land use.

Government at present is ill-equipped to provide adequate services (sewerage, water, waste collection and disposal etc.) in fringe urban areas. The current institutional framework for service provision specifically addresses urban and some rural needs, but there is no specific and coherent institutional framework for the special needs of fringe urban areas.

A Suggested Policy Framework

A policy framework for development of fringe Urban areas must anticipate the inevitable transition to urban characteristics (and eventually administrative status) by recommending appropriate guidelines, mechanisms and regulations to facilitate development which is environmentally sustainable, economically efficient and which provides affordable infrastructure and social services.

The framework must be responsive to the above issues, both as they exist at present and as they arise. That is, the framework must institutionalize an incremental, process approach in dealing with the issues, rather than letting the issues assume crisis proportions before attempting to deal with them on the basis of reactive management, often after irreparable damage has been done.

Broad Overall Objectives

To provide affordable service infrastructure and safe services to ensure introduction and maintenance of minimum health standards in accordance with the requirements for evolution to urban status in due course.

To direct and channel urban expansion and market forces towards urban amenity, including the retention of green belt areas.

To mitigate the problems related to spontaneous human settlements through policies and programmes that anticipate unplanned settlements.

Policy Elements

Control of land markets to work as the prime method of land and housing delivery in fringe urban areas, for protection of the poor.

Introduction of basic planning to guide development.

Stimulation of efficient, environmentally sound and equitable use of land through transparent, comprehensive, easily accessible and progressive taxation and incentive mechanisms. The full potential of land-based and other forms of taxation should be exploited in mobilizing financial resources for service provision by local authorities.

Introduction of infrastructure on cost-recovery basis.

Facilitating community and individual finance

Policy Supportive Elements

Information

Geographic and Land Information Systems should be introduced and maintained providing generally available data on: -

Land tenure practices for managing land,

Physical development: service infrastructure [roads, pathways, water supply, sewerage] social infrastructure (schools, health centres, community facilities], structures [housing, and other users).

Physical conditions (land forms, climate, soils, land suitability, etc.).

Legal

Powers of various jurisdictional authorities over land allocation, transfer, physical planning should be delineated and agreed upon.

Powers/responsibilities of institutions over provision of service infrastructure, social infrastructure and other community facilities should be defined

Comprehensive inventories of publicly held land should be prepared, and programmes designed to make them available for development (or to protect them from development as the case may be)

Develop appropriate cadastral systems and streamline land registration procedures.

Ensure simple procedures for the transfer of property rights and conversion of land use within a comprehensive policy framework, including the protection of the environment.

Infrastructure in fringe Urban Areas

Preparation of an infrastructure profile would identify the present status of infrastructure services, the shortfalls, future requirements and the physical and fiscal provision required to provide universal access to a minimum level of services. The infrastructure profile refers to the current state of infrastructure and utility systems in the area. It indicates the adequacy or inadequacy of infrastructure services in terms of coverage, quantity, and quality, the gap between demand and supply of different services, adequacy or otherwise of availability of water or power, cost of delivering services and differences in the level of services received by different socio-economic groups. Inadequate access to infrastructure is a key constraint to development; apart

from determining the characteristics and quality of public service delivery such as water supply, wastewater disposal, roads and road transport, public transport, street lighting, solid waste collection etc.

Urban Basic Services in fringe Urban Areas:

For future integration of the infrastructure of fringe areas with that of the main city, care must be taken to ensure commonality in the norms and standards. Fringe urban areas can have a preponderance of population with substantially lower or higher incomes than that of the main city. Situations may vary and a single prescription cannot be applied to all.

The major Urban Basic Services in fringe Urban Areas would include,

Water availability at predetermined standards
Sewerage and sanitation (Solid waste collection and disposal)
Roads and street lighting,
Public transport (bus service)
Environmental services.

It is necessary to review and assess, quantitatively and qualitatively, present and proposed levels/status of:-

Water:

Total capacity,
Distribution system and capacity,
Daily supply
Source of water
Water coverage (population to be covered by public water supply)

Per capita supply,
Supply duration,
Land requirements for capital works like filtration plant, distribution tanks etc.
OR integration with existing city infrastructure

Sewerage and sanitation

Disposal (underground/open sewerage) capacity
Households connected to underground/open sewerage system
Solid Waste generation & Collection daily
Storm water Drainage capacity interfaced with rainfall & capacity

Land required for capital works like sewage purification plant, sewage farm, means of disposal (through sea or water course, sanitary land fill) etc. OR
Integration with existing City system

Roads and street lighting

Roads length
Municipal roads
State/national highways passing through the area
Street Lighting
Area coverage
Source of energy supply

Public Transport

Buses (number)
Bus capacity/passengers /routes
Private registered vehicles
Land for capital works like bus Depots, repair sheds. Bus stops etc. OR
Integration with existing city system OR utilizing the State Transport System

Physical and Environmental Services

Environmental service Quality
Air
Water
Waste water
Solid waste disposal system and land fill requirements

Management

Institutions

The area may be managed and governed by a number of institutions and organizations. The purpose of the analysis is to present the organizational structure as it relates to the delivery and management of infrastructure services, and evaluate the efficiency and effectiveness of the existing institutional structures to identify key problems for efficient and equitable delivery of services and examine role of private sector in urban infrastructure.

With the physical requirements for the Urban Basic Services worked out in quantitative & Qualitative terms the next step is :

Identification of institutions and organizations that could have direct and indirect responsibilities for provision of these services
Identification of the areas of fragmentation or overlap;
Assessment of the impact that it has on services delivery and management; review of the role of the private sector in service delivery and the potential of public-private partnership in their development and management

Some of the questions that may need answers are:

Is there an overlap in the responsibilities and activities of public service agencies?
Are their objectives and activities complementary or conflicting?
What mechanisms exist for interagency coordination?
What level of investment would be needed to provide desired quantity and quality of utilities & services to the city's population?

What would be the order of investment if the standard of services were to be raised from the present level to a higher percentage?
What would be the invest required if the present system of services (eg. open drains) were to be upgraded (eg.into an underground sewerage facility)?
What economies can be achieved in energy consumption required for delivery of these services?
Are the present institutions/services working to their optimal capacity?

Financing: Options

In order to examine various options for financing it is necessary to prepare a detailed bankable project. Project preparation comprises of detailing the project/s for provision/upgrading of Urban Infrastructure. Project Detailing Options may vary, depending on the transaction and contractual framework, the nature and size of the project as well as the perception of risks by the public and private sector entities.

Project preparation is envisaged as a process in which an identified project is detailed in specific terms and readied as a project that can be implemented. Project preparation and detailing exercise has to be undertaken to ensure that it can be implemented by evolving options based on its:

(a)technical feasibility
(b) financial sustainability
(c) commercial viability
(d) environmental compatibility

(e) social and political acceptability
(f) legal and regulatory feasibility

The objective of project preparation is to structure a project for institutional financial assistance that can be leveraged to attract private sector participation and investment through durable long-term use of the assets created, efficient service delivery and management of resources by a system that allows full cost recovery. Planning for Urban Basic Services should be a part of the preparation of a development plan for the area which will constitute the source document for preparation of detailed project reports for one or more component of the infrastructure.

Project Preparation

The steps involved in project preparation are:

Estimate of additional resources
Municipal government's own resources
State government grants and loans
Institutional finance
Capital market
Central government grants
Private sector

If Consultants are to be appointed for preparation of a project report their Terms of Reference should clearly be defined in terms of (i) the method by which the study is to be conducted; (ii) the tasks required to be undertaken; and (iii) the timeframe within which outputs are expected indicating the minimum required man month inputs, staffing requirements, and output details

The appointment of consultants by the Local Body will depend on the type of consultancy to be outsourced. If assistance is available from financial institutions to be utilized for preparatory tasks also; the process of appointment of consultant should meet the requirements for availing of such assistance. A fair and transparent process has to be followed for appointment of consultants.

Options

(a) In case of public financed projects, where all risks are taken by the ULB (Urban Local Body) private sector is responsible only for contractual delivery of construction as per tendering process. Hence detailed design should be a part of project development.

(b) In case of PPP (Public-Private Participation) projects, the detailing would be governed by the level of risk sharing envisaged, apart from the nature and size of the project. Some of the options are:-

Build Operate Transfer (BOT)/ Concession projects: Detailing of the
basis of costs and assumptions is necessary though the risk and responsibility for undertaking detailed design preparation is passed onto the private sector.

Design Build Operate (DBO) or Design Build Finance Operate (DBFO): Risk of design is passed onto the private sector, detailed design can be avoided.

Lease: Such a transaction may include augmentation and strengthening of the existing system and facilities. The detailing may be for functioning or performance of the existing facilities. Detailed design risk and responsibility for this transaction may be with the private sector.

Build Own Operate Sell: In case of high-risk projects, the private sector's perception of risks may be high and ULBs may finance, construct and operate the project for an initial period till the risk profile of the project is reduced or is lower. In such a case, as construction would be undertaken by the ULB, the project would have to be sufficiently detailed.

There has to be an integrated approach in planning for these services as these are many a times interdependent. For example, the quantum of water supplied can decide the quantum of sewerage. Both these will have their own demands for distribution/disposal network; land for capital works for source and disposal. The road network could be a limiting factor for expansion of disposal and distribution network. The public transport quality and private vehicle ownership and frequency of use could affect air and noise pollution. The collection and disposal of solid waste can lead to creation of environmental issues that cannot be addressed without an environmental service plan.

Private public partnership is a very important issue in planning for these services. Public transport, solid waste management and environmental services can lend themselves to greater privatization. Policy decisions on taxes and tariff for services like water supply can have a limiting influence on the efficient delivery of these services. Inadequate delivery of some of these services to the under privileged sections of the population often lead to 'thefts' of these services.

Adequate supply and delivery of Urban Basic Services in Peri Urban areas can mitigate and alleviate many of the problems of the city and the city dwellers which has to, in the long run, absorb the population of these areas.

13

Urban Heritage Conservation & Management

Why conserve heritage?

It is very unfortunate that in a country like India with the richest and oldest heritage of monuments and relics, vandalism and defilement of the heritage assets is common and rampant. Such acts are committed by misguided common people. But what about destruction of this heritage by the so called enlightened and educated leaders of the community? Examples are aplenty. Construction of a multi storey hawkers market and offices just across the street from one of the finest examples of Indo-sarcenic Architecture, "Nyayamandir" (photograph below) in the heart of Vadodara, Gujarat is one.

'Nyayamandir' :Vadodara, Gujarat

Baroda also has a lake called Sursagar (photographs below) in the heart of the town. It aesthetically strung together the buildings surrounding it; the classical buildings of Music college on the south(seen in the photograph), Women's basic training college raised on a high ground to the north, the M.C. high school on the west and the High court building on the east. This aesthetic binding quality of the lake is lost today with the implanting in the middle of it a giant sculpture of Shiva, and construction of a still more grotesque tower building (by a demented Architect having influence over the then Mayor of the city) in front of the High Court building! I saw, observed and experienced this distortion and destruction of a unique urban design concept by self seeking architects!

Surasagar, Vadodara, Gujarat

A proposal to construct a tall statue of Indira Gandhi in the sea off Nariman point in Mumbai (on the lines of the statue of Liberty in New York) would have amounted to the destruction of the "Place". The proposal in the USA to commission a new design for the World Trade Centre Towers destroyed by terrorist attacks, in my opinion, falls in the same category. I felt so and wrote that,

Statue of Shiva erected in the middle of Surasagar

World Trade Centre (Twin Towers) New York, U.S.A.

"The diabolic destruction of the Twin Towers in New York was an act as despicable as brazen. It was meant to be as much an affront as abuse. It sought to humiliate a great people and a great democracy into permanent shame. Retaining the footprints

of the towers as a 'memorial' and building a new Tower as a replacement would be more of a tacit and 'permanent' admission of the victory of the 'evil' over the 'good' than displaying a spirit of rejuvenation."

Architectural merits apart, the only definitive and forceful statement that a Nation can make is to rebuild the Twin Towers exactly as they were and ensure that the cityscape and skyline of the great city is regenerated as if there was no aberration. A great people and a great democracy must demonstrate its undying character in 'immortality' of the symbols of its national ethos and not appear to be morally weaker than the forces of terrorism by grasping the opportunity for a new commercial exploitation of land and an Architectural commission."

It is now for our local government agencies to care for and conserve our Heritage. Historical buildings, festivals, art forms, dance, music, sculpture etc. - may seem less of a priority compared to more pressing issues such as infrastructure development, poverty alleviation or job creation. But effective conservation of heritage resources not only helps in revitalizing the local economy of cities, but also brings about a sense of city identity and belonging to its residents. A programme for Conservation of Urban Heritage and Management must explore the various dimensions of heritage conservation from an urban perspective. Discussion in this paper is limited to the physical heritage assets.

Heritage Conservation & Management

Heritage Conservation & Management is the process of managing the physical heritage assets, and to maintain their cultural significance. A heritage asset can be a relic (caves, milestones, public water fountains), a monument (tombs. City gates), or place (stepped wells, gardens), but is more usually a building. Heritage asset management concerns the care of these assets during their life cycle including management while still in use, maintenance, and capital works expenditure. The objective is to identify record, conserve and use physical assets with heritage value for the benefit of present and future generations.

Role of Local Government Agencies

The responsibility to care for heritage buildings lies with the respective government agencies/local government agencies. They should be aware of the heritage they have and conserve it to maintain a sense of continuity with the past which is vital for sustaining our culture. The agencies must not only comply with the specific objectives of heritage asset management because of legislative requirements (Central & State laws) but also to meet people's expectations for the care of heritage assets. Identifying assets with cultural heritage value;

recording these assets in a "Heritage Register"; preparing a conservation management plan, allocating adequate resources for the purpose; and monitoring and reviewing the strategy should become as much a part of their functions as providing services and utilities to the city population.

Identifying assets of Heritage value

The cultural 'heritage significance' of a place or building includes its aesthetic (Ajanta caves), architectural (Humayun Tomb Delhi) historical (Sabarmati Ashram), scientific (Jantarmantar, Jaipur), social (havelis of Siddhpur) or technological (Ashoka Pillar, Qutab Complex Delhi) value to the present and future generations. A "statement of significance" is a definitive statement about why a place is important in heritage terms; it sets out the cultural heritage significance of a place. To care for it, we must know why that place has a value and what those values are. Therefore, the first management action needed is an investigation into the significance of the asset.

The identification of the heritage significance of a place is a prerequisite for its proper management. The agency should commission a "heritage survey" for their assets. Such surveys generally require an interdisciplinary team to assess the significance of assets and to place them in context of related built assets. For example, it could be the best example of a type of residence, (Haveli in Gujarat,

Hemadpanti Temple

Rajasthan) the only remaining example of a Temple, (Hemadpanthi in Maharashtra) a representative courthouse of a particular design (Athra Kacheri,-below-

Bangalore) or a building associated with an event or person important in state/city's history (Gandhi Asham, Sabarmati, Ahmedabad,.below)

The team should have a heritage architect, a historian, an archaeologist, an engineer and a landscape architect with relevant expertise. The consultancy should be supervised by an inter-departmental Heritage steering committee for writing a Brief for Consultancy proposals, assessment of bids and project monitoring and review. The heritage steering committee should have a continuing role after the completion of the survey, to implement the recommendations of the study and to review developments proposed by the agency.

Preparing a Register of Heritage Assets

The "heritage register" which results from a heritage survey should provide, at a glance, all the heritage assets an agency controls.

A comprehensive heritage register will be valuable for:
• establishing the heritage significance of the city's assets;
• identifying items subject to heritage controls which can help establishment of suitable levels of management;
• developing maintenance programs;
• deciding when further information may be required e.g. a detailed survey;
• evolving financing and management priorities;
• avoiding program delays and unnecessary costs; and
• highlighting any anomalies in the existing heritage listings

The agency should incorporate key information from the heritage survey into their asset register. The Heritage Assets register should be readily available for staff carrying out planning or physical work on heritage assets.

Strategic planning

Once heritage assets have been identified, agencies should carry out strategic planning to ensure the best fit between their assets and corporate objectives (public-private partnerships) and business-service strategies. The management requirements of the assets and their relevance to the agency should be continually reviewed to make management and investment decisions.

Strategic asset management must ensure that social objectives are interfaced with economic objectives. Heritage value should be assessed along with physical, financial and operational planning issues. Strategic planning should be based on an understanding of the heritage value, condition and function of the assets. It must ensure coordinated planning for conservation including maintenance, refurbishment, expansion, upgrading and/or changing the use of an asset.

Conservation

Conservation means the processes of looking after a place so as to retain its cultural significance. It includes a range of stages from preservation to adaptation. A

conservation plan should investigate and establishes the cultural heritage significance of a place, and make recommendations about appropriate ways of conserving this significance by setting out a policy. It should identify the physical condition of the place, its history of development; be a record of the decision-making process and allow for appropriate community consultation. To be effective, a conservation plan should be reviewed regularly (every five years along with CDP), or whenever the Heritage site is subject to major change.

Conservation principles

The aim of conservation is to retain the cultural significance of a place and must include provision for its security, its maintenance and its future use and development. It must respect the existing fabric and should involve the least possible physical intervention.

Conservation should make use of all the disciplines which can contribute to the study and safeguarding of a place. The techniques should be traditional (stone carvers) but may be modern ones (fibre glass patches) for which a firm scientific basis exists. All aspects of the asset's cultural significance should be considered without undue emphasis on any one aspect at the expense of others.

The conservation policy appropriate to a place must first be determined by an understanding of its cultural significance, uses that are compatible and maintain an appropriate visual setting, e.g. form, scale, colour, texture and materials. No new construction, demolition or modification which would adversely effect the setting should be allowed. Environmental intrusions which adversely affect appreciation or enjoyment of the place should be excluded. (a shopping Mall near TajMahal)

Restored Temple of Abu Simbel. Egypt

The building or work should remain in its historical location. The moving of all or part of a building or work should be avoided unless this is the sole means of ensuring its survival. (Temples of Abu-Simbel in Egypt).The removal of contents which form part of the cultural significance of the place is inappropriate unless it is the only means of ensuring their security and preservation. Such contents must be returned should changed circumstances make this practicable.

Preservation

Preservation is appropriate where the existing state of the fabric itself constitutes evidence of specific cultural significance, (Shaniwar Wada, Pune) or where insufficient evidence is available to allow other conservation processes to be carried out and is limited to the protection, maintenance and stabilization of the existing fabric (garish oil paints on temples in Goa & southern states distort the heritage structure) but without the distortion of its cultural significance.

Restoration

Berlin Cathedral Restored

Restoration is appropriate only if there is sufficient evidence of an earlier state of the fabric and only if returning the fabric to that state recovers the cultural significance of

the place.(Coventry in UK, Rotterdam in Holland) Restoration should reveal a new culturally significant aspects of the place. It is based on respect for all the physical, documentary and other evidence and stops at the point where conjecture begins.(Restoration of many city center buildings in Budapest, Warsaw & other East European countries) Restoration is limited to the reassembling of displaced components or removal of accretions The contributions of all periods to the place must be respected. If a place includes the fabric of different periods, (Mosque converted to a Church in Seville, Portugal) revealing the fabric of one period at the expense of another can only be justified when what is removed is of much less significant than the fabric to be revealed

During the Second World War, the Berlin Cathedral building was bombed by the Allies and severely damaged. A temporary roof was installed to protect what remained of the interior and in 1975 reconstruction started. The restoration of the interior was begun in 1984 and in 1993 the church reopened. During reconstruction, the original design was modified into a simpler, less tall form.

The Astronomical Clock in Prague Town Centre (above) destroyed during Second World War was similarly restored.

Reconstruction

Reconstruction is appropriate where a place is fully or partially destroyed as in case of many cities in East Europe or where it recovers the cultural significance of the place as a whole. Reconstruction is limited to the reproduction of fabric, the form of which is known from physical and/or documentary evidence. (Architectural drawings, photographs and paintings are being used in parts of Frankfurt and Warsaw for such restoration work) It should be identifiable on close inspection as being new work. Adaptation can be made where the conservation of the place cannot otherwise be achieved (Fort in Milan, Italy adapted to be a Museum for display of ancient weapons, a 'Dzong' as a history museum in Bhutan near Paro) and where the adaptation does not substantially detract from its cultural significance. Adaptation must be limited to that which is essential to a use for the place, Fabric of cultural significance unavoidably removed in the process of adaptation must be kept safely to enable its future reinstatement.

An old Castle now housing a Museum at Milan,Italy

Conservation Process

Work on a place must be preceded by professionally prepared studies of the physical, documentary and other evidence, and the existing fabric recorded before any intervention. Study of a place should be undertaken where necessary to provide data essential for decisions on the conservation of the place and/or to secure evidence about to be lost. Investigation of a place which requires physical disturbance can be permitted if it adds substantially to a scientific body of knowledge, consistent with the conservation policy for the place. A written statement of conservation policy must be prepared setting out the cultural significance and proposed conservation procedure together with justification and supporting evidence, including photographs, drawings and all appropriate samples.

Appropriate professional direction and supervision must be maintained at all stages of the work

Conservation management

A conservation plan should be prepared for each significant building/site, before any decisions are made that could have adverse effect on its significance A plan can provide clear direction, a consistent approach and identify management objectives and responsibilities. It can establish the appropriate actions to manage a heritage place and also provide policies and mechanisms for decision making about its future use. Conservation objectives, management responsibilities and appropriate management techniques should be clearly defined. Where possible, the conservation management plan should be a public document and should be revised regularly. A copy of the plan should be kept on site for use by occupants.

Maintenance of Heritage Assets

Maintenance, in respect of heritage places, is "the continuous protective care of the fabric, contents and setting of a place". It is crucial to the conservation of heritage buildings to prevent deterioration through neglect or inappropriate action leading to a loss of its significance. The objective of maintenance of a historic structures is to make its fabric last as long as possible by restricting the processes of decay without damaging the character of the building.

Heritage assets therefore require a specific and regular maintenance program. Ad-hoc repairs produce temporary solutions only. A maintenance plan needs to be prepared specifically for each heritage property to show the work proposed in at least the next five years. Although heritage buildings are perceived as more expensive to maintain than other buildings in the normal pattern of planned maintenance, this need not be so. In some cases, maintenance may be required to overcome neglect. Repairs following neglect can be expensive and can result in the loss of historic fabric. The cost of regular maintenance needs to be balanced against the eventual cost of accumulated unattended repairs. Appropriate and prompt maintenance and repair is an important part of any cost-effective conservation program.

Inappropriate maintenance practices can cause damage that is expensive to repair. Regular inspections should be held so that problems are identified early and to understand likely cost implications of present and future maintenance requirements. As a general principle, maintenance and repairs should be undertaken as far as possible using the same materials and techniques as the original work (patching up by cement and mortar of ancient temples in India) unless there are practical and economic reasons for a divergence.

Keeping Heritage Assets in Use
The best way of caring for a building with heritage value is to ensure it remains in

continuous use as this usually requires the least physical intervention, i.e. alterations to the fabric of that asset. The city may have buildings that require little or no change to the significant fabric allowing them to continue as a useful asset for relevant agencies.(use as art galleries, museums, exhibition places etc.) Historic buildings can be readily adapted to changing requirements. However, changes in technology or practice can result in some buildings and facilities becoming outdated. If major and potentially damaging changes to the asset are required for it to continue to fulfill the same function, analysis may help to determine whether the potential compromise to the heritage value is justified. In many instances, the significance of the building as a local icon, providing an image and the public face of a government service, (Secretariat buildings in New Delhi below) may be more important than any operational inefficiencies inherent in its continued use. Recognizing heritage values may encourage a balance to be negotiated between a continuing use and minimizing the impact of change.

Rashtrpati Bhavan: New Delhi

In many cases, an existing heritage building that is no longer appropriate for its designed use can continue to provide a service for an agency in a different capacity. Usually the most appropriate use for a historic building will be one which requires the least physical intervention in the historic fabric. When a historic building is surplus to the needs of an agency an option study by specialist conservation consultants may be a useful means of determining the best method to maintain a use or to find an appropriate new use for the heritage asset. This could result in moving operations to the heritage building from another building whose disposal could be easier. Existing heritage buildings can be reused in preference to constructing new buildings.

It is desirable for heritage buildings to be occupied. The cost of retaining a heritage asset in everyday use may be less than the cost of caring for a vacant asset. Unoccupied properties can quickly become vandalized and maintenance problems may go unrecognized without occupants to report them. If a building is surplus to requirements it may fulfill a temporary use. If it must be vacated, it can be secured by 'mothballing' until a new occupant, or custodian is found. This will involve regular inspections for maintenance and security. It is a false economy to neglect maintenance of heritage buildings if the burden of costs for eventual major repairs or renovation increases in consequence.

"Developing" heritage buildings:

One aspect of conservation is the appropriate management of change. Some alteration to historic buildings is inevitable to bring them up to contemporary safety, functional and social standards. This may involve some loss of cultural value which may be justified to ensure continual use and conservation. Conservation involves intervention at various levels that is determined by the physical condition, the causes of deterioration and the ongoing needs of the place. By and large, a policy of minimum physical intervention should be followed The success of conservation works to heritage buildings is largely dependant on the knowledge and competence of the contractor who undertakes the work. Therefore, careful selection of the contractor is an important element in any successful heritage restoration/conservation project.

The settings of heritage buildings are generally of great importance and buildings should not be considered in isolation from their context. The environs of a heritage building can be extensive and may include boundary walls, paths and outbuildings as well as vistas and views.(Gateway of India, Mumbai) The siting of any new buildings should be planned and evaluated in terms of the likely effect on the setting of heritage asset. Good contemporary design can complement historic buildings,(New Taj next to old Tajmahal hotel at Apollo Bunder) provided it is sympathetic to the existing architectural character and form, respects significant views and vistas, and retains important landscape elements.

Updating Heritage Assets: Service Installations

Service installation (HVAC) can cause major problems in historic buildings and special care and planning is required to accommodate new services such as fire detection systems and alignment of power, water and telephone cabling. Services should be discreetly located so as not to impair the character, appearance or integrity of the place. The least damaging routes for services should be selected and ad-hoc installations should be eliminated. It is likely that demand for air conditioning will grow in public buildings. New systems should be designed to minimize their impact on significant fabric and spaces. With careful and sympathetic planning, and good quality installation, most heritage buildings can be brought in line with acceptable fire precaution standards, based on the fire risk and the type of

occupancy. Sophisticated and relatively unobtrusive alarm systems are now available.

Taj Mahal Hotel; Mumbai

Heritage buildings should provide easy and dignified access with minimum impact to the historic spaces and fabric of those buildings. An access strategy should be determined for each heritage building, consistent with the special qualities of each building, to determine the best way of providing accessible entrances, paths of travel, work environments and toilets.

Showcasing a Heritage Asset

Good management of a particular heritage asset may incorporate some activities not specifically related to asset management. Significant historic places may require the preparation of a 'Brochure' which can help a visitor understand the significance of a place enriching his interest, enjoyment and appreciation of a place. The Brochure may include historical information about the asset, or the use of a part of the building for a heritage display.

Conclusion

Cities in India, with perhaps the oldest heritage in the world, have unfortunately paid scant attention to this aspect of our culture under real or perceived pressure of a need for providing day to day services for their inflating population. But with increasing public-private partnership projects for services and utilities, there is no reason why such projects cannot also encompass Urban Heritage Conservation and Management.

14

Access to Employment, Infrastructure and Shelter

Synopsis

India has the highest percentage of population living below the poverty line. Adequate income is a primary requirement for a family to sustain life. Small enterprises can be an important source of income and employment. The urban employment structure is changing due to rapid growth of service and informal sector. Regulations have major implications for the growth of the informal sector economy. Yet, employment-intensive investment policies can re-direct resources for a stronger impact on job creation. Infrastructure and shelter can be considered as a 'package for healthy living. The majority of urban poor in informal settlements, not being able to pay or being ineligible to receive city utilities are forced to rely on small-scale private-sector service providers for basic urban services. The supply-oriented transportation strategies overlook cheaper modes like buses, bicycles, used by the poor. Housing shortage in urban areas, has resulted in a proliferation of temporary housing structures for the urban poor. Access to land is the greatest single impediment to improvement of urban living conditions. The focus could be on enhancing security and effectiveness of property rights. Access to land, housing & infrastructure are determinative of the urban Poor's overall living conditions and their achievement of sustainable livelihood.

Employment:

Poverty in India

India has the highest percentage of population living below the poverty line in the world. A recommended daily intake of less than 2100 kcl in urban areas. universally defines poverty. The government of India's definition of the poverty line for urban areas is Rs. 591 per person per month (year 2009) which means people who earn less than Rs. 20 per day. Yet there has been a net reduction of per capita food grain output from 182kg. in 1994-1995 to 165 kg. in 2002-2003. This is mainly due to a

lopsided view of 'development' that encouraged urbanization at the cost of investment in rural development. Rajiv Gandhi when Prime Minister publicly admitted that for every rupee the government spent on rural development only 15 paise (less than15%) reached the poor .As a result the classic "Push" factor continues to operate that sends people out from villages to the urban areas increasing the number of urban poor.

A recent report by the Ministry of Urban development & Poverty alleviation examines various issues related to urban poverty, such as migration, labour, access to basic services and the condition of our slums. It also looks at the dynamics of urban land and capital market, urban governance, and the marginalization of the poor to the urban periphery. Key findings of the report are:

Poverty in India has become urbanized. Urban poverty in India is over 25 percent. At the national level, rural poverty remains higher than urban poverty, but the gap is closing.

Migration towards urban centres has increased, indicating that economic reforms have not been effective in creating jobs in small and medium towns as well as rural areas. Poverty was higher among rural to urban migrants, while the most successful migrants are those who move from one urban area to another.

Urban poverty poses different problems. The nature of urban poverty poses distinct challenges for housing, water, sanitation, health, education, social security, livelihoods and the special needs of vulnerable groups

Definitions

Employment: 'income adequate to sustain an individual/family just at the poverty line';

Infrastructure: those physical services essential for healthy sustenance, ie. Water, electricity, waste disposal, transportation

Shelter: any 'self-help renewable structure' that can afford reasonable protection from elements of nature with independent or community toilet facilities.

For access to these primary facilities, the target group to be considered is the 'Urban Poor' living below the poverty line

Employment & Access to Livelihood Opportunities:

Urban poverty levels in India have worsened, the number of families subsisting below the poverty line in cities has risen from 12% a decade ago to between 18%-21%. (NSSO-2008) The survey found that 21% of urban households earn less than

Rs 591 per person per month -- the figure set by the central government to identify below the poverty line (BPL) families.

Migration of the rural poor to cities has contributed to the rise in BPL families in urban areas. Two principal reasons for the increase in the numbers of urban poor are -- lack of employment and inadequate wages. The latest poverty figures are an indicator of the lack of development and urban planning in Maharashtra where over 42% of the population lives in cities.

UNEMPLOYMENT (Male & Female) RATES 1999-2000 (% to labour force)

	Urban	Rural
India	**5.95**	**1.80**
Andhra Pradesh	4.20	0.92
Bihar	8.50	1.50
Delhi	4.25	14.95
Gujarat	2.35	0.55
Haryana	3.65	0.90
Karnataka	3.85	0.65
Kerala	16.65	13.65
Madhya Pradesh	2.95	0.45
Maharashtra	6.95	1.75
Orissa	6.95	2.35
Punjab	3.30	4.25
Rajasthan	3.20	0.50
TamilNadu	4.85	2.10
UttarPradesh	4.55	0.95
West Bengal	9.40	3.60

The rate of growth of unemployment in Maharashtra has steadily crept up. It is now officially 7 per cent, with 5, 00,000 unemployed persons being added to the list every year. More farmers commit suicide in Maharashtra than in Bihar. This, in a state where almost 65 per cent of the population is still dependent on agriculture and allied activities. The figures given by the Vidarbha Jan Andolan Samiti (people's movement) are truly staggering. Since June last year, more than 800 cotton farmers have reportedly committed suicide. Farmers in India as in Maharashtra have almost no access to finance and as a result are unable to have water, electricity, seeds and fertilizers for their farming operations. More than 60 per cent of the irrigated area is the monopoly of the politically-influential sugar belt.

Incentives for rural agricultural employment

Though the Indian economy is ostensibly booming the employment rate remains stagnant referred to as 'jobless growth'! Adequate income is a primary requirement for a family to sustain life, even below poverty line. Income generation in the urban areas is therefore the basic issue. Majority of the urban poor are immigrants to the urban area having been "pushed" out of the rural hinterland within the state or from other states. Income generation measures in the urban areas without addressing the causes for the "push" factor operating in the rural areas can be counterproductive by way of making the urban area more attractive for immigrants. Hence, addressing the "Push" factor in rural areas will mean,

- Helping the marginal farmers to improve agricultural yield,
- eliminating the middleman for him to get remunerative prices for the produce
- Not depleting the availability of agricultural land by revoking all legislation (SEZ, township development by builders for profit) that allow acquisition/ purchase of such land for non- agricultural purposes without a community cost benefit analysis,
- Redistribution of agricultural land by taxing all agricultural income in excess of that required for sustenance of the families dependent on the produce. At present it is the big landlords who reap the profits of the agricultural produce while the farmer who actually tills the land is turned into a farm labour and whatever little piece of land he owns along with his residential hut is taken away for SEZ.or for resorts of the Urban rich.
- Access to institutional finance to the farmers/agricultural producers for value added processes, machinery & equipment and/or their mandatory share holding in such industry. A simple example is the Tomato grower has to sell his product at 1/20 the of the price when the fruits are converted into 'ketchup' for the consumption of the urban rich
- Restoring the occupational structure of the village community for a self sustaining community as envisaged by Mahatama.Gandhi. Urban job creation is an issue which cuts across the traditional dividing lines between

It means implementing a wide range of measures to create economic opportunities and equipping people with capacities to seize those opportunities. What role can municipal governments, play in this process? What kind of local initiatives are most likely to be successful in generating sustainable means of subsistence?

Role of the Informal Sector in generating employment

During the past twenty years the changing structure of urban employment has been marked by a rapid growth of the service sector and the urban informal sector at the same time. the rapid expansion of the informal sector activities (the best example is 'Dharavi' in Mumbai) carries the danger of increasing social exclusion and sub-standard working conditions. But it also has the potential for increased employment opportunities.

Informal sector industry in Dharavi, Mumbai

Dharavi has provided a niche for local players to compete, specialize, and create jobs in the world economy through globalization. Yet, the city government of Mumbai (driven by land hungry, so called Consultants and politicians abated by the Bureaucrats) is bent on destroying this thriving employment hub by the most unimaginative solution. In this context the two areas where cities can take positive action to create employment, are the regulatory environment and investment policies.

The regulatory environment in Urban Centres

This covers zoning regulations, regulations governing the establishment of small and medium enterprises, regulations on public contracts and tendering procedures, as well as regulations linked to the application of working conditions and labour standards. All of these regulations have major implications for either encouraging or holding back the growth of the informal economy. By screening and redesigning such regulations to facilitate job creation, cities can create a propensity for economic growth to result in more jobs. City governments should also redesign the way in which they contract for goods and services to favour local employment and those using more labour-intensive methods.

Investment policies

Investment decisions are being taken increasingly by local rather than state governments. In this context, employment-intensive investment policies can be used to re-direct already allocated resources for a stronger impact on job creation. They can adopt labour-intensive construction methods which, are cost-effective at the same time yielding high quality results. Both public and private resources should be directed not only towards employment-intensive infrastructure investments, but also towards human capital building. Finally, the problem of spatially oriented unemployment can be addressed through targeted investments in poor urban neighbourhoods or large slums.

Support to Small enterprises

For the urban poor, small enterprises can be an important source of income and employment (including self-employment) In many cities, a substantial share of the working population -- sometimes as high as 50 percent -- is engaged in small enterprise activity.

Despite the need to stimulate small enterprises, the action of many local governments is to sweep hawkers off the street into back alleys, prohibit selling altogether, or subject them to strict regulations. Alternatively, the supply of rights and permits to permanent spaces may be severely restricted. Vendors stay small and mobile because they cannot afford the start-up capital to establish themselves in a permanent market where they are subject to inspection and have to pay rent, fees, and taxes.

Various activities to improve small business environments can be considered. Regulations on hygiene, license fees, and area restrictions should be reviewed as these regulations constrain the activities of small-scale enterprises and prevent them from operating effectively. Land use decisions, often victimize small-scale enterprises and street vendors. Regularization efforts, such as high license fees, can be detrimental for small-scale entrepreneurs. State governments and/or city authorities need to develop simple and appropriate taxation policies for small businesses and the banks/financial institutions must serve them.

Supporting Home-Based Income-Generating Activities

Home-based production (as in Dharavi, Mumbai) is also an important income-generating activity among the poor. Homes can also accommodate commercial and manufacturing activity. However, planning policies and land-use regulations tend to be based on the principal of separating housing and productive activities. City authorities often prohibit such industry to avoid health and safety hazards. In view of the potential importance of home-based production for the urban poor, the regulatory framework need to be adjusted to permit those activities while maintaining safety and providing infrastructure.

Accessibility to livelihood opportunities in urban areas

In conclusion, income generation and supplementation measure in the urban areas can be introduced to improve accessibility to employment that may include,

- Immigrant reception and registration centres to match available skills with the requirements of the urban area
- Public- Private partnership in new labour intensive projects suitable for employment of immigrants
- Reallocation of priorities for Urban infrastructure projects that benefit the immigrant population and not the resident rich.
  For example, instead of creation of multistory car- parks allowing tiered parking within the premises of   commercial, /residential buildings in down town areas can serve the same purpose at 1/100th of the cost and employ permanently more people as attendants; scraping underground rail rapid transit systems, (instead a rapid bus transit system can be put into operation at no cost and allow the street hawkers who are mostly the urban poor to ply their trade, and scraping capital intensive projects like Trans-harbor bridge in Mumbai.(instead a continuous service of Ferries for 12 hours at 1/50th of the investment of the bridge can employ thousands semi-skilled and un skilled urban poor)
- Revocation of legislation banning employment of child labour (while children of the rich make millions as 'little champs' on Television shows the poor urchins are denied honest labour jobs that may give them just one frugal meal a day)
- Creating opportunities for self employment by facilitating recycling of solid waste including plastic bags etc. instead of the local government bodies dolling out contracts to 'kickbacking' investors for the job.
- Revocation of minimum wages act.(instead of denying jobs to the poor because an small enterprise cannot afford to pay the minimum wages "some' emoluments are better than none at all)

- Create a network of unemployed young and youth to report regularly to the law enforcing agencies; acts, activities, persons and happenings likely to endanger social health and public safety.
- Revoke minimum wages act. A government which cannot provide food, clothing and shelter-the basic necessities of human beings- to all the population has no right to take away the subsistence of the urban poor by such 'Acts' to appease the western countries.

Infrastructure & Shelter:

Housing and Urban Policy in India

The policies of urban development and housing in India have come a long way since 1950s. However, the general perception of the policy makers was that India is predominantly an agricultural and rural economy and that there are potent dangers of over urbanization which will lead to the drain of resources from the countryside to feed the cities. The positive aspects of cities as engines of economic growth in the context of national economic policies were not much appreciated and, therefore, the problems of urban areas were treated more as welfare problems and sectors of residual investment rather than as issues of national economic importance.

Five Year developments Plans of India

In the First Five Year Plan (1951-56), the emphasis was given on institution building.

In the Second Plan (1956-61). Town & Country Planning Legislations were enacted in many States and necessary organizations were also set up for preparation of Master Plans for important towns.

The Third Plan (1961-66) addressed the needs of the Low Income Groups. Master Plans for major cities were prepared and the State capitals of Gandhi Nagar and Bhubaneswar were developed.

Balanced urban growth was a high priority in the Fourth Plan (1969-74). The Plan stressed the need to prevent further growth of population in large cities, and improvement or Urban Slums to provide a minimum level of services, like, water supply, sewerage, drainage, street pavements

The Fifth Plan (1974-79) promoted growth of smaller towns & new urban centres, to ease the increasing pressure on urbanization.

The thrust of the Sixth Plan (1980-85) was on integrated provision of services along with shelter, particularly for the poor.

The Seventh Plan (1985-90) recognized the need to entrust major responsibility of housing construction on the private sector limiting the role of public agencies to mobilization for resources for housing, provision for subsidized housing for the poor and acquisition and development of land.

The Eighth Plan (1992-97) for the first time explicitly recognized the role and importance of urban sector for the national economy. The Plan identified the key issues in the emerging urban scenario:

• the widening gap between demand and supply of infrastructure services badly hitting the poor, whose access to the basic services like drinking water, sanitation, education and basic health services is shrinking
• unabated growth of urban population aggravating the accumulated backlog of housing shortages, resulting in proliferation of slums and squatter settlement and decay of city environment
• high incidence of marginal employment and urban poverty as reflected in NSS 43rd round that 41.8 million urban people lived below the poverty line.

Urban Growth & Levels of Urbanization

An increasingly larger percentage of Indian population lives in the Urban areas. Today, India's urban population is second largest in the world after China, Over the last fifty years, while the country's population has grown by 2.5 times, in the urban areas it has grown by five times.

The states with greater urban concentration are Maharashtra with 38.73 per cent of its population living in urban areas, followed by Gujarat (34.40 per cent) and Tamil Nadu (34.20 per cent). Except in Kerala, Gujarat and Maharashtra, the Urban Rural growth Differential is lower in all other states. Conspicuous deceleration in urban growth has taken place in Bihar, Orissa and Uttar Pradesh.

Urban Morphology

It is interesting to note that the population growth is more in large cities. About one-third of Urban India (71 million) lives in metropolitan cities (million plus). The number of such cities in India has increased from 1 in 1901 to 5 in 1951 to 23 in 1991 and over 40 in 2001. Out of the total increase in the country's urban population of 58 million between 1981 and 1991, 44 million were added to Class I cities alone. 28 million persons were added in metropolitan cities.

Role of Urban India in Indian economy

Most of the commercial activity perhaps other than agriculture and village merchandise takes place in Urban areas. Therefore, to a large extent, urban India is the engine of productivity and growth in the country. This is manifest in the increasing contribution of urban sector to national income. The following table vividly illustrates the correlation of urban population and its contribution to the nation's economy. Among the urban centres the metropolitan areas contribute a lion's share to the national income.

Year	Percentage of Urban to total population	Estimated contribution to national income
1951	17.3	29
1981	23.3	47
1991	25.7	55
2001	30.5	60

The Problem of Urban Infrastructure

In spite of its prominent role in Indian economy, urban India faces serious problems due to population pressure, deterioration in the physical environment and quality of life. According to estimates, nearly one third of the urban India lives below poverty line. About 15 percent of the urbanites do not have access to safe drinking water and about 50 percent are not covered by sanitary facilities.

Traffic congestion has assumed critical dimensions in many metropolitan cities due to massive increase in the number of personal vehicles, inadequate road space and lack of public transport. There is a huge and widening gap between demand and supply of essential services and infrastructure. Urban poor in India are forced to live under unhygienic conditions in slums, lacking in basic amenities. Slums have grown in almost all major cities due to inability of major chunks of population to afford accommodation in planned areas of the cities.

Investment Needs in Urban India

The explosive growth in Urban India has resulted in serious infrastructure constraints. Water, transport, housing, electricity, health & sanitation and education are some of the areas of concern. Infrastructure to meet these requirements calls for huge investments. Investment requirement for housing in urban areas has been estimated at Rs. 526,00 crores in the IXth plan. The India Infrastructure Report (1996) estimates the annual investment need for urban water supply, sanitation and roads at about Rs. 28,035 crores for the next ten years.

The Central Public Health Engineering organization has estimated the requirement of funds for 100 percent coverage of the urban population under safe water supply and sanitation services by the year 2021 at Rs172,905 crores Estimates by Rail

India Technical and Economic Services (RITES) indicate that the amount required for urban transport infrastructure investment in cities with population 100,000 or more during the next 20 years would be of the order of Rs. 207,000 crore.

It is logical to consider infrastructure and shelter as a 'package'. Even though the shelter can be 'temporary', not made of permanent building materials, it can serve the purpose of protecting the residents from the elements of nature IF physical services like water supply, waste removal & electricity are available even at individual or community level.

The "Push" factor operates in the rural hinterland of the urban centres due to inaccessibility to social infrastructure services such as:

- Education
  Lack of primary/secondary education schools, colleges & vocational guidance schools
- Health
  Absence or lack of adequate health facilities and medical personnel for common ailments

If these facilities are made available in rural areas the 'Push' factor may weaken reducing the migration to cities. I have considered access to only the physical infrastructure services and not the social infrastructure services

Access to Infrastructure influenced by urban regulatory systems

However, the urban infrastructure scenario in India is very grim. At present, availability of protected water supply is 84 per cent with 16 per cent deficiency, sewerage and sanitation 49 per cent with 51 per cent deficiency, refuse collection and disposal up to 72 per cent with 28 per cent deficiency and electrification 75 per cent with 25 per cent deficiency. The inadequacy of urban infrastructure facilities has made life in Indian urban areas uncomfortable. (Deficiency is measured in terms of inability to meet international standards for supply of the infrastructure services)

The following components of infrastructure are usually essential for sustainable livelihoods: adequate water supply and sanitation; affordable energy; & reasonably priced transport;.

Formal sector infrastructure regulatory systems typically comprise three distinct but closely related elements
• A set of regulatory rules embodied in building by-laws, licenses, contracts or similar instruments that define acceptable conduct;
• One or more regulatory bodies responsible for administering and enforcing those rules; and

- A set of regulatory processes undertaken or managed by regulatory bodies to discharge their responsibilities.

Infrastructure improvements need to be incremental and respect the needs, priorities, preferences as well as the affordability of households that live in informal settlements. This may require changes in the financing of infrastructure services, and pricing methodologies.

Existing procedures, rules and forms of contract governing infrastructure procurement should facilitate the widespread involvement of poor communities in the implementation and management of their local infrastructure.

Accessibility to physical infrastructure

Water supply & sanitation

In spite of constitutional amendments which give rural and urban local bodies the right to function as institutions of self-governance, city corporations and municipalities continue to operate largely within a regulatory and restrictive frame work. Since it is more difficult to extend water and sanitation to communities of the urban poor, the local authorities generally expand their services to high income and middle-income communities, leaving the poor with limited, or no immediate source of water. The poor may or may not be recipients of waste management services but generally are active participants in the informal waste economy. In the latter role, the poor derive income from waste, but also experience health risks as waste workers. The poor can play very significant roles in the collection, transportation, disposal, recycling, reusing and composting activities. They should be closely involved at all stages of the solid waste management process by some institutional arrangement.

The vast majority of urban poor people living and working in informal settlements are forced to rely on small-scale private-sector and community-based service providers (water vendors, telecommunications, informal transport, etc.) for basic urban services. But infrastructure standards and regulations typically exclude small community-based entrepreneurs who lack the capital or technology required. Yet it is precisely these enterprises that are likely to offer lower cost services affordable by urban poor.

Pro-poor regulatory systems could enable them to gain sustained access to safe drinking water and sanitation. Local governments should take into consideration the range of technology options with particular attention to low-cost options, maintenance and management implications. Regulatory barriers to entry by alternative infrastructure providers should also be removed to enable them to respond to the needs of un served urban poor households. This could mean relaxing regulatory rules that control market entry and formally recognizing informal providers, such as water vendors

Transportation

The urban poor spend the highest percent share of income on transport. The challenge is to provide low-cost, affordable public transport using existing infrastructure. The supply-oriented transportation development strategies overlook the basic transportation modes such as buses, Bicycles, and walking generally used by the poor. The impact of the supply-oriented urban transportation strategies makes use of non-motorized transport dangerous and risky. It is essential that planners consider the needs of the poor and non-motorized transport in future planning. Rapid Bus Transit system is the option and not under/over ground metros/light rails.

Shelter

Poverty rates, coupled with an increase in housing shortage in urban areas, have resulted in a proliferation of temporary housing structures for the urban poor. Most public sector housing programs do not target the poor. Hence the poor mostly access housing through illegal and informal private sector. The only options for the future are to improve and increase access to serviced land, incremental development and urban basic services. Poor families often are denied basic services, like access to safe drinking water, on the grounds that their settlements are illegal and that service provision would only encourage more land invasions and migration despite clear evidence that lack of physical services does not discourage migration to urban areas.

Though the upgrading of existing slums is a necessity, it is often an expensive option. Informal settlements tend to occur where land has the least value - at the edge of the urban area, in flood zones, on dangerous hillsides - all locations where infrastructure provision is costly. The most effective response to this inefficient pattern of settlement is to guide informal settlements onto municipally approved infill locations (specific provision of land in the development plans of cities), where government can provide security of tenure. This approach recognizes the inevitability of informal settlement but reduces the costs of extending the essential services that residents need. City governments must begin to recognize that - given the inevitability of urban growth and migration, they can save precious resources by proactively planning for and facilitating environmentally and socially sound 'Slum" or informal sector shelter growth. Regulations should encourage gradual house construction over time, permit the use of informal-sector materials, and provide security of tenure.

Facilitating access to shelter for the Urban poor

Regulatory frameworks comprise a wide range of laws, including local building by-laws, legislation and regulations related to town planning, public health, land development and building. The urban poor are unable to access the services to achieve sustainable livelihoods largely because the policy and regulatory frameworks prevents them from engaging in activities required for a means of living.

Protracted and costly procedures, the interpretation and application of regulations are a further impediment,

Land

Many cities find that access to land is the greatest single impediment to the improvement of urban living conditions. Land is a critical element in the provision of shelter for the urban poor. Access to land is a basic need for housing and related infrastructure. Secure access to land is a fundamental requisite to establish a sustainable livelihood. The policies, institutions and processes, including laws and regulations, which govern people's access to land thus have a significant impact on the livelihood options of the urban poor.

Dharavi in Mumbai

It has been suggested that the focus should not be on tenure legalization but rather on other non-legal strategies. The regularization of informal settlements increases the perception of security of residents; provision of infrastructure adds to the sense of security and also makes upgrading feasible; and facilitates provision of other services and amenities; and the availability of finance for housing improvement using non-property collateral.

It has also been argued that the focus should be on enhancing security and effectiveness of property rights under prevailing arrangements. A "Community Land

Trust" can be an alternative model that aims to make land tenure for the urban poor community sustainable and minimize negative effects of the land market on poor residents. The challenge is to find ways to increase tenure security and protect individuals against market forces.

Access to land and housing are determinative of the urban Poor's overall living conditions and their achievement of sustainable livelihoods. These entitlements are essential for their physical and economic security. Regulatory barriers to affordable housing compel urban poor households to live in informal settlements characterized by deficient infrastructure, poor quality housing, overcrowding and unsanitary living environments. Regulatory barriers to adequate and affordable housing must therefore be priority targets for reform if urban poor households are to access one of the key assets needed for the achievement of sustainable livelihoods, ie. shelter.
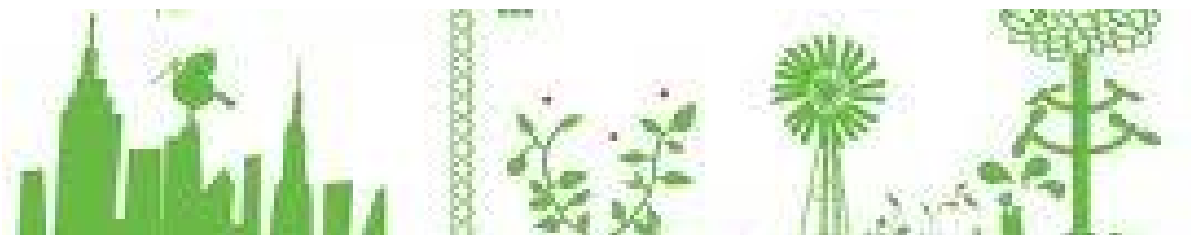
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HOUSING GUIDELINES

HOUSING SITUATION IN MAHARASHTRA

NEEDS:

An assessment of housing shortage in the state is a difficult task. However, based on the criteria decided by National Building Organization, the housing shortage in 1981 is estimated at 2.18 lakh units, of which 43,000 are for replacing the existing stock. An approximate requirement of dwelling units during the seventh five year requirement of dwelling units during the seventh five year plan, 1985-90, is estimated to be 8.75 lakh dwelling units.

The total requirement of housing can be categorized into three elements viz., existing backlog, requirement for additional population and the replacement for obsolescent houses. A bulk of the investment by public agencies has been so far applied for construction of formal housing and the output of dwellings so far has been of the order of about 2.00 lakh of tenements over the last 35 years, which represents a very small proportion of total housing requirements.

NEED AND DEMAND:

Need
Human settlements cannot differ much in the norms for provision of shelters and utilities like water supply, waste disposal etc., since all such services have to be provided on the basis of human and biological requirements. The needs for physical services, therefore, cannot vary much from country to country if these are meant to provide a healthy living environment. It is, however the demand for these services that varies depending on social and economic circumstances and can affect the process of deriving norms.

Demand

While needs can be determined on the basis of biological and other measurable indices and requirements, the demand is essentially determined by the cost of the services including its delivery and the affordability of the people to be served.

Need for Housing is different from demand for Housing. Need is worked out as a theoretical exercise. It is a statistical exercise based on present situation and projections for future based on past trends. The demand varies on the basis of social, economic, location, qualitative and other aspects.

In the recent past, emphasis has been on construction of completed dwelling units and not much attention was paid to the total housing situation in the state. Preparation of the seventh five year plan has brought out the awareness about the need for consideration of the overall housing situation in the state and to frame policies accordingly. It is therefore necessary to assess the housing situation in the state, and to determine the housing need by a process described below.

Assuming the one household should have one dwelling unit, the difference in census figures of number of households and number of occupied residential houses would indicate the notional housing shortage. Another aspect is the qualitative shortage, wherein houses made of temporary materials can be included in the shortage. Thirdly a household size beyond the average size can be included in the shortage assuming that the present household is over crowded. Fourthly, houses of dilapidated nature or dwelling units in danger of structural obsolescence can be considered in working out the need for housing.

Normal percentage for replacement is taken between 1% to 2% of the housing stock.

The other factor affecting the housing need is, migration from surrounding region. It depends upon the growth potential of the town. Sometimes this phenomenon leads to single male migrant while the family continues to reside in rural area due to social and economic factors. The nature of housing need changes accordingly.

The HOUSING NEED therefore can be worked out on basis of the following:

1. Housing shortage or backlog,
2. Housing shortage of qualitative nature,
3. Housing shortage by obsolescence of existing stock,
4. Housing need for natural growth of population, and
5. Housing need for migrant population.

A sum total of estimates of need based on these aspects can then be taken as a fairly reliable requirement of housing.

The housing need thus worked out indicates a theoretical requirement based on assumptions of ideal conditions. However the need does not become equal to

demand due to various constraints. The constraints are not merely economic in term of affordability but also factors like socio-cultural characteristics, personal and family priorities, impact of education etc. There are other factors like location, terms and conditions of payment, allotment and use, type and quality of dwelling unit, market conditions for sale, price etc., which result in a difference between the demand and the need.

Certain social system like the joint family system may reduce demand, on the other hand demand may increase if economic conditions permit.

Availability of finance, credit and market situation may also increase or decrease demand as compared to need. Thus, need is a notional estimate of requirement while demand expresses the real life situation in terms of the actual desire of the people to own a house backed by economic potential.

URBAN AND RURAL HOUSING SHORTAGES:

HOUSING FOR SPECIAL GROUPS:

In spite of the fact that HOUSING has had a low priority in the past, the state Govt. had formulated various schemes for the benefit of certain special groups. These schemes have a certain inbuilt subsidy element. This was intended to aid the special groups. The schemes have been modified from time to time. Generally, financial provisions are made in state plan for these schemes.

ROLE OF THE STATE GOVERNMENT

NATIONAL HOUSING POLICY GUIDELINES:

1. There should be a time bound programme to balance Housing requirements with availability, keeping in view the constraints of resources and paying capacity of the beneficiaries.

2. There should be adequate provision in the total national plan investment for Housing sector and this share should go up progressively. A substantial share of total private savings in future should be attracted in the Housing sector.

3. Tax exemptions, incentives to certain type of Housing Development, Institutional finance for private builders, mortgage insurance and developing secondary mortgage market should be envisaged to attract more private investment in Housing.

4. The bulk of the Housing investment should be in the private sector. However, bulk of investment required for meeting the Housing needs of lower income groups in urban areas has to come from the public exchequer.

5. Social Housing Schemes should cater only to the least privileged sections of the society and should be designated without direct external subsidies and within the paying capacity of the intended beneficiaries.

6. Provision of public funds for housing should be directly in proportion to the number of families in different income groups.

7. Large scale sites and services programmes in urban areas and a cheap hutments programme for rural areas should be taken up with provision for gradual improvement of standards.

8. The public sector should play an increasingly growing role with extension of its activities to small and medium towns with a main share of the responsibility for social Housing programmes in urban areas as a "facilitator" to affect level and pattern of housing activity in the country through promotional measures.

9. Large scale repairs and renewals programme should be taken up to conserve existing housing stock.

10. Industrial Licensing should be linked up with provision of minimum housing for workers to promote Housing for Industrial workers.

11. Rural Housing programme should be viewed more comprehensively as part of overall rural reconstruction with emphasis on generating employment of non-agrarian nature.

12. The public sector should play the "facilitator" role to promote aided 'self help' and extend technical counseling services for promoting use of traditional building materials. The rural housing programme should make the rural life socially and economically more attractive so as to reduce the present rural-urban drift.

13. Building materials production should be integrated with targets of Housing production and generation of local employment.

14. Industrial training schemes should be extended to train building labour for specialized skills.

15. Co-operative Housing should be encouraged to strengthen co-operative movement specially in small and medium towns.

16. Realistic and modest Housing Standards and building norms and controls in conformity with prevailing socio-economic and cultural conditions should be evolved for optimum use of resources.

17. Existing public housing organizations should be restricted to enhance co-ordination, monitoring and evaluation of housing development against predetermined targets and objectives.

18. Efforts of voluntary agencies and community groups at local level should be incorporated without hampering the pace of development.

19. Research and Development activities should be extended to field projects to demonstrate positive results.

20. Land is one of the fundamental elements in human settlement. State should have the right to take necessary steps to maintain under its control – the use, possession, disposal and reservation of land.

NATIONAL LEVEL AGENCIES IN THE FIELD OF HOUSING:

a. **Planning Commission:**
   The allocation of the total available resources for various sectors of development is the task of this agency and the resources available to a state directly through its own plan and indirectly through other financing agencies are decided by its policies.

b. **Life Insurance – General Insurance Corporation:**
   These agencies do not directly finance housing in a state but only through HUDCO. Direct funds in the firm of loans are available to insurance policy holders.

c. **Unit Trust of India – Nationalized Banks:**
   These also do not directly housing but only through HUDCO.

d. **HUDCO:**
   The biggest and the model housing finance agency at the national level is HUDCO which through its technical scrutiny of projects endeavors not only to finance but also to create a minimum acceptable standard of environment in the projects financed by it.

e. **National Buildings Organization:**
   This agency discriminate the results of building research in India and elsewhere and encourages innovative technique adoption in building construction through financing of the cost of such innovative components in demonstration projects in urban and rural areas.

f. C.B.R.I.

The Central Building Research Institute at Roorkee, undertakes research in almost all aspects of housing and building construction and also undertakes construction to demonstrate its technique for their applicability in the field.

g. S.E.R.C.

The structural Engineering Research Centre at Madras undertakes research in the structural components of building construction.

h. Bureau of Standards (ISI)

The Bureau undertakes preparation of Standards in all aspects of life including building codes, by laws etc. The National Building Code – a performance oriented approach to building by-laws and I.S. 8888 guidelines for low-income housing are its major contributions in the shelter sector.

i. National Research Laboratories

A number of National Research Laboratories are engaged in research on new building materials and have contributed significantly to use of local materials. Notable among them are, Regional Research Laboratories at Jammu and Jorhat and the Fuel Research Laboratory at Jealgora.

AGENCIES FOR HOUSING IN MAHARASHTRA:

The major Agencies in public and private sector are:

a. M.H.A.D.A.

The Maharashtra Housing & Area Development Authority is the Apex public agency in the state with five regional housing and area development boards operating as its implementing arms all over the state.

b. M.C.H.F.S.

The Maharashtra Co-operative Housing Finance Society Ltd. is a Govt. owned housing finance agency to finance cooperative housing effort in the state. It operates within the policy guidelines of the States Govt.

c. H.D.F.C.

The Housing Development Finance Corporation is a financing agency in the private sector which encourages savings for house-building and offers finance for construction/purchase of houses/flats to individuals, cooperatives etc.

d. C.I.D.C.O.

The city and Industrial Development Corporation, a state Govt. undertaking is mainly concerned with the development of New Bombay but also develops other new towns and undertakes housing construction in the state.

e. M.I.D.C
The Maharashtra Industrial Development Corporation also undertakes provision of housing for industrial labour on a limited scale in its own industrial estates.

f. Municipal Corporations – Municipalities:
The Municipal Corporations and Municipalities in the State are also empowered under their act to undertake housing for their employees and weaker sections of the public.

g. Private Housing Finance and Development agencies:
During 1985 – 86 a number of leasing and housing finance agencies have started operations in the state as well as all India level more or less on the lines of H.D.F.C

THE ROLE OF MAHARASHTRA HOUSING AND AREA DEVELOPMENT AUTHORITY (MHADA)

SHARE AND JURISDICTION OF M.H.A.D.A.

The Housing Programmes of the State Government in Maharashtra are mainly executed through the Maharashtra Housing and Area Development Authority (MHADA) and the four Regional Housing Boards under it.

The main functions of the Authority are to arrange for funds for its housing activities, to acquire lands for its programmes, to keep financial and administrative control over the Regional Boards, by laying down guidelines and supervising the functions and activities of the Regional Boards and to advise Government in all matters pertaining to housing and area development including development of peripheral areas of existing urban centres, development of new townships and of a commercial centres, etc.

The MHADA has prepared a perspective plan in respect of housing requirement and the strategy to be followed for addressing the problem of housing shortage in different urban areas. MHADA has identified 18 towns for taking up activities on the basis of the importance of the town, rate of urbanization, population growth, regional development, investment activities etc.

The State Government provides finance to the Authority mainly for land acquisition and development for the housing programmes and in addition allocates substantial outlay annually out of the State quota for Open Market Borrowings. The Authority secures LIC loan for execution of the housing programme. The General insurance corporation also provides loan assistance for taking up of rural housing programmes and housing for weaker sections of the society. Likewise MHADA obtains loans from HUDCO for the various housing schemes. Advance contribution from the perspective allotters is also obtained by the Authority.

With the provisions made in the State Plan supplemented by institutional finance and mobilization of other resources, MHADA is expected to undertake a housing programme of the order of Rs.16.36 crores during 1985 – 86 for which a plan provision of 4.09 crores has been made and the overall size of its programme for the Seventh Five Year Plan 1985 – 90 will be Rs.214.68 crores including plan provision of Rs.64.68 crores.

FUNCTIONS OF M.H.A.D.A.

The Maharashtra Housing and Area Development Authority came into existence on the 5th December 1977 under the Maharashtra Housing and Area Development Act, 1976. Prior to the establishment of the Authority and the four Regional Boards thereunder, the following statutory bodies were in existence:

i.	The Mumbai Housing Board.
ii.	The Vidarbha Housing Board.
iii.	The MumbaiBuilding Repairs and Reconstruction Board.
iv.	The Maharashtra Slum Improvement Board.

The Bombay Housing Board (later on Maharashtra Housing Board) was constituted in the year 1948. It had jurisdiction over the entire State of Maharashtra except the Vidarbha Region. This body mainly undertook construction of buildings under different schemes for different sections of society. Allotment and maintenance of these buildings was also being looked after by it.

The Regional Housing Board were constituted in the year 1951. Their functions were similar to those of the Mumbai Housing Board. It was also advancing loans to the Co-operative Housing Societies, Institutions for construction of houses.

The Bombay Building Repairs and Reconstruction Board was constituted in the year 1971. It came into existence for tackling the problem of old buildings in the island city of Bombay and undertook repairs and reconstruction of the same, so as to make them structurally sound and safe for habitation.

The Maharashtra Slum Improvement Board was constituted in the year 1974. The activities of this Board were to provide basic amenities such as water, latrines,

drainage, pathways and street lights to the slum localities in the City of Bombay and in the Bombay Suburban district, subsequently the activities of the Board were extended to other parts of the State.

The Maharashtra Housing and Area Development Authority was established with a view to integrating the activities and functions performed by the four statutory bodies mentioned above, as the programmes undertaken by these bodies were more or less complementary to each other. The idea was, to provide for a comprehensive and a co-ordinated approach to the entire problem of the development of housing in a planned and balanced manner by giving adequate attention to ecology, pollution, overcrowding and all other factors which go hand-in-hand with any large scale housing programme. On the establishment of the Authority, all the four statutory Boards mentioned above have been abolished.

THE AUTHORITY (M.H.A.D.A)

The Maharashtra Housing and Area Development Authority consists of a President, a Vice President, and seven other members, all appointed by State Government. The VP & CEO, MHADA is appointed as an Ex-Officio Secretary to the Govt. of Maharashtra for certain provisions of MHADA Act, 1976.

The main functions of the Authority are to arrange for funds for its housing activities, to acquire lands for its programmes, to keep financial and administrative control over the Regional Boards by laying down guidelines and supervising the functions and activities of the Regional Boards and to advise Govt. in all matters pertaining to housing and area development including development of peripheral area of existing urban centres, development of new township and of commercial centres.

The Housing and Urban Development Corporation (HUDCO) is the main financing institution for the housing programmes of the Authority whose finances are secured by the State Government Guarantee/Bank Guarantee. Other sources of finances are, loans from Government, the General Insurance Corporation of India, contributions from allottees in advance under Advance Contributions Schemes and open market borrowings by issue of debentures. The programmes of repairs and reconstruction and slum improvement are taken up through the funds provided in the State Budget.

ORGANISATIONAL RELATIONSHIP:

The Regional Boards.

The Maharashtra Housing and Area Development Authority is an apex body. It has 5 Regional Boards under its control, viz.

    i.   The Mumbai Housing and Area Development Board (Mumbai, Mumbai Suburban District);

ii.   The Pune Housing and Area Development Board (Pune, Kolhapur, Solapur,, Sangli, Satara and Ahmednagar District);

iii.   The Aurangabad Housing and Area Development Board (Aurangabad, Jalna, Osmanabad, Nasik, Dhule, Jalgaon, Parbhani, Nanded, Latur and Beed Dist.);

iv.   The Nagpur Housing and Area Development Board (Nagpur, Wardha, Chandrapur, Bhandara, Akola, Amravati, Buldhana, Gadchirolo and Yavatmal District);

v.   The Konkan Housing and Area Development Board (Thane, Raigad, Ratnagiri and sindhudurg District);

The Boards consist of a Chairman, a full time or part time Vice Chairman and 13 other members, all appointed by the State Government. The Vice Chairman is full time, is also the Chief Officer of the Board. In case the Vice-Chairman is part time, then a separate Chief Officer is appointed by the Government.

The Chief Officer of the Bombay Board is assisted by various officers under his control viz. a Chief Engineer, a Secretary, Dy. Chief Engineers, Dy. Chief Officers and a Chief Accounts Officer.

The Bombay Board also undertakes repairs and reconstruction works of old and dilapidated buildings within the island city of Bombay. It provides basic amenities such as drinking water, drainage, pathways and street lights to the slum areas and environmental improvement to slums.

The other Regional Boards have a Chief Officer appointed by the Government who is assisted by other officers of the Board. Housing and Area Development and Slum Improvement Schemes are implemented by the Boards within their areas of jurisdiction.

The Regional Boards have no separate corporate status and function within the framework of policies and guidelines given by the Authority from time to time. The regional boards are the implementing agencies of the Authority, which is a body corporate having perpetual succession and a common seal.

PERSPECTIVE PLAN OF MHADA:

The State of Maharashtra ranks first in terms of urban population in India. This Urban population is spread over 307 Urban Centres. Bombay, has 40% of the total Urban population in the State. MHADA, as the prime agency for housing and allied activities in the state has therefore made an assessment of the requirements of

housing for all the urban centres. A perspective plan is prepared to meet the requirements which have identified 18 urban areas as centres for continuing housing activity. Housing activity in a few other centres could be taken up as 'one shot' operation.

The perspective plan assesses the growth requirements of all the urban centres, analyses growth potential and on the basis of a selection criteria, suggests continuing activity centres, one shot operation centres and recommends norms and standards for decision about taking up of schemes in other situations.

This exercise has formed the basis for the preparation of the Seventh Five Year Plan of the State.

ACTION PLAN FOR MHADA :

The Perspective Plan is a statewide programme. The action plan is a detailed statement of actions proposed to be carried out in a pre-determined time frame. The action plan indicates various actions to be initiated, in sequence, for achievement of the programme objectives. On the basis of the perspective plan, wherein continuing activity centres have been identified, it is necessary to prepare action plans, for each such centre. Thus, the board programme of MHADA is translated into action plans for each constituent board and further into detailed schemes for each action centre; be it a 'continuing centre' or one shot operation centre.

ORGANISATIONAL OBJECTIVES AND TARGETS:

The MHADA was formulated with the intention to unify, consolidate and amend policies and laws, rules, regulations, related to all activities of Housing Process. It was done with a view to integrate the activities of various corporate and statutory housing bodies then existing and functioning in the state. It was thought proper to provide for a more comprehensive and co-ordinated approach to the entire problem of housing development, planning and development of areas in a balanced manner, with sufficient attention to ecology, pollution, over-crowding and amenities required for leading a wholesome civic life.

The perspective plan of MHADA lays down the programme for its own activities as well as targets for the state as a whole. It has to work as a facilitator so that the overall target of housing can be fulfilled partly by the direct activities of its constituents and partly by measures to help and facilitate creation of housing by individuals, cooperative, private sector etc. through financing, slum upgradation and other measures.

SELECTION OF ACTION AREAS:

Having assessed the requirements of housing in all the urban areas of the state, M.H.A.D.A. has to select certain action areas taking into consideration various factors such as:

a.   Overall availability of resources to the authority which will indicate the total size of the programme, given the ceiling costs for various categories of houses/sites and their mix.

b.   Present and future availability of land in each of the urban areas.

c.   The total requirement in each urban area must be of such a quantum that a continued programme can be undertaken so as maintain the minimum of technical staff and absorb their overheads.

d.   The likely demanding in an urban area which may be considerably lower than the requirement and hence not sufficient to provide continued work load to the construction staff.

e.   Possibilities of injection of new economic activity in the area in the form of large industry, industrial estate or other economic activity.

f.   Availability of funds through sources other than M.H.A.D.A. for undertaking a housing programme as in case of B.U.D.P. in Bombay through World Bank assistance.

PRIORITY ACTION AREAS:

The action areas selected qualify the areas for taking up activities. These areas need to be classified in different categories so as to identify the degree of stress (that is the acuteness of the problem) and decide upon priorities. The degree of stress should be considered more upon size or quantum of requirement of dwelling units and the likely effective demand. The classification can be done in following categories.

a.   One-shot action areas.
b.   Specific action areas.
c.   Continuing action areas.

a.   One shot action areas are those where the activities of an optimum size can be taken up to meet requirement of the urban area. The type of areas are normally the urban areas where demand is already assessed and hence though continuing activity may not be possible one shot operation is justified.

b.   Specific action areas are those where housing activities are needed to meet the potential requirements likely to be created by induction of investment by other agencies such as MIDC-SICOM, growth centres etc.

c.   Taking into account the growth rate, quantum of growth, stresses and other market conditions, etc. certain areas can be identified for undertaking activities continuously. These are generally the major urban centres in the state. A list of these centres is appended at the end as Annexure.

PREPARATION OF TOWN/CITY PROFILES:

The activities of the authority have to be taken up to meet the specific needs of the town/urban area. It is therefore necessary to assess the current housing situation and potential situation in the town. Such an assessment can be based on various factors and their careful study. The analysis of data collected about these factors is very important. The analysis will give the field offices a feel of the town and know its pulse. Some of the data required for preparation of a town profile might be factual while some based on perceptions of the person who collects and compiles it. The exercise therefore is not to be looked upon as "form filling" or answering a questionnaire.   The perceptions need to be developed, so as to gauge the quantitative as well as qualitative aspects of the problem.

The profile based on information collected on aspects listed below should be capable of constant updating but at a given point in time indicate a very clear picture of the qualitative and quantitative housing demand – present and future – locational, planning and design preferences, affordability limits etc.

Basic questionnaire for preparation of a Town Profile:

- Name, status, location and character of town

- Population - size, character, growth rate, migration, demographic details – age, sex, rations etc.

- Economic characteristics - employment , workers, industries growth centre and other growth potentials, growth rate, trend etc., Trade and Commerce.

- Physical characteristics – growth rate, trend, directions, physical infrastructure, services, land values, availability, quantity etc., constraints prospects.

- Authorities – organizations working scope and limitations, cooperative or otherwise. Approx. work load, etc.

- Housing situation – rents, values, availability, quantity, quality, types, plots, co-ops, flats, builders, trends, etc

H O U S I N G

HOUSING – A PROCESS

Housing is a part of the total living environment and must be integrated in the overall planning for economic growth and social advancement. The housing problem in the developing countries has been getting worse both in regard to the shortage and deterioration of the older stock.   The continuous influx of migrants from rural settlement to urban settlements involves a physical shift and hence, the perennial need for housing not only in different locations but also of different standards. Yet, uncoordinated construction of houses has lead to the destruction of the landscape and reduction of open usable space, and heavy traffic flow between placed of work and residence.

Housing, even if conceived in its simple physical terms, forms part of the human settlements.   In its wider perspective of the "living environment" in itself, it is a subject of utmost concern.   Housing cannot be viewed as mere 'construction of houses' but as determinant of the texture and quality of man's life by 'creation of an environment for the HABITAT of man which will lead to his physical, intellectual, cultural and social development.   It is quite clear that this final objective can be achieved only by an imaginative configuration of shelters and other facilities that lead to the creation of the total environment.

The process can be described by its various steps which comprise of,

- a. understanding the need,
- b. making its quantitative and qualitative assessment,
- c. identifying the socio-economic requirements and their role as determinants in evolving physical environment,
- d. designing the physical environment with a built-in flexibility for step by step up gradation,
- e. facilitating social and community organization,
- f. delivery of social and physical services,
- g. continuous monitoring of all aspects of the built environment to provide guidelines for the future.

SHELTERS AS ONE COMPONENT OF THE PROCESS:

A radical change in the orientation of public housing agencies is called for if they are to serve the need of low income people better. Shelter is an entry point to a comprehensive programme for developing people. While it may be too much to expect Housing Agencies to become vehicles of social development overnight a happy media could be achieved if shelter is regarded by these organizations as a component of an integrated programme of services which must include health, education, recreation and sports, mother and child care and support for income earning activities.

Shelter is the tangible physical expression of the intimate environment that a family creates for itself and symbolizes as much the socio-economic status of the family as the efficiency or otherwise of the human settlement system to provide and deliver complete physical services to it in the form of open spaces, parks, landscaping, schools, health centres, roads, water supply, sewage etc.

A Shelter in the sprawling 'slum' in a metropolis is as much an indication of the economic affordability of the family as the failure of the urban system to provide it with a services site.

SOCIO-ECONOMIC COMPONENTS:

Social services are community goods, very often intangible but like food and shelter, are necessary basic human needs. Primary social services include education, health care, recreation etc. It is not always easy to determine where physical infrastructure ends and social services begin. Both employ a net-work of physical distribution and are, therefore, location specific. The goods made available through infrastructure are by and large material and the success or failure of this system can be fairly, easily evaluated. The intangible goods delivered through social services are less easy to measure. There is, however, one criteria amendable to measurements relating to the way in which the services are delivered, i.e. the quality of distribution. In other words, it must be accessible to all. It may be difficult to quantify the achievements of the system of social services but it is fairly simple to decide within broad limits, whether or not it is equitable.

HOUSING as a process does not end in facilitation or completion of shelter – physical completion of construction. It needs to be supported by proper function of overall environment. Shelter has surroundings – neighbourhood. The people within immediate next door form group, a cluster. The relationship forms social group – a community. For satisfaction of various needs, apart from shelter, different land uses like amenities – schools, community centre, medical facilities, shopping, etc. get developed in the environment. Depending on other socio-economic requirement of the community, facilities like Crèche – 'Balvadis' need provision. The provision of mixed land uses evolves in organic developments which can be observed in old cities, core areas of cities – gaothans. It has certain advantages and disadvantages. Planned settlements of recent past had been lacking provision of these components.

But now, realization has developed awareness and these components are being provided while planning the settlements.

Planning of a shelter project requires a thorough understanding of the functional and spatial aspects of housing. Mere preparation of type designs for various categories of flats or houses and their arrangement in a piece of land, does not lead to creation of a healthy environment either physically or socially.

FACILITATING PROVISON OF OTHER COMPONENTS:

It is necessary to have an integrated approach in designing a shelter project and consider the micro and macro aspects in order to create a total environment which will be conducive to – better living and social integration. It is necessary, that provision of land be made and that buildings are also constructed by the Housing Authorities along with the shelter project so that it does not lack social and cultural facilities.

Many a times it may not be legally or economically feasible for a housing agency to actually provide these facilities. It must therefore formulate policies on land reservation, allotment pricing and phasing to ensure that necessary facilities are developed simultaneously with the development or construction of shelters.

It is therefore necessary to ensure co-operation not only from governmental institutions dealing with provision of these facilities, but also with private and institutional efforts in the field.

AGENCIES TO PRIVDE OTHER COMPONENTS:

The other components of Housing as a process are:

a.   Economic

b.   Socio-cultural

Both these components can be made available either through the public or private sector. It should be the effort of a public housing agency to keep close liaison with the public sector organization through an institutionalized system of communication so that a closer inter-relation is established   between the provision of these components and shelter.

The economic component would mainly get provided through,

a.   Policies of industrial location by the state industries department.

b. Large public sector project location policies of other departments like agriculture, irrigation, communication etc.

c. Location policies of state industrial development corporation.

The socio-cultural component would mainly get provided through public as well as private sector location preferences and budget for;

a. Schools – colleges and other educational institutions.

b. Health facilities like hospitals – polyclinics, etc.

c. Sports and recreational facilities.

d. Shopping centres, markets etc.

e. Parks and playgrounds.

COORDINATING ROLE OF SHELTER AGENCIES:

An integrated approach to planning of a housing scheme would lead to creation of a total environment which not only involves construction of houses but provision of all the necessary facilities required for the day to day life of the residents. An integrated approach would lead to creation of environment which will be conductive to better productive effort on the part of the residents.

The public sector housing agencies therefore have to have a separate call to co-ordinate, in fact search for various public and institutions that can provide these facilities and act as a nodal point to bring these institutions and the people together so that the felt needs of the people can be taken care of.

MODES OF PROVIDING SHELTER:

The modes of providing shelter can be,

a. making available raw land,

b. making available developed land with all physical infrastructure,

c. making available a shelter either fully or partially built,

d. making available finance for any of the components of shelter,

e. providing technical services and advice for any of the components of a shelter programme,

f.   providing guidance and coordinating the activities of various agencies to facilitate provision of any of the components of shelter,

g.   enacting legislation pertaining to land holding, land and house taxation, other taxation, creation of housing mortgage market etc., are some legislative measures which can help provision of housing.

CONCEPT OF CONSUMER PREFERENCE:

Consumer is the ultimate beneficiary of any product including a shelter; be it a services site or a completed dwelling unit. Constraints in the economy of developing nation like ours create situation of a 'seller's market'. Yet, it is necessary to build up awareness about importance of satisfaction of consumer. This awareness would help in designing and planning to suit the requirements and pockets of the intended beneficiaries of housing project.

While affordability is very important in tailoring the type and quality of shelter that can be provided, despite a shelter being affordable it need not be acceptable to the beneficiaries if its design or plan offends the normal life styles or living habits of the people in a particular regions. This aspect has to be borne in mind.

Consumer's preference depends upon his socio-economic and cultural background, affordability and life styles, living habits and his personal aspirations. It affects the design, type location and character of a housing scheme and its demand.

CONCEPT OF AFFORDABILITY:

A household has certain monthly expenditure pattern depending upon its income and priorities. In low income and economically weaker groups, the households' major expenditure is for food and fuel. In fact, the expenditure required to be incurred to meet per capital calorie intake requirements for survival being fixed; the elasticity of this item of expenditure is very low. The expenditure required to be incurred to meet other basic needs has to be adjusted to match the residual income.

The amount of monthly expenditure that can be spent to meet the requirement of a shelter for various levels of income determines the affordable cost of a shelter for the particular group. This monthly amount can be taken as an equated installment and for an identified period at a suitable rate of interest the total amount that can be amortized can be worked out. In addition the capacity of a family to make a down payment from the savings will also increase the affordability limit.

It is also possible that in case of a very strong desire for shelter the family can increase its affordability limit by making adjustment in its expenditure pattern even in

the non-elastic elements of expenditure like food and clothing. The affordability limit can thus be further increased by this willingness to pay for the shelter.

CONCEPT OF MARKETABILITY:

Every product is generally made for sale. The price depends as much on its cost, and need as the promotional effort. It also depends upon the conditions of market. It is, therefore, necessary to keep in mind that the end product of activities undertaken by the housing authority is meant for sale. Though marketing may be undertaken by a specific department, everyone involved in the process of production can help to make the product more marketable. The product therefore needs to be tailored to the requirement of the market namely:-

COST : This should be commensurate with size, quality, location and comparable to alternatives available and within the affordability limits of the intended market segment.

QUALITY : This should be commensurate with cost and comparable to any available alternatives.

QUANTITY : This should meet the requirements and absorption capacity of the market.

TYPE : This should be commensurate with the living habits and cultural pattern of the target group.

Finally it should aim at offering at least one advantage over other similar products in market.

The last and most important factor is the marketing of the product. This can be expressed as a proper communication in terms of language, attitude and expression, with prospective beneficiaries.

CONCEPT OF COST RECOVERY:

The housing authority normally works on the principle of No Profit – No loss. This means that no activity should incur any loss and profit if any, should be charged only to wipe off certain unforeseen losses and generate funds for increased housing activity for the weaker sections. Hence it is necessary to ensure that all costs incurred are totally recovered from the price. The concept of cost recovery therefore envisages correct estimating of likely costs, correct accounting if incurred costs, proper distribution of indirect costs and finally methodical and total recovery of all these costs.

CONCEPT OF PUBLIC, SEMI-PUBLIC, SEMI-PRIVATE AND PRIVATE SPACES:

In residential or for that matter any developed area the spaces have specific functions. The areas have ownership and control for their functional use. These spaces can be divided in four categories depending upon the control exercised on their rise -

PUBLIC SPACES:-
Access to these areas is not restricted. Any member of public can use these areas almost at any time. By almost, it is necessary to indicate that the access may be controlled as and when necessary to do so. Roads, Gardens, Sea-beaches, etc. are example of such spaces. Roads can be closed for repairs, can be made one way etc. Gardens can be closed during night. Entry to beaches can be controlled. Yet the general public has free access though some control can be exercised.

SEMI-PUBLIC SPACES:-
Access to these areas is restricted to an identified group of people or members, etc. However, it is possible for any person from general public to become a member or join the group after following necessary procedures such as making an application, paying fees etc. Exhibition grounds, fairs, swimming pools, gymkhana etc. can be cited as example under this category.

SEMI-PRIVATE SPACES:-
The areas which are incidental to adjacent private use and where ownership and control of the area vests in some identified group can be termed as SEMI-PRIVATE SPACES. The entry to these areas can be restricted to private area holders/owners and the visitors. Cost of such an area and the maintenance charges are borne by the group. Pathways, side and front open spaces around multistoreyed buildings, roads and gardens in a society's layout etc. are example of this category.

PRIVATE SPACES:-
The areas which are under absolute control of an individual or a family and where entry is restricted unless permitted by the holder are private spaces. A plot, A terrace, A dwelling unit, etc. are examples under this category.

Clear cut distinction of areas under these four category helps in the costing of housing schemes, handing over the properties and also maintenance of the areas. Understanding of this concept helps in designing services network – its layout, use of material location of control points, fixing meters etc. In order to minimize problems of disputes, maintenance and encroachment, it is necessary to understand the concept, demarcate the area and design the infrastructure suitably.

HOUSING MODES

NORMS OF HOUSING (CENTRAL):

The Government of India as well as HUDCO has fixed certain limits for income groups. The ceiling limits for costs for these groups have been fixed by government of India for the finance along with interest rates, repayment period, etc.

Norms of Housing: State

The state government has fixed certain norms. The target is exposed to cover 50% for EWS, 30% LIG, 15% MIG and 5% HIG. State Government follows norms of centre for these groups.

MODES OF HOUSING:

Housing is the entire process of making available a total environment for healthy living. This can be achieved by various modes. These modes can be categorized in the three basic types.

   i.   Ready Made product.

   ii.   Partially complete product.

   iii.   Supply of components for assembly.

The details of each category are described as under:

1.   Making available completely built HOUSING UNIT.

    This mode falls within first category and can be generally made available in multi-storied structures, in the form of flats or in low-rise development of row houses, detached or semi-detached structures – Bungalow, etc. This mode is available for outright purchase, hire purchase, on lease or on rent. This is provided by all types of housing agencies – Private builders or Public Agency. Considering the cost, fixed physical area and conditions of sale etc. it is not suitable for a majority of population in our country, whose incomes are too low to afford this mode.

ii.   Making available partially built HOUSING UNIT. This mode falls within second category and will generally be in single storied structure. There will be possibility of expansion, addition, alteration, change of use, etc. either at one or more levels. This mode can normally be available for outright purchase or an hire-purchase. This will not normally be available on rent. This mode may or may not be complete for use in the first phase. The basic idea of this mode is to match the cost with affordability, demand and choice. This mode can be provided by all types of agencies but is mainly done by Co-

op. Hsg. Societies and public agencies. This mode can be considered suitable for all income as well as social groups.

iii.   Provision of Finance – LOAN making available materials – components. Making available land – plot with or without services. Making available services. These modes fall within the third category. Generally these will be made available by public agencies. However, private sector can also be involved in all the modes except for services. These are suitable for all income groups but not for all social groups. Some social groups prefer other modes to these modes due to their affordability and choice.

SITES AND SERVICES:

Provision of shelter needs a basic resource which is the land. This piece of land is called a SITE. A supporting services infrastructure is necessary for proper use of this site for erecting and using a shelter. The system of provision of serviced sitesis called as 'SITES AND SERVICES'.

Awareness among professionals is Housing, policy-makers and others connected with HOUSING process about the available resources and housing needs have changed the approach from provision of completely built shelters to other modes of Housing. SITES AND SERVICES is prime among other modes. This mode was in common practice by land owners as well as public agencies in the past, however the new name has been recently introduced.

SITE is a piece or plot of land made available for erecting shelter by the allottee. SERVICES include access, water supply, drainage, sewerage and electricity. In the overall context it also includes provision of all necessary socio-cultural facilities, amenities and utilities. The basic idea of this mode is to provide all components to help the allottee to construct his shelter.

Considering the amount of investment, speed of provision of the mode, flexibility of use – size and adaptability, it is the most suitable mode in a poor economy of any developing country. This mode, however, needs supporting provisions of other components such as finance, materials, prefab components etc. It also needs support and concessions in building rules and regulations etc. The mode can not successful in the process of Housing by itself unless systematically supported by other modes.

The success of this mode, apart from its concept, supporting modes and its scale, lies in its location, proximity to job centres and infrastructure of supporting community development programmes.

CORE AND INCREMENTAL HOUSING:

CORE house is part of construction undertaken on a plot proposed to be allotted. This is constructed to offer immediate relief in the form of a part shelter. It provides some protection to the belongings as well as the occupants. The size and form may differ as per designs. It may contain a full y constructed sanitary unit (WC and/or both) or even partially constructed sanitary unit.

This helps housing process in many ways. It provides a standardized basic unit offering advantages of lesser investment by public authorities and standardization. It offers opportunities of growth by the occupants as per his needs, means and choice. It reduces monotony but also helps to create vernacular development in planning as well as architecture.

INCREMENTAL HOUSING:

As explained earlier, HOUSING is a process. The needs for the shelter are not static but changing depending upon means, size of family, age group, education, socio-cultural background etc. The provision of shelter therefore needs to be flexible. The flexibility is necessary in form, investment and in the approach or concept of the shelter. Such a provision is called incremental HOUSING. It is necessary for all categories of houses. It is a need for all income groups. It does not mean a convenient solution worked out to fit a small house in the ceiling limit of cost for a lower category of unit. Understanding of this concept will ensure that inflexible dwelling environment is not provided as far as possible. Flats in multi-storied buildings are an example of inflexible dwelling environment.

COMPLETED SHELTERS:

This can be most satisfying way of provision of a shelter. It is a fully built structure as the name indicates. It should have sufficient areas for each user as per local building rules and regulations. The areas can very depending upon type or income category. It is also necessary to have minimum dimensions – length, width, height, etc. as per rules laid down. It should have proper specifications to match a particular quality. However, there can be scope for still better specifications by replacement of items.

Such structure may or may not have provision for growth.

HOUSING PROJECT PREPARATION

PROJECT IDENTIFICATION:

The perspective plan of MHADA gives an overall programme of the activities that need to be taken-up in the state. The action plan details the programme in various activity centres. After having identified the requirements of "A" activity centre it is the

stage to identify, and define possible projects in that centre. A project means, specific location, predetermined quantum, specific type or character of housing to be provided, likely time-span, resource requirements, mechanics of implementation, identification of target group, method of sale, conveyance of the property, formation of a community, and recovery of costs. The project therefore, is not merely an engineering exercise of construction of a fixed number and types of houses, but includes selection of suitable land, suitable location for identified target group, allotment of houses after selection of beneficiaries, etc., it is thus the total process.

The major steps involved in project identification are :

a. Identification of the relevant geographical areas in which the project is proposed to be undertaken and definition of the time scale in which the project is planned to be executed. (This time scale could be determined in relation to the existing macro-level programme such as ALIS, the government expenditure planning period and this should also coincide with MHADA's plan if any).

b. Assessment of the socio-economic characteristics of the households through a market survey.

c. Determination of the housing needs after taking into account the population growth, net migration and household size (in terms of number of persons per household).

d. Determination of the effective demand based on the housing needs and project objectives and constraints.

e. Determination of the projected housing output in the proposed area by public and private agencies.

f. Identification of potential sites/infrastructure.

g. Determination of types of housing by taking into account the demand, output and affordability including formulation of schemes and fixation of sale prices.

h. Identification of the sources of finance.

i. Preparation of project feasibility report.

PROJECT VIABILITY;

A project can be reasonably expected to be successful if its viability is ascertained beforehand. The viability, incase of shelter projects, has to be seen for various aspects, namely, physical, economic and market.

The physical viability will depend upon whether the land is properly located, sufficient, suitable and free for user it is intended to be put to. For example a small plot of land situated on a narrow street may not be useful for a five star hotel project. A five star hotel has certain minimum area requirement for a standard facilities and hence below a certain area of plot the site cannot be considered physically viable for the project. Same is the case with a school where there is a requirement of a minimum size of playground.

The economic viability depends upon expected returns from the project. If a high class air-conditioned shopping centre with multi-storied structure, with escalators, marble flooring etc. is built in a small suburban middle class area, the shops may not be sold even if as per the standards there may be a requirement of a large number of shops. In such a location, large number of small area shops may fetch attractive returns in terms of percentage on investment. Thus a project of 'Khoka'(kiosks) shops may be economically viable while a high class shopping centre with the same amount of shopping area may not be an economically viable proposition because of location and the market. Therefore, depending on the location, the quantum of use and investment will defer. The project become economically viable only if certain return on investment can be achieved.

 Market viability depends upon aspects like the living habits the ability to pay and the prices of similar product in a comparable area/location. A multi-storied flat in a small town may not be marketable due to the life styles of the people as well as availability of one storey units through other agency. In the same place even a small single storey house may not be marketable if for example the toilet block abuts the kitchen which may be offensive to the life styles of people there. Even without this defect the house may not be marketable if it costs substantially higher than a comparable unit offered by another agency, but even at a certain higher cost it may be marketable if sold on higher purchase basis provided again that the agency's credibility is good. Thus, market viability depends on the physical properties of the product, consumer preferences, location, prices, deferred payment facilities, credibility of the agency, availability of comparable product etc.

LAND OPTIMISATION AND COMPUTER MODELLING:

Due to various reasons like location, transportation system, user permissible, etc. the pressure on land increases. This pressure increases the value of land. The higher the value of land it needs to be looked upon as a precious commodity and its utilization achieved with greater care and thought, so that land allocation for each use like road, open spaces amenities, residential use etc, is just adequate. That is called the optimum   utilization of land. Computer is a tool which can help the

optimum utilization of land within the affordability limits through a mathematical model which an give several options. The computer can develop a series of options for optimum utilization of a piece of land on the basis of given data or assumptions. This data should consist of plot size, cost per sq.m. ceiling limit for cost of plot, area under roads and other uses etc. All the data is analyzed through a mathematical model and various alternatives are worked out for every change in the assumptions data. Various alternatives can thus be available in minutes which would have taken months if a trial and error method through manual efforts was to b adopted.

PROJECT BRIEF:

A 'project' is not a set of Architectural drawings and engineering details and estimates. It encompasses all the activities. Hence, a PROJECT BRIEF is an outline prepared setting out in words the content, and method of implementing a project to its final allotment and recovery of cost without going through the time consuming routine of preparing architectural and engineering designs. The PROJECT BRIEF is therefore a basis for preparation of Architectural and engineering details.

It should therefore indicate the following:

i.   Brief information about the town and the locality where the proposed site is situated. The growth directions, trend, character of development etc.

ii. Details of site: All physical features, shape, size/area dimensions, soil conditions etc.

iii. Development plan proposals, D.C. Rules, permissible users, FSI – FAR – quantum of development – density etc.

iv. Demand registered, if any, likely demand, land value, expected utilization, cost, demand based on land cost etc.

v.   Development costs.

vi. Type of Houses in the town, surrounding area, etc. trend housing – flats, row houses, etc.

vii. Proposal for utilization of land indicating all details to form the guideline for working out physical details.

viii. Marketability of the project – including consumer preferences.

ix. Likely costing of the project.

x.   Prices of similar product in the surrounding locality.

xi.   Likely source of funds, availability of manpower, building materials etc.

xii.   Project viability.

xiii.   Methods of recovery of cost.

TESTING THE DEMAND:

The demand for HOUSING – shelter, plot, built houses, etc. depends upon various aspects such as income, savings, family size, social attitudes, customs, economic and social status education, plans for future, age of head of family etc. It also depends on other inputs such as payment terms, amount of down payment, loan availability, rates of interest, total cost of unit, restrictions – regulations – rules etc.

The demand therefore can be assessed or actually registered. The assessment can be attempted on the basis of

  i.   Growth trend of town.
  ii.   Type of housing built and prevailing rents.
  iii.   Land sub-divisions and availability.
  iv.   Census date, densities, conditions
  v.   Visual studies/observations
  vi.   Discussions with various people and organizations

The demand can be assessed by actual registration leaving apart demand created by institutions for the welfare of their employees and by the profit motive of private investment, demand is generally assessed by housing agencies by following either of the two methods, i.e. general registration or special registration.

In assessing the demand by general registration, the housing agency gives an approximate idea of the size and price of the product and requires the intending purchasers to register their demand by depositing a certain amount of money to ensure the genuineness of demand. The detailed mechanics of registering such demand can give a good indication to the agency about the total demand in a city as well as preferences by size, design and price. It can thus help the agency to formulate/a long-term perspective plan for its requirements of financial/material resources and implementation policies.

In the second system, i.e. special registration where the agency calls for demand for each and every specific scheme as and when it is taken in hand or is being implemented; there are all the disadvantages of ad-hocism. The demand does not give any indication to the agency about the size and prices of the product for its

future programme because the demand is purely location linked and a onset time shot.

TESTING MARKETABILITY:
If the project is prepared on the basis of an assessment without registration of demand it can be advertised to test its marketability. The marketability depends upon costs, design, availability of alternative, terms of payment, etc.

PLANNING:

PHYSIOLOGY

The physical morphology, or the physiology of lands available for housing projects had to be quantitatively and qualitatively studied and catalogued with weightings given, depending upon its suitability for a range of developments normally contemplated as part of the Authority's housing programme. For example, the range may start from a slum Up gradation programme to sites and services, Transit Accommodation, simple load bearing structures, multi-storied construction, sale of open land on commercial basis, etc., weightings can be attributed to the range of developments, depending on the priorities determined by the Authority and on the basis of these weightings, each piece of land can be evaluated against this development, depending upon its physiology.

The subsidiary factors that arise out of the physiology of land area :-

      a. Cost implications

      b. Time implications

      c. Legal implications

Mere physical aspect can only determine the kind of physical development that is most desirable or is a least cost solution. Yet it is necessary to evaluate land for the entire range of developments attributing the costs for it.

Similarly, depending upon the time frame within which land is likely to be available free of encumbrances for development, another set of costs can be attributed to each piece of land. A related aspect would be the legal implications which may reflect upon the cost factor or the time factor.

The physiology of land has cost implications in terms of land development as well as building. Both of these need to be evaluated separately for the range of developments contemplated. The weightage for the cost factor will also very depending upon the purpose for which the land is proposed to be utilized i.e. Whether for only land development or land development + building etc.

Another factor which should always be kept in mind, irrespective of the range of developments and weightages depending on cost factor, is the opportunity cost of the land. It is possible that despite the development plan provisions or restrictions, the Housing Authority's immediate needs or political considerations, the land could be best utilized for a purpose distantly connected or totally unconnected with the main work of the public agency. A serious consideration to this aspect is necessary so that the opportunities are seen in their wider context and perspective and not merely in relation with the purpose for which the Authority works.

LOCATION ATTRIBUTES:

Another way of evaluation of the available land resources will be from the point of view of location attributes. Here again, weightings could be given for the entire range of developments contemplated with relevance to the various aspects of location attributes. These could be:

      a. Market value.

      b. The surrounding development and environment.

      c. Flexibility for interchange of development with another site.

      d. Integration with future development strategy.

      e. The FSI possibilities.

      f. Opportunity cost.

The market value of land juxtaposed with the range of developments contemplated can very easily help to determine the particular kind of development most advantageous from this aspect. The type of development around will also contribute towards this decision. The flexibility or inherent potential of the site to accommodate a different kind of development because of interchange of development contemplated elsewhere, will also have implications on the cost factor.

While land uses are fairly well-determined in the Development plans of cities like Mumbai, Pune, etc., it is not so in some of the smallest towns and cities. In such cases, a quick appraisal and review of the city's growth and the potential can bring out different possibilities and options available for the range of developments and yet indicate method of integration with the future development. Similarly, the FSI restrictions are generally imposed only in a large cities and in smaller towns these re either non-existent or not in force. In such situations it is worthwhile examining accepting a radical approach with an eye on the future potential of land.

For this aspect i.e. location attribute also, the opportunity cost is very important. It is necessary to have a totally unbiased approach irrespective of the constraints of the location advantages and disadvantages.

COST BENEFIT

An evaluation in terms of cost for the entire range of developments is generally possible for the first two aspects i.e. the physiology and the location attribute. A preliminary cost benefit analysis should, therefore, be undertaken in terms of :-

      a. Physical costing;

      b. Opportunity cost;

      c. Social cost.

While the physical cost and opportunity cost are fairly quantifiable, the social costs are not. For example, the social cost of not providing a commercial complex and instead providing more housing or the social cost of filling up existing open spaces with housing are not easily quantifiable. At the same time it is not entirely feasible to determine this aspect on the basis of standards prescribed by various Authorities as well as the Government for social amenities. A more balanced view has to be taken keeping in mind the possibilities of renewal and change in the use of land and buildings so that while the present contemplated development may be consciously accepted despite higher social costs, there may be a possibility for renewal and change of use to reduce the social cost at a later date.

MARKETING

Because of the constant exposure to the acute problem of housing in metropolitan areas, the concept of marketing hardly ever appears to be considered as a valid aspect in our housing programmes. Yet leaving apart the areas of acute deficiencies like Mumbai, Pune and other large cities, we have had fair experience of poor salability of the product i.e. house, in smaller towns. In the context of this experience, at least basic considerations of marketing need to be kept in view in planning for housing projects. Some of the questions that one may ask in order to decide a very broad marketing concept or strategy are:

      a. Is this location saleable?

      b. What is the quantum that can be sold easily?

      c. What is the timing of putting the product into the market?

      d. What is the kind of product that will sell most, irrespective of other institutional constraints?

      e. What is the best approach of marketing whether an advance sell or catering to a fixed demand?

Instances have been known even in metropolitan cities like Calcutta where housing could not be sold because of poor location, or undesirable environment around, or because of simultaneous launching of marketing at two locations which were not comparable etc. In smaller towns, the consumer requirements sometimes do not coincide with the standard requirements laid down by institutions like HUDCO, etc. In such circumstances, it is worthwhile considering which line of approach to take i.e. whether consumer oriented or resource oriented. In many cases it is possible to cater to a predetermined demand of bulk consumers in the shape of a self-financing housing scheme.

When a State wide programme of housing is undertaken which gives equal importance to developing urban areas as well as providing incentives to new urban areas, far more attention to the marketing aspect of housing will have to be given than what has been given hitherto.

SOCIO-CULTURAL PARAMETERS

Irrespective of the cost benefit analysis and the marketing requirements, there are sometimes over-riding considerations in terms of socio-cultural parameters. These parameters may indicate a development which is totally different than what the Authority or the financial institution may be accustomed to and yet in the interest of serving the consumer, it is desirable that these parameters are given a higher weightage and precedence over other consideration.

These parameters generally apply to the type of development, the densities, the accommodation provided, the mix of the various types of development and the physical form of buildings, etc. The inputs from these parameters are highly important in designing of housing projects. For the Architect-Planner as well as the Engineers, these parameters should be a constant guide and must be regarded as a continuous process of input into the design methodology and not as a one time exercise.

ALTERNATIVE FORMS OF DEVELOPMENT

Based on the various aspects explained earlier, the planner can come to some kind of a tentative decision in terms of the form of development. This does not, however, relate to the physical form, but the kind of model or mix that could be evolved for the total housing programme. The alternative forms could be:

> a. Sites and services.
> b. Commercial development.
> c. Sale of F.S.I.
> d. Sale of plots.
> e. Sale through private developers

f. Co-operative financed by institutions like HDFC, etc.

The forms of development referred to above therefore means not the physical form, but the kind of model to be adopted which will determine the physical form.

A detailed consideration of these aspects will form the total content of planning for housing projects. Based on these considerations, we can later on come to the various aspects in the planning of housing projects which will mainly decide the physical form and content of a project.

OFFICE RECORDS AND DOCUMENTATION

In order to have continuity of information it is necessary to record various information created or generated from time to time. The information can be in the form of figures, written in sentences, visual aids – photographs, slides, recorded speech, etc. In the office the information needs to be kept in certain approved form. This is called records. This information is normally kept in the form of statements, charts, reports, photographs, etc. It is updated or collected at fixed or at certain important time intervals. This is necessary to review progress, understand achievements, find out shortcomings, list out reasons for delays etc. Documentation is a systematic record of a particular project or theme or study containing background, details, achievements, difficulties faced, highlights and conclusions, mostly with visual aids.

In case of projects the office records are necessary to review the progress, monitoring and recording achievements. Documentation is required for important achievements for dissemination of the information. Documentation can be photographic or by video-films depending on the purpose and the importance of the project.

PRELIMINARY COSTING

The project needs to be prepared on the basis of certain norms. The project therefore needs to be based on thumb rule principles of costing for deciding a line of action. The preliminary costing is normally attempted on the basis of plinth area rates of construction based on current schedule of rates. A little more refinement is, to take the cost index for various regions or cities published by the Reserve Bank of India and update the general observed plinth area rates of similar previous projects on the basis of cost index.

Another method is to have a break up of cost per sq.mtr. for different types of buildings with special items like pile foundation, lifts, filling in low lying area etc. and update the p.a. rate of these components of cost on the basis of observed tender premiums for similar projects.

TESTING AGAINST STATE AND CENTRAL GOVERNMENT – MHADA And HUDCO REQUIREMENT

Each Project due to various constraints like location, cost of acquisition of land, surrounding development, demand, zoning regulations and proposals, etc. may not have strictly observed the norms laid down by Government's and may not be as per all the requirements of HUDCO or MHADA. Testing of needs of the project against these requirements is necessary. Maximum possible alternatives – modifications or compromises to meet the needs of project as also the requirements can be tried. Such a procedure is a must. In case of unavoidable circumstances deviation in policies may be necessary with proper references and approvals of competent authorities.

NETWORK ANALYSIS AND CHARTS

Network analysis is a tool or technique of representing graphically all activities of the total process of housing with the corresponding time element so as to monitor the progress and get advance intimation of likely problems before they occur and also take advance action for anticipated future events.

A model network chart for a housing project is given at annexure –

Bar charts are commonly used to monitor the progress of each activity of the total network in terms of quantum and time. Thus the progress of bricklaying for walls, concreting for slabs, columns etc., laying of various services etc. can all be monitored individually by bars showing scheduled and actual progress of work.

Graphs can be used to monitor employment of labour, expenses, stores inventories etc.

LAND MANAGEMENT

LAND PLANNING & PROCUREMENT:

Land is the basic resource for any housing mode and hence it is necessary to manage it with utmost care. It's management has to deal with its protection, control of use, maintenance and utilization for various purpose. This being a natural resources there is no 'cost' but there is a 'value' attached. The 'opportunity cost' determines the value of land which reflects in the project as cost of land. Considering its proportion in overall costs, it assumes importance in project costing and cost allocation.

Procurement of land takes quite a long time if the land is proposed to be acquired. It is, therefore, necessary to plan the procurement of land far ahead of its actual use. All the land in possession cannot be utilized for construction. There would normally be a development plan for various urban centres which would determine the use, quantum of use and permissible construction, etc. It also indicates alignment of

major roads, width, of scheme roads, open space area, etc.   Hence, after ascertaining the demand for dwelling units, while working out the requirements of land, it becomes necessary to make allowances for all the statutory provisions as indicated above.   Some allowance for odd shapes and corners which reduce efficiency of layout, is also necessary.   The normal standard for working out land requirement after making all allowances work out to 100 D.U./Ha.

Second aspect of land planning is deciding the directions in a city for location of land, identification of specific areas, phasing out procurement and deciding about its time schedule.   The details about land selection criteria are given in the next paragraph.   The planning also needs to be based on objectives of that scheme such as large scale area development project, small construction project, ownership patterns and trend of development, etc.   For large scale projects provision for higher level facilities and amenities will be necessary.   For small construction projects, land for residential units only will serve the purpose.   Small land owners may required deletion – allotment of certain pieces increasing the overall area requirement.   In case of Co-operative societies with individual plots, layouts requires certain unification or consolidation of facilities and adjustment in plot area.

Procurement of land is normally done through acquisition proceedings. In order to take over the land free form encumbrances it is necessary to complete formalities of acquisition as per the concerned act.   Even when land is taken over by direct negotiations or with the consent of land owner it is advisable to complete the formalities much before actual development work is scheduled to be commenced.

Other alternative of taking over land are, obtaining land through other public bodies like N.I.T., C.I.D.C.O., M.I.D.C., Municipal Council etc.   Last alternative is to take over Government land wherever available.   Even for these lands it is necessary to see that all documents are completed, "Sanad" is executed and 7/12 extract is amended in favour of the housing authority. The detailed procedure to be followed in respect of various acts is appended in annexure.

LAND SELECTION CRITERIA :

Location : Should be preferably in the direction of the growth of the concerned urban centre with proper access and transport after link ensuring its accessibility to consumers.

Size & shape : Size should be adequate to accommodate a minimum No. of housing units required to sustain the cost of physical, social services, community formation, and estate management.   The shape should not be too odd creating problems of under utilization or excess of area for roads.

Topography : Filled up sites can create problems in laying of services, providing soak pits etc.   Hilly or contoured land should be amenable to terracing and carrying

of services from the existing point. The cost of making roads is a basic point to be considered in hilly sites. Existence of pits, queries can reduce the effective usable area.

Physical features : Existence of walls, structures which cannot be demolished, overhead H.T. Lines, major roads traversing the site, trees and shrubs etc., can all be used to an advantage in planning the layout but depending on size and shape of land can also prove to be a disadvantage.

Availability : Whether the land is immediately available as in case of lands belonging to Government or under the urban land ceiling act or is to be acquired will also have to be considered in the selection process. If any alternative piece of land is available is another factor to be considered.

Cost : Cost of land will differ in case of Government lands, ULC/lands, acquired lands or lands to be purchased by direct negotiations. Moreover, for each of the selection criteria/mentioned earlier, there will be an accompanying cost. Finally, all these factors have to be converted in terms of fiscal costs. The intended project content will have to be matched with all these factors for a particular site and a cost worked out for the available alternatives.

LAND PROTECTION:

Protection and security of land already in possession, particularly in view of large scale unauthorized squatting in urban areas, is a major aspect of land management.

- **Legal:** To protect the land by law, adequate measures must be taken to ensure creation of photographic evidence to show its actual condition on the date of taking over possession. The photographs should show the adjacent development as well. These photographs can be authenticated by concerned land records authority.

  Placing of ownership boards, warnings for trespassing etc. should be done.

- **Physical**: The land can be enclosed by wire fencing or wall. However this can be an expensive proposition.

- **Leasing back to owners** : The land can be leased back to the original owners for specific use for specific periods.

- **Leasing to local residents' association for recreational purposes:** This can ensure keeping the land free from encroachment but can also create problems with the lease at a later date.

- Employing private security agencies for watch. This can also be a costly proposition but may be less costlier than employment of own security staff.

- The best way to protect the land is to ensure that building activity starts as soon as the land is taken over.

COST APPORTIONMENT TO PROJECTS

On a piece of land it is possible to take up projects for different categories of dwelling units for one or more income groups. The extent of utilization of land for different projects can vary. It is, therefore, necessary to study the relationship of area under, residential use and area under common facilities like roads, open spaces and other non-saleable areas like nalla, etc. The cost of land area under such users need to be spread over all saleable land area. For such spread over, it is necessary to establish proper quantitative relationship within a project area.

The apportionment of the cost of land and cost of development of the land as well as roads, etc. needs to be done in relation to the intended use of land For this purpose the useable land or saleable land is assumed to be 100%. The on-saleable area is proportionately distributed over the saleable area in terms of costs ad area. The costs are thus apportioned for non-saleable users on saleable lands. The share of each project can be further worked out.

This exercise can however become a bit complicated when the land is to be developed in phases. Certain facilities, though not serving the earlier phase of development, have to be provided right in the beginning like, main access roads, land for main overhead or underground water reservoir, central park, sewage treatment plant or septic tank etc. It is necessary to therefore apportion the area of land for common facilities to each phase so that costing an be done accordingly.

The concepts of public, semi-public, semi-private and private land explained earlier should also be kept in mind while apportioning the land.

LAND ACCOUNTING:

Land is the basic resource for all shelter programmes. Therefore, a land account should be maintained almost in the similar manner as the fiscal accounts of the concerned organization. It should give,

> The last balance of land available.
> Likely addition during the year.
> Apportionment to various projects.
> Possible requirement for short term and long term projects.

Ways and means of creating this resource.
Likely costs.

In the absence of such an account for the basic resource, any future planning as well as cost accounting can only be ad-hoc.

VALUATION OF LAND :

The process of valuation is a systematic or logical derivation of the value of land at a particular point of time taking into consideration its existing and potential development prospects.

The cost of land is determined on the basis of valuation of land. Land is valued on the basis of following aspects.

   i.   Location,
  ii.   State of development, access, services, etc.
 iii.   Permissible uses – residential – commercial – industrial etc.
 iv.   Shape, size and dimensions of land,
  v.   Sales data of nearby and adjoining properties.

Acquisition of land requires valuation of land to be done by Government registered valuers or officers of Town Planning department. The real value of land is difficult to assess as many sales transactions do not truly record the price paid. The practice to pay certain solarium over and above the amount of valuation, has been evolved to cover the unrecorded portion of transactions to some extent.

The valuation takes into account, the development potential of land in terms of quantum of development, quality of development, intensity of development, users, accessibility, availability of social infrastructure – facilities, availability of physical infrastructure – services, location in terms of distance from city centre, etc. The size and shape of land determines the scope of development and hence affects the value. Sales data establishes the trend and hence is used as an important index.

CONCEPT OF F.S.I.

The value of developable land in urban areas depends mainly on location and user. The quantum of permissible development is governed by a set of proposals and regulations in Development Plan Documents. The quantum of development in physical terms is explained in terms of F.S.I. or F.A.R. The terms are synonymous and indicate relationship of the area of land with total developable area. Floor space index (F.S.I.) indicates the proportion of total permissible floor area to the total area of plot (1:1 1:3.3 1:2.4 etc) while floor Area Ratio explains the ratio of permissible floor area to total plot area (100 : 150 : 200 etc.)

The value of land or the opportunity cost of land is one of the factors determining the quantum of development. Higher value of land demand intensive use. The intensive use in turn increases the price of land. However, the F.S.I. is predetermined in a development plan taking into consideration the user, location, available and proposed physical infrastructure, etc. This becomes an important tool for control of development. As a resultant the permissible F.S.I. or F.A.R. determines the land values at least affects it to a great extent.

In smaller towns where pressure on development is not so high the concept of F.S.I. may not exist. Even the development control regulations lay down only ground coverage and the number of stories. However the common practice is to have F.S.I. 1.00. when it exceeds that index the concept "really operates".

SLUM IMPROVEMENT AND UPGRADATION

THE MAHARASHTRA SLUM AREAS   (IMPROVEMENT, CLEARANCE AND REDEVELOPMENT) ACT 1971.

BASIC OBJECTIVE

The act which came into force in August 1971 provides for

>	Improvement of Slum areas.
>	Clearance of Slum areas.
>	Redevelopment of slum areas.

Declaration of Slum areas :

The importance of this act in its possible use as a major instrument of managing development lies in its definition of what constitutes a slum. It is relevant therefore to reproduce here section 4(1) and (2) as below.

4 (1)   Where the Competent Authority is satisfied that –

>	(a)	any area is or may be a source of danger to the health, safety or convenience of the public of that area or of its neighbourhood, by reason of the area having inadequate or no basic amenities, or being unsanitary, squalid, over crowded or otherwise; or

(b) the buildings in any area, used or intended to be used for human habitation are-

(i) in any respect, unfit for human habitation; or

(ii) by reason of dilapidation, overcrowding, faulty arrangement an design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation, light or sanitation facilities or any combination of these factors, detrimental to the health, safety or convenience of the public of that area. The Competent Authority may by notification in the Official Gazette, declare such area to be slum area. Such declaration shall also be published in such other manner (as will give due publicity to the declaration in the area) as may be prescribed.

(2) In determining whether buildings are unfit for human habitation for the purposes of this Act, regard shall be had to the condition thereof in respect of the following matters, that is to say –

(a) repairs;
(b) stability;
(c) freedom from damp;
(d) natural light and air;
(e) provision for water supply;
(f) provision for drainage and sanitary conveniences;
(g) facilities for the disposal of waste water;

and the building shall be deemed to be unfit as aforesaid, if and only if, it is so far defective in one or more of the said matters that it is not reasonably suitable for occupation in that condition.

DECLARATION UNDER THE ACT :

It would be clear from this section that any use of land which may constitute a source of danger to the health, safety or convenience of the PUBLIC of that area or of its neighbourhood can be declared as a slum. Quite obviously the area NEED NOT be a residential area. In fact, subsection 4(i) (b) and 4(2) describe separately the grounds on which residential areas can be declared as slum areas.

Apparently, the significance of the subsection (i)(a) of section 4 has either been lost or has not been used properly. This sub-section empowers the competent authority to declare any area or use – industrial – commercial – recreational to be a slum area if it is considered a source of danger to the health, safety or convenience of the public of that area.

Thus, a squalid vegetable market, a slaughter house, a congested commercial street, an ill located building material market etc. can be declared as a slum area and cleared or improved under this act.

SLUM IMPROVEMENT :

The competent Authority under this act has fairly wide powers to the extent of evacuating the entire area for the purpose of instituting improvement that cover, laying of services, roads, provision of amenities like parks and playgrounds, schools, hospital etc. Thus the improvements include all the provisions that are normally made in a T.P. SCHEME under the M.R.T.P. Act.

The Act also empowers the competent authority to require the owners of the building to carry out the improvements, instead of incurring expenditure from public funds on such improvement. More over, the costing or maintenance of such improvements is also recoverable from the people residing in the area.

SLUM CLEARANCE AND REDEVELOPMENT:

This section of the act empowers the competent authority to demolish all structures and completely clear an area for the purpose of development. While proper safeguards are provided in the act to give alternative accommodation to those people who may be rendered homeless, never-the-less this section gives tremendous powers and enables a competent authority to undertake large scale redevelopment.

It would thus appear that despite such sweeping powers provided in the act, the urban development and local authorities have not so far effectively used these provisions to manage the development of their urban area.

ACQUISITON OF LAND :

Under this section the competent authority is fully empowered to acquire land for slum improvement etc. and the land is deemed to vest with it as soon as a notification for acquisition is issued. Thus, the land acquisition process under this act is much quicker then under land acquisition Act of 1894. The provision in this act are similar to that in the B.M.R.D.A. Act.

All in all it would appear that the Maharashtra slum areas act can become a very effective instrument of development management both from control and promotion point of view.

SLUM IDENTIFICATION AND CLASSIFICATION:

The slum in a city can be classified into a hierarchical order based on the existing physical-social-economic 'Aspects'. Some of the major aspects that have considerable impact on life in a slum, are :

(a) **Physical Environment**: Roads, water supply, drainage, sewerage, electricity.

(b) **Building conditions**: Quality of construction, ventilation, materials used.

(c) **Living space standards:** Area per family.

(d) **Facilities**: Schools, open spaces and play areas, dispensaries, shops and accessibility to public transport system.

(e) Age and size of slum.

(f) **Location of slum**: Harmony or disharmony with planned future development of the city.

(g) Literacy amongst residents.

(h) Family income of residents.

(i) Animal population.

(j) Occupation of residents.

(k) Density of population.

The classification of the slums can be done by assigning weightings to these aspects in terms of their "acuteness" as well as priority as felt by the slum dwellers themselves.

Selection:

It is necessary to adjudge the impact of all these aspects on the quality of life in the slum. Since some of the aspects are more basic and vital to life than others, it is important that these are assigned weightage in conformity with their relative importance. Weightings can be assigned by taking into consideration the opinions of a cross section of that community where up gradation is contemplated. For example, highest weightage may be assigned to the element "Physical Environment" and the lowest to "occupation" if the inhabitants of the slum so feel.

A slum scoring the highest weightage will be at the top (worst) and the one scoring the lowest will be at the bottom (bad), thus revealing its hierarchical order and suggesting an order of priority for undertaking up gradation programmes.

SLUM REDEVELOPMENT

During the time that the general agreement of the people of a particular slum for the improvement programme is obtained, the concerned agency can prepare the redevelopment scheme for the slum. The basic components of such a redevelopment scheme should be.

1. Widening, paving and realigning of existing access ways to the extent possible.

2. Surfacing of these roads to allow for vehicular traffic to a limited extent.

3. Provision of water supply by Public stand-posts at convenient location.

4. Provision of a surface drainage system to reduce water logging during rainy season.

5. Provision of public utilities including washing and bathing places and WCs (separate for men and women).

6. Provision of amenities like schools, health centres etc.

Cost Estimates:

Thereafter, cost estimates for the package of redevelopment programme need to be worked out. For each package of programme, a minimum and maximum cost per household has to be roughly worked out.

The cost estimates have to be derived on the basis of factors such as, ownership of land, land value, and existing conditions in slum and thus may vary from town to town depending upon the acuteness of slum conditions.

TRANSIT ACCOMMODATION:

During the period that a slum is being redeveloped it might become necessary to shift some of the families temporarily. To accommodate these families temporarily, transit accommodation has to be arranged. Proper identification of the number of families to be shifted must be done and records maintained about the size and

composition of the family so that at a later date no unauthorized families get either the redeveloped accommodation in the slum or occupy the transit tenements.

In allotting the transit accommodation, care should be taken to ensure some relationship between the location of the transit camp and the places where the family members are employed – working etc., to ensure minimum resistance to shifting in the transit camps.

COST COMPONENTS:

The cost components in a slum up gradation programme would comprise of :

      a. Cost of land.

      b. Cost of laying physical infrastructure.

      c. Cost of facilitating provision of amenities.

      d. Cost of providing shelters if any.

      e. Cost of providing common taps, toilets etc.

      f. Cost of providing transit accommodation.

      g. Cost of technical assistance to the slum dwellers in building shelters and obtaining necessary Municipal approvals.

      h. Cost of community and social workers for organizing the people and to formulate redevelopment plans with maximum participation from the inhabitants.

      i. Cost of administration of the project.

HOME IMPROVEMENT LOANS:

The urban poor have great need for small amounts of money to repair or modify parts of their shelters. Such modifications, though may cost very little, can considerably bring relief to the living environment of the poor.

It is therefore necessary that there are some innovative methods of financing such loans for home improvement wherein the normal stringent security requirements are suitably altered to facilitate and give better access to institutional financing for the urban poor.

CO-ORDINATING WITH LOCAL MUNICIPAL GOVT.

Slum up gradation or redevelopment as a rule should be undertaken only as a joint programme in which the local Municipal Government must be a partner. Under most of the Municipal Acts in this country, provision and maintenance of infrastructure facilities like roads, water supply, drainage, sewerage, solid waste disposal, health, etc. are the obligatory functions of the local government.

Hence, it is finally the local body which has to take over roads and other services and maintain these permanently. It is therefore necessary that the specifications and laying of the physical infrastructural services is done with prior agreement of the local authority.

Moreover, there are many community welfare programmes either run or funded by local authorities which can be profitably implemented as part of an integrated slum up gradation programme. It is therefore imperative that such programme are undertaken with full cooperation of an in co-ordination with the local Municipal authorities.

ROLE OF VOLUNTARY AGENCIES:

Without substantial community support and initiative "slum up gradation" is difficult, if not impossible. The participation of the residents is particularly important for the maintenance of these projects. Questions of tenure, self help, relocation, compensation, tax collection and enforcement of requirements can only be successfully resolved with the active help and participation of the community in planning and implementing the improvement projects. Community involvement is most effective when it operates through established leaders, groups, and organizations. When such leaders and groups exist, it is important to involve them from the beginning in the planning of the project. Unfortunately, in certain slum areas, there is no social unity. There may be divisions along racial, religious, linguistic or class lines, all these divisions are likely to be intensified at times of political unrest and economic hardships. Lack of education amongst slum dwellers frequently compounds the problem. Planners, therefore, have to work closely with the people in the hope that the necessary organization and spirit of mutual help will spontaneously develop. Often, however, there is a shortage of professionals with training and experience in community work.

In such situations it is the voluntary community development organizations which effectively act as bridges to deliver the programme of slum up gradation by working with them, educating them, organizing them so that they can effectively participate in the programme.

ESTIMATING - COSTING AND PRICING

DEFINITION

ESTIMATING is the process of working out expected costs of all concerned – related items and ingredients at current market rates and then making provisions for unforeseen expenditures and cost escalation during the construction/development period.

COSTING is a process of working out various costs involved in – assembly – creation of a product by working out direct costs and by allocating indirect costs. The amount of these various costs put together become ACTUAL COST of a product with need not have any direct relationship with its PRICE.

PRICING is the process of determining value and fixing price for sale accordingly. It is a combination of the process of valuation and process of determining sale price for a product.

COST OF LAND AND INFRASTRUCTURE

The cost of land can be considered in two ways i.e. actual cost paid plus interest on that investment if any or market value that can be realized in open sale. Charging of any one of the two costs depends upon the policy of the organization. When cost of acquired land is not paid at the time of estimating, suitable provision will have to be made including provision for the interest component. Cost of infrastructure is the amount spent on provision of various services like water supply etc. It also includes interest capitalization and agency charges depending upon the policy of the organization. Infrastructure items include, water supply, sewerage, drainage, electricity, land dressing, filling and other land development items like landscaping, street furniture, etc. which can be included under environmental planning.

Cost of land and infrastructure together constitutes total cost of developed land. It is possible that agency establishment charges or overheads are charged on the basis of cost of land and infrastructure together instead of adding on individual items. This depends upon the system adopted by the organization.

COST OF CONSTRUCTION (shelter)

It is worked out at two stages. First is at the estimation stage. At this time costs are worked out with the help of schedule of rates for the current year, provisons are made for certain items which are likely to occur due to the likely time gap between estimation and actual construction. These provisions are made as a percentage of the basic estimated cost. Second is at the stage of completion of construction. At this time almost all actual costs are known. Certain direct costs or overheads are

added to the actual costs. These overheads may be added as a percentage of the basic costs or as per allocated costs.

COST OF MONEY

Any money used for manufacture – assembly – creation of a product is called capital. The capital used in the activity of production is an investment and it is necessary to make provision for adequate financial return on this investment. This return on investment in case of housing is the interest. It is decided in proportion to the capital/investment per time unit. This interest is the cost of MONEY utilized in production. A provision is made in the estimates under "interest capitalization". It means interest at a fixed rate for the average period of construction (production) assuming investment is made at a uniform rate of interest throughout this time period. Progressive interest capitalization on the investment for full period of construction would be more accurate. However, a simple system of interest capitalization for half the total period of construction at the rate of interest applicable to the source of funds is adequate for the purpose of costing of shelter projects.

However, many a times the intended money for a low cost shelter programme is not available in time when the organization may have to use its own funds which may carry a rate of interest higher than that changeable to the project. In such cases, for correct costing, interest capitalization should be done at the actual interest rate and not at the rate changeable to the project.

COST ESCALATIONS

At any point of time, costs are on increase due to natural process of increase in the cost of all commodities. The phenomenon is known as cost escalation. It is, therefore, necessary to make provisions for the natural cost escalation in the estimates while working out estimated cost of a product. This provision is made as a percentage of the basic cost of construction. This provision is not made for the land component because land cost is normally paid for at the time of estimation and the interest component takes care of the increase. However, for construction, direct costs payable are likely to increase and hence provision of escalation is necessary.

At the time of costing, only the escalation paid to the contractor is required to be added to the costs.

ADMINISTRATIVE COSTS

Any basic function of production needs supporting functions which may not be directly required for the production process. Costs of these supporting functions are indirect costs or overheads. These costs need to be recovered in the price of the product. The component of costs of administrative functions such as administrative departments costs, costs of head office, cost of indirect staff, costs of office and equipment, etc are ADMINISTRATIVE COSTS.   Presently it is the practice to levy

10% of all costs put together towards recovery of these Administrative costs. The percentage and system is constant for estimation as well as costing. These costs are charged on the cumulative total of all other costs because the administration is required to be done for all activities – put together. No actual costs are worked out for these functions because these are fixed costs. Hence it is necessary to carry out a certain quantum of work per year in order that their percentage is not too high on the total direct cost.

COST OF SALES

In case of products which are necessarily sold with the help of marketing strategies like advertisement department of marketing etc. it is a practice to estimate and to allocate cost of sales separately. Such a practice needs to be adopted by public agencies for housing. The cost of sales can alternatively be included in administrative costs. Generally, the efforts required to be made for sale of HOUSING do cost money in terms of printing, stationary, commission to the bank for accepting the forms etc. Moreover, it may be necessary to adopt more vigorous marketing efforts for non-residential buildings and other developments and hence suitable provision for the cost of sales in estimates may become necessary.

PRICING METHODS

Pricing, as explained earlier is process of fixing a sale price with reference to costs and capacity of the market to pay for a particular product depending upon its use, need, supply, demand etc. The methods of pricing are therefore based on the nature of product.

There are two basic methods for pricing. First is based on past trends of prices for same or similar product and deciding price of product accordingly assuming certain projections. Second is based on actual accosts and certain profit. However, both methods are not directly suitable for housing. Considering the need, target group and its affordability, social considerations and the policy of government etc. it is not possible to link-up prices with the market trend. It is also not desirable to base prices on actual costs plus profit. It, therefore, becomes necessary to fix the prices with a view to avoid profit as well as loss. Hence generally, the method of actual costing is adopted with differential allocation of costs. The differential allocation is normally done for indirect costs or costs other than construction costs. Thus, a higher component of indirect costs and profit may be changed to the higher income group housing while a lower component of indirect cost can be charged to the low income housing and no profit may be charged.

CROSS SUBSIDIZATION

The sale prices of different categories of shelters are governed by norms laid down by the government or financial institutions, particularly HUDCO. These norms are based on the concept of affordability of families of different income groups. In order

to keep the costs of various modes of housing within the norms it may become necessary to adopt the technique of cross subsidization in pricing wherein, for the same project, land may be priced higher for HG and lower for EWS. The surplus amount generated by sale at higher price than actual cost is to be used for subsidizing the actual higher costs not recovered due to subsidy in the EWS category.; The principal is commonly used by development authorities for various schemes.

The major danger is when due to the hidden subsidy, the price of the EWS shelter becomes far lower than the market price, motivating the beneficiary to sell off the unit. Hence, either in case of differential pricing or cross-subsidy it is necessary to see that the final price of the EWS unit is not far too lower than the market price which may include the beneficiary to sell off and thus defeat the very purpose of cross-subsidization.

PROFITS

The amount of different between actual total costs and the realized price at the time of sale is termed as profit. The profit realized by any organization does not indicate its efficiency as commonly considered true. It merely expresses the capacity of the market to pay and the capacity and of the organization to manufacture/or create the product. In other words, if the market is unable to pay even the costs, there would not be any profit and there may even be loss. In housing organizations the amount of profit is decided on the basis of the capacity of the market to pay. Organizations working on the principle of NO PROFIT NO LOSS BASIS charge ascertain percentage of the basic costs as profit mainly to charge lower costs to the lower income group housing. The amount can be fixed in proportion to the basic costs and must have a definite relationship with the capacity of the market to pay, for a similar product by any other organization.

<u>G L O S S A R Y</u>

ACCESS   :   Access street/pathway providing direct access to plots, buildings, row houses etc. with no through traffic function.

AFFORDABILITY   :   The amount of money that a person or family can pay for housing/shelter/plot/site after other essential expenditure is met from the total income.

AMENITY   :   Any use of land or built-up space (other than the residence of a family) meant to help the daily life of the people.

BENEFICIARY	:	The person/family who is the final user of the plot/shelter provided by a housing agency.
BUILDING CODE	:	Statutory regulations governing the development land and building construction applicable in any specific area.
BUILDING LINE	:	The limit of permissible building construction within a plot, along the road etc. normally prescribed by the building code or development control rules or Town Planning by-laws.
BUILDING SYSTEM	:	A preplanned process of building construction normally referred to in prefabricated or partially prefabricated construction, specifying the building components, their specifications and sequence of erection.
BUILT-UP AREA	:	Area measured between the outer limits of the building constructed including balconies and all common areas.
CARPET AREA	:	Usable area within the walls of a building normally excluding the area occupied by walls.
CIRCULATION	:	The land area primarily used for movement both on foot and by vehicles.
CLUSTER	:	A group of plots/residential buildings around a common open space/garden.
COMMUNITY SPACE	:	Land not built upon and used for access, recreation, etc. maintained by either the surrounding residence or by the local government.
CONVENIENCE SHOPPING		Shops catering to absolutely necessary daily necessities of life located or conveniently walk able distance within a residential development.

CORE UNIT	:	Development on a plot prior to sale/lease comprising at a minimum a connection point to essential utilities system (water supply – sewerage – electricity) and at the maximum built accommodation designed to be the first phase of a larger house in future.
CROSS SUBSIDY	:	A form of subsidy generated within a project usually by differential pricing of plots/ shelters so that the excess over cost by serving expensive land/shelters can subsidies sales to lower income groups.
DELIVERY SYSTEM	:	The physical system designed to service individual plots/buildings with utilities such as water supply, sewerage, electricity etc.
DENSITY	:	Ratio of dwelling units/plots to the area of land including all amenities and services (GROSS) or excluding these components (NET)
D.C. RULES	:	Development control rules particular reference to Bombay.
DETACHED BUILDING	:	A building standing independently within a plot and not connected to adjacent buildings physically.
DEVELOPMENT PLAN	:	Statutory or proposed development plan for a city/town prepared under relevant legislation.
DEVELOPER	:	Agency that develops a piece of land providing all utilities within it and constructing buildings for residential or other purposes.
DWELLING UNIT	:	Totally built-up or partially built-up residential premises meant to house a single family and includes a developed site.

EFFICIENCY OF LAYOUT	:	The relationship of the area of land actually utilized for locating residential units to the total land including areas for utilities and amenities expressed as a percentage of total land for the project.
EFFICIENCY OF UNIT DESIGN	:	The relationship of area of dwelling unit under actual use for habitation with the total area of the dwelling unit including circulation and wall areas.
FRONTAGE	:	The maximum length of a plot/building facing the access street.
F.A.R.	:	The ratio of the total built-up floor area in a plot to the total area of the plot expressed as a single number. E.g. F.A.R. 400 indicates the total floor area taking one total plot area as a base 100.
F.S.I.	:	The ratio of the total built-up floor area in a plot to the total plot area expressed as a single number e.g. F.S.I. 1.a. indicates the total floor area to be 1.a. times the total plot area at a base of 1.
FEASIBILITY STUDY	:	Preliminary investigations or studies to assess whether a project is capable of realization within the parameters prescribed (WORLD BANK DEFINITION: identification and preparation of preliminary design of technical and institutional alternatives and comparison of respective costs and benefits inclusive of detailed investigation)
FACILITATOR	:	An agent providing components for development to act as catalyst to accelerate the process of land development/ construction.
GAOTHAN	:	Original human settlement representing generally. The physical limits of area developed organically prior to initiation of a planning process, normally evident as the core area of the present city/town.

GROSS DENSITY	:	See Density.
HABITAT	:	The total human environment including all physical, social, economic facilities for healthy living of people.
HABITABLE ROOM	:	An enclosed and roofed space used for inhabiting and excludes passages, toilets, kitchen, store rooms etc.
HIGHRISE	:	Any building requiring mechanical vertical transportation system and would normally mean buildings with ground and four or more floors.
HOUSE	:	A dwelling unit constructed for use by any family.
HOUSE SYSTEM	:	A preplanned process/system of providing shelter on a mass scale and only include provision of sites as well as buildings.
HOUSE HOLD	:	A group of persons sharing a common dwelling unit especially the kitchen and may comprise of more than one family.
INDUSTRIALISED BUILDING	:	A system of building construction where in one or more components of the building are mass produced and the entire construction process is a kin to manufacture in an assembly line production.
INFRASTRUCTURE	:	Basic installation of utilities such as roads, water supply, sewerage, solid waste disposal system, electricity etc. which are necessary for urban development.
INFORMAL HOUSING	:	Housing development carried out by individuals involving varying degree of self help from the household involved.
LANDUSE	:	The major use to which any particular piece of land is put to.

LANDSCAPING	:	The provision of paving, retaining and boundary walls and fences, trees, shrubs and related irrigation.
LOW COST HOUSING	:	Provision of basic amenities for a shelter within the affordable cost limited for any particular target group of population.
MODULAR COORDINATION	:	Coordinating the size, dimensions or area of all the components used in a shelter by adopting a single common lowest size, dimension or area so that all components are a multiple of this common module.
MONITORING	:	The process by which information on key aspects of the project is collected regularly in order to assess progress relative to plans and foam a basis for the review of plans.
NEIGHBOURHOOD	:	An area whose inhabitants share certain social services such as a primary school. They are usually designed to minimize walking distance to school and avoid the crossing of major roads by children.
NET DENSITY	:	See DENSITY
OFF SITE	:	An construction/provision of utilities beyond the boundaries of individual sites mean for the shelter of single families, but serving the total population in the project.
ON SITE	:	All construction/provision of utilities within the boundaries of individual site meant for the shelter of a single family.
OPPORTUNITY COST	:	(of land) An amount of money which a piece of land would common if sold on the open market. This amount represents a lost 'opportunity' and is therefore a cost to the project.

PARAMETER	:	A figure or quantity used as a limit which is constant in a particular situation but which may change if that situation is altered.
PATHWAY	:	An access to a plot/shelter/building of such width and specification as can afford only pedestrian movement normally.
PLOT COVERAGE RATIO	:	The percentage area of an individual plot/site which can be built upon at ground level by the construction of a house/building.
PRIVATE HOUSING	:	Housing/shelters built by private enterprise which includes co-operative efforts.
PROJECT PLANNING	:	Conceiving a project based on given parameters of land, infrastructure, costs, materials, resources, systems and manpower.
PROGRAMME EVALUATION AND REVIEW TECHNIQUE	:	PERT: A system of evaluate the progress of a project and apply corrective measures to conform to original time and cost schedules.
PREFABRICATION	:	Making of one or many components of a building in advance of its actual use and time for its incorporation in the building.
PRIVATE OPEN SPACE	:	The land area for the exclusive use of a single or group of beneficiaries through which no utilities/services can be laid that do not serve the same beneficiaries.
PUBLIC OPEN SPACE	:	The land area for the free use of general public and maintained by the local authority.
PUBLIC FACILITIES	:	Services such as schools, health centres, places of worship, community centres, public toilets etc. required by the community.
PUBLIC HOUSING	:	Housing meant for general public normally constructed by a public sector housing agency.
RESOURCES	:	Public and private finance, land, labour and materials available for the implementation of the plan.

RIGHT OF WAY	:	The total width of a road along with its pavement and future reservations.
ROW HOUSING	:	Houses built in a row with two of thin walls common and shared with adjacent houses.
SANITATION	:	Measures for the promotion of health in particular drainage and sewerage disposal.
SERVICES SITE	:	A housing plot/site fully services and connected to the main water supply, drainage, sewerage, solid waste disposal, electricity and road system.
SEWEAGE	:	Human waste and waste water usually carried by a sewer pipe or stored in septic tank or pit latrine.
SEWERAGE	:	A system of sewer pipes to carry sewerage.
SEMI PUBLIC AREAS	:	Areas for use of an activity where access is restricted to only group of people and at specified times. Such as stadiums, shopping centres etc.
SEMI PRIVATE AREA	:	Areas which are meant for use by identified group of beneficiaries and maintained by them who can restrict access to these areas by public such as terraces, stilts, pathways, driveways etc.
SITE PLANNING	:	Preparation of a layout design for a given piece of land without reference to the surrounding development.
SITES AND SERVICES	:	A method of deciding common modules, designs, processes so as to reduce the repetitive quantum of work in a project.
SUBSIDY	:	See Cross Subsidy.
SUPERSTRUCTURE	:	All building works above the ground.

TARGET POPULATION	:	Identified segment of population with known socio-economic characteristics for whom a project is to be undertaken.
TRANSIT HOUSING	:	Shelters provided to identified families for their temporary accommodation for their permanent shelters are ready.
UTILITIES	:	Physical services such as water sewerage and electricity but excluding roads.
WALK UPS	:	Buildings having maximum ground and four floors without any mechanical means of vertical circulation requiring residents to 'walk up' the stairs to topmost floors.

16

Community Participation in Housing

Most often, in India, people who live in the slums have other people planning for their lives. As a result, what they get is not planned with them but what other people plan for them.

slums in Mumbai

Most slum redevelopment projects in India have brought the issue of community participation in development decision-making into sharp focus. Redevelopment of Dharavi in Mumbai for example, revealed a complete lack of regard for the life styles of an affected community's input into key decisions

that would have far reaching implications for their lives. It is an example of how tragically wrong things can go when communities are not consulted by those charged with execution of such projects.

Be it Dharavi in Mumbai or development in Navi- Mumbai it often leads violent protests making headlines in the media.. We have become accustomed to regular media reports of such "service delivery" protests. At the heart of the issue appears to be the problem that people are not being listened to by the concerned authorities and the state.

Slum dwellers protesting against eviction

A recent research conducted in South Africa by the 'Community Agency for Social Enquiry' with funding support from the Ford Foundation probed whether community participation is working; especially in the way municipalities interact with marginalized residents in terms of their housing strategies. The research hoped to improve communication between local government authorities and marginalized residents.

The research found that, despite the legislated requirements and the structures and processes that both municipalities have in place to engage in community participation, these do not always work. Consultation is often seen as 'token' or 'time-consuming' and does not necessarily mean that residents have a meaningful contribution to government's planning and implementation.

The Town Planning Acts in most states of India provide for structures and processes to facilitate and enhance community involvement including community based integrated development planning. In addition, cities like Mumbai have elected ward councilors and ward committees,

Citizens are promised effective community participation through several legislative mechanisms including the 74th-75th amendment to the Indian Constitution, which focus on a range of socio-economic rights and promotes developmental, inclusive and participatory local government. The law requires local government to work with its citizens and communities. For example, ward committees are a forum for citizens to voice their concerns to promote community participation.

Yet, community participation in housing-related decisions remains inadequate. In some cases poor people's housing strategies are in conflict with competing interests and authorities, and they are removed from settlements. Declaring their activities as "unauthorized" by the authorities increases their vulnerability, with non-local population particularly at risk.

Community participation: A rarity

Since 1995, when it was created, the Mumbai Slum Redevelopment Authority has consistently failed to put in place policies focused on in situ upgrading. In

other words, improving informal settlements where people have already erected structures for shelter has been deliberately neglected.

Slum re-housing continues to be built on poorly located land far from work opportunities and social facilities. In addition, the upgrading of informal settlements and provision of low-income rental units is almost non-existent. The recent cases in Mumbai, Delhi and some other cities where government demolished houses built by residents who were duped by fraudsters into buying illegally secured land, reveals the extent of the shortage of land for affordable housing in Indian cities.

There is a growing problem of homelessness and inadequate housing. This huge demand for housing has led to the poor resorting to "illegal" occupation of dilapidated buildings in inner cities like Mumbai causing frequent structural collapses and human fatalities

In Mumbai most dilapidated old buildings are poorly maintained "chawls" usually in the inner city, which threaten the health and safety of occupants. Mumbai has approximately 16000 dilapidated (cessed) buildings of which only about 1200 have been reconstructed since 1999.

Dilapidated building still inhabited!

Location of housing remains critical as economic opportunities for the poor are so important. Poor people try to locate close to areas where they can find economic opportunities, which often bring them into conflict with the local authority. Various social surveys by NGOs in the slums of cities in India (and in the Author's own experience of interaction with project affected families in world Bank aided projects in Mumbai and Chennai) highlighted the availability

of employment opportunities, transport networks and schools as key motivations for the location of housing for resettlement of slum residents.

At the same time, local government is faced with serious urban management challenges, particularly those linked to housing. Municipalities do not have adequate funding and capacity to deliver physical services. Court cases that have followed evictions of families from dilapidated structures and illegal slums have only further underlined the fact that there is an urgent need to provide options to these families living in intolerable conditions, by considering in situ upgrading and provision of alternative accommodation.

Cities must make explicit commitments in their development plan making process to make public participation an integral part of the planning, budgeting and service delivery processes. City development process must work with the people to plan for their future rather than merely informing the community of what is going to happen to them. Community participation processes should be seen as a genuine attempt at capturing the developmental aspirations of the people and not merely a public affirmation or a checklist exercise.

Slum dwellers display identity cards

Community participation for residents living in dilapidated buildings marked for redevelopment and in informal settlements is inefficient where it exists, and

non-existent in most cases. In fact, in cities like Mumbai the only interaction the slum residents have with the authorities is when the police or officials of the local or Slum Redevelopment Authority harasses them for identity documents. The drive for "Adhar" cards should in fact be concentrated and taken up vigorously in the dilapidated buildings and slum areas of cities like Mumbai

There is a perception that politicians only seek out such communities during the election period. What is their interaction in the so called participatory mechanisms for local development? In the affected people's eyes, the enforcement of municipal by-laws seems to be the only feature of municipal-community interaction!

The civil society organizations, rather than engaging themselves in national corruption issues, could instead, fight for the "right to participate" in the city

Civil Society Activists

Development process. In the absence of any such initiative, mass protests, demonstrations and approaching the "news hungry" TV media have often become the outlets for people's expression of frustration. A key issue is the importance of effective communication. When considering housing options for the poor it is important that issues around participation of the poor are addressed in conjunction with those affected. Far more emphasis should be placed on effective communication with ward councilors, NGOs and residents.

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HOUSING THE URBAN POOR

Introduction

The housing problem in India has already assumed alarming proportions. The financial outlay required to solve the problem is colossal and the funds actually being made available are insignificant as compared to the need. The problem becomes more aggravated because of the very limited paying capacity of an overwhelming majority of our people who cannot afford to have a house of conventional construction unless it is heavily subsidized. Any scheme of subsidy not only dries up resources for plough back in housing, but also leads to a number of malpractices like re-selling etc. The phenomenal rise in the cost of construction, all round shortage of various building materials and deterioration in quality has made the situation worse. It is, therefore, clear that the conventional design and construction practices have to be reoriented to meet the challenge.

In the western countries, capital, energy and skill are in plenty and labour is scarce while in India the situation is just the opposite. If a building technology has to serve the vast majority in India, it should reduce cost of construction to the minimum, employ construction methods which are relatively simple, capital saving, labour intensive, reduce consumption of materials to the minimum and primarily use locally available/manufactured materials. An all round resources conservation should be the primary concern of the new construction technology .

Economic Background

An all India Household Survey conducted by National Sample Survey showed that an urban household has an average annual income of less than Rs.1,19,067 per household (2009-2010).extrapolated on the basis of per capita monthly expenditure.. Assuming a total expenditure of 15% of the monthly income (17,860) on housing, an

overwhelming majority of people cannot afford to pay for a house more than Rs.1488/- p.m. for amortization in a period of 20 years. This would mean that the cost of the house cannot exceed-@10%rate of interest- Rs.1,54,196. A small dwelling unit of 16 sq. mt. plinth area can be constructed within this cost even at current (2012) prices.

To meet this situation, it is necessary that standards relating to land use, floor space, quality of finish and other specifications, utilities and even durability of materials, should be modified suitably to bring down the cost within the paying capacity which is of paramount importance. Design of such a house should be on a "Growing House Concept" capable of being improved/expanded as and when the paying capacity of the household increased.

Cost Components of Housing

There are two primary components of the cost of a house
i)   The cost of developed land; and
ii)   The cost of building construction

While selecting land for the housing of the lower income groups, apart from social and physical factors, the economic considerations are of primary importance. The cost of developed land is determined by

i)   The cost of raw land
ii)   The efficiency of the layout plan reflected by the density and
iii)   The cost of development

While the cost of (i) and (iii) might be less easy to control, the relative efficiency of the layout plan can increase or decrease the incidence of the cost per unit of house/flat. Higher the proportion of the saleable land in a layout, the lesser will be the incidence of its cost per dwelling unit.

When the cost of developed land is substantially higher, there is a temptation to resort to multi-storey construction to distribute it over as many dwelling units as possible. While trying to intensify the use of land, the environmental standards should not be reduced below the minimum requirements for human habitation.

The intensity of land use that can be obtained by resorting to ground and four-storey (5 storey walkups) developments as against ground and one-storey development is demonstrated by the two layouts shown below in fig.1 and 2. In figure 1 it is shown that for a site of 1.72 Hectares, a density of 133 D.Us (dwelling units)./Hectare is obtained with ground floor development alone. It is doubled to 266 D.Us./Hectare with G+1 storey development. By retaining the same standards of open space provision, a density of 408 dwelling units per hectare is obtained for ground and 4 storey development, as shown in figure 2. This indicates that though the number of
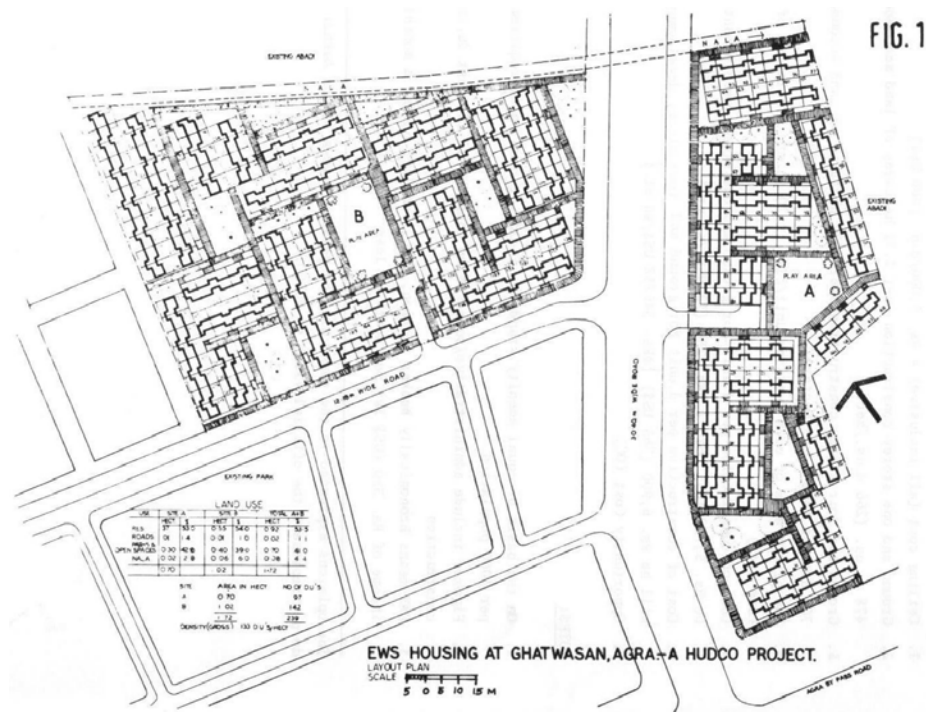
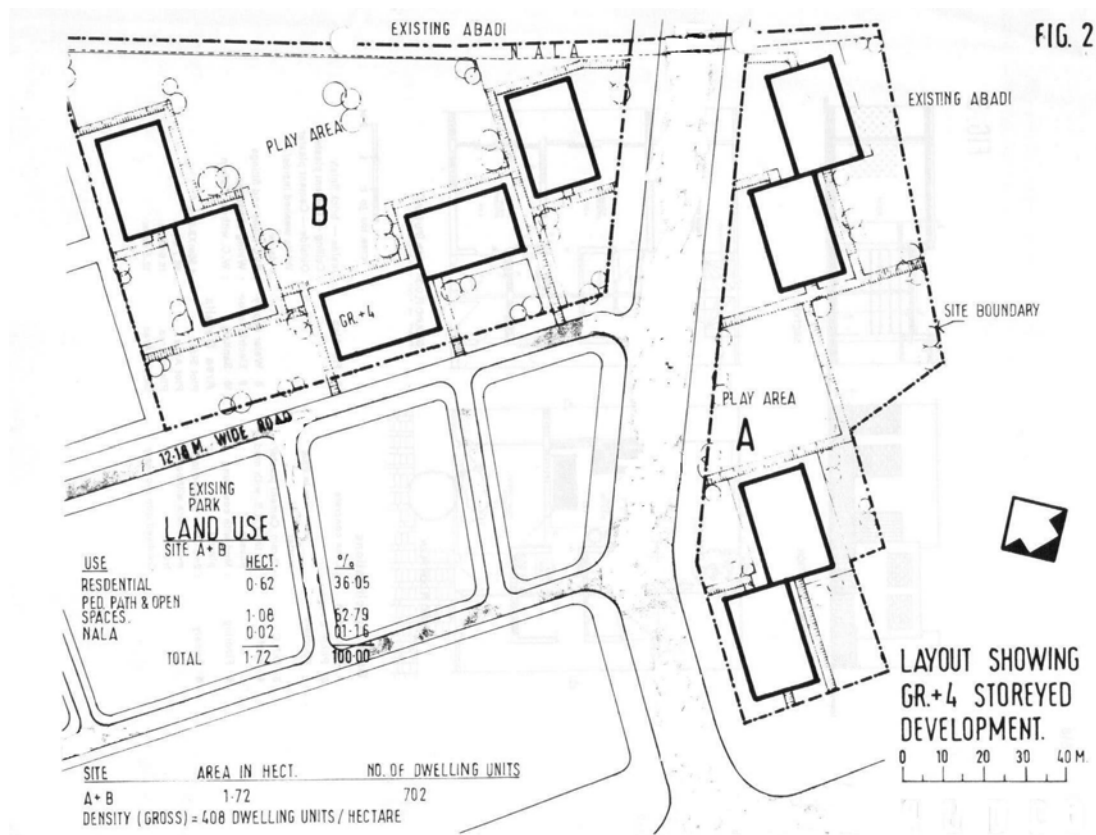storey is increased by 250% the increase in density that can be achieved is only 50%.

Moreover, multi-storey construction increases the cost of construction per sq.mt. as extra expenditure will be involved in providing stronger foundations, stair cases, higher specifications, services etc. The extent of increase in the cost of construction is indicated in the table below:

Index of plinth area rates for construction

Type of construction	Index	%increase
Ground floor construction	106.5	+ 6.5
G.F + 1	100	Base
G.F + 2	106.5	+ 6.5
G.F + 3	112.5	+12.5
G.F + 4	121.88	+ 21.8

The above indexes clearly indicate that ground and one storey development is the cheapest form of building construction.

FIG. 1

EWS HOUSING AT GHATWASAN, AGRA-A HUDCO PROJECT.
LAYOUT PLAN

FIG. 2

LAYOUT SHOWING
GR.+4 STOREYED
DEVELOPMENT.

Two layout plans for G+1 and G+4 storey development are illustrated in fig 1 and fig.2

The construction costs can be derived from the cost indexes mentioned earlier, in Table 1 for these two types of construction. With successive increase in the cost of developed land, the amount available for building construction reduces. Thus, where the cost of saleable land is substantially higher, the use of such lands for low density low income housing (growing concept)is not economically feasible and multi story development may have to be resorted to.

The argument that multi-storey construction is a 'must' where the land cost is high is however not necessarily valid. However, such a development will lead to less intense utilization of land as the number of dwelling units provided will be lesser as compared to G+4 storey development. Even if the opportunity costs of these dwelling units is added to the cost per dwelling unit in case of G+1 storey development, dwelling units can be constructed where the cost of developed land is low

The result of the study was utilized in preparing a live project which has been implemented in collaboration with the Uttar Pradesh Housing & Development Board at Agra, India.

Low Cost Housing Project at Ghatwasan: Agra

The project at Ghatwasan, Agra, was undertaken in collaboration with the U.P. Housing & Development Board. The entire project was designed and financed by HUDCO while the construction and allotment was undertaken by the U.P. Housing & Development Board. The project design illustrates effectively that low rise development is possible and practicable on high cost land

The principal objective of this project was to demonstrate the importance and effect of efficient architectural, structural design, layout and construction management in bringing about economics of cost without detriment to the creation of a good physical environment.

Site

The site of the project is situated along the Agra by-pass on the northern periphery of Agra. The project area was a part of a large housing project being developed by the U.P. Housing & Development Board at Kamla Nagar (Ghatwasan. Agra). The project area is bifurcated by a 30 M wide road with site 'A' on the eastern side of the road and site 'B' on the western side of the road. The total area of the site is 1.72 hectare. Along the western boundary of the site 'A' and along the northern boundary of site 'B' there are existing 'Abadis' (village sites). The land is generally level.

Design Approach

The principal criteria in developing a design for the economically weaker sections of the society are their ability to pay. This necessitated the provision of the minimum covered accommodation. The possibility that the income of these people might increase in future enabling them to expand the houses for themselves cannot be ruled out at the planning stage. Thus, the minimum house to be provided for these people have to be capable of growth in future as and when necessary. In order to achieve maximum utilization of land, row housing was preferred with plot size of 4.5 mt. x 8.6 mt.

The accommodation provided consists of a room of 3 mt. x 3.1 mt. with a cooking space of 1.2 mt. An independent WC is provided with open bathing space adjacent to it. In future, a room of about 3 mt. x 2.5 mt. can be added in the front courtyard and by providing a staircase at the rear, the entire unit can be repeated on the upper floor. The foundations provided in the initial stage are capable of taking the load of the first floor. Thus, although initially a plinth area of only 16 sq.mt. is provided on the ground floor in future the family can have a total plinth area of 25 sq.mt. each on the ground floor and on the upper floor respectively. This indicates the growth possibilities of the design. Initially the covered area provided being less the courtyards will accommodate outdoor activities of the family occupying the house.

Cost Reduction Measures

Following specific measures were adopted for cost reduction:

All load bearing brick walls in lime mortar are provided with a maximum
roof span of 3.23 mt.
Service core of two adjacent units are combined together for spanning the
roof at a height of 2.2 mt. This has helped in eliminating a load bearing wall
on one side of the cooking space and WC
Reduced ceiling height for WC and cooking space will facilitate repetition
of WC on the upper floor and will result in reduction of quantities for brick
work.
Reinforced brick roofing is provided to replace conventional RCC roofing.
Walls are plastered on one side (external) only.
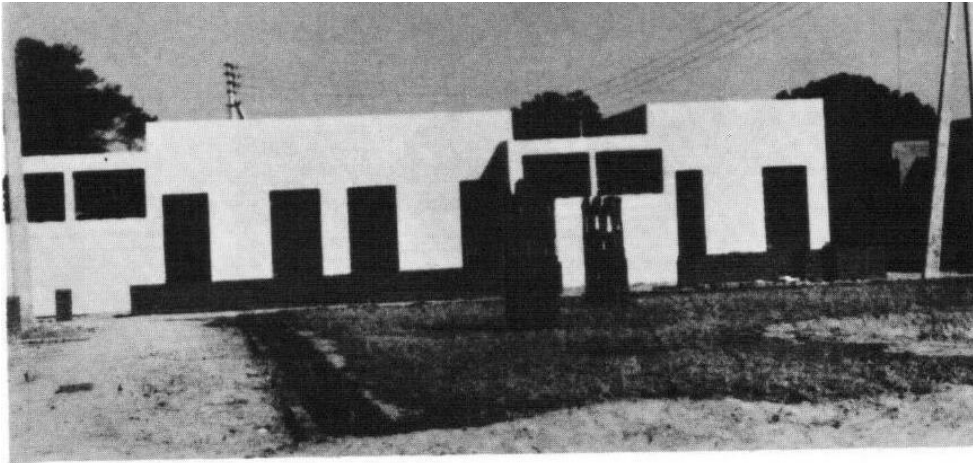
Fig. 4 Completed ground floor units in Phase - I of construction

Rammed earth filling with mid plaster is provided for the ground floor. No
floor finish is provided. Individual families can provide a suitable floor
finish with their own efforts.
In place of regular windows brick jail is provided. This type of jali requires
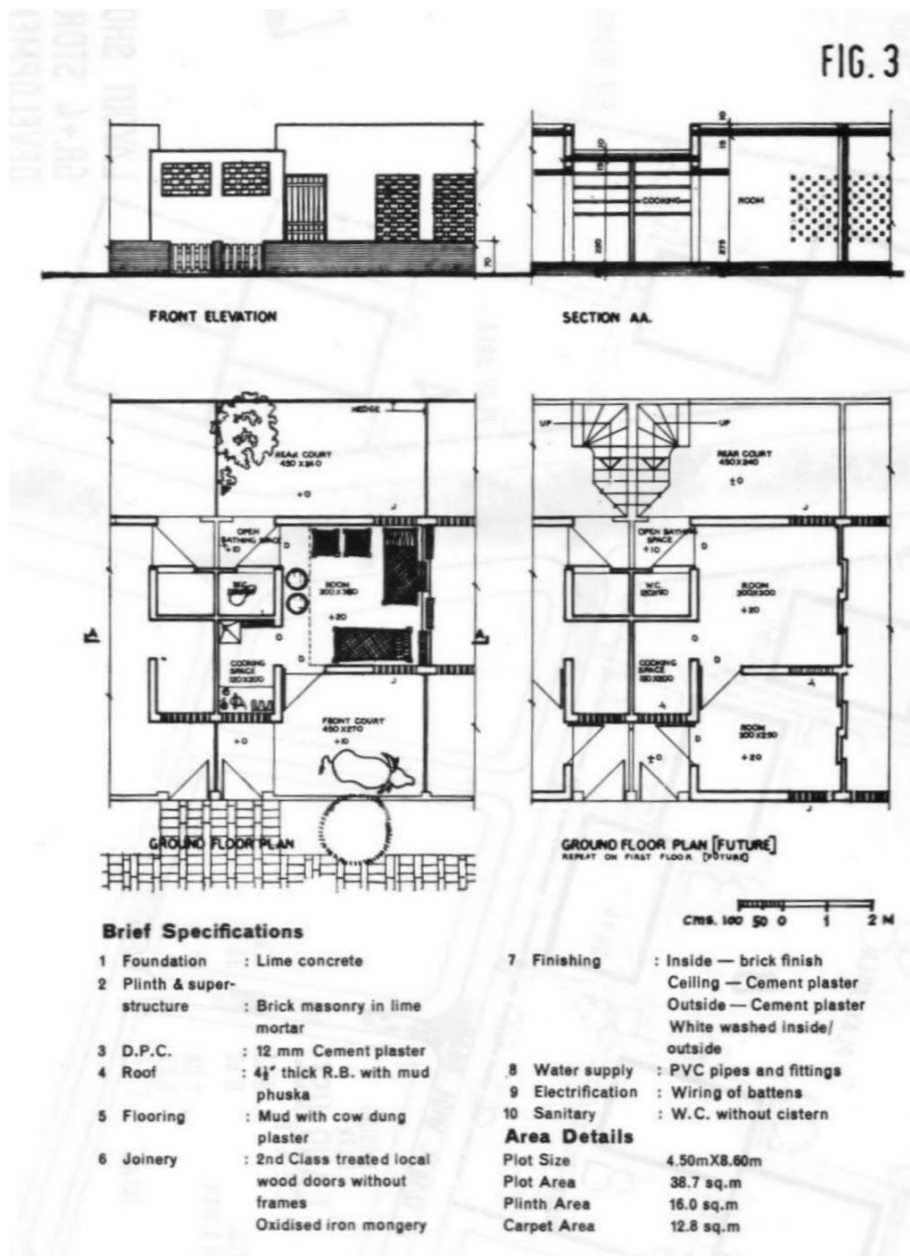no special labour.
Frameless battened doors of second class timber are provided. Only one
type of door is proposed.
a common door shutter is provided between the room and WC.

Density of Development

The site was free from any constraints that would affect the density of development.
Assuming the plot size mentioned earlier, preliminary studies carried out indicated
that with single-storey development, a density of around 130 dwelling units per
hectare can be achieved on this site by making adequate provision for the

community open spaces as required. The layout prepared subsequently, has actually achieved a density of 133 D. units per hectare with single-storey construction. If the entire dwelling unit is repeated on the first floor, this density can be doubled (266 dwelling units per hectare). Thus, an effort has been made to achieve the maximum utilization of land in order to reduce to the minimum the land cost per dwelling unit.

FIG. 3

FRONT ELEVATION

SECTION AA.

GROUND FLOOR PLAN

GROUND FLOOR PLAN [FUTURE]
REPEAT ON FIRST FLOOR [FUTURE]

CMS. 100 50 0   1   2 M

Brief Specifications

1	Foundation	: Lime concrete
2	Plinth & super-structure	: Brick masonry in lime mortar
3	D.P.C.	: 12 mm Cement plaster
4	Roof	: 4½" thick R.B. with mud phuska
5	Flooring	: Mud with cow dung plaster
6	Joinery	: 2nd Class treated local wood doors without frames Oxidised iron mongery

7	Finishing	: Inside — brick finish Ceiling — Cement plaster Outside — Cement plaster White washed inside/outside
8	Water supply	: PVC pipes and fittings
9	Electrification	: Wiring of battens
10	Sanitary	: W.C. without cistern

Area Details

Plot Size	4.50mX8.60m
Plot Area	38.7 sq.m
Plinth Area	16.0 sq.m
Carpet Area	12.8 sq.m

Layout Plan

a) Cluster planning

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The dwelling units are grouped in small clusters of about 18-20 dwelling units around open spaces varying in sizes. As the covered plinth area provided is minimum, the activities of the EWS families are likely to spill over in the open spaces available around the dwelling units. Although the courtyards are provided to take care of such a spill over, it is desirable to plan for provision of community open spaces that can absorb a part of the spill over of such family activities. This can be done effectively by providing the cluster open spaces of various sizes. Such cluster open spaces can absorb activities like out-door living, working recreation, maintenance of domestic animals, etc. and provide opportunities for social integration.

On site 'A' consisting of 0.7 hectares of land, 97 dwelling units are accommodated around 4 clusters of varying sizes. Similarly, on site 'B', consisting of 1.02 hectares of land, 142 dwelling units are accommodated around clusters of varying sizes. The largest of these clusters on each site is located more or less in the central position and is designated as 'Play Area'. The smaller open spaces are landscaped and used for recreational purposes and other outdoor activities.

b) Circulation Pattern

The entire layout is prepared on the basis of pedestrian approaches to all dwelling units. Vehicles such as fire tenders, ambulances, etc. can enter the housing areas along the pedestrian paths provided, in case of emergencies. The vehicular approach inside each site is restricted to one entry point only and normally leads to the largest open space available. From this point onwards, the entire circulation within the site is pedestrianized. However, bicycles as well as light vehicles like scooters, can traverse along the pedestrian paths. The area under roads is as less as 0.02 hectares (1.1%).

c) Streetscape

While planning the dwelling units along the principal peripheral roads on each site, an effort is made to avoid the monotony. At least one open space on each site is abutting the peripheral roads. In order to create a variety along the street, dwelling units are grouped parallel to the street as well as at right angle to the street at regular intervals.

d) Community Facilities

The project site is a part of a large residential neighbourhood, developed by the U.P. Housing and Development Board where the necessary community facilities like shopping, schools, community halls are provided for. However, a community centre has been provided for, in addition to the children's play equipment, open multi-purpose platforms under the shady trees and shops.

The community centre is also intended to demonstrate the growth potential of the dwelling units constructed. This is achieved by constructing the two dwelling units

with the additional room on the ground floor and upper floor, with a staircase from the rear yard. Voluntary organizations were approached to run a dispensary, Adult education classes, Day Nursery etc. The community centre also provides indoor recreational facilities and meeting space for the residents' organization.

Landscaping

Special efforts are made in evolving the landscape design for the cluster open spaces with an objective of facilitating easy identification of various clusters of the project area. The principles on which the landscape plan is prepared are as follows:

The largest open space on each site is reserved as play areas.In remaining cluster open spaces, one or two shady trees are planted to serve as focal point for group activities.

In order to lend colour to each small open space and to give it a separate identity,

two or three flowering trees of one type are planted along with the shady trees in each open space.

In the incidental open spaces in the form of narrow strips, tall growing trees are planted.

Medium height flowering plants with scanted flowers are planted along the 'Nallah' (drain) to the north of the site.

The tender cost of each dwelling unit was Rs.4100. The U.P. Housing & Development Board according to its normal policy, provided the developed land to this housing, free of charge. Therefore, the completed houses along with the land was sold to the individual family at a cost of less than Rs.4,100/- per dwelling unit.

(The Author designed and got executed the project as Chief of HUDCO in 1976. The costs, by current comparison may seem unbelievable but are true. Mr. J.B.D'Souza the then Chairman & M.D. of HUDCO mentions this project on page 192 in his autobiography "No Trumpets or Bugles")

18

Low Income Shelter Options

Introduction

To be effective, a developing country's housing programme has to be in line with its income level. Most of the past housing effort in India, however, has catered largely to the needs of relatively well-off families.

In itself Housing cannot be viewed as mere 'construction of shelters' but as determinant of the texture and quality of man's life by 'creation of an environment for the HABITAT of man which will lead to his physical, intellectual, cultural and social developments'. This objective can be achieved only by an imaginative configuration of shelters and other facilities that lead to the creation of the total environment for living.

Housing Concepts

The concepts of housing are, conditioned by the culture, social and economic background, upbringing, habits and values of the people. It may be claimed that the required 'minimum' can certainly be defined in terms of 'Biological' and 'Anthropometric' considerations.

In most shelter programmes, land and infrastructure constitute 40% of the total costs. If public housing agencies were to invest only in land and infrastructure they could attract public participation and resources in the total effort Development of infrastructure facilities, making available developed plots, social health and cultural amenity buildings and employment centers may be a more prudent way of investing than direct construction of houses.

Housing Standards:

The question of standards and norms is quite subjective in spite of claims about the performance oriented approach. For private housing, it is the municipal bye-laws which decide the housing standards.

A greater part of the success or failure in solving the problem of housing will depend upon how realistically the developing countries fix standards for housing. Housing standards must form part of a national housing policy. The author was involved in formulating special guidelines for low income housing in India published by Indian Standards Institute in 1978 as I.B. 8888,

Form & Density of Housing Development:

There are wide disparities in the form and densities of existing housing development in the cities of developing countries. In India, the forms range between crowded squatter huts to individual single storey houses to multistory high rise apartments. The densities range from 12 dwelling units per hectare in some suburban developments through 600 dwelling units in squatter areas to 1200 dwelling units in the older walled city *areas.

High Rise Residential Development:

High rise residential development constitutes tall buildings, which require mechanical means of transport for the vertical movement within the building. having five or more stories. .

Land Cost:

One of the important arguments given in favour of high-rise development is that more intensive use of land is bound to result in economy in the cost of land. In an urban area, land under residential development does not normally exceed 60 per cent. Recent trends in town planning have further reduced this percentage. For example, in Reston, a new town near Washington D.C. the residential area forms 56.1 percent of the total area, the land under open space and recreation being 14.5 percent. In Hook, a new town between London and Southampton, which has the highest design density amongst the new towns in England, the percentage of land under residential use is 35 and the area under open space and recreation is 27.9. In Tapiola, in Finland, the percentage of land under residential use is further reduced to 24.2 per cent and the area under recreation is 55.9 %

Cost of Development & Construction

Density:

The argument that vertical development can help people to be in close proximity of their places of work is valid and worthy of consideration. However concentration of people near work places through high density high-rise development may not always be feasible. In fact solutions in respect of improving work-residence linkages lie largely in improved transportation systems.

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Open Spaces:

It can be claimed that high rise developments afford more open space for social facilities. It must be viewed in context of the limited expenditure that local authorities in developing countries can entail on landscaping. This may leave large open spaces between high rise buildings virtually unattended for lack of funds. A number of experts in social medicine in developed countries like U.S.A. attribute living in high rise apartments as one of the reasons for juvenile delinquency.

Low Rise High Density Residential Development:
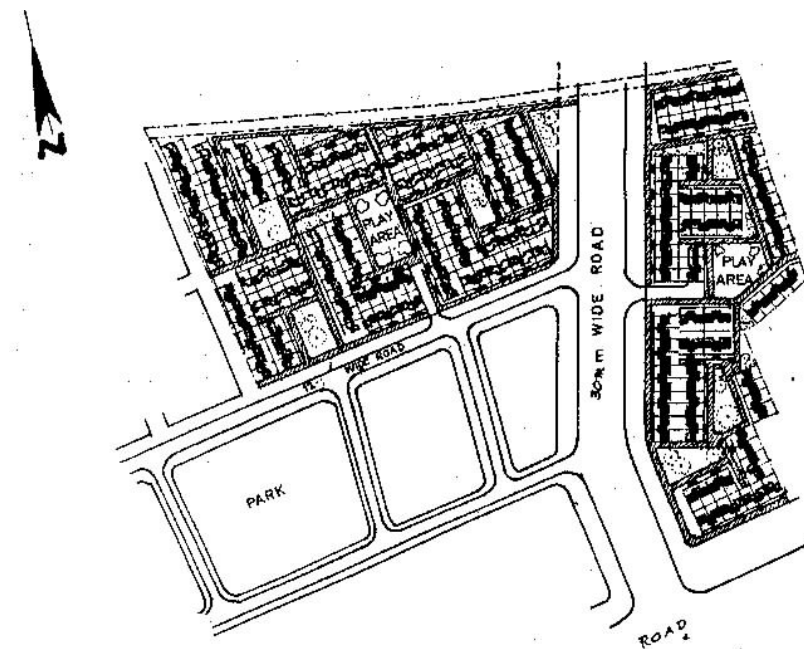
LAYOUT OF A LOW INCOME HOUSING PROJECT   INDIA

Ground floor structures only	480 Units
Site area utilised	1.72 Hectares
Density	266 D.U. Per Hectares
Dwelling size	16 sq. mts. plinth area
Plot size	39 sq. mts.

Site & Services Concept:

In such projects only developed sites are made available with all physical infrastructure and the owners can incrementally build small houses with individual or community effort. There are many successful examples of such development in many cities of India. The illustrations that follow depict the concept
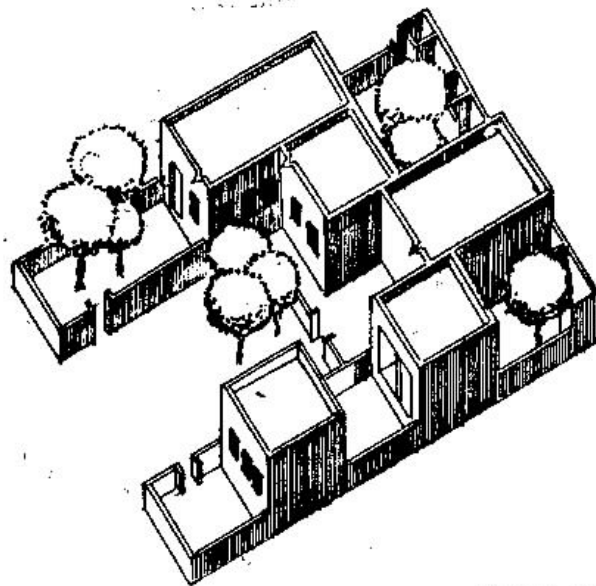
Plot Type A = 40 m² (13' X 33')
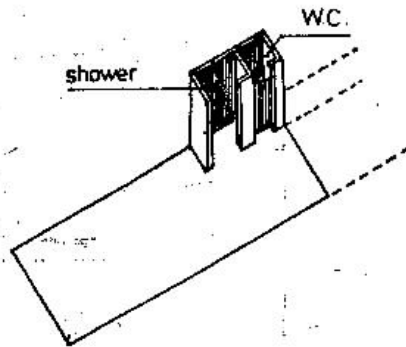
Plot Type B = 47m² (10'X50')
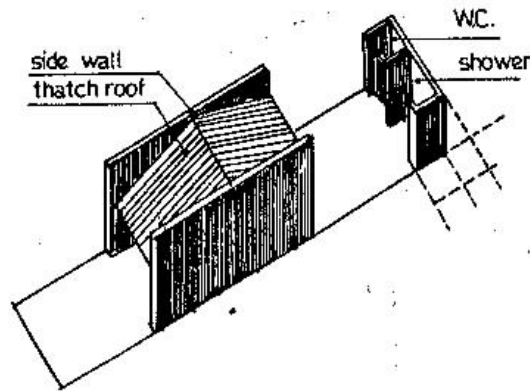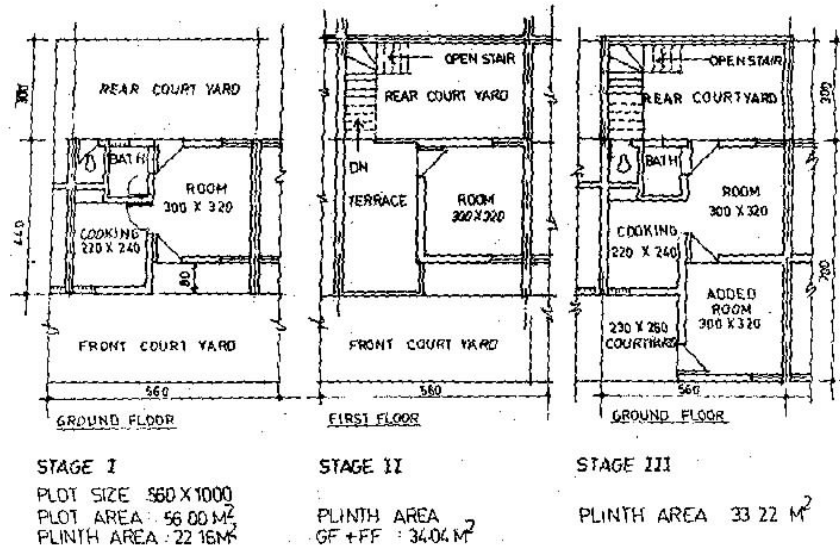
Plot Type C = 47m²
(Three plots represented)

Not many of the arguments normally put forth in favour of high rise development hold good in the context of urban environment in the developing countries except in a few isolated cases. Furthermore, the question of high rise is complicated by cultural and climatic considerations which seen to favour low rise development.
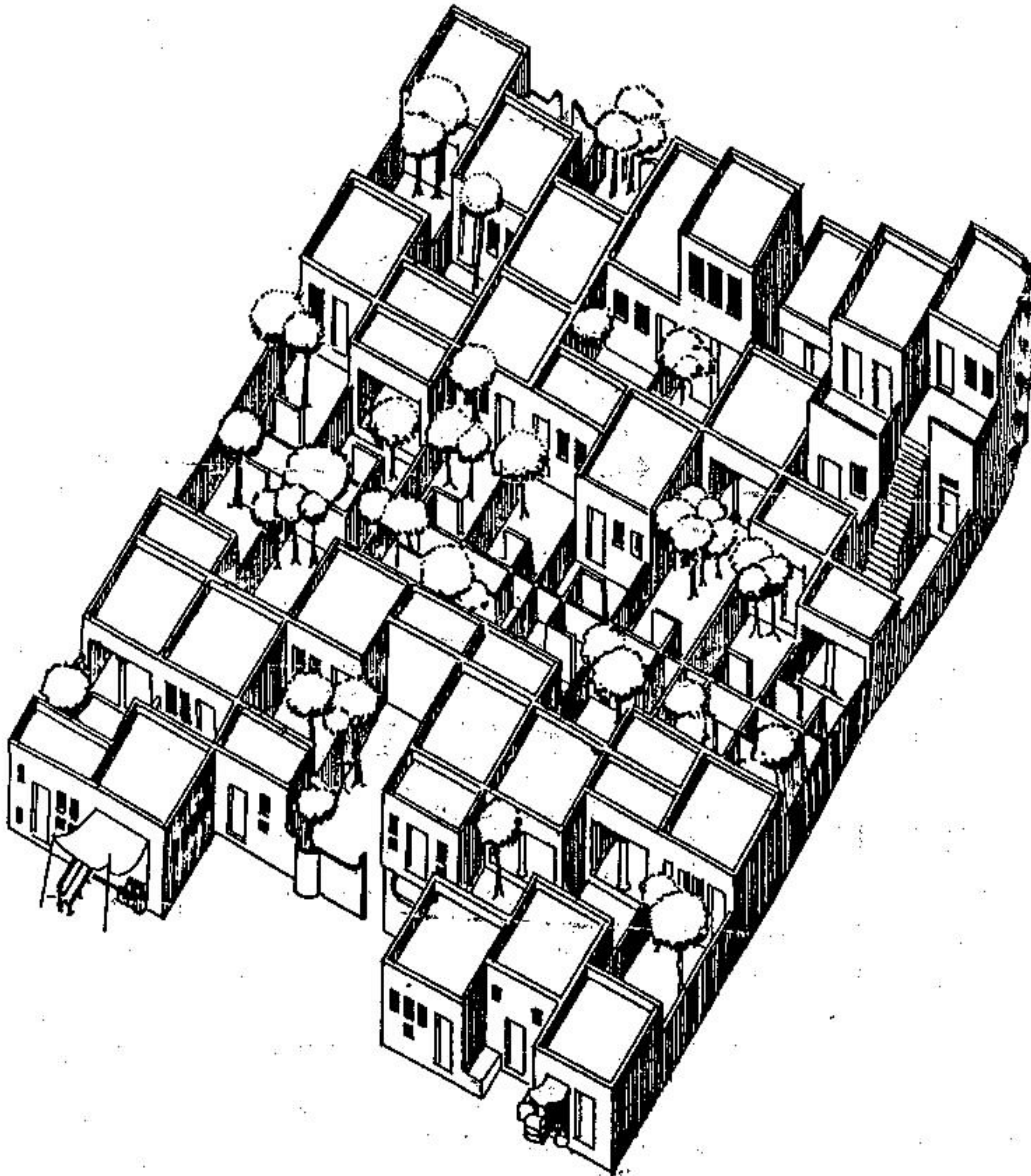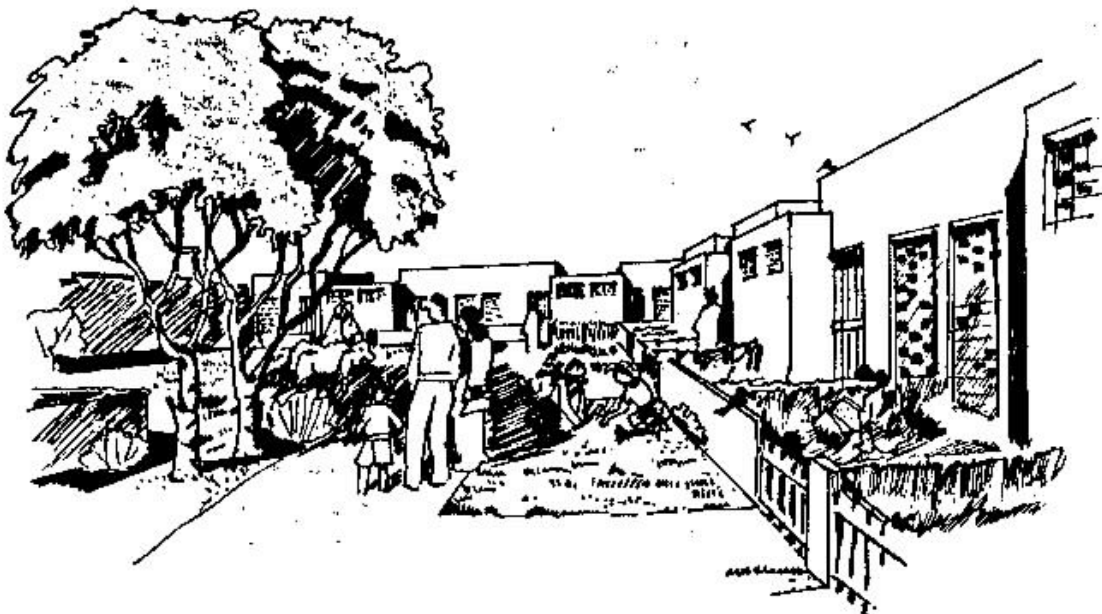

The isometric represents 15 dwelli   units on 47 m² plots
SITE AND SERVICES PROGRMME IN MADRAS - INDIA

There are two primary components of the cost of a house : Cost of developed land, and Cost of building construction.

STAGE I

PLOT SIZE : 560 X 1000
PLOT AREA : 56.00 M²
PLINTH AREA : 22.16 M²

STAGE II

PLINTH AREA
GF + FF : 34.04 M²

STAGE III

PLINTH AREA   33.22 M²

SUGGESTED SELF HELP SHELTER - PHASED DEVELOPMENT

A view of the small plotted development.

FRONT ELEVATION

'L' SHAPED PRECAST PANELS LAID TO SLOPE

SECTION AA

SECTION BB

GROUND FLOOR

FIRST FLOOR PLAN

Double storied high density development in Mumbai designed by the Author

The cost of developed saleable land is primarily determined by:

(a)   Cost of raw land;

(b)   Efficiency of the layout plan, and

(c)   Cost of infrastructural services

While components (a) and (c) might be difficult to control, the relative efficiency of the layout plan can increase or decrease the cost per unit.
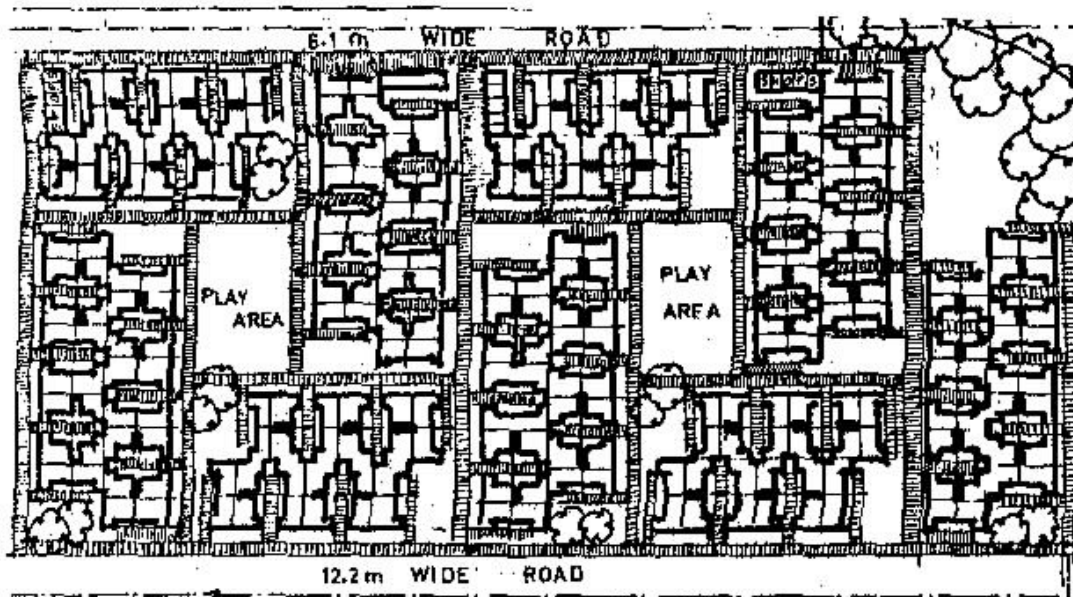
SCHEME DETAILS

SCHEME AREA	1.367 HECT
NO OF DWELLING UNITS	512
PLINTH AREA/D.UNIT	14.4 SQ M
NO OF SHOPS	20
PLINTH AREA PER SHOP	50 SQ M
DENSITY	374 DUS/HECT

LAND USE ANALYSIS

LAND USE	AREA IN HECT	%
RESIDENTIAL	0.6135	44.9
SHOPS	0.0100	00.8
ROADS	0.2660	19.4
PED PATHS & INCIDENTAL OPEN SPACES	0.2660	19.4
PARKS & OPEN SPACE	0.2115	15.5
	1.3670	100

LAYOUT PLAN: LOW INCOME HOUSING PROJECT: BOMBAY : INDIA

Even where land cost is as high as Rs.160 per square metre of saleable area (Rs.80 per square meter of gross area), it is feasible to have low rise development within an

affordable cost of Rs.8000 per dwelling unit. However, such a development will lead to less intense utilization of land as the number of dwelling units provided will be lesser as compared to that in a GF + 4 – storied development. If 'the opportunity cost' of these extra dwelling units is added to the cost per dwelling unit in case of GF + 1 – storied development low rise housing can be constructed where the cost of developed land does not exceed Rs.90 per square meter (Rs.45 per square meter of gross area) Even multi-storied development beyond this cost of developed land will be uneconomic as the overall dwelling cost will rise much beyond the paying capacity of the low income population.

Cost of Reduction Measures:

Economic specifications are followed to reduce construction cost. The following specific measures were adopted for the purpose

(a) All walls are load bearing of brick in lime mortar. Rooms have a maximum roof span of 3.23 m;

(b) Service cores of two adjacent units are combined for spanning the roof at a height of 2.2m. This has helped in eliminating a load bearing wall on one side of the cooking space and WC;

(c) Reduced ceiling height for WC and cooking facilitated repetition of WC on the upper floor and resulted in reduction of brick work;

(d) Reinforced brick roofing is provided to replace conventional RCC roofing;

(e) Walls are plastered on one side (external) only;

(f) Rammed earth filling with mud plaster is provided for the flooring on ground floor. No floor finish is provided. Individual families can provide a suitable floor finish with their own efforts.

(g) In place of regular windows, brick grill work was provided. The residents would replace these with regular windows as and when their economic circumstances so permit.

Past experience has shown that economics in shelter projects in general can be achieved through –

1) Maximization of land use to get optimum density consistent with desirable living environment, thus distributing the cost of developed land to maximum number of dwelling units without sacrificing environmental standards.

2) Building designs that are simple and functional, use indigenous building materials, are of expansion, are low on capital cost though higher on maintenance cost.

3) Innovative building designs that are generally single/double storeyed facilitating easy access to public open spaces and community facilities, and use of public open spaces for the overspill activities of the families of the tropical regions.

4) Use of austere specifications, cheaper and substitute building materials and new building material and techniques to reduce capital cost and bring shelter within the affordability limits of low income families.
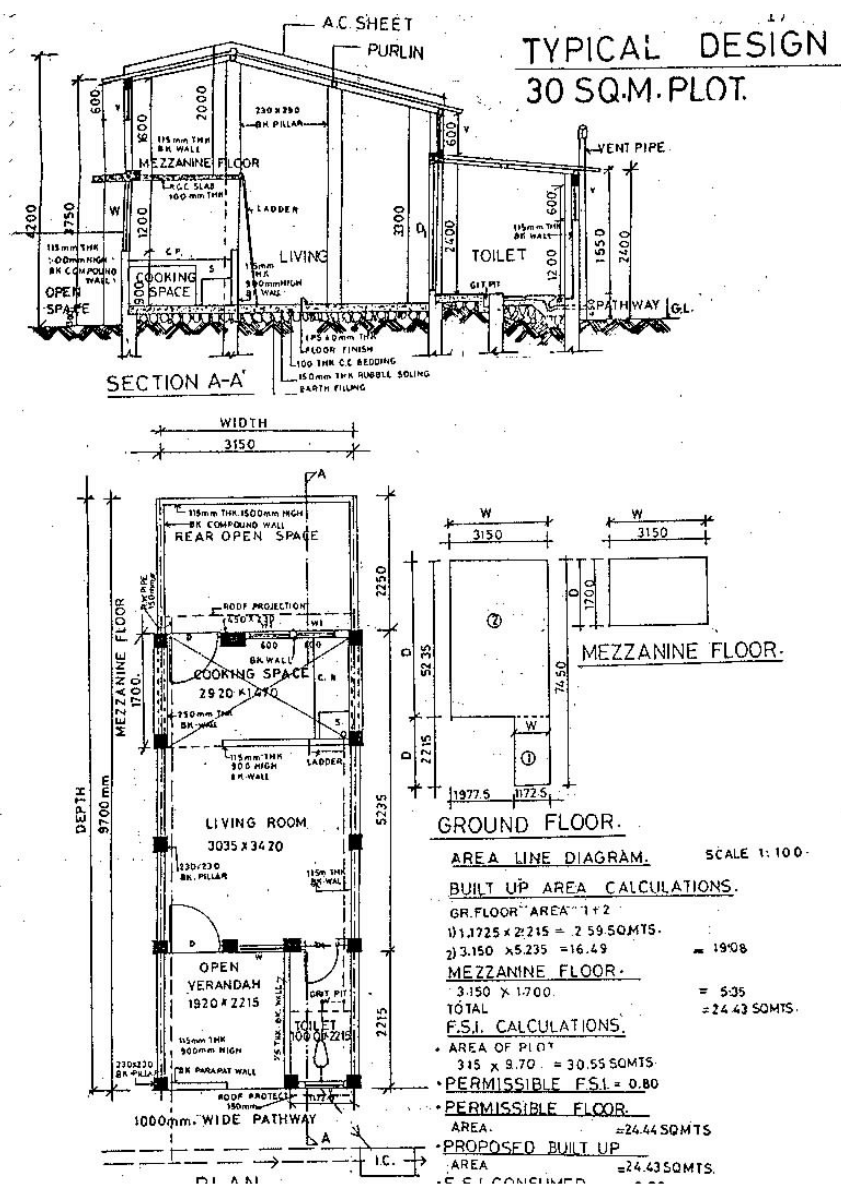
Some examples of small plotted high density development

SECTION A-A'

TYPICAL DESIGN
40 SQM PLOT.
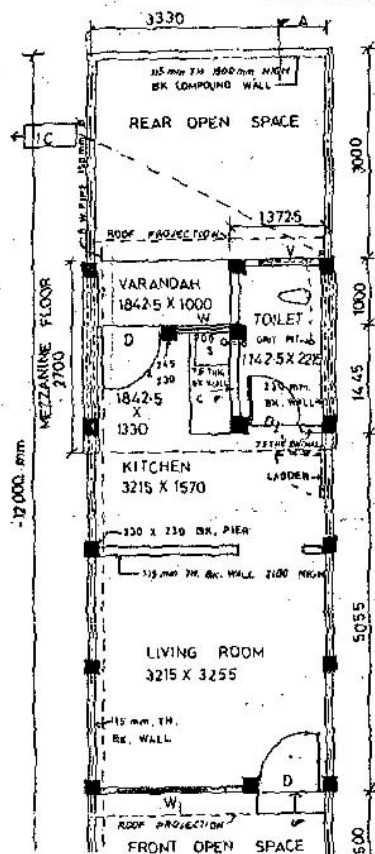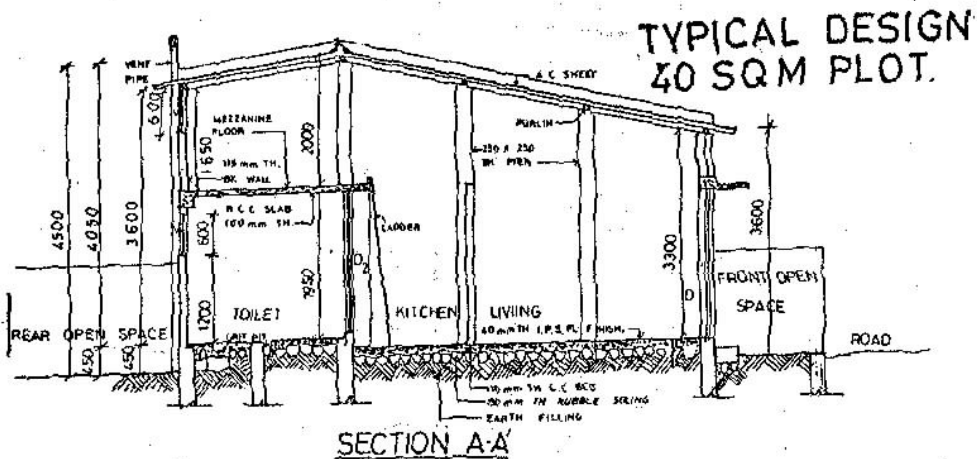
AREA LINE DIAGRAM   SCALE 1:100

BUILT UP AREA CALCULATIONS

GR FLOOR AREA   = 3·33 X 7·5 = 24·97
MEZZANINE FLOOR = 3·33 X 2·7 = 8·99
        TOTAL   =   33·96 m²

F.S.I CALCULATIONS

AREA OF PLOT   = 3·33 X 1200 = 39·96 m²
PERMISSIBLE F.S.I.   = 0·85
PERMISSIBLE FLOOR AREA = 33·96 m²
PROPOSED BUILT UP AREA = 33·96 m²

PLAN

19

EDUCATION FOR SUSTAINABLE DESIGN

Synopsis

With a high quantum increase in the knowledge about almost every aspect of human life, the arts and sciences, a need arose to teach hitherto little known or unknown aspects as full fledge branches of knowledge. The teaching of Architecture in most of the schools in India is still mainly 'creative' design oriented, seeking to produce an Architect who is first and foremost a designer. Building design that harnesses elements like wind, solar energy, vegetation, water, natural building materials is not only sustainable but also economical in fiscal costs. An Architect has to be far more sensitive and conscious about the effects of his creation on the environment and the ecology as basic to sustenance of the human species. Sustainability must be integrated in the training of Architects

Introduction:

Increasing urbanization and changing socio-economic systems in India make wider and varied demands on the skill of individuals, professionals and institutions. With a high quantum increase in the knowledge about almost every aspect of human life, the arts and sciences, a need arose to teach hitherto little known or unknown aspects as full fledge branches of knowledge. The Medical science is a good example. Psychology, Para-psychology, forensic medicine, medical law, occupational therapy, environmental hygiene, social medicine are now being taught and practiced as almost separate or allied sciences for which the knowledge of traditional medicine may or may not be necessary. The study of some of these branches of science does not require knowledge of medicine as a prerequisite like, occupational therapy, nursing, environmental hygiene etc. Thus the education in medicine has kept pace with demands of contemporary needs for specialized skill.

The teaching of Architecture in most of the schools in India is still mainly 'creative' design oriented, seeking to produce an Architect who is first and foremost a designer. The needs of the present times require the Architect to possess allied and

different types of skills as he is required to play varied roles in today's complex economic and social system. Many of these roles may require a minimal of conceptual designer's skills but call for quite different qualities. Some of the allied and other skills that he requires to play these roles are:-

Sustainable Designing:

In a developing country like India, resource conservation and cost effectiveness should be a prime concern in any project. Building design that harnesses elements like wind, solar energy, vegetation, water, natural building materials is not only sustainable but also economical in fiscal costs. Unfortunately most schools of Architecture tend to include 'subjects' like conservation and cost effectiveness in their curricula as these are considered 'in' things in the current global environment and not necessarily out of a strong conviction about sustainability as the main stay of architectural design process. An Architect has to be far more sensitive and conscious about the effects of his creation on the environment and the ecology as basic to sustenance of the human species. Sustainability must be integrated in the and training of Architects

Professional Promotion:

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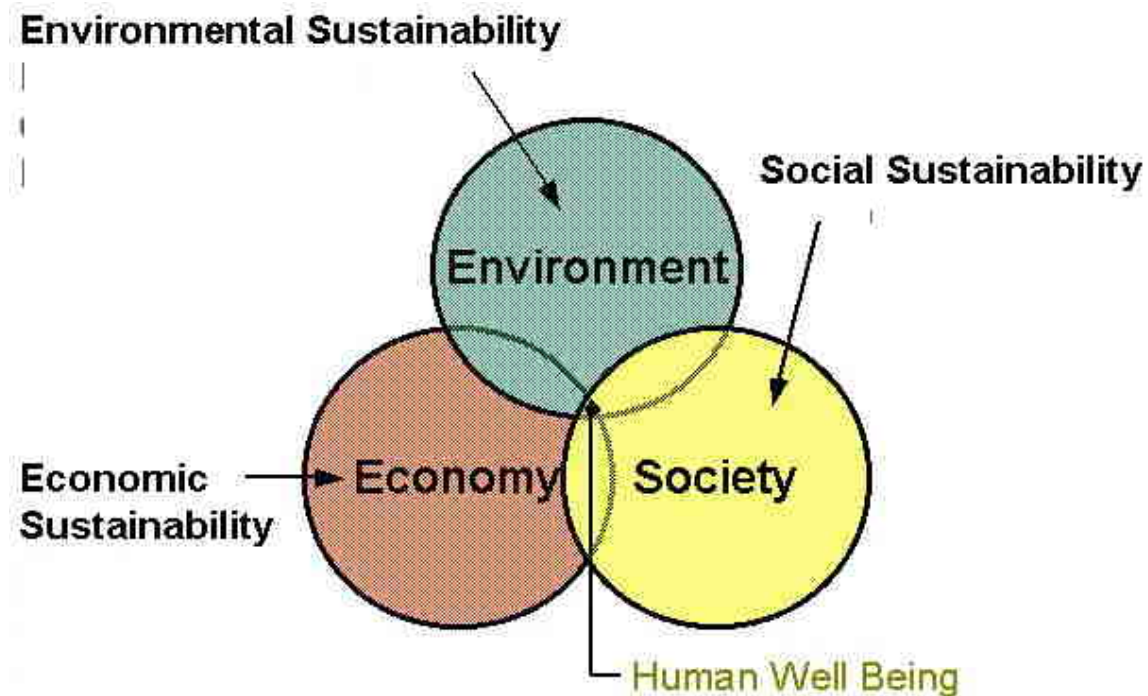
In today's highly competitive economy, skills have to be marketed. Most Architectural practices also find it necessary to aggressively sell their skills. But a good designer may not necessarily be a good salesman. There has to be someone with just enough understanding of Architecture but with the skill to sell, make presentation, develop wider social contacts and be on the look out for job promotion. The need for such a person is felt by many large practicing firms where unconscious division of work takes place between partners/associates, and work promotion is delegated to some one not found competent enough in the practice of Architecture itself but otherwise good in public relations. If so, why not teach this art of professional promotion as a part of teaching of Architecture? There are many examples of such persons who have practiced very little Architecture but have proved to be competent at professional promotion and have rendered yeomen services to Architecture and Architects at national and international forums.

Architectural appraisal:

With increasing institutional finance being made available for planning, Architectural – engineering projects through commercial Banks, and specialized techno-financial institutions etc. the Architect is being increasingly called upon to play the role of an appraiser/for the Architectural aspects of the projects. Invariably, Architects with a 'critical' aptitude and ability for rational analysis of design have taken up such assignments. Many have really developed the process of appraisal into an art of constructive Architectural analysis. If its is the need of the times and the economic system that there be Architects who would only appraise the projects for their functional/economic viability, why not train such 'appraisers' as a part of teaching of Architecture so that appraisal is done with a constructive approach?

Teaching of Architecture:

Teaching requires specific qualities which, to a great extent, are common to all good teachers whether they be teaching the tiny-tots or the would be Architects. The art of teaching naturally requires, adequate knowledge of the subject but more than that, requires a quality to bring oneself to the mental level of the taught, identify with him, search for the hidden potential in him or her and bring it out and nurture it. In doing so, the teacher has to almost have a split personality so as to leave out the Architect in him so that his attitude to the taught is objective and not subjective.

One who has these qualities of a good teacher may not necessarily be a good designer. Many ex-students of schools of Architecture may recall that, objectively speaking, quite a few of the good teachers then, were at best average designers. But that in no way detracts from their abilities as Teachers. Hence there has to be a conscious attempt to train a teacher or identify the qualities of a teacher from amongst the students of Architecture and nurture those to develop the future teachers.

Managing/Coordinating Projects:

By the very nature of his work, an Architect has to be aware of all the services and systems that go into a building/project to make it functionally workable. Therefore, he has to be a jack of all arts and know all skills that are required for a project. As a result he may often be called upon to manage or co-ordinate a project. Once this task is entrusted to him, the mere fact that he knows generally about the inputs into the project from various disciplines does not equip him to provide leadership, prepare time schedules, evaluate, review, monitor and manage the project. For this task he requires different qualities and aptitude; that of a Manager and coordinator. He must know about project planning, scheduling, motivating people, evaluating performance, financial implications etc.

If these qualities are identified at the student level itself and nurtured he can prove to be a good Project Manager, for Architectural Projects. The awareness of this fact has made many a Universities offer a course in Architectural Management.

Architectural criticism:

Not all Architects can have capabilities of good oral or written expression. It is one thing to design – plan or create a project and quite another to be able to write about it and present it in a manner that can bring out the essence and philosophy of the design for even non-Architects to understand and appreciate. Much of the ignorance and misunderstanding in the Indian society about the role of an Architect is due to the fact that not many Architects can write or do write in a language that a lay man can understand and appreciate the importance of Architecture as an art and science and the contribution of the Architect to the sustainability of environment or the habitat.

Despite the fact that socio-political and economic revolutions have been brought about by thinkers through their writing; we tend to underrate the power of the written word especially as Architecture is a visual art. Yet, thinkers and philosophers as well as critics are as much necessary for advancement of an art as the artists themselves which is amply proved by the important role of literary criticism in world literature. The qualities required to make a good critic/could be nurtured at the student stage.

Catalyst for Architectural design process:

It is common today for large business and industrial houses to have in-house Architectural as well as Engineering expertise. Yet, even in such large houses, the more important projects are often got designed by eminent practicing Architects and the in-house Architect is used for minor works and as a link between the business house and the practicing Architect. Thus, he is called upon to play the role of the interpreter of his employer's requirements in interacting with the practicing Architect. Since he can speak the same language, it is imperative for the employer to see that

the in-house Architect interacts with the outside Architect to safeguard its interest in term of the efficiency of the design of the project and to generally oversee the design process.

It is a difficult role to play, to be able to present correctly the special requirements of his employers with their rational relationship, to the outside Architect and see him build up a form that fits the function. It calls for analytical abilities, clarity of thinking and tactful handling of the employer on one hand and the Architect on the other. An increasing number of Architects are called upon to play this role. Unless they are equipped for it during their education itself, it can lead to frustration and waste of their designing abilities.

Architectural detailing:

Most Architect's offices have to have at least one person dependable enough to be able to produce accurate construction drawings that interpret the Architect's design in to working drawings and details to be followed at site for construction.
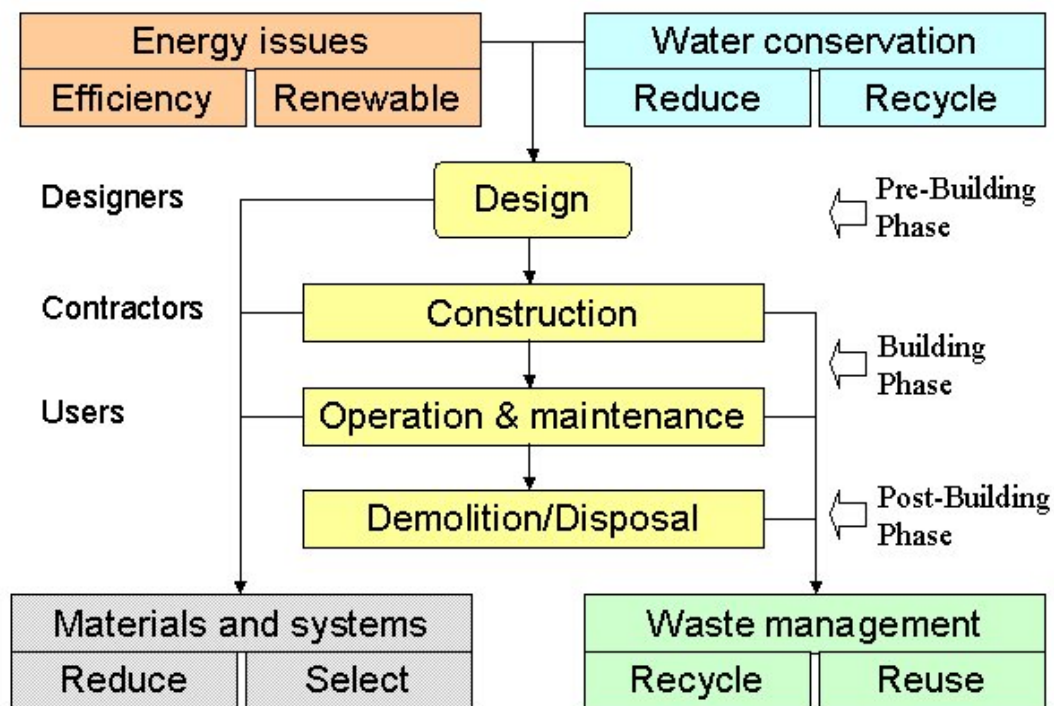
The person, though an Architect has to have a far wider and deeper knowledge of construction practices, building materials, construction methods and system to be able to design details for the construction of the project. The job therefore calls for an aptitude, not for creative design, but for innovative and environment friendly

approach to construction details. This job is complimentary to the conceptual design process. At the student level those who have greater aptitude for designing details rather than conceptual designing could therefore be encouraged and developed at the student level.

Visualization:

In order to communicate the Architect's concepts visually to other professionals as well as laymen and to clarify the concept for the Architect himself, it is often necessary to prepare perspective drawings and models of the projects. One need not necessarily be an Architect to be able to draw perspective or make models..But in case of certain project it is very helpful if the perspective maker or the model maker is an Architect. Then he can understand the concept quicker and better and also deliver the goods faster. He can even contribute fruitfully in the concept of the design itself.

Many Architecture students show a remarkable preference for model making or perspectives and this quality can be specially developed at the student level in preference to the design, detailing or other aspects of the curriculum.

Computer Aided Design:

While a computer drafting package is a mere "electronic fast worker" CAD can generate alternatives for layout planning as well as Architectural design and help in generating optimum solutions. However, to work with the Computer one has to know its language, which does not require Architectural designing capabilities. With simulation technique, it may be possible to write a programme which can generate in 3 dimensions the entire project design at different horizontal and vertical angles which can be of great help in decision making. This work would require a special talent for which one may not be a full fledged Architect, if aptitude for this work is identified at student stage.

Architectural Design:

This is the most cherished role an Architect likes to play. Hence if it is accepted that;

 (1)   An Architect in the contemporary socio-economic environment has to play different roles,

 (2)   These roles have emphasis on different aspects of Architecture and not merely the design aspect;

 (3)   It is possible to cultivate consciously one or more of these qualities so that one can successfully play the role requiring these qualities with the general background of Architecture, then it should follow that our teaching system,

syllabus of Architecture and selection of teachers should be designed to achieve these objectives.

The selection process for the prospective student of Architecture should be so designed as to identify and assess the aptitudes that are likely to help the student in playing satisfactorily any one of these roles described earlier apart from an overall assessment for his creative abilities and presentation. We must also evolve methods of measuring these qualities, design tests for these, and ensure that the prospective students are assessed for their potential for each of these qualities.

Thereafter, it is a matter of a individual policy and culture for each Educational and Training institute to decide which 'mix' it would prefer of potential qualities for fulfilling the different roles. It can still continue to lay emphasis on the conceptual design qualities but would have; by going through this process, recognized the equal importance of other qualities.

It follows form this approach that the Educational and Training institutions particularly in developing countries, engaged in teaching of Architecture and building design, will have to evolve new and different systems of measuring competence on similar scale for all these qualities so that there is no more a single parameter of 'excellence in design' for judgment. There will be a range of parameters to assess the different qualities and a method to bring them on par on a single scale of measurements. Obviously therefore, the system of evaluation in all subjects and the system of teaching of these subjects will have to undergo a sea change. It would mean that there should be a system of teaching of Architecture in which almost for every subject taught, there could be different ways in which the students can apply the knowledge received, thereby giving him alternative of being evaluated differently.

For example, History of Architecture could either be presented orally or in writing or visually, or by way of a critique or an appraisal or as a redesigning problem or merely as a visual presentation in terms of perspectives or models. The same would apply for the main subject of Architectural design as it is treated today.

This, approach to teaching of Architecture pre-supposes that the selection of teachers will also be done in harmony with this new approach. The basic aptitude one should be looking for in a teacher is his/her ability to recognize strengths and weaknesses of the student, build on the strengths and try to reduce the weaknesses as far as possible. The second quality one should be looking for in a teacher is to his/her ability to nurture in the student any one of the qualities that are required for an Architect to play any one of the dominant roles described earlier. Hence, the entire selection producer for teachers as well the taught also needs to undergo a total change to install systems that can identify one or more of the qualities in the students, that will help him/her play the role most appropriate to his/her potential.

Glossory

Goan	Resident of the Indian state of Goa
Goa Bachao	Save Goa
GramSabha	Village Assembly
Panchayat	Elected 5 Village leaders
GIS	Geographic Information System
IT	Information Technology
Salt Pans	Seaside land used to make salt from sea
Andolan	Popular movement
MMRDA	Mumbai Metropolitan Region Development Authority
MRTP Act	Maharashtra Regional & Town Planning Act
Kandla	Port town in Gujarat state
Dharavi	Large slum in Mumbai
Crore	10 Million
NGO	Non Government Organization
Barriadas	Slum (Peru)
Favela	Slum (Brazil)
F.S.I.	Floor Space Index (Ratio of total land to total built up area)
Pucca	Permanent

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ABOUT THE AUTHOR

Prakash M. Apte, born in 1939, graduated in Architecture from M.S. University of Baroda and completed Masters Programme in Regional Planning in 1961 from IIT Kharagpur. He studied Urban Design at Naples University, Italy in 1963. Later in 1974, he obtained a Diploma in Business Management from Bharatiya Vidya Bhavan, New Delhi. **He is a Fellow of the Institute of Town Planners, India and the Indian Institute of Architects.**

He had initial work experience with Chandigarh Capital Project, Delhi Development Authority. He led a team to prepare a **Development Plan for the 600 sq.km. Asansol region in West Bengal**. In 1965, he led a project team in Gujarat, to **design and build the new capital city - Gandhinagar**. **Joining the Housing & Urban Development Corporation of India - HUDCO - in 1972**, **as Chief (Projects)**, he formulated its Policies, project appraisal and monitoring systems, organized research, undertook consultancy and executed housing projects. Since 1979 he has worked with private sector and the **World Bank** designing and executing housing and commercial complexes and star hotels.

As a Senior Adviser to the Royal Government of Bhutan in 2003 he prepared the Shelter Strategy for the Capital City, Thimphu. He has been a Consultant for World Bank funded Low Income Housing programme in Malaysia and in Gujarat, Madhya Pradesh and Maharashtra. **Since last 12 years he is a Consultant to the World Bank for the Mumbai Urban Transport Project (MUTP) & Tsunami Resettlement project TamilNadu.**

He has been a **Consultant to HUDCO,** Maharashtra Housing and Area Development Authority, Centre for Development Studies & Activities, Pune and a **Member of the Bombay Development Plan Advisory Committee** and the **Development Plan Committee for the Vasai-Virar Region.**

He **has been a Governor of the Delhi School of Planning & Architecture, & a guest faculty at** Indian Institute of Management, the Economic Development Institute's Programme in India; Institute of Environmental Design and M.S. University, Vadodara. He has **Chaired and addressed national and international seminars** and has been a jury for Architectural/Planning Competitions. He is the Author of 4 books; 'Building of Gandhinagar: New Capital of Gujarat, Urban Planning & Development: An Indian Perspective, Urban Growth Strategies: Mumbai Lessons and What Ails India.

He has been a **member of MHADA,(**Maharashtra Housing & Area Development Authority), Academic Committee of M.S. University, **and the HURE Board of the Bombay Metropolitan Region Development Authority. Vice-President of the Institute of Town Planners, India in 1976**, he is a Founder Trustee of AVAS, a Trust engaged in upgrading the quality of life in the slums in Bangalore.

He was invited as the 1988 Eisenhower Fellow from India by the Eisenhower Exchange Fellowships Inc.U.S.A. in the field of Urban Management, the first Architect-Planner from India to be so invited.