READING MATERIAL

3 days training on

Land Use Planning in Urban Area

State Institute for Urban Development
ATI Campus, Lalitha Mahal Road, Mysore- 570 011
Ph: +91-821-2520116, 2520163, Fax: +91-821-2520164
Website: www.siudmysore.gov.in, E-mail: directorsiud@yahoo.co.in
3 days Training Programme on

Land Use Planning in Urban Areas

State Institute for Urban Development
ATI Campus, Lalitha Mahal Road, Mysore- 570 011
Ph: +91-821-2520116, 2520163, Fax: +91-821-2520164
Website: www.siudmysore.gov.in, E-mail: directorsiud@yahoo.co.in
# CONTENTS

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Chapters</th>
<th>Pg. No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Introduction to Town Planning</td>
<td>01-06</td>
</tr>
<tr>
<td></td>
<td><em>(Extract from Town Planning by Rangwala)</em></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Necessity of Town Planning</td>
<td>07-13</td>
</tr>
<tr>
<td></td>
<td><em>(Extract from Town Planning by Rangwala)</em></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>URDPFI Guidelines</td>
<td>14-46</td>
</tr>
<tr>
<td></td>
<td><em>(Extract from MoUD, GoI)</em></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Charges and Fees</td>
<td>47-52</td>
</tr>
<tr>
<td></td>
<td><em>(Extract from URDPFI/Internet)</em></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Master Plans - Existing Tools, Techniques, and Agencies for Implementation</td>
<td>53-70</td>
</tr>
<tr>
<td></td>
<td><em>(Extract from STEM, Bangalore)</em></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Urban Planning Process in Gujarat</td>
<td>71-86</td>
</tr>
<tr>
<td></td>
<td><em>(Extract from The Town Planning Mechanism in Gujarat Shirley Ballaney-WB Institute)</em></td>
<td></td>
</tr>
</tbody>
</table>

**Annexure – I**

| 7.     | Case Studies                                                   | 87-97    |
|        | *(Extract from News Papers)*                                   |          |
Chapter – 01:

INTRODUCTION TO TOWN PLANNING

GENERAL

The term town planning is used to indicate the arrangement of various components or units of a town in such a way that the town as such attains the significance of a living organism. It also includes ways and means to be adopted for the improvement of the existing towns or for the extension of towns. Thus, the knowledge of town planning helps in achieving the best possible advantages of the situation of town with respect to its land and the surrounding environments. In a sense, it will be quite proper to say that God made the country and man made the town.

The town planning demands active imagination and sharp common sense of the understanding of various needs of the society occupying or likely to occupy the town. A town planner has to prepare the layout plans or to carry out the researches in such a way that the final results are appreciated by all the sectors of public. The success of a town planner lies in converting the town from an inert and lifeless object to a complex organic body that pulses with life. A well-planned town carries out its activities in a normal way like a living organism. The urban growth or development is the man's most civilized creation.

The town planning is a science as well as an art too. The science consists in collecting, correlating and analysing the facts about a town. The art lies in arranging the components of a town in such a way that the final result is in the form of a beautiful, convenient, economical and efficient unit. Thus, science and art must not and cannot sit apart when a new town is being designed or when an existing town is being remodelled. The science and art must join their hands and work as co-partners in the difficult task of bringing out a well-arranged town. The town planning, however, is not an exact science and precise forecasts of future possibilities are not attainable. But the gap between guesswork and prediction can be brought down to a minimum by the co-operation of various agencies involved in the use and development of land.

The difference between town planning and architecture should be noted. The town planning expresses the life of an era. The architecture reveals its spirit. In this chapter, the general topics related with the subject will be described.

EVOLUTION OF PLANNING

The works of an archaeologist show how the, ancient cities were planned. The primitive men used to stay in tribes and they formed groups for mutual protection for
carrying out business activities and for maintaining a social life. The location of towns was also selected by giving some consideration such as ease of defence, climatic conditions, business facilities, etc.

As such, cities are as old as civilization as seen from the verbal connection between the words 'city' and 'civilization'. These two words have emerged together with city furnishing the structural framework through which civilization functions. By civilization', we basically mean an urban civilization. There were obviously human groups before that period. But they were initially nomadic, then agricultural and finally evolved into an urban society.

The towns of the modern time have to be designed for problems which were not existing in the ancient times. Such conditions may be enumerated as air pollution, water pollution, telephones, motors, electricity, etc. The study of ancient towns, however, helps considerably in solving the complicated problems of town planning even of today.

The two illustrations of ancient towns are worth mentioning. Kahun in Egypt was conceived and built for a specific purpose before 2500 B.C. It was designed to accommodate workmen and officials engaged in the construction of the pyramid at Illahun.

The other notable example is from ancient India in the valley of the river Indus in Sind, now in Pakistan and located 480 km north-west of Karachi. A brief note on the Indus Valley Civilization (lYC) is given later in this chapter.

In the year 1922, the ruins of the city of Mohanjo-Daro were discovered by a British archaeologist Sir John Marshall when he observed the villagers digging up heads of pottery fragments from their fields.

The name Mohanjo-Daro means the mound of the dead and it is regarded as the cradle on Buddhism of the subcontinent. It is understood that it was the most planned and developed city with an important trading centre in the Indus Valley around 2600 B.C. Its population is estimated as 40000 to 60000 living off an agricultural economy. The arrangements for houses, water supply and drainage systems in this ancient town were supposed to be of very high standard. The rooms were large and well ventilated and baths were attached to the rooms.

As the city stands today, it is divided into two mounds, one measuring 1183 m x 546 m and the other measuring 364 m x 273 m. The city also contained a huge public bath which in excellence and solidity of construction cannot be improved upon by any modern builder. It provided a social centre exhibiting the precision, craftsmanship and imagination of the ancient builder.

There is nothing on record to show the demise of this outstanding and unparalleled ancient city. There are indications to show that it was gradually abandoned possibly because of a changing climate or as per another prevalent theory, the people of town
fled to escape the hordes of Aryan nomads who launched an invasion of the subcontinent from central Asia in about 1700.

OBJECTS OF TOWN PLANNING

The four essential objects or ideals of any town planning scheme are beauty, convenience, environment and health.

The object of beauty is achieved by taking the most possible advantages of the natural conditions surrounding the town and also by giving architectural finishes to the various components of the town. It also includes the preservation of trees, natural greenery, architectural control on public as well as semi-public buildings, ancient architectural buildings, temples, churches, mosques, buildings of cultural and historical significance, etc.

The object of convenience is understood in the form of various economic, social and recreational amenities to be given to the public. These amenities include cheap power and electricity, proper sites for industrial units, transport facilities, adequate water supply, easy disposal of sewage and industrial wastes, facilities to commercial units, etc. The recreational amenities include open spaces, parks, town halls, playgrounds, cinema house, community centres, stadium, etc.

The object of environment is important in the sense that environment should be moulded in such a way that man can go about his normal activities with the least amount of strain. The complex problems of the modern society such as tiresome travel to work, long hours of work, limited time spent within the community, etc. have gradually led towards serious mal-adjustments between the human being and the type of life he had to live. These mal-adjustments have tended to destroy the vitality of urban living and the town planning is mainly concerned with bringing about a better relation between man and his environment.

The object of health is accommodated in a town planning scheme by making right use of land for right purpose, by providing parks and playgrounds for the public, by maintaining the pollution of various forms to the lowest possible degree, etc. It is achieved by dividing the land into zones such as residential, commercial, etc. and by avoiding the encroachment of one zone upon the smooth and orderly development of the town in future.

It is, however, necessary for the town planner to maintain a proper balance between the four objects mentioned above and not to give emphasis on anyone of them at a disadvantage of the others.

ECONOMIC JUSTIFICATION FOR TOWN PLANNING

The town planning can be studied from many different angles such as legal, historical, sociological, architectural, economic, etc. Each category will study the subject from certain points of view and the conclusions arrived at by each study will certainly have
influence on the fields of other categories. It is thus not possible to study town planning from a solitary angle. Hence, if town planning is not to be frustrated, it should be studied from the economic angle along with other factors.

In the economic sense, the town planning is desired if its adoption leads to better utilization of the resources of the community than would otherwise be achieved. The town planning mainly deals with the utilization of available lands. Hence, for any given size, the best planned town is one where the aggregate land values are at a maximum. Thus, economically, the best town plan will lead to the highest aggregate land values.

While adopting the land values criterion, the following factors are to be considered for assessing the economic worth of the town planning:

(1) **Change in quantity of resources:** There should be no change in the quantity of resources. If the quantity of resources change, there are chances for the land values to fall.

(2) **Demand for goods and services:** The demand for goods and services should not change. If the demand for goods and services falls, naturally the demand for resources will also fall and it may cause the land values to come down.

(3) **Production techniques:** The techniques of production should remain more or less the same. Otherwise more efficient use will be made of the resources and it may have adverse effects on the land values.

(4) **Redistribution of land values:** If town planning has merely resulted in the redistribution of land values and as such there is no net increase in land values, the town planning in economic sense, is not justified. Thus, the town planning should not lead to increase in the land values at certain places and corresponding decrease in the land values at some other places.

The economic advantages offered by the urban way of life are enormous. But at the same time, it should be remembered that the path of urban growth is not very smooth and there are many mal-adjustments which accompany this process preventing the city from making the maximum contribution to the national economy. Some of the economic disadvantages can be mentioned as difficulties in securing housing accommodation, inequalities of incomes between urban inhabitants, congestion of facilities, etc. In a similar way, the drawbacks of the rapid urban growth from various other disciplines can be enumerated as follows:

(1) The local government is concerned with the expansion of urban area, its administration, etc.

(2) The medical officer is concerned with the effects of dirt, smoke, etc. on the health of urbanities.

(3) The psychologist is concerned with the effects of noise and strain leading to greater insanity and more suicides.
(4) The sociologist is concerned with the formation of slums, inadequate recreational facilities, increase in crimes, etc.

It is thus seen that there are certain disadvantages of urbanization from different viewpoints. But the advantages offered by urbanization out-weigh its disadvantages. An urban dweller comes into contact with a variety of people and he can develop his career, if he uses the opportunity. The characteristic of city life is that all sorts of people meet and the social relationships in such a society will naturally be different than the folk community. An urban man cannot know all people and he is always making new acquaintances and forgetting the old ones for achieving his personal benefits. Hence, it has become more popular at present and efforts are made to overcome its disadvantages. The society cannot obtain the greatest possible benefit from cities unless and until the disadvantages of urbanization are totally removed.

At this stage, it will be worthwhile to understand the meaning of the term urban area. This term is used to mean a limited area in which a large number of people are permanently residing and they are separated from other centres by a much greater area of thinly populated land. It is also understood that the residents of an urban area are normally, although not wholly, engaged in non-agricultural activities or occupations. Thus, the urban areas are very much a human invention and their primary function is to carry out service activities from centralized locations for the benefit of the surrounding agricultural area.

**PRINCIPLES OF TOWN PLANNING**

The subject of town planning demands knowledge of various professions, especially those of engineering, architecture and surveying. The town should not be designed only to satisfy the needs of the future generation. But the probable growth and development of the town should be suitably conceived by the town planner and it should be seen that the town does not develop in any haphazard fashion. Some of the guiding principles of town planning are as follows;

1. Green belt
2. Housing
3. Public buildings
4. Recreation centres
5. Road systems
6. Transport facilities
7. Zoning

Each of the above principle of town planning will now be briefly described

1) **Green belt:** The provision of a green belt on the periphery of town results in the limitation of its size and hence, the final size of the town can well be anticipated.
(2) **Housing:** Extreme care should be taken to provide housing accommodation to various categories of people. It should be observed that there is no development of slums and further, if slums are existing, they are cleared by the provision of some alternative arrangement.

(3) **Public buildings:** There should be a well-balanced grouping and distribution of various public buildings throughout the town. The unnecessary concentration of public buildings at certain spots of the town should be avoided.

(4) **Recreation centres:** Depending upon the size of town, enough space should be reserved for the development as recreation centres for the general public.

(5) **Road systems:** The efficiency of any town is measured by the layout of its roads. A nicely designed road system puts a great impression in the minds of people, especially the visitors to the town. The provision of a faulty road system in the initial stages of town formation proves to be too difficult and costly to repair or to re-arrange in future.

(6) **Transport facilities:** The town should be provided with suitable transport facilities so that there is minimum loss of time from place of work to the place of residence.

(7) **Zoning:** The town should be divided into suitable zones such as commercial zone, industrial zone, residential zone, etc. and suitable rules and regulations should be formed for the development of each zone.
NECESSITY OF TOWN PLANNING

It is evident that a small house, if well arranged and planned, looks far more better than a disordered big palace. In a similar way, a town which is properly planned affords more comforts and conveniences to the public. The necessity of town planning can very well be appreciated by mentioning the evil situations which a town has to face in the absence of town planning. They are as follows:

1. Defective road system resulting in the formation of narrow streets and lanes.
2. Development of slums and squatter settlements;
3. Haphazard location of industries;
4. Heavy traffic congestion during the working hours of the day;
5. Inadequate open spaces for parks and playgrounds resulting in unhealthy living conditions;
6. Lack of essential amenities like electricity, water supply and drainage;
7. Noisy atmosphere disturbing the peace of city dwellers;
8. Uncontrolled development of the town
9. Unhealthy living conditions; etc

ORIGIN OF TOWNS

If a survey is carried out regarding the origin of some of the important existing towns and cities of the world, it can be easily established that any town or city has originated because of certain specific cause. The contributing forces for the origin of towns and cities can be broadly divided into two categories, namely, topographical and functional.

The topographical features contributing to the origin of towns are as follows:

1. Conditions favourable for industrial units
2. Hilly areas to achieve the object of defence
3. Plain areas useful for business activities
4. River banks, and
5. Sea or ocean fronts

The functional aspects responsible for the origin of towns are as follows:

1) Education
2) Health resorts
3) Political, and
4) Religious
GROWTH OF TOWNS

The towns grow during passage of time in a number of ways and various forces which contribute to the overall development of a town are transport facilities, installation of industries, expansion of factories, provisions for defence or security proximity of agricultural lands, availability of electric power, political importance, etc. It should, however, be remembered that towns and cities are not solely products of industrialization because they existed many centuries before the Industrial Revolution. However, the pre-industrial towns and cities have limited opportunities for producing goods and rendering services and as such, they have less relative importance.

It is quite evident that the degree of urbanization increases sharply as industrialization increases and the aspect of urban growth has occurred practically throughout the world indicating the terrible attraction of urban way of life inspite of certain imperfections in the urban mechanism.

Some of the reasons why the people would like to stay close together in urban areas can be enumerated as follows:

(1) It is also quite likely that man has been often found to stay in groups to facilitate defence against attack from hostile outsiders. Of course, as time passes, the defensive element may go in the background.

(2) The man by nature is a social animal and he gets much of the satisfaction of living a life in the company of his fellows.

(3) The size of urban aggregate exhibits considerable heterogeneity. An urban man can develop contacts and friendships with like-minded persons having common interest and at the same time, the urban dweller can retain a very high degree of privacy.

(4) The urban area may provide a reliable water supply or a meeting place for exchange of goods or a place of assembly for religious, political or administrative purposes, etc.

The need of a man for employment and opportunities regarding education, recreation, business, marriage, etc. will add to the additional functions of town growth and ultimately, a town provides a platform for a variety of persons to perform specialized activities on different scales.

The growth of town, to a large extent, will depend on the economic forces because it is found that an urban area is usually a centre of specialized activities and hence, the size of a town will depend on the amount of goods and services supplied to outsiders i.e., its exports. The economic base theory suggests that if there is an increase in the demand of goods and services exported by the town, the growth of town takes place and the rate of growth will naturally depend on the rate at which demand for its exportable products
increases. Moreover, the money earned by the export activities would provide a fund for supporting the production of goods and services required by the population of town.

The facilities of transport or communication increase the population and such a tendency leads to the growth of towns. The means of transport may take up the following forms:

(1) Aerial ports: In some cases, the airports also play an important role in the growth of a town.

(2) Railways: If town is connected with railways, there will be increase of passengers and goods traffic even from long distances.

(3) Roadways: The neighbourhood area is connected with the town and it leads to overall expansion of trade and industry.

(4) Waterways: If facilities of waterways are available, the town can grow as a harbour with possibility of foreign trade and business.

The above-mentioned means of transport have led to the horizontal growth of town. But the availability of mechanical lifts, escalators and elevators has made it possible to have vertical growth of town in the form of skyscrapers.

The growth of towns and cities can be studied in the following two ways:

Growth according to origin

i. Growth according to direction.

ii. Growth according to origin

The growth of towns and cities according to the origin can be divided in two categories:

(1) Natural growth
(2) Planned growth.

(1) Natural growth: Most of the towns in the past have grown in a natural way, that is, the development of the town as such has taken place without any future planning. The men on the spot and the interested parties took decisions regarding the growth of the town for immediate comfort and convenience of the residents. The provisions of various essential amenities such as road system, parks, playgrounds, schools, industrial units, commercial centres, hospitals, cinemas, etc. are made in an irregular way without any consideration for future expansion of the town. The natural growth of a town may be in the form of the following four types:

(i) Concentric spread
(ii) Ribbon development
(iii) Satellite growth
(iv) Scattered growth.
(i) **Concentric spread:** It is the natural tendency of the people to be as near as possible to the town or city and as a result of this tendency, the town develops in the form of concentric rings with nucleus as town. Such a growth creates many complicated problems such as traffic congestion, narrow streets, concentration of population, improper houses, etc.

The town growth is represented by a series of concentric circles or rings. The first zone embodies the central business district and it is the focal point of commercial, social and civic life of the town area. It represents the area of original settlement and land use in this zone takes the form of shops, offices, hotels, theatres, etc. As the town grows, the persons who can afford more transport time and charges go away from the central zone and thus low-income housing, better-class residences and high-class residences are subsequently formed away from the central business district respectively.

The idea of concentric spread is based on the fact that similar or functionally related activities will be located at the same distance from the centre of an urban area. Thus, the town grows radially from the centre whereby each inner zone extends its area by invading the adjoining zone towards the periphery of the town area.

(ii) **Ribbon development:** It has been observed that because of improvement of road surface and growth of motor traffic, it is the natural tendency of everyone to build as near as possible to the main road

The building activity therefore expands in a natural way along the sides of main road and long fingers or ribbons of houses, factories, shops, etc. develop as shown in fig. 1.1

If ribbon development is allowed without the enforcement of certain rules and regulations, it leads to the following disadvantages;

1. As the houses extend in a long strip, there is increase in cost of various basic utility services such as water supply, electricity, postal deliveries, telephone, etc. It thus results into wastage of available resources.
2. The development of ribbons causes to loose and to scatter the community so that there is lack of social life.
3. The future improvement becomes costly and difficult, if not impossible.
4. The houses face heavy traffic associated with noise, dust and undesirable smells.
5. The interior portion is left undeveloped which results in the wastage of valuable land.
6. There are chances of traffic accidents and traffic delays because of the presence of pedestrians on the main road.
7. The ribbon development is purely an urban formation which is thrust into the naturalness of a country and hence, it is aesthetically faulty.
8. The ribbon development spoils the countryside and if it is carried to the extreme, it would make it non-visible at least to the road user.
9. The through traffic of main road is considerably affected by the local traffic.
10. The traffic capacity and efficiency of main road are reduced.

Depending upon the number of main transport routes, especially the fastest ones, the growth of town may even be in the form of a star-shaped pattern and each arm of the star will correspond to the main route leading to the town.

The problem of ribbon development is very complex involving socio-economic, political, technical and legal measures for its solution. It requires a co-operative effort by legislators, town planners, traffic department, judiciary, adjacent land owners and last but not the least, the road-users themselves.

Considering the various causes of ribbon development and the resulting ill-effects, the requirements for legislation exist in respect of the following:

(1) control of advertisements and obstructions to view;
(2) control of unfettered access to the highways;
(3) creation of a competent authority to enforce the various legislative measures;
(4) land-use zoning to check undesirable building activity in the vicinity of highways;
(5) regulation and control of traffic using the highways;
(6) removal of encroachments from the road right-of-way; etc.

The engineering measures to discourage ribbon development include expressway facility with completely controlled accesses, grade separated crossings, controlling the access points, planning the roadside amenities, etc.

(iii) Satellite growth: When a town reaches a certain size, some sort of satellite growth is bound to take place. The development of a satellite town is mainly due to the metropolis and the term satellite is used to indicate a body under the influence of a more powerful body but possessing its own identity. Fig. 1-2 shows the development of satellite towns around the parent city. The features of a satellite town are as follows:

(1) It has its own local government and corporate life.
(2) It is a town in the full sense of the word except that it depends to a certain extent upon a nearby large town or city.
(3) It is connected to the parent city by local trains, buses, etc. in such a way that men can reach to the parent city without any difficulty.

4) It is free to decide its economic, social and cultural activities.

5) It is generally situated beyond the green belt of the parent city.

6) It is mainly a residential area having only local shops, schools for children, etc. As no industries are permitted, the people will have to depend on the parent city for employment opportunities.

7) It is neither a village nor a suburb. A village has not to perform the functions of a town and a suburb is absorbed or is likely to be absorbed into another community.

8) It need not have zoning regulations

9) Its size and development are controlled in such a way that it does not become a rival to the parent town or city in future.

10) The satellite may even be considered to be the part of the market for some of the goods and services being produced in the parent city.

11) The workers living in a particular satellite may belong to the labour force of a certain industry and in that case, it will give a wider choice to the employers of such industries for finding the best man for the job.

The main disadvantage of satellite growth is the necessity of the long journey to work. However, this fact is sometimes over-stated or over-estimated. It may be that a long journey in distance does not necessarily mean a long journey in time and further, a long journey is not invariably more uncomfortable than a short one. However, this drawback of satellite growth has to be assessed by considering the efficiency of the different modes of transport.
It is also sometimes pointed out that the satellite may be deprived of entertainment and cultural activity and this factor may be responsible for preventing the development of a community spirit. This drawback also seems to be over-emphasized because the absence of community activities may be due to certain other reasons such as absence of community centres and halls.

(iv) Scattered growth: In this case, the growth of a town takes place in a very irregular way. It results into traffic congestion, encroachment of industries on residential areas, slums, lack of parks and various other problems which prove to be too difficult to be solved in future.

(2) Planned growth: In case of a planned growth, a town develops in a predetermined line as conceived by the town planner. The overall growth of the town is controlled by the enforcement of suitable rules and regulations. Such an orderly growth avoids the clashing of manifold activities to which a normal town has to undergo. There is rational distribution of various blocks such as residential, industrial, commercial, etc.

The provision of various amenities such as widths of streets, drainage lines, water supply lines, parks, playgrounds, etc. is made to meet with the future requirements. The modern concepts of town planning can very well be seen and appreciated in some of the recent new towns in many parts of the world.

II. Growth according to direction:

With respect to direction, the growth of towns and cities can take place in the following two ways:

(1) Horizontal growth
(2) Vertical growth.
Urbanization

India’s three urban agglomerations viz. Greater Mumbai, Delhi and Kolkata have crossed the 10 million mark in population, while the number of million plus cities has increased from 35 in 2001 to 53 in 2011.

Five cities viz. Chennai, Bengaluru, Hyderabad, Ahmedabad and Pune have attained more than 50 lakh population. The total population of million plus cities constitute 42% of the total urban population, while the total population in Class I cities constitutes 70% of the total urban population. The Census of India has released provisional figures of million plus cities and cities with more than one lakh population. The total number of towns as per 2011 Census is 7935. The number of Class I towns (1 lakh +) has increased marginally from 441 in 2001 to 468 in 2011.

The decadal growth rate of the population has, however, slowed down as the rate has declined from 21.5% during 1991-2001 to 17.6% during 2001-2011. The growth rate of urban population also seems to be heading for stabilization as the decadal variation remained around 31.5% during the last two decades.

In terms of conversion from rural to urban, the number of Census Towns increased by 185% whereas the number of statutory towns has increased by 6.37%. This signifies that a number of rural settlements have attained Urban characteristics and accordingly has been classified as Census Towns.

The Planning Scenario

A critical examination of the available literature on the current planning practices in the country indicates that planning objectives, policies and strategies at national level, are basically formalised in the Five Year Plans which are economic and social in nature and contents. These plans are the major documents which determine the course of national development.

According to the Item 20 of the Concurrent List in the Seventh Schedule of the Constitution of India, social and economic planning is a joint responsibility of the Central and State governments. However, land being a state subject the role of the State Government becomes more pronounced in the implementation process.
Further, the Central Government has been encouraging State Governments to make provision to decentralise the planning exercise and form local self-governments in the spirit of 74th CAA. It is reflected in the JNNURM reform agenda, ATR on Second Administrative Reforms Commission (SARC) and XIII Finance Commission and advisories issued by MoUD on the subject. However, limited States have taken the initiative to reform their legislation (through Notification or Acts) to conform with the 73rd and 74th CAA. Only States of West Bengal, Kerala, Maharashtra and Andhra Pradesh have issued procedures for formulation of Metropolitan Planning Committee (MPC) and metropolitan areas like Kolkata, Mumbai, Nagpur and Pune have MPCs.

As per the study titled ‘Urban Sector Feedback for Metropolitan Planning Committees’ submitted by the Indian Institute of Public Administration (IIPA) to the Ministry of Urban Development, it can be noted that the implementation of the constitutional provision to constitute Metropolitan Planning Committees and to prepare Metropolitan Development Plans is tardy. Out of 53 metropolitan areas (million plus cities), as per 2011 Census, Kolkata has prepared a Metropolitan Development Plan and similar action is being undertaken for Mumbai, Nagpur and Pune. Besides, it is pertinent to note that very few metropolitan cities have constituted “Metropolitan Planning Committees”. The prognosis on this aspect by the Planning Commission and Census of India put the urban population of India between 550-590 million with over 60 metropolitan cities by 2030.

In Kerala during 2013, major reforms in the planning system and administrative set-up have been made through an ordinance to form District Planning Committee and Metropolitan Planning Committees. The State is a pioneer in the formation of six District Development Plans with provision of joint area planning too.

Regional planning as District level planning, is a provision in the 73rd and 74th CAA, however the urban sprawl along the National capital region gave a new shape to regional planning in India in the 1980’s. Apart from the NCT, urban agglomeration around metropolitan cities set an alarming need of metropolitan regions to be planned along with surrounding urban nodes, peri-urban areas and rural settlements. Thus, another planning system emerged as Metropolitan Development Regions under respective Metropolitan Development Authority, such as Mumbai Metropolitan Regional Development Authority (MMRDA), Kolkata Metropolitan Development Authority (KMDA), Hyderabad Metropolitan Development Authority (HMDA) and Bangalore Metropolitan Development Authority (BMDA).

Further, settlements across region are linked physically through transport corridors. As movement of goods, services and alignment of infrastructure are closely linked to transport network, the human settlement and economic activities generally follow the transport lines.
Lately, the Government of India has recognised the potential of transport corridors as a mechanism to impart economic push to large region and has launched Delhi Mumbai Industrial Corridor (DMIC) Project. The objective of this project is to expand India's manufacturing and services base and develop DMIC as a "Global Manufacturing and Trading Hub". The project will provide a major impetus to planned urbanization in India with manufacturing as the key driver.

The planning process in the cities of India were initially managed by Sanitary Commissions which further evolved to Improvement Trusts and with the complexities in the urbanisation, urban local bodies– Municipal Corporations were formed through State Municipal Acts. However, the Municipal Bodies were limited to public health, public works & roads, water supply, drainage, permission and regulation of buildings and were found highly inefficient to meet the requirements of large cities or the metropolitan areas. So, the need for Urban Development Authority Acts and Metropolitan Regional Development Authority Acts in various states was felt and Urban Development Authorities/ Metropolitan Authorities with its designated jurisdiction covering urban and peri-urban areas were formed. The multiplicity of urban local bodies in large cities and overlapping jurisdiction has many a times led to confusion in their roles and cross-purpose functioning. Isolation in spatial planning and lack of coordination are among the common issues faced by all State Governments.

**Need of a Renewed Planning System**

Land Planning in India is facing challenges. Some of the major issues associated with planning in the current scenario can be listed and categorised as:

- Urban development issues specially in newly formed states and backward areas,
- Need for planning system uniformity in the country,
- Problems in planning practices and requirement of coordinated working between Departments/ Authorities,
- Issues in implementation of plans and projects by the States/ UT’s in legal, funding and decision making aspects,
- Issues related to promoting rapid urbanisation and climate change,
- Lack of focus on economic aspects of plan implementation / budgeting while preparing land use development plans etc.
- Need for inclusive Planning, people participation and planning for the urban poor,
- Integration of Peri-urban areas in the planning process,
- SEZ’s or industrial development’s impact on spatial and urban development especially when their location is near to large cities.
- CRZ policy and Coastal management in case of coastal cities.
- Special issues in urban development in hill states.
- Provisions for Affordable housing
As per the Working Group on Urban Strategic Planning, 12th Five Year Plan, lack of integration between spatial and sectoral planning is among the major issues. It states that ‘most of the sectoral (socio-economic) planning efforts are focused on program and project formulation and have very weak spatial planning components. The most recent additions in the context of urban development are the plans required under JnNURM and other GOI programs. Various plans not covered in the previous guidelines and some of those which have emerged lately are:

- Master plan, Concept plan,
- Urban Revitalisation Plan, Slum Redevelopment Plan,
- City Development Plan, Comprehensive Mobility Plan, City Sanitation Plan,
- Coastal Zone Management Plan, Environmental Conservation Plan, Riverfront development projects,
- Heritage Conservation Plan, Tourism Master Plan
- Investment plan

The new planning systems are emerging without integration between different levels of plans - including integration of city development plan and comprehensive mobility plan with other statutory planning systems, which need to be addressed through a reformed planning system and hence a renewed planning system is needed.

**The sections in the URDPFI Guidelines recommend and guide the following:**

- Current scenario of the country to be included on basis of Region and at Nation level
- Planning practises and issues in implementation of plan by States and Union Territories (UT’s).
- Inclusion of the latest trend in the Urban Development process
- Suggested changes in the master planning processes and implementation as per the current situation requirements
- Address relevant issues related to peri-urban areas and urban planning regions.

**Consultative Approach for drafting URDPFI Guidelines**

A participatory consultative approach has been followed in order to revise the guidelines to holistically understand and proactively involve the Government of India Ministries/Agencies/Bodies and State Governments for guiding Urbanisation.

**Information for the users**

The URDPFI Guideline is intended to be a comprehensive guideline for regional and urban planning process. These guidelines would basically provide the framework; the necessary techniques; norms and standards, resource mobilisation and land assembly approaches and development promotion rules and regulations needed for formulation and
implementation of urban & regional development plans. Since conditions vary from place to place and even within a settlement, these guidelines are not uniformly applicable to all situations and places would need to be modified depending upon the local conditions, felt needs and technological innovations so that the development plan may serve as an efficient and dynamic instrument for planning and do not in any way, intend to limit the freedom of expression of urban and regional planners. This Guideline could be used to evolve various alternative planning and design solutions pertaining to urban development. The Guideline is intended to be a reference for various aspects of planning by State Governments, Development Authorities and Planning Organisations.

Classification of Urban Settlements

Definition of census for an urban settlement as per the Census of India 2011, the definition of urban area is as follows;

1. All places with a municipality, corporation, cantonment board or notified town area committee, etc.
2. All other places which satisfied the following criteria:
3. A minimum population of 5,000;
4. At least 75 per cent of the male main working population engaged in non-agricultural pursuits; and
5. A density of population of at least 400 persons per sq. km.

The first category of urban units is known as Statutory Towns. These towns are notified under law by the concerned State/UT Government and have local bodies like municipal corporations, municipalities, municipal committees, etc., irrespective of their demographic characteristics as reckoned on 31st December 2009. Examples: Vadodara (M Corp.), Shimla (M Corp.) etc.

The second category of Towns is known as Census Town. These were identified on the basis of Census 2001 data.

The human settlement classification for planning purposes, its nomenclature and population range is redefined in the URDPFI guidelines based on:

- Census 2011 and reference to census towns
- Master plan formulation in numbers in the states
- Emerging agglomerations in India
Recommended Planning System

Literature review on the planning systems in India and abroad reveals that each country/territory has evolved its own system suiting specific needs and legal provisions. The recommended urban development planning systems in the guidelines has therefore taken into account the problems and the expectations as well as the legal, administrative and political system in India.

The recommended planning system is to consider various plans, both statutory and non-statutory, to be a part of the system. These various plans such as urban revitalisation plan, city development plan, comprehensive mobility plan, city sanitation plan, and coastal zone management plan have emerged due to the urban planning needs, funding schemes/programmes and for integrated planning. Similarly, regional plan, which is to cover a larger land area, is included in the system across the scale of planning.

The table below suggests the planning system framework on the basis of -

- Hierarchy
- Spatial extents
- Scale of planning
- Details provided in the plan
- Function and their speciality

Table 1.3: Various emerging plans in addition to the existing Planning System framework

<table>
<thead>
<tr>
<th>Planning system</th>
<th>Core area of planning</th>
<th>Specific and investment planning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope and purpose of the plan</strong></td>
<td><strong>Perspective plan</strong></td>
<td><strong>Regional Plan</strong></td>
</tr>
<tr>
<td>To develop vision and provide a policy framework for further detailing</td>
<td>To identify the region and regional resources for development</td>
<td>To prepare a comprehensive Development plan for Urban area, Peri-urban areas (jurisdiction) &amp; District(s) Dev. Plan controlled by DPC</td>
</tr>
</tbody>
</table>
### Time frame: Various plans: Indicative

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 years</td>
<td>Regional Development Plan</td>
</tr>
<tr>
<td>20 years</td>
<td>Zonal Plan</td>
</tr>
<tr>
<td>5-20 years</td>
<td>City Development Plan</td>
</tr>
<tr>
<td>5-20 years</td>
<td>Investment Plan</td>
</tr>
<tr>
<td>1 year</td>
<td>Pre-feasibility study</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plan Type</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept plan</td>
<td>Sub-regional plan, Master Plan, Ward Committee Plan, Comprehensive Mobility Plan, Audit and monitoring plan, Detailed Project plan</td>
</tr>
<tr>
<td>Mission statement</td>
<td>Metropolitan Development Plan, Town Planning Schemes, City Sanitation Plan, Surveys &amp; studies</td>
</tr>
<tr>
<td>Perspective Plan</td>
<td>District Development Plan, Coastal Zone Management Plan, Disaster Management Plan, Project such a Riverfront development projects</td>
</tr>
<tr>
<td>--</td>
<td>Revised Development Plan, Urban Redevelopment Plan, Slum Redevelopment Plan, --</td>
</tr>
<tr>
<td>--</td>
<td>Tourism Master Plan, --</td>
</tr>
<tr>
<td>--</td>
<td>Environmental Conservation Plan, --</td>
</tr>
<tr>
<td>--</td>
<td>Heritage Conservation Plan, --</td>
</tr>
</tbody>
</table>

### Scope and purpose of various plans

The need & roles for the specific plan category, thereby resolving gaps in the planning system is detailed in the following section.

### Perspective Plan

Developing the vision of the region is essential for policy framework. The vision stipulates direction of growth and identifies thrust areas for development. It integrates broad level plan with the regional or development plan.

The State Urbanisation Policy should have the Perspective plan for the State. The Perspective plan is a document on the spatio-economic development policies, strategies and programmes towards the intended development of the State. To plan the perspective of the State, the state resource mapping and analysis shall play the foundation of the long-term policies regarding development of infrastructure and resource mobilisation. Thereafter, the vision statement and its concept plan needs to be formulated to define the perspective. The scope of this plan covers the social, economic and spatial development.
goals, policies and priorities relating to the activities that have spatial and financial implications.

The purpose of a perspective plan is to provide overall framework for further detailing; and it serves as a guide for urban local authorities and regional development authorities in preparation of the regional and development plans.

**Regional Plan**

Regional plan is to be a comprehensive plan at an appropriate scale for the integration of urban nodes with the semi-urban and rural areas. The plan shall encompass characteristics of the region on the understanding of the flow of people, goods, knowledge and money.

Some states have comprehensive town and country planning legislation which provides for urban planning and development in a regional perspective beyond the city limits and coordinated with the overall framework of economic development, priorities and resource availabilities. Regions (identified in the States) are to be planned holistically or as sub-regions for the holistic approach of planning.

The detailed planning of the urban nodes will be addressed by the development plans at the next stage of planning, while the requirements of the region will be addressed by the regional plan to bring out policies for development and bringing in harmony between the different types of human settlements. Regional Plan will have higher magnitude (in terms of its geographical area coverage) and would encompass planning of larger area, and thus overcoming the missing link in the present planning system.

**Development Plan**

To avoid overlapping with Special Purpose Plans and confusion in terms of the scale of planning, the development shall be further defined to serve the purpose of a Master plan and integration of land and transport.

Development plan is a statutory plan prepared within the framework of the approved perspective plan. The objective of a development plan is to provide further necessary details and intended actions in the form of strategies and physical proposals for various policies given in the perspective plan depending upon the economic and social needs and aspiration of the people, available resources and priorities.

Its proposals are precise and definite, with an implementation strategy and evaluation criteria. It makes known publicly the intention of the local authority regarding physical, social and economic development, the facilities and the services that are proposed to be
provided in the near future. The approved development plan allows the local authority to implement the development of the land area with the help of schemes and projects.

The time frame of the existing Development Plans is for a period of 20 years by most of the urban development authorities/ULB. A longer period for greenfield cities where infrastructure life of 30 years is considered while planning could also be looked into.

These plans should be in phases of 5 years to coincide with the State Five Year plans and State Finance Commissions’ recommendations. The targets set for each phase can be assessed as the mid-term review against the achievements at the end of each phase. For Greenfield area phasing could include a ‘Zero’ period for approvals, initial land polling and developments and revisiting any strategy.

**Master Plan**

Development plan is a statutory plan, approved and adopted by the local authority and its proposals are precise and definite. Also Development plan ‘notifies the property owners the manner in which their properties will be affected’. Similar details are provided by the Delhi Master Plan, Chennai Master Plan, Guwahati Master Plan, Ahmedabad Development Plan, Hyderabad Metropolitan Development Plan and Bhopal Development Plan. Here, both the plans, Development plans and Master plans have the same functions and impose similar controls. Hence, the two are to be understood as similar plans with variation in the use of nomenclatures by State Governments.

It may be desirable to review and if necessary to adopt structure plan as an intermediately between the regional and master plan. In areas under the schedule list as per the Article 6 of the Constitution of India, land is not directly State subject and hence precise and definite detailing upto the level of revenue may not be possible. In such cases or otherwise, Structure Plan is a planning document which directs the growth and zones of planning, but is not as precise as the development plan (such as the Bangalore Structure Plan) may be formulated. Structure plans may be considered as an option of Development plan for Metropolitan Regions, thereby allowing flexibility.

**Local Area Plan**

The planning hierarchy needs a focused approach in the present context. It should not be included under the title of project or scheme. Thrust of planning should shift to local area plans which could encourage decentralisation.

Local area plans are to be prepared to achieve development or re-development of land; conservation of buildings, physical features; providing improvements in the physical layout, making infrastructure and amenities available and managing the area to enhance health and safety of the occupants to support economic development as well as to
enhance the quality of living, environment, and preparation of area specific regulatory parameters for the area covered.

Local area plans are prepared to specify the implementation details to comply with the Government Policies (such as State urban housing, hi-tech township, rainwater harvesting, energy, disaster management, industrial and service sector investment, barrier-free environment for physically disabled, information technology, tourism & other policies).

The plan shall identify allotment or reservation of land for roads and public purposes of all kinds, for sale by the ULB, for construction, for reclamation etc. The plan shall instrumentalise recovery of the associated costs by mechanisms like levy of betterment charges, charges on additional development rights, implementation of the Local Area Plan providing benefits to the persons concerned.

**Special Purpose Plan**

The Special Purpose Plan cannot be treated as Development plan as it emerges from its proposal. Also approach, scale, context of each one of them is different and also from the Development plan.

Depending on the urgency of the needs and priorities requiring special treatment and covering special aerial extent - Special Purpose Plans for specific subjects can be prepared within the framework of the Regional Plan, Development Plan or Local Area Plan in the area of jurisdiction of the local authority.

These plans may also emerge to serve the purpose of urban planning needs under the Capital or State grants, funding schemes programmes with an aim to:

— Encourage reforms and fast track planned development of cities, peri-urban areas, outgrowths, urban corridors, and others,
— Scale-up delivery of civic amenities and provision of utilities with emphasis on universal access to the urban poor,
— Special focus on urban renewal programme,
— Supplement to budget documents on ULBs,
— Sustainability, Environmental and heritage protection,
— Theme based development
Annual Plan

An Annual Plan would contain the details of the new and ongoing projects that the local authority intends to implement during each financial year for necessary financial resource mobilisation.

The annual plan is to be prepared by the local authority every year to identify the new projects, which the authority will undertake for implementation during the year, taking into account the physical and fiscal performance of the preceding year, the priorities, the policies and proposals contained in the approved Regional Plan, Development Plan or Local Area Plan.

The annual plan is intended to provide the resource requirement during the year and sources of funds including those mobilised by the local authority, grants, aids and project/scheme funds by the State and Central Governments.

It is thus an important document for the resource mobilisation as on the basis of this, the plan funds are to be allocated by the funding body. This plan, therefore, serves as an important link with the budgetary process.

Projects

Projects are derived targets of the sequences of plans which focus on items of execution, investments, costing and returns. Conceived within the framework of the perspective plan, development plan or any of the plans in the planning system, projects are the working layouts with all supporting infrastructure and documents including cost, source of fund and recovery providing all necessary details for execution including finance, development, administrative and management.

These projects could be for any area, old or new; any activity or land use like residential, commercial, industrial, recreational, educational or health related; or infrastructure development, separately or in an integrated manner; for research and development in the field of planning, key surveys to determine statistics, by any agency such as government, semi-government, private or even individual; or any agency prepared by town planners, architects, engineers as the case may be, enjoying maximum freedom of expression in their design within the stipulations of development promotion rules and other regulations as applicable.

The selection of the area subject/project is to be determined by the needs or priorities of the executing agency guided by market forces and government policy interventions.
The contents of the plans suggested in the planning system are given subsequently in plan formulation section.

**Inter-relationships among various plans**

Taking into account the entire planning process and also incorporating the suggested planning system, Figure 1.1 shows the interrelationship of the different plans, directly or indirectly related to the land development, at various levels ranging from national to a transitional urban area under the jurisdiction of a Nagar Panchayat.

A Perspective Plan is formulation of development strategy generally at the State level or at the regional level. This is detailed further in Regional Plan or Sub Regional Plan as the case may be and in Development Plan. Perspective Plan should be a guiding document for planning. It could also specify the regional planning authorities, urban/local area planning authorities, regulatory authorities in the State and those responsible for preparing plan at various levels. The State Urbanisation Plan shall give a stock of the urbanisation, planning status and especially of the land suitability.

Regional Plans are to be prepared at district and metropolitan region level, and where economic regions are formulated. This is the linkage for aggregation of plan’s proposals for consolidation and integration of physical and fiscal planning efforts at District, Metropolitan area, state and also at national level (in case of inter-state regions). As figure 1.1 depicts, Regional and Development Plan is the level of integration and disaggregation of policies, resources in the planning system.

**Figure 1.1: Relationship of Planning System**

Source: Various sources
Development Plan and Comprehensive Mobility Plan need to be integrated to ensure transportation oriented spatial planning. It needs to be emphasised here that urban plans should not be considered in isolation from its region as each urban centre is part of a regional system of the settlement which in turn play their respective roles in the process of development of the region as a whole. The Development Plan shall provide policies and development proposals, which are detailed in the local area plan to a greater scale. This interrelationship between planning system is the key to implementation; hence Development Plan and Local Area Plan shall be prepared by the same authority.

However, areas which require special plan within the framework of the development plan or planning for specific purpose should be prepared only when the need arrives. The funding schemes, such as JnNURM, RAY, have significant role in the new planning system, where City Development Plan, Comprehensive Mobility Plan, City Sanitation Plan, Slum Redevelopment Plan, Disaster Management Plan are to be formulated. Among all, Comprehensive Mobility Plan should be prepared along with the Development Plan, while City Sanitation Plan, City Development Plan should be prepared in line with the Development plan for getting the funds.

Project reports and Annual plans are necessary requirements of the planning system. These are directly interrelated with each other and are vertical with the entire planning system. Implementation of all intended developments is linked to this stage and hence these can be prepared following any of the above mentioned stages.

**Sustainable Urban & Regional Development**

The important concepts influencing planning are: Transport network, Drainage network, Density distribution and Disaster proofing. For achieving the above, there should be adequate emphasis of these on the basic concept in planning.

Twelfth Five Year Plan has also noticed the trend of urbanisation like its precursor and provided road map intending to fasten and guiding urbanisation into broad based inclusive development phenomenon including:

- Step up investment and leverage JnNURM to provide required investment in Urban Infrastructure- Operation & Management,
- Strengthen Urban Governance structure / Local Bodies,
- Augment ‘Soft infrastructure’- System Capacities,
- Inclusive Governance- Take care of the Poor, More Miles to cover,
- More Attention to the Urban Renewal as well as Regional Planning,
- Urban Governance structures, esp. the Municipalities, need strengthening & support
- Environmental sustainability- Cities are not sustainable yet: Inadequate water supply, solid waste management
India is a diverse nation, with varying topography, many types of cites; contextual in term of land form, cultural historic backgrounds and socio-cultural variations. With a long history; the Indian cities have evolved into typical urban morphology, which have extreme variations from each other. In such diversities, multiple options would need to be explored. Micro projects would need to be molded in existing developments, while larger concept and approaches have to be tailored in city specific and contextual requirements. Implementation of some of the successful approaches in one city has failed in another due to lack of alteration as per situation.

**State Land Policy**

State Land Utilisation Policy would need to be defined at the Perspective Plan Level, which should be as per the guiding framework of National Land Utilisation Policy (draft version is currently in place), Department of Land Resources, Ministry of Rural Development, for different states keeping in context the state-specific needs, potential, priorities and legal provisions.

The National Land Utilisation Policy takes into consideration the predominant (existing or scientifically established) functions of land serving the needs of people, environment as well as different sectors of economy and development. Also, the Policy takes into consideration the existing laws and approaches that govern land uses. It is suggested that the land in the country will be divided into Land Utilisation Zones (LUZs) based on the predominant use of those lands. Here, each state should formulate the strategy of land development in a spatial concept plan. The following six types of Land Utilisation Zones (LUZs) are proposed to be identified on the basis of predominant land use:

1. Predominantly Rural and Agricultural Areas.
2. Areas Under Transformation;
3. Predominantly Urban Areas;
4. Predominantly Industrial Areas;
5. Predominantly Ecological Areas, Landscape Conservation & Tourism Areas. Heritage Areas;
6. Major Hazard Vulnerable Areas.

As mentioned, the perspective of the State, the state resource mapping and analysis shall play the foundation of the long-term policies regarding development of infrastructure and resource mobilisation on the land.

**Land Transport Integration**

National Urban Transport Policy (NUTP), 2006 has identified - Integrating land use and transport planning as one of its objectives. In the past decades, urban sprawl has resulted into loss of high quality agricultural land and open space, fragmentation of ecosystems,
spatially segregated uses inducing high dependency on private vehicle use and unfavourable conditions for public transport. Land transport integration benefits in making investment decisions in transport infrastructure and services which in turn are linked to economic, social, and environmental outcomes. It involves two mutually supportive processes:

- Organizing the physical form and land use pattern of a city such that the travel demands, trip lengths and travel times are minimized, while accessibility, comfort and efficiency are maximized.
- Organizing all systems of transportation from pedestrian pathways to mass transit systems such that they integrate well with each other and enable the harmonious establishment of land use around them, in the process generating a city form that is sustainable.

Conventional development plans for Indian cities have a statutory requirement to plan land uses and channelize growth, whereas transportation plans are not statutory and work with the mandate of arriving at regional and local level projects for improving mobility. Thus, this URDPFI guideline suggests the shift from such an approach to explicitly regarding interactions between various land uses/activity subsystems. Therefore, Comprehensive Mobility Plans (CMPs) mandatory under the JnNURM to access central funding for any transport related projects in cities is integrated with development plans bridging the disconnect between transportation projects and statutory land use planning.

Transport networks are among the most permanent element of cities which change very slowly over decades or centuries. While, buildings are the second most permanent element of cities, with lifetime of hundreds of years, but can be adapted to changes through refurbishment but the integration of the two shapes the urban form of a settlement.

**Transit Oriented Development (TOD)**

“Transit Oriented Development is essentially any development, macro or micro that is focused around a transit node, and facilitates complete ease of access to the transit facility thereby inducing people to prefer to walk and use public transportation over personal modes of transport”. This is an attempt to compact the cities and reducing dependency on the new urban developments in the periphery which highly encourage the shift from non-motorized to motorized modes of travel. Approach to TOD development highly depends on establishing mixed landuse zone by strategic densification. The policy includes:

- **Network & Connectivity:** Disperse high traffic volumes over multiple parallel streets rather than concentrating traffic on few major arterial streets. Create a fine network of streets that provides choice of routes for all modes, reducing distances between places as well as journey times.
- **Last mile connectivity:** Provide fast, convenient interchange options and spatial provision for various modes of Intermediate Public Transport (IPT) at Multimodal
Transit Station for seamless travel. Provide multiple mode choices for last-mile connectivity at various prices and comfort levels. And at a given situation, eliminate the need of Intermediate Public Transport by design and engineering.5

- **Pedestrian access**: Provide the shortest direct route to pedestrians and non-motorised modes to station as well as between building blocks.
- **High Density, Mixed-Income Development**: Compact neighborhoods for shorter commutes and equity for all sections of society. Mix of use to promote 24 hour activity.
- **Streetscape Design**: Urban places should be designed for enjoyment, relaxation and equity. Pedestrian friendly designated space for all activities.
- **Promote Place Making to Create a Sense of Place** - Focus on promoting liveability, quality and uniqueness of each space
- **Direct Business to TOD Locations** - Create transit services to regional job centers, focus job creation investments in transit serviced locations

Application of TOD is in context of scales in planning i.e. Regional context, Sub-regional context, city context and area context. It shall require a robust methodology for intervention. Hence the Transit oriented development would need to be planned at:

Mobility1: i.e Regional or Sub-regional planning level
Mobility2: i.e City or local area planning level.

The context of TOD is in terms of City Core areas, Peripheral areas and Greenfield areas which are equally important and mutually dependent on densification, redevelopment, mode of public transport and intermediate public transport, uses of land in the influence zone. Detailed approach of identifying influence zone and its planning is covered in chapter 8.

Besides, integrated urban development, TOD can benefit as an alternative revenue generation source, from:

- Financing of Urban Transport projects by Unlocking Land Values as Higher FSI in influence zone of Transit corridors within the framework of the overall planning guidelines to be prepared by respective states
- Transit Corridors (Metro/ Mono Rail, BRTS, Ring Road) attracting economic activities and leading to induced urban development with less efforts
- Land-use based financing sources along Transport Corridors. For example, periodic revision of property guidance value, higher property tax along transit corridors, impact fees, development charges, conversion charges and betterment charges.

If properly planned and implemented, invariably promotes, value added activities including commercial and services.
Focus on Regional Planning

Strategic approach to planning urban areas starts with macro perspective at the national/state level and then at regional level to guide urbanization and rural development in an integrated and holistic manner. This comprehensive approach shall eventually pave way for ‘sustainable settlement planning’ emphasising on human living environment rather than overtly concentrating on built environment and the accompanying administrative structures. It will integrate top-down and bottom-up approaches. Hence, as suggested by the Steering committee on Urban Development & Management, 12th Five-year plan; ‘Regional and urban planning should be an instrument for guiding inclusive growth i.e spatial and development planning covering metropolitan regions, planning areas of cities, while transportation networks to be central pieces of planning to “lead” development’.

The approach needs to ensure spatial planning in a coordinated manner, sharing of natural and other resources, integrated provision of infrastructure and conservation of the environment. However, detailed planning needs to be left to the urban and rural local bodies. Whereelse, development of investment regions along the national transport/industrial growth corridors shall form the national spatial grid structure.

Flexibility in Plans

Statutory landuse plans have implications on the land use and development control mechanism. Due to the controlled (rigid) approach, Development plans are not implemented completely and have deficiency in coverage. Sometimes, in spite of statutory backing, it has been experienced that the proposals/estimates have not kept pace with the growing requirement of cities or the aspirations of the city dwellers. In case of conflicts, these matters escalate.

Master planning approach is to be for a flexible plan formulation for facilitation and promotion of development in plan making and implementation, where changes in landuse are to be permitted only when necessary by specifically appointed empowered committee. These changes may be guided by large developments, social interest and need for all.

For minor changes in the landuse, the planning system is to be improved to allow flexibility in the development plans/master plans. Such as allowing mixed use of land in the zoning regulation for industrial
– Non industrial aspects of mix. Vertical mix of use of land is an alternative approach for promoting flexibility is suggested in section 5.3.2 of the guideline.
**Land to generate fund for Infrastructure Development**

The URDPFI Guidelines suggest the ways to augment financial resources for implementation of the development/spatial plan through various innovative sources of revenue generation. Formulation of spatial plan should be such that the plan is able to create economic growth and which could fund the implementation of the plan. Among the land development mechanism, town planning schemes followed in the states of Maharashtra and Gujarat are successful case to demonstrate financial sustainability (cost of recovery) of the plan.

Many schemes and projects are conceptualised without proper techno-feasibility studies or financial viability assessments. Consequently, in the Plan, there is not much appreciation of the implications of its standards for capital cost, cost recovery and maintenance by the municipalities and the state agencies. The Urban Local Bodies (ULBs) mainly in the small and medium size towns, without exception, suffer from a very weak resource base. Their per capita income is much less than the level of expenditure, which makes it heavily depend on external funding instead of its self-generated revenues.

For fiscal resource generation from the land, vacant land policy, unauthorised informal development and unutilised FAR could be a source of financial resource generation (refer section 3.3), which can be for dedicated urban development through an infrastructure fund. Here, implementing agencies need to treat land as an asset for infrastructure development through capital gain, stamp duty, auction and other mechanisms in consensus of the State Finance Commission.

**Sustainable Waste Management**

Developed nations in Europe have managed ‘Zero waste’ disposal in a phased manner. International agencies working on zero waste have claimed that recycling rates of 75% & plus have been achieved by municipalities large and small throughout the world to prove it. Zero waste is gaining ground as being practicably achievable.

Zero waste can be achieved by adopting systematic approach of segregation at source by planning, collection facilitation and most importantly public awareness. As per MoUD, ‘Cities are sitting on untapped wealth, i.e. waste to wealth’. In India, many of such practices of conversion from waste to wealth have been successfully implemented, where waste is treated as a commodity for sale and purchase. However this is required to be planned by the other cities in a phased manner in respective situations with multiple party interventions. Sustainable Waste Management is detailed in the chapter number 8.

It is rather important in India now when the trends of urbanization are changing, the standard of living is improving and thus, increasing quantum of all kinds of waste.
Such approaches are needed to be conceptualized in the State level policies and practically implemented by the cities at the Development Plan level and the local area planning.

Besides solid waste, the effective management of waste water would result in availability of treated water for reuse, capture of methane gas for power generation and improvement in the quality of the environment. Therefore, planning should encompass concepts of zero landfill site is to save the precious land and judicious use of water is to save the planet.

**Inclusive planning**

Development plan / Local area plans in India have not explicitly earmarked spaces for the urban poor / informal sector for residents or other activities. In new townships and new developments of IT / BPO Townships, Satellite Townships, SEZ, etc. where the space standards are changing, informal sector is significantly gaining recognition. Planning norms for urban street vendors, the marginalised and the informal sector to be adopted and developed from this guideline. It is of utmost importance to protect the interest of urban poor by reserving space, extending legal title (ownership) and above all the Master Plans/Development Plans to take this component into account. Hence, planners should allocate space with serious assessment of the requirements of urban poor after ascertaining the ground realities with regard to location of vendors, informal activities, slums and need for in-situ redevelopment/upgradation.

There is a strong gender dimension of the ‘shelter-transport-livelihood link’, which exist between women’s place of residence, their ability to access places of employment, education or basic services and their ability to improve their livelihoods. The core problem is that places of employment for low-income people are often located far away from their place of residence. Another vulnerable group of the society is the disabled and the elderly. Barrier Free Environment is one way to enable people with disabilities to move about safely and freely and to use the facilities within the built environment. However, to integrate the disabled and elderly persons fully into the society, the social infrastructure norms suggest co-development of old age home and orphanage facilities with appropriate barriers so that the two distinct sections can benefit from each other’s presence.

Over the past couple of years, the Government of India has brought about a paradigm shift in the approach to disaster management. The new policy emanates from the belief that investments in mitigation are much more cost effective than expenditure on relief and rehabilitation. This approach has been translated in the URDPFI Guidelines in chapter 6 for disaster planning, covering institutional mechanisms, preparedness, response and capacity building both at State and District level.

States, metropolitan areas, regions and cities need to collect data, information and undertake mapping for all infrastructure, services and amenities to understand requirements and
identify gaps. At the local planning area level, spatial maps need to be created to evaluate neighbourhood, streets and public spaces based on their safety, comfort and convenience.

**Speeding the process of planning & implementation**

**Simplifying the planning process**

As per the ‘Strategy paper on master plan formulation, inclusive planning, prioritization for housing and pedestrian movement’, TCPO, there is a widely held view that the urban development planning process in the past has been unduly time consuming and largely confined to the detailing of land use aspects. In light to the concern, the State Governments would need to modify respective Town & Country Planning Acts for the following:

I. **Simplification of preparation of plan:** making provisions in the Development Plans for detailing only the focused key sectors and preparation in a limited time to one year, as suggested by TCPO

II. **Simplification in the implementation of plan:** the plans to be easily understandable & acceptable, minimizing conflicting recommendations within a plan, provision for translation of plans and related documents into vernacular languages

III. **Simplification in data gathering:** user-friendly GIS and remote sensing data to be sourced for simplifying the process for plan formulation by developing a spatial data base useful for planning, decision making and implementation decision.

IV. **Simplification of approval/schemes:** improving the approval process by developing citizens charter, approval mechanism for the change in landuse permissions and by developing regulatory body at State and/or local area planning level to bridge the gap between approval and implementation. Provision of Interim development order\(^1\) in between the period of plan formulation to implementation can be considered.

V. **Better public participation:** The State planning provisions to be modified to emphasis on involvement of public at early stages, formulation of Grievance & Redressal system to address the public grievances and bringing transparency in accounting system. It is suggested to involve Residential Welfare Associations (RWA) in Local area plans (LAPs) and ULBs to use modern tools for awareness through websites/ on project sites.

Foremost, during the plan formulation, roles and responsibilities for the implementation of the plan are to be well defined in order to achieve the milestones as per the action plan and to bring in transparency in the implementation system. Further, during the plan evaluation, citizen charter should to be involved.

In case of inadequacy in the manpower capacity with the Government bodies for planning, outsourcing to non-governmental and private organisation could be considered as an option,
but as suggested by TCPO - Urban Local Bodies and Development Authorities of the States need to take necessary steps in the direction and take a lead to ensure that all the cities and towns of the State have statutory Master Plans by the end of the XII Five year plan.

Plan Formulation

Planning Process
Planning is a continuous, time-oriented, cyclic process and, therefore, spatial development planning shall be seen and practiced as a process where planning, implementation, monitoring, review and plan updations go on as a dynamic process. In this process, the decision to prepare a plan is outside the cycle of planning process. Following diagram portrays the general process of planning.

Figure 2.1: General Process of Planning

Source: Updated by Mott MacDonald based on UDPFI Guidelines

Following are the stages of planning process:

- Selection of Aims and Objectives,
- Identification of site needs,
- Identification of projected needs,
- Plan formulation,
- Inclusive planning,
- Statutory obligations,
- Decentralisation of plan approval process,
- People’s participation,
- Plan modification,
- Review and revision of plans.
Aims and Objectives

The aims are broad and general statements indicating the decisions of the policy makers, aspirations of the people and needs of the community. For example, ‘To provide job opportunities for all’ is a statement of aims.

Objectives are specific statements indicating the ways and means of achieving the set aims taking into account the potentials. For example, for the aim related to job opportunities, the objectives could be:

- Provision of jobs through development of industries / commerce or trade;
- Provision of incentives and inducements (specific) to industries;
- Provisions of informal sector economic activity sites as part of commercial areas, and such others.

The aims and objectives formulation exercise comprises the following four steps:

1. Identification of values cherished by and needs of various stakeholders including citizens, administrators, professionals, politicians, and other group of people;
2. Identification of aims incorporating the values’
3. Identification of criteria that further defines each aim to form basis for formulation of objectives, and
4. Formulation of objectives which could be further defined as design objectives and implementation objectives.

Identification of Site Needs

For comprehensive planning and integration of the sectoral development and spatial planning, site specific needs are to be identified in the beginning of the planning process. The report of the Working Group on Urban Strategic Planning (12th Five year plan), states that due to ‘Lack of Comprehensive Planning Approach, haphazard growth and proliferation of slums around industrial locations, peri-urban areas and randomly located new developments such as SEZs and township has taken place’.

Diverse ground conditions and interrelationships in settlements require different strategies for spatial planning. The growth potential and special functions performed by the urban centres such as marketing, industrial, tourism, pilgrim centres etc. need to be explicitly recognized.

At this stage of the planning process, the site needs shall be identified based on the typology of urban development- such as port city, old city, industrial townships, peri-urban areas; corridor development, regional development and accordingly the vision needs
to be prepared. Table 2.1 throws light on some site specific features for studying urban and regional settlements while planning. The list is comprehensive but not exhaustive.

The stage of identification of site needs should be taken as base line study phase. As this stage has implications on the following stages, a broad based study should be done for identification and incorporation of as much as elements that are specific to the settlement and are likely to have impact on the future development of the settlements to prepare sound proposals.

**Identification of Projected Needs**

After identification of site needs, the next stage in the process of planning is identification of projected requirements of various activities, supporting infrastructure and land as the basic input for plan formulation. It is this stage of planning which would require most of the time. Thus, there is need to minimise the time taken at this stage. In this context, it is emphasised that primary surveys and studies should be rationally chosen so that it saves time and minimises delays in the process. The choice of technique of surveys, analysis, synthesis and projections should also be such that it is effective and time saving.

**Gaps & Projections**

Expansion or development of settlement necessarily requires corresponding provision of infrastructure to support residents and economic activities. Thus, infrastructure gap analysis shall be carried out mandatorily while preparing the plan. Infrastructure gap can be assessed on the basis of remaining life of existing infrastructure and coverage of infrastructure against benchmarks. Special focus must be paid to the transport infrastructure at this stage. Detailed study of different modes of transportation and their corridors shall be carried out to find about travel demand and pattern of the planning area. Using public consultations and carrying capacity techniques (further elaborated in the Chapter on Special Planning Techniques), current or future requirements in infrastructure can be identified.

The background study of standards and guidelines for disaster mitigation shall be completed to find out the gaps that may exist in city infrastructure, landscape and administration.

Aims and objectives of the study should also be considered at this level for setting up priorities of development. To incorporate the element of sustainability in human settlement planning and development, environmental and infrastructural carrying capacity study of the planning area must be carried out at this stage. The capacity to hold the population is an indicator for infrastructure projection.

Population projections can be carried out based on past trends, employment and induced growth (due to the future proposed economic activity of the land). The corresponding needs of the human settlements on infrastructure are to be projected. Priorities for
planned development are identified through norms and standards for buildings, provision of services and infrastructure provided by national agencies, national and state level programmes and policies.

**Consultation**

Public participation is the key to planning exercise and hence different group of stakeholders should be consulted to know the needs and finalise the priorities for projections. Different demographic, social, economic categories of stakeholders can be prepared for wide-ranging public participation such as representatives from agencies and institutions involved in planning and development of the area, elected representatives, associations, experts in the sectors and non-governmental organizations.

Figure 2.2: Identification of Projected Requirements

![Identification of Projected Requirements Diagram](Source: UDPFI Guidelines & MM)

**Plan Formulation**

Based on planning techniques, planning theories/principles, national norms and standards, multiple alternatives of urban planning concepts must be selected. Next level of plan formulation requires Vision development. At all scales of plan formulation, land and transport integration is suggested at this stage of planning, wherein a comprehensive mobility plan is to be formulated. All transportation surveys and studies should be undertaken independently by the transport department or jointly under JnNURM scheme before this stage.

**Visioning Exercise**

The focus of the plan preparation exercise shall be on ensuring adequate stakeholder participation to arrive at a shared vision for the settlements, with regard to economic
Development and quality of life. The vision thus arrived shall form the guiding principle for the Regional or Development plan. These would include inter alia:

- Economic Development Objectives;
- Transportation Objectives;
- Utility Services (levels and coverage) Objectives;
- Social Infrastructure Objectives;
- Growth Pattern/Design Objectives;
- Investment Program/ Sustainability Objectives, etc.

Contents of Development Plan

This part provides contents of development plan document which incorporates the written document as well as the map showing the development plan and other supporting charts and diagrams. It provides major heads and sub-heads to serve as a guide for formulation of development plan of an urban centre.

With the view of saving time and also developing a participatory system of spatio-economic planning, necessary information from secondary sources be utilised, as far as practical, and primary surveys should be conducted only when it is unavoidable. Conceived within the framework of the perspective plan, a developmental plan is to be prepared for a period of twenty to thirty years.

A development plan shall contain the following major heads:

1. Existing Conditions and Development Issues;
2. Projected Requirements and assessment of deficiencies;
3. Development Aims & Objectives;
4. Development Proposals;
5. Resource mobilisation;
6. Implementation;
7. Monitoring & Review.

The details of each of the major sub-heads of developmental plan are given in the following sections.

Existing Conditions and Development Issues

1. Physical characteristics and natural resources:
   - Location, regional setting, brief history of development of the town;
   - City influence and its characteristics including settlement pattern, rural-urban relationship and fringe area developments
   - Issues related to decentralisation of activities
   - Climate;
- Topography;
- Soil: soil profile and condition;
- Sub-surface geology and aquifer system;
- Environmentally and ecologically sensitive areas; water bodies, air, water, noise, soil pollution
- Heritage; sites, buildings and areas;
- Existing generalised land use;
- Developable and non-developable area.
- Land use, zoning and built floor space, existing zoning and development within zoned area, existing land use, existing land use pattern, built floor space, floor space permitted

2. **Demography**: Existing population, age-sex composition, sex ratio, literacy, working population, growth rate, natural growth rate, migration, floating population, population density, and household characteristics—household density and size.

3. **Economic base and employment**:
   - Formal sector
     - Primary:
       - Urban agriculture, forestry & fishing
       - Mining & quarrying
     - Secondary:
       - Manufacturing
       - Construction
       - Gas, water and electricity supply
     - Tertiary:
       - Trade, Hotels and Restaurants
       - Transport, Storage and Communication
       - Financial services such as Banking, Insurance etc.
       - Real estate and Business services
       - Public Administration
       - Others services.
   - Informal sector and urban poverty alleviation, informal trade, commerce, transport, household industries.
   - Work force
   - Occupational pattern
   - Employment generation / Major work areas
   - Whole sale / retail trade

4. **Housing and shelter (both formal and informal)**:
   - housing scenario, housing stock, housing supply mechanism, housing need assessment, slums, squatter and illegal housing identification,
5. **Transportation:**
   - Mode of transportation - by road, rail, air, water as the as may be.
   - Network of roads, railways, waterways and their interrelationship with major activity nodes.
   - Transport terminals.
   - Trans-intra city transportation facility
   - Pedestrian and bicycle
   - Goods movement system
   - Transportation land use integration
   - Parking
   - Signage and way findings

6. **Facilities like:**
   - Education: schools, technical institutes, universities,
   - Health care: Dispensary, health centres, hospitals
   - Recreational
   - Religious
   - Socio-cultural
   - Parks and open spaces

7. **Infrastructure: (benchmarks)**
   - Water supply: network, existing demand and supply scenario, water transmission, reservoirs and distribution
   - Energy: existing demand and supply scenario, transmission and distribution network
   - Drainage, sanitation and refuse and solid waste disposal: existing demand and supply scenario, generation and collection system, transportation, treatment and disposal of waste
   - Communication
   - Police protection, fire protection
   - Cremation and graveyards
   - Disaster management centre

8. **Gap analysis:**
   - Based on the existing conditions and the projected requirements of the planning area, a gap analysis is suggested to be done and issues be identified.

9. **Identification of disaster risk, both natural and manmade**

10. **Resources:**
    - Fiscal: Sources of revenue, streams of expenditure – existing, required
    - Manpower: departments workforce - existing, required
    - Land
11. Developmental Management:
   - Institutional set-up
   - Legal support
   - Inter-department cooperation
   - Integration of development efforts

12. Major policy issues

13. Maps & Plans:
   - Existing land use / utilisation plan
   - Historical city growth map
   - Infrastructure maps
   - Environmental sensitive zones map
   - Disaster maps

Projected Requirements
Assessment of projected requirements should be for a period of twenty to thirty years and it should further be classified under periods of 5 year in lieu with State five year plans and State Finance Commission reports. This classification of projected requirement would help in preparation of annual plans and budget.

1. Population:
   - Proposed population, (the population projected should be guided by environmental and infrastructure [especially drinking water] sustainability and holding capacity of the city. Dispersal of economic activity also guide population projection)
   - Floating population, age sex composition, literates.

2. Economic base and employment: Hierarchy of commercial areas, dispersal of commercial activity and related activities.
   - Dispersal of industries or restriction of specific type of industries considering pollution level, environmental sustainability.
   - Urban poverty and its alleviation.
   - Work force, employment in different sectors of economy
   - Proposed hierarchy of trade and commerce area.

3. Housing and shelter:
   - Informal sector housing, slum up-gradation and resettlement strategy,
   - Housing need and requirement, parking
4. **Transportation:**
   - Mass transportation system and its integration with activity nodes/facility centres and land use pattern
   - Airport, seaport (as the case may be)
   - Travel demand forecast, Road length, hierarchy of roads, transport terminals,

5. **Facilities:**
   - Education: schools, technical institutes, universities;
   - Health care: Dispensary, health centres, hospitals;
   - Recreational;
   - Religious;
   - Socio-cultural; Parks and open spaces;

6. **Public facilities:**
   - Cultural facilities- museum, cultural centres;
   - Specialised hospitals and specialised education and research centres,

7. **Open spaces: protection of encroachment and misuse of open spaces,**

8. **Infrastructure:**
   - Water: projected water demand, water treatment plant,

9. **Land use requirement for (DCRs)**
   - **Residential areas**
     - Primary residential
     - Mixed residential
     - Unplanned / informal residential
   - **Commercial areas**
     - Retail shopping
     - General business and commercial district / centres
     - Wholesale, godowns, warehousing /regulated markets
   - **Manufacturing area**
     - Service and light industry
     - Extensive and heavy industry
     - Special industrial, hazardous, noxious and chemical
   - **Public and semi-public**
     - Government / Semi Government / Public Offices
     - Government land (use undetermined)
     - Educational and research
     - Medical and health.
     - Social, cultural and religious
     - Utilities and services
- Cremation and burial grounds

**Parks, Playgrounds and Open Spaces**
- Playground / stadium/sports complex
- Parks & gardens - public open spaces
- Special recreational - restricted open spaces
- Multipurpose open space (maidan)

**Transport and Communication**
- Roads
- Railways
- Airport
- Seaports and dockyards
- Bus depots / truck terminals and freight complexes, transport terminals
- Transmission and communication

**Special areas**
- Old built-up (core) area
- Heritage and conservation areas
- Scenic value areas
- Disaster prone areas / Eco sensitive area

**Agriculture**
- Agriculture
- Forest
- Poultry and dairy farming
- Rural settlements
- Brick kiln and extractive areas

**Water-bodies**
- Special activities, if any, like tourism or pilgrimage which results in increase of floating population and demand for facilities and infrastructure. This will particularly be useful for hill towns and pilgrimage towns.

10. **Disaster management plans:**
- Earthquake, cyclone, flood, land slide

11. **Maps & Plans:**
- Proposed land use plan

**Development Strategies**

The plan shall contain aims and objectives of development of the town covering issues identified under section existing conditions and development issues.

- Goals and objectives related to dispersal of activities, environmental and infrastructure sustainability; mass transportation and informal activities,
Information and Communication Technology to be incorporated if not already included.

It can/shall consist of the guiding planning principles for the plan formulation. Like whether the city development strategy is for Compact city/ green city/ densities/ particular zones of density.

**Development Proposals**

The proposal sub heads are enlisted as:

- Concept of hierarchy of planning units and spatial development of various activity nodes, facility centres and network of roads
- Commercial activity nodes and corridors
- Industrial activity nodes / Corridors
- Residential
- Open Spaces System
- Higher order facilities and facility centres
- Public and semi-public offices
- Transportation network and transport activity nodes
- Renewal and redevelopment areas
- Proposed land use
- Mass transportation system and land uses interfaces.

**Resource mobilisation**

1. **Proposals for fiscal resource mobilisation including:**
   - Grants
   - Aids
   - Internal revenue
   - Institutional finance
   - Market borrowing
   - Private sector finance

2. **Proposal for land resource mobilisation including:**
   - Land acquisition
   - Land pooling
   - Accommodation reservation
   - TDR

3. **Proposals for manpower resource mobilisation including:**
   - Technical manpower
Implementation

Following inputs from preceding stages and prevailing Statutory Acts a seamless plan implementation schedule must be prepared for Development Plan. It should contain roles and responsibilities of all stakeholders, resource mobilisation framework and phase-wise implementation schedule for planned project activities. The key aspects to be covered in the Implementation framework shall be in line with aims, objectives and prioritised projects and schemes. Implementation framework will include the following:

- Priorities of projects and schemes
- Phasing of developmental activities
- Identification and placement of projects and schemes
- Investment Strategy and Promotion
- Development promotion rules / regulations
- Stakeholders’ role and responsibility

1. Priorities: Classify various projects identified as a part of development proposals by priority as under:
   - Essentials (top priority)
   - Necessary (2nd priority)
   - Acceptable and desirable (3rd priority)
   - Deferrable (4th priority)

2. Phasing: Phase the development in two phases:
   - Phase-I: (3 years) up to end of the term of the local authority which formulated the development plan
   - Phase-II: (2 years) up to the end of the plan period and to be implemented by the following or subsequently elected local authority.

3. Projects / schemes

Projects and Schemes shall be identified by phase and implementing agencies (including private, cooperative and corporate sectors).

4. Investment Strategy and Promotion

5. Development promotion rules / regulations

To regulate and develop land use as premeditated under the Development Plan, development promotion rules / regulations should be mentioned in this section.

6. Stakeholders’ role and responsibility
Contents of Local Area Plan

Once the Development plan is prepared, its proposals can be further implemented by preparing local area plan. Local area plan can be either Zonal Development Plan or Local Area Scheme and these can have the following contents:

Contents of Zonal Development Plan

1. Introduction
   - A brief introduction to the city comprising its regional setting, functional character growth trends.
   - Development plan / Master Plan context
   - Interdependence of Zone on other parts of the city

2. Site Background & Analysis
   - Land use distribution and analysis,
   - Population and density
   - Built-up area, character, extent and delineation
Chapter: 04

Charges and Fees

Development Charges, Levies, Impact Fees, non-tax sources, valorisation charges, service charges:

Charges are a fee charged by a consumer’s local body to recover the costs of specific community/physical services. For example, municipal charges of water supply may go to cover costs of laying water supply infrastructure and water treatment plant in a city. Betterment charges are usually imposed on the beneficiaries of the improvement projects to recover the project cost. Development charge is used for recovering the cost of providing new services and infrastructure in an area.

The Municipality can levy user charges for following services provided in the urban areas:

- Provision of water-supply, drainage and sewerage
- Solid Waste Management
- Parking of different types of vehicles in different areas and for different periods
- Stacking of materials or rubbish on public streets for construction, alteration, repair or demolition work of any type
- Other specific services rendered

Transit Corridors attracts economic activities and concentrated development where provision of additional infrastructure or its augmentation requires additional financial support. Therefore, such areas call for self-financed urban infrastructure projects. Alternative possibilities to raise revenues in these areas can be by tapping land-based financing sources along dense transport corridors, these options can be:

- Higher Conversion charges especially for commercial and economically lucrative activities,
- Higher Development charges or Betterment levy on land uses which put more pressure on infrastructure
- Impact fees or higher charges on the purchase of extra FSI/FAR along the corridor upto a maximum prescribed by the authority
- Overall additional changes and fees such as higher property tax, special water tax (mentioned in the table 3.1)
- Non tax source for the use of particular services, such as Service charges for parking in the TOD influence zone, fire safety facilities in the zone among others.

The Municipality can levy fees and fines for the following services and activities to generate revenue:

- Sanction of building plans and issue of completion certificates,
- Issue of municipal licenses for various non-residential use of lands and buildings,
- Licensing of various categories of professionals, activities such as sinking of tube-wells, sale of meat, fish or poultry or premises used for private markets, slaughterhouses, hospitals, animals, carts or carriages and other activities.
- Sites used for advertisements in roads, parking lots, commercial locations and public building,
- Issue of birth and death certificates.

Impact Fees: It is a fee imposed on builder, developer on industrialist to compensate the impact and burden new project is going to have on socio-physical infrastructure (existing and need for new) and environment.

**Grant-in-aid & Subsidiaries**

Central Finance Commission (CFC) evolves a comprehensive framework for the distribution of the grants-in-aid between states. This criterion include indicators like – population, area, distance from highest per capita sectoral income, index of devolution, SC/ST proportion in the population and FC local body grants utilisation index. These indicators have varying weightage according to which grants are allocated to the States.

Grants are classified as planned on non-planned. Plan Grants are made available through planned transfers from upper tier of Government under various projects, programmes and schemes, such as JnNURM, UIDSSMT, IDSMT, RAY and IAY. Non-Plan Grants are made available to compensate against the loss of income and some specific transfers, such as Octroi compensation.

A capital grant is usually utilised for capital expenditure like purchase of land, building, equipment, facilities, etc. The benefits of such expenditure are of an enduring nature and spread over an extended period of time, such as road development grant.

The revenue grant is generally utilised for meeting recurring expenditure, the benefits of which usually expire within the accounting year in which it is incurred. Revenue Grants are usually in the nature of a subsidy. Subsidies are provided, directly or indirectly, for the provision of services such as water supply, disposal of sewage, transporting and disposal of wastes; municipal transport, street lighting, hospitals and schools.

Further, the 13th Finance commission has introduced other grants namely, general basic grant, general performance grant and special area basic grant.
Public Private Partnership (PPP)

One of the ways to enhance fiscal capabilities of the municipal authorities is to shed some of their functions and evolve alternative institutional arrangement for the performance of such functions. Public Private Partnership is such arrangement between a government / statutory entity / government owned entity on one side and a private sector entity on the other, for the provision of public assets or public services, through investments being made and management being undertaken by the private sector entity, for a specified period of time. There is well defined allocation of risk between the private sector and the public entity. The PPP arrangement ensures that private entity receives performance linked payments that conform to specified and pre-determined performance standards, measurable by the public entity or its representative.

PPP models are generally classified in the categories are enlisted below:
- Management Contracts
- Turnkey Projects
- Lease
- Concession

Private Ownership

Loans from Financial Institutions

A financial institution is either in public and private sector which brings funds from the public and puts them in financial assets rather than physical property. Such institutions are made up of different organizations such as banks, trust companies, insurance companies and investment dealers. Specialised financial institutions e.g. IDFC, NHB, HUDCO and IL&FS are some agencies which provide loans and a variety of instruments for infrastructure financing. Other financial institutions e.g. ICICI, LIC of India, etc. also provide funds for infrastructure projects. These institutions have access to funds which are for longer duration e.g. loans from development agencies, bonds from open market, foreign institutional investors, etc. and are thus able to lend for relatively longer durations than banks.

Credit rating of the ULB plays an important role here. The better the credit rating for repayment of principal and interest, lower is the rate of interest. Certain financial institutions provide credit enhancement mechanisms to enhance the inherent credit quality to obtain a better credit rating resulting in lower interest rates. This facility is now also being extended by Ministry of Urban Development through its Pooled Finance Development Fund (PFDF) scheme. Institutions may also provide guarantees for funds accessed from other sources. *(Municipal Finance Improvement Programme-JnNURM)*
Banking institutions also provide finance to local authorities. Bank loan is a relatively new avenue and an easier option for finance for Local Bodies, as the banks have prescribed norms and well laid down procedures. The time period of these loans are short to medium term and generally do not cater to the long tenor needs of infrastructure projects. Bank loans are available to finance the short term needs of institutions e.g. working capital loan, bridge loans, loans against property etc.

**Funding by Bi-lateral & Multi-lateral agencies**

Bilateral organizations are government agencies or non-profit organizations of a country that provide aid to other countries. Bilateral organizations receive funding from their national governments, and use the funding to aid developing countries. Few bilateral agencies are as follows:

- US Agency for International Development (USAID)
- Department for International Development (DFID; UK)
- Japan Bank for international Cooperation (JBIC)
- Japan International Cooperation Agency (JICA)
- Aus Aid

Multilateral organisations are international organisations whose membership comprises member governments, who collectively govern the organisation and are the primary source of funds while the loans/grants-in-aid are provided for projects in various countries. Some examples of multilateral funding agencies are:

- Various United Nation (UN) bodies
- World Bank
- Organisation for Economic Cooperation and Development (OECD)
- Asian Development Bank (ADB)

Bi-lateral and Multi-lateral bodies are also known as Development Agencies. These provide soft loans and grants for infrastructure projects. Accessing funds from these agencies is relatively a long process and it requires preparation of various project documents - in-depth planning, and studies to assess compliance of the project with respect to environment, rehabilitation / resettlement and social safeguard policies, and pilot testing of new initiatives. As almost all loan projects of bi-lateral and multi-lateral agencies are backed by a sovereign guarantee, the Department of Economic Affairs, Ministry of Finance, Government of India plays an important role during the entire process. In line with the development financing objectives of these institutions, projects funded by these institutions are typically in sectors that are not commercially attractive. Local bodies can receive external development assistance from bilateral and multilateral sources on behalf of the State Governments for State sector projects/programmes. **(Municipal Finance Improvement Programme-JnNURM)**
**Foreign Direct Investment**

Funds from Foreign Direct Investment (FDI) have emerged as a major source of funds in infrastructural projects in India – for instance Japan’s (Japan Bank of International Cooperation) FDI support in developing the Delhi Mumbai Industrial Corridor (DMIC).

Under FDI Policy 2013, almost all the sectors have been opened for 100 per cent FDI except agriculture, mining and petroleum and natural gas, manufacturing, service sector and financial services. The sectors in which hundred per cent FDI is permissible are construction (townships, housing and built up infrastructure), Industrial Parks and Airports with few conditions. Hence FDI support for financial resource mobilization is easily available, which could be permitted through financial collaborations, joint ventures/technical collaborations, capital market, preferential allotments etc.

**Pooled Finance development fund scheme by GoI**

Small and medium sized cities find it difficult to raise resources from the market for infrastructure projects due to lack of project structuring capabilities and creditworthiness. The Government of India has launched the Pooled Finance Development Scheme (PFDS) to enable these local bodies to bridge this gap through accessing market funds for their infrastructure projects. The scheme is meant to provide credit enhancement grants to enable local authorities to access market borrowings through Pooled Finance Municipal Bonds (PFMB) for investment in urban infrastructure projects.

PFDS facilitates ULBs in municipal infrastructure by helping them access capital and financial market for investment in essential projects. It facilitates local bodies in developing bankable urban infrastructure projects. With appropriate credit enhancement measures it helps ULBs in reducing the cost of borrowing from market, on the other hand strengthening the municipal bond market.

The PFDS creates an incentive structure to support urban reforms, which would also be driven by covenants of financial market lenders to ULBs. These urban reforms are in synergy with urban reform agenda of other central schemes as JnNURM and UIDSSMT. In order to apply for the grant assistance a State Pooled Finance Entity (SPFE) is required to be established in every state. The SPFE could be a trust provided that the entity is just a pass through vehicle. The Central Government will be responsible for the funding of these State pooled finance entities through the PFDF. The cost of each project of the Municipality/ULBs will be estimated. Seventy-five per cent of these costs will be reimbursed by the Central Government and twenty-five per cent by the State Governments.

Other funds at the national level, set-up by Financial Institutions and Banks have also started providing the much required funds. State level Infrastructure funds (from supply side) and Pooled Finance Funds (from demand side) have also started providing funds for
infrastructure projects. The examples of such funds are Tamil Nadu Urban Development Fund and Gujarat Infrastructure Development Fund etc.

**Municipal bonds/debentures**

Urban Local Bodies and Infrastructure funds, issue municipal bonds and debentures to general public or specific institutions at fixed rate of interest and are redeemable after a specific period. Municipal bonds can either be taxable or tax-free. These bonds and debentures can be listed on the stock exchange which makes the securities highly liquid and makes secondary market available for the bonds and debentures holders. National Stock Exchange and Bombay Stock Exchange provide a facility for listing of bonds and debentures in their Exchanges. In India, the Municipal bond market is still in its budding stage. Only large ULBs having buoyant revenue base e.g. Ahmedabad, Bangalore were successful in the past in raising funds through Municipal Bonds.
Chapter: 05

Master Plans - Existing Tools, Techniques and Agencies for Implementation

 Though it has been generally observed that Master Plans are used more for enforcement purposes (i.e., controlling development) some plans have been implemented partially if not fully. Attempts have been made to detail out the Master Plans to the level of actual layouts and schemes for the purposes of implementation and/or enforcement. A variety of legal and administrative tools have been adopted for this purpose. While the case studies undertaken by STEM have revealed the extent to which the Master Plans have been implemented and the reasons for non-implementation, this paper deals with the general process of Master Plan implementation, and some of the tools and techniques used and the agencies involved in plan implementation.

Master Plan Implementation Process
The various stages involved in the implementation of Master Plans are indicated in the diagram

Broadly the implementation process constitutes:

a. Detailing out of the Master Plan, (especially the areas/zones/districts earmarked for immediate development) into zonal/district plans and layout plans.
b. Preparation of schemes (such as Town Planning Schemes).
c. Acquisition of land and development of the same by the provision of services, by the city development authority sectoral agencies and private investors.
d. Sale/allotment/distribution of land to individuals/corporate bodies/government departments, etc.
e. Construction by individual corporate bodies/government, etc. after obtaining planning and building permission.
f. Enforcement of planning/building permission and dealing with encroachment and violations.

Though variations exist, from state to state and from town to town, the above process is generally adopted wherever Master Plans have been put into implementation.
Diagram: Master Plan Implementation Process

Master Plan

Preparation of Zonal/District Plans

Notification & Acquisition of land for a scheme by UDA

Provide services + Civic amenities + Recreation by UDA

Allotment & Sales of Plots

Seeking & obtaining building permission

Issue of certificate of completion by UDA after construction.

Dealing with building bye laws violations by LG

Private developers to handover sites for civic amenities free of charge to UDA

Scrutiny according to land use regulation

Provide Roads W.S., drainage, Electricity, etc. by respective authorities

pvt developers to handover sites for civic amenities free of charge to UDA

Sales of Plots or owner occupation

Building permission by Municipality/Corp/UDA

Construction by Private agencies

54
LEGAL TOOLS

The main legislation available for implementation of a Master Plan is Town and Country Planning Act. Other legal tools include:

a. Development Authority Acts
b. Municipality/ Corporation Acts
c. Housing Acts/ Slum Improvement Acts
d. Industrial Areas Development Acts
e. Land Acquisition Act, and

Regulations such as:

a. Land use and Sub-division Regulations under the Town and Country planning Act.

a. Town and Country Planning Acts

The State Towns and Country Planning Acts are mainly meant to establish the machinery, process and procedure for plan preparation and enforcement. The provisions for plan implementation in those Acts are minimal and wherever such provisions existed, as in the case of TCP Acts of Andhra Pradesh, Assam, Gujarat, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Mizoram and Orissa, they are only limited to the preparation and implementation of Town Planning Schemes. There is no provision in those TCP Acts for implementation of other components of Master Plans such as city level infrastructure, open space systems, etc. Thus it is to be concluded that TCP Acts are, at present not geared to effective implementation of Master Plans.

b. Development Authority Acts

The Development Authority Acts provide for the creation of city Development Authorities. In many cases these authorities are created by the merger and transformation of the existing city Improvement Trusts. The Development Authority Acts give powers to the Development Authorities:

i. To prepare and implement development schemes, mainly residential, commercial, recreational areas, etc. including on-site and off-site infrastructure.
ii. To provide for private development of residential areas.
iii. To institute the necessary institutional set-up for performance of their functions.
iv. To levy development charges and betterment tax on the beneficiaries to recover the investment costs.
v. To raise resources by other means and maintain a Development Fund.
vi. To make regulations and bye-laws and administer them to control the use and construction of buildings.

Though, their jurisdiction covers the whole of local planning area, mostly their activities are concentrated in areas outside the municipal boundaries. In principle, the city
Development Authorities have adequate powers to implement the Master Plan, but very seldom do they use these powers vested with them; they do not institute the necessary institutional set-up develop the technical, professional and managerial capabilities or resources for implementation of plans.

c. Municipality/ Corporation Acts

Municipalities and Municipal Corporations are local government bodies created under the State Municipality/ Corporation Acts mainly to provide and maintain municipal services (roads, water supply, sewerage, drainage, waste collection and disposal, street lighting, fire services provision and maintenance of parks and play fields, etc.) within the limits of the city/town boundaries. Though the Municipality/ Corporation Acts provide powers to the municipalities and corporations to under-take execution of city wide infrastructural projects and programmes using the revenues raised from property and other taxes, due to limited financial resources and manpower, their role in plan implementation has been mostly confined to operations such as widening of roads, and marginal improvements to existing water supply networks, sewer lines, etc. Any large scale city wide developments, extending and crossing over, the municipal limits are left to city Development Authorities. The Municipality/ Corporation Acts, therefore work in conjunction with the City Development Authority Acts.

d. Housing Board Acts/ Slum Improvement Acts

These legislations exclusively deal with housing (and related infrastructure) schemes, to be developed within urban areas and in specified areas notified for the purpose. While the former deals with new schemes to be planned and implemented in developing or undeveloped areas, the latter deals with improvement of existing slum housing.

The Housing Board Act Provides for the establishment of a board and enables slum housing.

i. Plan and develop housing schemes for different income groups, though the emphasis, of late, is for the SEWS.

ii. Provide for necessary infrastructure and community facilities in the schemes.

iii. Allot and sell developed sites and provide loans for housing or build houses and allot or sell them to the beneficiaries of the scheme.

iv. Recover from the beneficiaries the cost of development and loans given through development charges, rents, outright sales, loan repayments, etc.

v. Establish a revolving fund to enable rolling programme of housing schemes.

Similarly the Slum Improvement Acts (Slum Clearance & Improvement Acts) provide for the creation of Slum Improvement Boards and enable the Boards to:

i. Develop and implement schemes for provision of essential infrastructure and community facilities for certain specified areas declared as 'slums' Provide financial assistance through loans in building materials for the improvement of their shelter.

ii. Recover the cost of the schemes from the beneficiaries through monthly charges, loan
repayments, etc.

iii. Establish a revolving fund to enable the programme to roll on.

Thus, to a large extent, these two Acts enable the implementation of public housing programme component of the Master Plan.

e. Industrial Areas Development Act

This is meant to enable the State Industrial Areas Development Board to acquire, develop and distribute land for industrial and related purposes in cities/towns in the State. The Act gives powers to lease or sell the land and to collect revenues/development charges/rents, etc. to recover the cost of those schemes.

f. Land Acquisition Act

This is an Act enacted by the Parliament at the national level and is a generalized legislation by which any development agency/government institution acquires land for public development purposes. The Act specifies the procedure for acquisition of land for public purposes and also how compensation should be estimated and paid for. The use of this Act is also referred to or indicated in other Acts mentioned above, wherever land has to be acquired and developed for the purposes of preparation and implementation of Town Planning Schemes, Development Schemes, Housing Schemes, Municipal Services, etc. whichever government/public agency adopts the Act, for its purpose, that agency is responsible for the administration of the Act, for the purposes of that particular schemes/projects/programmes.

g. Land use & Sub-division Regulations under TCP Acts

These do not constitute a separate legislation. They are regulations and form the integral parts of the Master Plans (and zonal district plans which are mentioned later). Land use provisions in the Master Plans (and Zonal plans) are effected on a plot by-plot basis through the administration of the land use and sub-division regulations. The purpose of these regulations is to make the developer to comply with the land use provisions of the Master Plan (and zonal plans) through a system of issuing planning permission before starting development. These regulations provide the basis for scrutiny and issue of planningdevelopment permission for each developer. Mostly these are applicable only to private developers, as government developments, in most states, are exempted from these regulations.

Broadly the land use regulations stipulate:

i. The type of land/building uses normally permitted and those not permitted in the various broad land use zones indicated in the Master Plan (and zonal plan);

ii. Where the discretionary powers of the authority (responsible for the administration of the regulations) are used; and

iii. The procedure for applying for and issue of planning permission.
The land use regulations are administered by the Planning Authority responsible for the area, which could either be the Municipality/Corporation or the City Development Authority or the State Town Planning Organization in charge of the area.

Sub-Division Regulations specify:

i. Size to which a plot can be subdivided (residential, commercial, industrial, etc.).

ii. The requirements of a layout plan, if a private developer or government agency wants to prepare a layout plan for his site.

iii. The width and other specifications for a private street to be built.

iv. The provision of community facilities and their norms.

Like the landuse regulations, sub-division regulations are also administered by the planning Authority.

**h. Building Bye Laws under Municipal Acts**

These are meant to guide and control the setting, design and construction of buildings. As the nature and complexity of buildings vary from place to place, building bye-laws also vary. Usually the state Ministry of Urban Development formulates model bye-laws (applicable to different classes of towns and it are up to the administering authority to modify them if found necessary, and adopt these regulations). Within municipal limits the administering authority is the municipality/corporation and for areas outside the municipal limits but falling within the jurisdiction of a city Development Authority, that Authority is responsible for the administration of the bye-laws.

**ZONAL / DISTRICT PLANS**

The Master Plan is implemented through more detailed plans like the zonal/district plans which are either prepared by the respective state Town Planning Department or the City Development Authority.

The zonal/district plans are prepared for well defined areas earmarked in the Master Plan for various purposes, mainly for residential uses. The areas usually bounded by major roads or natural boundaries are chosen and detailed out.

A Zonal/District Plan usually shows

- A hierarchy of road system connecting the arterial major roads
- Blocks of residential units (which could be subdivided into specified sites and number of plots) and/or density.
- Location and size of community facilities such as:
  - Shopping areas
  - Schools/colleges, etc.
  - Health centers/hospitals etc.
  - Community centers
  - Parks & play fields
– Post offices and telephone exchanges, etc.

• Alignment of infrastructural network and location of:
  – water storage tanks/pumping stations
  – Sewage disposal works, ponds, etc.
  – Power sub-stations, etc.

The plan document includes a statement of the proposals in the layout and the statement of landuse & sub-division regulations which govern the type of development in the zonal/District plan. The zonal district plan is generally initiated for the purposes of housing and land development programmes.

LAND POOLING TECHNIQUES

One of the main issues in plan implementation is the availability of adequate land for the plan needs. Very often the CDA has to acquire the land at a very high price and the sheer magnitude of land acquisition becomes a prohibitive factor in plan implementation. Alternatives to acquisition of land have been attempted in some States, with some success. Two of these techniques are: a) Town Planning Schemes, b) Transferring of Developmental Rights.

a) Town Planning Schemes

The Town Planning Scheme is a land pooling technique which has been successfully practiced in the State of Maharashtra initially and now in Gujarat (India) since last seven decades. The Bombay Town Planning Act, 1915 provided legal backing to this technique. The later revisions of the Act in 1954 and 1976 have largely retained the basic character of the scheme provided under the Act of 1915. Basically, Town Planning Scheme is a technique of plot readjustment. In addition to detailed area-planning, it also provides legislative support and finance for implementation. The technique is rational and equitable. It has found support both from the local authority and the owners. These features make it a unique technique amongst those developed elsewhere in the world for similar purposes.

How it Works

An area which is normally a developing area or the area likely to develop in the near future is selected. Most of the land parcels are normally unequal in area, irregular in shape and without adequate access. The area may not have adequate linkages with the main town and other parts of the town through a regular road network. The land parcels are marked and pooled together on a map. In other words, the area is treated as a monolithic piece of land without any dividing boundaries. The whole area is laid out into regular shaped plots (proportionately reduced in size compared to original holdings) after carving out roads and sites for public uses. The reconstituted plot called 'final plot' is normally located on or near the original land-parcel called 'original plot'. The owner is allotted back the final plot which is normally reduced in size but improved in terms of shape and accessibility. The owner
gets compensation for the area deducted from his original plot. The owner has to pay half or less than half of the increment in the market value of the final plot to the local authority as his contribution towards the cost of town planning scheme. This, in a nutshell, describes the principal features of the scheme.

The Rationale

The examination of the basic considerations shows that the technique is rational and equitable. It is rational in logic and equitable in application and procedure. The Considerations are that the market-value of the final plot increases with:

- Regularity of shape,
- Improved accessibility,
- Improved prospect of development,
- Availability of facilities nearby,
- Better linkage with other parts of the city, and
- Improvement in environmental quality of the area due to hierarchical road network and provision of community open spaces.

Since increase in market-value takes place without any effort on the part of the owner, it forms 'unearned increment' accruing to him. To the extent, this increment is attributable to the proposals of the town planning scheme, the local authority has legitimate claim over it and hence it is tapped by the local authority partially.

Instead of requiring the whole town to bear the cost, it is appropriate that the direct beneficiaries contribute towards the cost of development in proportion to the benefits.

The owner receives compensation for the land deducted from his original plot. He also retains at least half of the increment in market-value of his plot immediately available and full increment in future.

Instead of dispossessing anyone owner totally, the area required for roads and sites for public uses is equitably shared by all the owners in proportion to the area of their original holdings.

The local authority prepares the draft scheme after giving due opportunity to the owners and the persons affected. The State Government sanctions the draft schemes with modifications if necessary and appoints the Town Planning Officer. The Town Planning Officer acts as an arbitrator and finalizes his decisions after giving due opportunity to all affected by the proposals.

Thus the technique is beneficial to the owner, to the local authority and to the society as a whole and so they join hands and contribute towards the cause of planned development.

The main drawback of this approach is that the procedure is very time consuming.
(taking nearly 10 years); also deciding the compensation payable to and betterment to be levied on various owners and recovery of betterment levy are complex tasks.

b) Transfer of Development Rights

Yet another way of pooling land in already developed or being developed areas for plan implementation, as experimented by Bombay Municipal Corporation, is the concept of Transfer of Development Right (TDR). By this, the owners who surrender their plots free of charge which are earmarked or reserved for public purposes, are free to utilize the floor space index (FSI) of those plots elsewhere.

In the cases of reservation of plots for public amenities like library, dispensaries, welfare centre, etc. where residential development is permissible as a mixed use, the owner is permitted utilisation of full FSI on the same plot, if he provides the amenity free of cost. In the case of plots reserved for garden, playground, schools, hospitals, etc. where the owner is not permitted to use extra FSI, he may transfer his FSI to other land owners, after surrendering his plot.

This has been found a reasonable and workable way of ensuring private participation in development projects. By this the local body in charge of implementation of the public facilities is partly relieved from the pressure of land acquisition, while the community gets the amenity free of charge.

The only problem in this approach is that the land owners have to willingly come forward to surrender their properties, failing which the authority has to acquire the land. In fact in most cases the owners are expected to agree to transfer their development rights from a high value area to a low value area, on one to one scale, without any weightage for the price differential which is not a profitable proposition to the land owners.

Plan Implementation Agencies

Although various agencies are involved in the implementation of a Master Plan, the City/ Urban Development Authorities are the main bodies responsible for the implementation of major components of the plan, especially land development and infrastructural services.

The sectoral government departments and corporate bodies implement those projects which are within their areas of operation, e.g., Education department in building schools, Housing Boards building houses, Industrial Development Boards developing industrial areas, etc. The various institutions responsible to undertake implementation of the various components of the Master Plan are indicated in Table. It is however pointed out that very often, due to a variety of reasons, these agencies are unable to implement their programmes and projects in time and the required co-ordination (spatially and in time) is not adequately effected.
<table>
<thead>
<tr>
<th>Components of Master Plan</th>
<th>Implementing Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residential Areas</strong></td>
<td></td>
</tr>
<tr>
<td>i. Land development and provision of infrastructure</td>
<td>City Development Authority (+private developers under supervision of CDA)</td>
</tr>
<tr>
<td>ii. Housing</td>
<td>Housing Board, Municipal Corporations, State &amp; Central Governments CDA, Slum Clearance &amp; Improvement Board, Housing Co-operatives + Police Housing Corporation etc.</td>
</tr>
<tr>
<td>iii. Community Facilities</td>
<td>*Education Govt+Private</td>
</tr>
<tr>
<td></td>
<td>*Health CDA+LGs+Private</td>
</tr>
<tr>
<td></td>
<td>*Community Halls Individuals+LGs</td>
</tr>
<tr>
<td></td>
<td>*Others Govt+LGs+Private</td>
</tr>
<tr>
<td><strong>Commercial Areas</strong></td>
<td></td>
</tr>
<tr>
<td>i. Land development and infrastructure</td>
<td>CDA+LGs</td>
</tr>
<tr>
<td>ii. Shops, Market, etc</td>
<td>CDA+Corporation+Individual</td>
</tr>
<tr>
<td><strong>Industrial Areas</strong></td>
<td></td>
</tr>
<tr>
<td>i. Land development and Infrastructure</td>
<td>CDA + Private + Industrial Area Dev.Boards</td>
</tr>
<tr>
<td>ii. Industries</td>
<td>Govt + Private + Societies</td>
</tr>
<tr>
<td><strong>Institutional Areas</strong></td>
<td></td>
</tr>
<tr>
<td>i. Land development and Infrastructure</td>
<td>CDA + Private</td>
</tr>
<tr>
<td>ii. development of institutions</td>
<td>Govt + Private + Societies</td>
</tr>
<tr>
<td><strong>Road Network</strong></td>
<td></td>
</tr>
<tr>
<td>i. Arterial Roads</td>
<td>CDA + Govt</td>
</tr>
<tr>
<td>ii. Major Roads</td>
<td>CDA + Govt</td>
</tr>
<tr>
<td>iii. Transport Terminals</td>
<td>Municipal Corporations + State Transport Corporations + Truck Terminal Corporations</td>
</tr>
<tr>
<td>iv. Fly overs/ Bridges, etc.</td>
<td>Municipal Corporations + UDA</td>
</tr>
<tr>
<td><strong>Water Supply</strong></td>
<td></td>
</tr>
<tr>
<td>i. Treatment Plants, Trunk &amp; Main Lines</td>
<td>State Water Supply and Drainage Boards + Municipalities</td>
</tr>
<tr>
<td>ii. Localised Supply (handpumps)</td>
<td></td>
</tr>
<tr>
<td><strong>Sewerage</strong></td>
<td></td>
</tr>
<tr>
<td>Trunk &amp; main lines and Treatment Plans</td>
<td>State Water Supply and Drainage Boards</td>
</tr>
<tr>
<td>Septic Tanks/ Soak Pits</td>
<td>Individuals</td>
</tr>
<tr>
<td><strong>Drainage</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>State Water Supply and Drainage Boards</td>
</tr>
<tr>
<td>Private investors in plan implementation</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Private investor's role in master plan implementation is generally seen in the following areas:</td>
<td></td>
</tr>
<tr>
<td>a. Land development (mainly for residential purposes)</td>
<td></td>
</tr>
<tr>
<td>b. Provision of housing (Group housing, Farm houses, etc.)</td>
<td></td>
</tr>
<tr>
<td>c. Development of commercial areas (commercial complexes)</td>
<td></td>
</tr>
<tr>
<td>d. Industrial Areas (Industrial units, warehousing, etc.)</td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Land Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private developers purchase land from individuals and pool them together to provide adequate area for a housing estate/ scheme. Layout plans for the areas are to be prepared after the conversion of land from agriculture to non-agriculture as per the provisions of Revenue Act, by the developers in conformity with the provisions of the Master Plan and zonal district plans and after approval by the CDA; they develop the area by the provision of on-site infrastructure (roads, water supply, etc.) and the developed sites are sold to individuals or companies for construction of dwellings.</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Provision of Housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private developers may build houses (group houses, farm houses, etc.) in their own areas (as mentioned in (a) above) or in areas allotted by the CDA. Wherever CDA has provided serviced sites, the private builders could build on them. Otherwise, they have to provide services to those plots.</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Development of Commercial Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial development so far by private investors is mainly in building commercial complexes, with offices at upper floors.</td>
</tr>
</tbody>
</table>
**Industrial Areas**

Here again, the role of private enterprise has been limited to building individual units/warehouses in already developed (serviced) sites provided or leased by the State Industrial Area Development Corporation.

So far private investors have not been involved in large scale infrastructural services (such as, trunk roads, mass transport systems, water and sewerage systems, etc.), which needs consideration. Participation of private investors on a partnership basis with Government has more scope in future.

**Enforcement**

The strongest and important element of a Master Plan is the enforcement of it. As a matter of fact, all Town and City Planning Acts emphasize strongly on the mechanism and provisions for enforcement and stipulate on the penalties for violation of regulation and bye-laws. It is also the conventional belief that the provisions in the plan get implemented through strict enforcement.

Enforcement of the Master Plan contains two aspects:


b. Dealing with cases of violations and unauthorized developments.

**a) Issue of Planning/Development Permission and Building Permits**

The way to make all developments (i.e., use and type of structures) to conform to the land use proposals of the Master Plan has been to make it mandatory for all developers to obtain a planning/development permission before they start construction in a plot. The same procedure applies if the developer wants to change the use of his plot/Building.

Similarly, the developer has to obtain a building permit which enables him to build a specified structure within the limits prescribed by the building bye-laws.

The procedures for issuing planning permission and building permit have been cumbersome and complex, which have led to corrupt practices and consequently violation of plans.

**b) Dealing with Violations and Unauthorized Developments**

Encroachments (knowingly or unknowingly) occur especially from private development to public areas (reserved for roads, community facilities, etc.). Similarly, violation of the provisions of the Master Plan occurs when unwarranted change of land use or buildings occurs. Contravening the Acts, regulations and building bye-laws also constitute violations.

In general, the performance of enforcement authorities in dealing with violations has not been fully satisfactory, either due to lack of resources, manpower or commitment.
PLAN IMPLEMENTATION PROCESS IN GUJARAT

The development plan envisages plan implementation as per stipulations laid down under the Gujarat TP & UD Act 76. The Development plan is used mainly as an instrument to regulate and control development activities. The main features of the plan implementation frame work include:

a. Urban Local Bodies (ULB)/ Urban Development Authorities (UDA) - are the key nodal agencies responsible for plan implementation assisted by other public agencies like GEB, PWD, PHE, GSTC, etc.

b. Any development to be carried out by any agency or individual, is subject to approval by UDA/ULB as the case may be.

c. TP scheme formulation and its implementation by ULB/ UDA forms the main plank of implementation process. Public agencies such as GHB, GIDC, GSCB and other government department are also to implement development for their field of activities.

d. Development activities are intended to be controlled and regulated, under the provisions of zoning and development control rules. Thus the framework essentially dwells in using development plan as control and regulatory mechanism rather than as an instrument for setting up of city's socio-economic growth process.

Institutional Set-up

Institutional set-up for plan implementation is undefined and adhoc. There is no conscious approach to establish an effective plan implementation mechanism for the main components of the plan. Various components of the plan proposals are expected to be implemented by various agencies as given below

a. Land and Housing Development: UDA/ ADA are the principal nodal agency for activities related to land development for housing. TP schemes are used as an instrument of land development and those schemes are achieved by UCA/ ADA, as per provisions under the Acts.

b. City Level Infrastructure: No specific responsibility is assigned to any agency. Various public agencies are expected to take up utility schemes in their fields of activity. No specific targets and programmes are set out. These public agencies act only when, budgetary provisions are made available under plan funds.

Infrastructure agencies like water supply and sewerage board/ PHE are to provide city level trunk services, like water supply, sewerage, drainage, etc. GEB is meant for expansion of power distribution and street lights. Telephone department is there to provide and expand telecommunication system; GSTC for public transport and local authority for garbage collection and disposal, and general municipal services.
c. **Institutional Zones:** Various public agencies are required to activate developments in areas earmarked for their field of activity. Educational department and Health department are expected to make necessary provisions of funds accordingly and they are take-up work as per resources mobilised for the purpose.

d. **Industrial Areas:** GIDC is the main nodal agency for development of industrial areas in the cities.

e. **City road network bus station, depots pick up station, etc.:** The Plan provides for proposed road network, but actually road network programmes are launched as per availability of funds from the state government for the purpose. ULBs are able to implement some portion of the roads, which form part of the TP scheme, provided it is supported by TP scheme economics. Betterment levy in the shape of development charge is the main source of implementing the road portion, included under the TP scheme.

For other city roads, the authority depends upon the budgetary resources from the state government. For bus station and transport infrastructure, the agencies use their own resources.

**TP Scheme Mechanism**

Town planning schemes in Gujarat have played an important role in land development, by developing large amount of privately owned lands, through public and private sector collaboration without requiring costly and time consuming land acquisition. It is a unique land pooling mechanism which mostly generates its own resources required for land development from the beneficiaries of the scheme. The mechanism dwells on the principle that 'Land must pay for its own development to maximise its buildability levels'; using land as a resource and appropriately sharing the appreciated value of land on its development, between the land owner and the agency, using land valuation principles.

The **TP Scheme involves the following steps:**

a. Survey of each parcel of land, its areas and ascertaining its ownership rights.

b. Reconstitution of plot boundaries, with a view to maximise their buildability levels. This involves provision of roads, giving accessibility to each reconstituted plot, and the provision of community open spaces and other public facility sites appropriately located. This provides opportunity for preparation of a draft lay out, following neighbourhood planning principles.

b. Preparation of a scheme statement in terms of area under reconstituted plots, original plot area, and proportionate area pooled for public purposes, etc.

c. Preparation of a valuation statement, giving original plot value, appreciated value of reconstituted plot, apportioned cost of land development ..
Compensation payable = Value of reconstruction plots - Value of Original plots + Appreciated land value (up to 50 per cent value)

This scheme finds its own resource, required for land development which gets pooled from the appreciated land value of reconstituted plots. The scheme thus ensures benefit for all the participants under the scheme i.e., land owner, the agency, and to the society at large, the areas under the scheme develops without any land acquisition and beneficiaries i.e., land owners are also not uprooted from the lands pooled under the scheme.

The scheme has a great potential to achieve its full cost recovery, and permits to organise a more rational location of common facilities. But in Gujarat as per the present practice, the potential offered by the scheme is not adequately harnessed. Scheme formulation as well as processing has deficiencies, such as (a) time delays, which at present takes around 5-10 years (b) inappropriate cost estimates which adopt price levels applicable at the beginning of scheme processing, and c) inadequate provision for on-site infrastructure. Adopting suitable modifications and using more modern methods of keeping urban land records and using better planning skills, it is possible to overcome these deficiencies.

Institutional Set-up for TP Schemes

i. Draft TP Scheme: UDA/ADA is to initiate notification of the TP scheme within the framework of DP provisions.

ii. Preparation of preliminary scheme: State government appoints TPO, for preparing the preliminary scheme_ This involves preparation of a layout which mainly caters to reconstitution of original plots, so as to improve the build ability of each original plot, along with the provision of properly accessible community facilities, etc.

The basic physical planning exercise gets finalised at the level of the preliminary scheme itself. Before finalising the preliminary scheme, the layout is notified to obtain public responses to the proposed layout. State government sanction is also obtained for the preliminary scheme, proposed to be finalised by TPO.

iii. Preparation of the Final TP Scheme: TPO undertakes assessment of valuation of each original plot as well as the reconstituted plot. Accordingly, it finalises compensation awards and land allocation statement in respect of each land owner, whose lands are pooled under the scheme. CTP staff is mainly engaged to assist TPO for all assessment works.

iv. TP Scheme scrutiny and its sanction: State government with CTP's assistance, undertakes scheme scrutiny at various stages of scheme preparation. State government ultimately considers the CTP's report and accords sanction to the scheme at various stages.
TP Schemes Preparation Main Steps involved

Designation of the Area and Authority: State government designates UDA or ADA or ULB, as an appropriate authority for making TP schemes for areas included under city limits or the development area of the city. The state government is also empowered to issue directions to frame TP-scheme for any area as it considers necessary.

TP scheme could be taken for any area, which may be
i. In course of development or already built upon.
ii. Likely to be used for residential or commercial or industrial or any other purpose, including building development.

TP scheme Provisions:

i. Reconstitution of original plot boundaries with a view to improve its build ability levels along with a provision of appropriate accessibility.

ii. Layout showing new roads/ streets, upgrading of existing road network, improved circulation pattern, addition/ alteration in existing pattern.

iii. Reservation of land for roads, open spaces, gardens, schools, markets, milk booths, facilities, and public purposes of all kinds, etc.

iv. Utility and service network (water supply, sewerage, drainage street lights, garbage disposal.

v. Allotment for sale of residential commercial/ industrial use.

vi. Imposition of such conditions, as considered appropriate, including suspension of any rules, bye-laws regulation, notifications or order issued under any act of the state assembly.

Declaration of Intention for formulation the TP Scheme:

The authority will notify the intention of making the scheme and publish the limits of the area, proposed to be included under the TP scheme, and submit the proposal to the state government within 21 days of such notification.

Drafting the TP Scheme

i. The authority is to make a draft scheme within 12 months of declaration of the intention or period as may be extended but not exceeding over 18 months and publish it in an official gazette along with the draft regulations.

ii. Scheme declaration intention gets lapsed, if the scheme is not prepared and no scheme can be prepared for this area, for a period of three years.

iii. Draft scheme is to contain (a) area, ownership and tenure of each original plot, (b) allotted or reserved for various public purposes, (c) extent to which it is proposed to alter the original plot boundaries, (d) layout along with provision of site infrastructure, (e) cost of the scheme, (f) size and shape of every plot in the layout, and (g) necessary land adjustments as considered appropriate.

Dealing with objections to the Draft Scheme:

Within one month of draft scheme publication, any person affected by such scheme, shall submit his objection. The authority shall consider the objections received
and modify scheme as it thinks fit.

**TP Scheme Sanction:**
Authority to submit the draft scheme to the state government within 4 months of its gazette notification, incorporating such modification in the scheme as considered appropriate. The State government to sanction scheme, as it may think fit, within 6 months from the date of its receipt. Sanctioned scheme shall be open for inspection to the public.

**Development Restrictions:**
On or after the draft scheme publication,
- i. No person shall carry out any development without the permission of UDA/ULBs
- ii. Authority shall communicate the decision on every application seeking permission within 3 months.
- iii. Provisions shall not apply to any operational construction undertaken by central or state government.

**TP Scheme Finalization**
Final TP Scheme shall: i) fix difference between values of original plot and reconstituted plot, ii) determine areas reserved for public purposes, iii) estimate the compensation payable on each plot used, iv) calculate contribution to be levied on each plot in proportion to the appreciated land value expected to accrue, v) final amount of compensation payable. (Decision of TPO shall be final and binding on all, except in certain matters). TPO shall communicate decision to the affected party. The party aggrieved however may file an appeal before the board or civil courts. Authority has power to enforce the scheme after it has reached preliminary stage.

**Plan Enforcement**
a) Basic instruments of plan enforcement includes:

- i. Final development plan as sanctioned under Gujarat TP&UD Act - 76 by the state government
- ii. General development control rules and zoning as provided under final Development Plan.
- iii. Preliminary town planning schemes as sanctioned by the state government for the area.

b) ULB/ ADA or ULB as may be appointed is the appropriate authority for enforcement of various provisions contained under:

- i. Final development plan
- ii. Development control rules applicable for the city
- iii. TP schemes provisions
- iv. Municipal bye-laws
c) The responsibility of the plan enforcement rests in appropriate authority as appointed.

d) Every individual, public/private agency is required to seek approval who intends to undertake any development on any plot/building within the development area of city/town.

e) Local Authority is empowered to impose penalty for unauthorized development or use. The act also empowers authority to remove unauthorised development.

**Plan Violation**

It is observed that extent and nature of violation are seen mainly in cities with spurtive growth. Nature of violations mainly include:

- Development carried out without any permission
- Violation of FSI setbacks and ground coverage
- Squatting on government lands, mostly by slums beas ties
- Encroachment of road side space.

These violations are mainly due to weak enforcement set up in the authority, overlapping - of activities assigned to the enforcement staff, inaction on the part of authority to activate timely action and keep constant vigilance.

These violations also occur due to a) impractical provisions in development regulations b) rigid landuse zoning c) inflexible approach to development plan proposal as these prescriptions do not meet the changing needs and dynamics of city development process. d) Unaffordable planning standards being pursued under the plan. e) cumbersome planning and development permission procedure involving clearances from several authorities f) overlapping bye-laws and regulations g) absence of strong will to deal with violations strictly.

**Urban Administration and Management**

Urban areas in the state are administered and managed through Urban Development ministry, as a principal nodal agency. The implementation efforts of UDN ADA are assisted by various government departments. Water supply, sewerage, drainage are undertaken by GWSSB/local authority. City illumination is managed by GEB/local body, GIDC attends to the development of industrial infrastructure assisted by UDA, GSTC manages public transport.

Gujarat Housing Board and UDA/ULB undertake land and housing development. UDA takes up large scale land development operation, using TPS mechanism without requiring acquisition of private lands. City's main roads mostly remain unattended to except
those roads which may come under TPS limits. Public uses are implemented by UDN Public agencies on sites earmarked for their activities.

Plan funds for urban areas flow through various sectoral ministries: There is no system to pool these resources being spent for a city or town and integrate them spatially. Even planning and design of various services are dealt in total isolation.
Urban Planning Process in Gujarat

Introduction

Gujarat has a fairly good and robust legislative framework for urban planning as compared to other states in India under the Gujarat Town Planning and Urban Development Act (GTPUDA), enacted in 1976. The act derives from early 20th century planning law devised by the British to improve and manage Indian cities. It also has been amended from time to time to keep pace with the changing requirements.

The GTPUDA mandates the delineation of a “Development Area” around a city or a town for planning purposes. It encompasses a much larger area around the city or town that is likely to see development. This ensures and allows for better planning and for guiding the development in the area. A village is the basic spatial unit and every development area is an agglomeration of numerous villages, or may also include portions of villages. Each village is an agglomeration of land parcels or plots.

The GTPUDA also mandates the creation of a special planning authority— the Urban/Area Development Authority (UDA/ADA)—which is charged with the task of undertaking planning within the delineated Development Area.

Urban planning in Gujarat is a two-step process and is prescribed in the GTPUDA and its Rules. The first step is to prepare a “Development Plan” (DP) for the entire city or development area. The second step is to prepare “Town Planning Schemes” (TPSs) for smaller portions of the development area for which the Development Plan is prepared.

The Planning Process

Development Plan

The DP is a macro strategic plan document that defines the direction of growth and envisions the citywide infrastructure for the entire development area. It is a comprehensive document that looks at all components of development and makes specific proposals with respect to each. These include the following:
• Land development—land use zoning, areas to be opened up for new growth, development control regulations (which determine the built form), and allocation for public uses
• Road network and transportation
• Water supply
• Sewerage
• Storm water drainage
• Open spaces, green areas
• Environment and pollution control
• Reclamation of areas
• Any other

The DP is revised every 10 years and is varied (updated) in the interim whenever a need arises to respond to the changing context.

The process also includes limited public participation—after a draft DP is prepared by the Development Authority, it is published and kept open for public inspection for a period of two months and objections and suggestions are invited. Each objection and suggestion is responded to and, if required, the DP is modified. It is published again to invite further objections and suggestions. These are again taken into account and the DP is modified. It is then sent to the State Government of Gujarat for approval and oversight. The State Government may suggest modifications, keeping the overall public good in view if required, before approving the DP.

Town Planning Schemes (TPS)

The DP is a broad-brush development vision for the city—a dynamic document which then is detailed gradually. The new areas for growth to be opened up for development are clearly marked and divided into smaller areas of about 100 to 200 hectares. Each such area is called a TPS. The TPS are micro plans prepared for about 100 to 200 hectares typically involving 100 to 250 landowners. The TPS are numbered starting from one, two, three, etc., and are usually named after the “village” they fall in.

A complex system is used to simultaneously reorganize land parcels or plots, provide access to each land parcel or plot, set aside land for public uses by taking a portion from each landholding, and appropriate increments in land values for infrastructure development. Detailed infrastructure is designed and cost estimates are prepared. The process involves intensive public participation and consultation at several stages.
A Brief Legislative and Implementation History of the TPS

Gujarat and Ahmedabad

Modern town planning emerged from the British intervention in Indian cities. These were modeled heavily on the prevailing ideologies and movements in town planning in England.

During British colonial rule, a number of measures were undertaken and laws were enacted. These were then continued by Indian planners after independence. It was not until very recently, however, that the legislation was amended to recognize the emerging situation in India. This has resulted in chaotic and unplanned growth of cities and towns.

In the early 1900s, town planning or urban planning was regarded to be part of the municipal administration. As the problems in urban areas took on greater proportions both with regard to scope and complexity, however, improvement trusts addressing portions of cities and towns were set up under various improvement trust acts to formulate and implement town improvement schemes.

These gradually gave way to town planning acts to prepare town improvement schemes by some states. Different states enacted different legislation for town planning, and there was no continuity or uniformity across states. Thus, different states had different legislation for town planning either under municipal acts or town planning acts.

The Bombay Town Planning Act, 1915, was the first to be introduced in India and was applied to the present states of Maharashtra and Gujarat. Such laws empowered the local authorities to control the use of land and development through the instruments of zoning and building regulations, acquire land for public purposes, and recover betterment contributions in respect to land parcels benefiting from improvements.

This act largely came about as a response to remedying the chaotic and unhealthy environment created by industrialization in the form of textile mills in Ahmedabad. Its objective was sanitation, some social amenities, and orderly development of the area. The local authorities were given the powers to prepare TPSs.

Both type of acts—improvement and town planning—did not provide for comprehensive planning of cities and towns, but only improvements for portions from the viewpoint of public health, sanitation, and safety. Further, the Bombay Town Planning Act was voluntary and depended on the initiative of the local body.

A Town Planning Handbook published by the Public Works Department of the Government of Maharashtra published in 1876 was the main sourcebook for
preparing TPSs. It provided new models for layouts. The elements of zoning, neighbourhood units, and greenbelts were incorporated and absorbed in the local planning vocabulary.

Soon after independence, town planners realized that suburban developments were not solving problems. To enable local authorities to tackle the issues of growth and planned development in a comprehensive and integrated manner for the entire city or town based on surveys, studies, and analysis of physical, social, and economic conditions, more comprehensive legislation was required. The Bombay Town Planning Act was enacted in 1954 keeping this objective in view by the State of Maharashtra. It replaced the 1915 Act and was applicable to the states of both Maharashtra and Gujarat. It came into force in 1957. Under this act, it was mandatory for every local authority to carry out a survey of the area within its jurisdiction and to prepare and publish a development plan.

Even the 1954 Act was heavily modelled on the Britain’s Town and Country Planning Act of 1947 and did not emerge in response to the local planning problems. There were a couple of clear drawbacks:

- The process of preparing TPSs took very long, as physical planning proposals and the financial proposals were required to be resolved prior to implementation.
- The jurisdiction was limited only to that of the local authority. With the increasing pace of urbanization and migration, the pressure of development just outside the limits began to be felt. The periphery or the fringe began to see unplanned development and could not be left unattended.

This act was eventually replaced in by the more recent act—the GTPUDA enacted in 1976 by the State of Gujarat. It came into force in 1978. It is a far more comprehensive legislative act and responded to the local challenges of growth. The above two drawbacks were addressed:

- The act allows for delineation of a large planning area around the jurisdiction of the local authority; and
- The physical planning proposals and financial proposals in TPSs were unlinked.

The process of preparing a TPS was divided into three parts—draft TPS, preliminary TPS, and final TPS—to expedite implementation.

Apart from this, the act has been amended several times to improve the process of planning.

**Implementation History in Ahmedabad**

Most of Ahmedabad has been developed using the TPS mechanism. The process began as early as 1915. TPSs were prepared continuously under the various acts described above. Clearly, there is a long history of implementation of the TPSs, which has made the process acceptable to the people. There have been continuous improvements in the content of the proposals over the years.
Case Study: TPS No. 90 Vinzol 2, Ahmedabad

Introduction to the Case Study Area

The TPS No. 90 Vinzol 2 is taken as a case study to explain the process. The TPS area is located in the southern portion of the city of Ahmedabad very close to the junction of Ahmedabad Mehmedabad Highway and the 60-meter-wide Sardar Patel Ring Road. This is one of the most rapidly developing corridors and is predominantly an industrial area. It falls in the village of Vinzol.

The TPS falls within the jurisdiction of Ahmedabad Municipal Corporation. River Khari abuts the entire northern portion and passes through the TPS. Most the area is vacant and includes the village settlement of Vinzol. The total area of the TPS is approximately 82 hectares and it has 80 land parcels.

In this TPS, there is a village settlement that needed to be integrated, a large water body that needed to be responded to, and a non perennial river that passes through the area.

The TPS Preparation Process

The process for preparing a TPS is prescribed in GTPUDA, 1976, and its Rules. It is quite a complex and long process. It is described in a much simplified and concise manner.

Survey of the Area

A very detailed and accurate topographical survey of the entire area for which the TPS is being prepared is undertaken using high-accuracy Total Station Survey, which records all physical features on the ground—structures, trees, fences, compound walls, electric poles, water bodies, drains, etc.
Establishing the Ownership Details of Every Land Parcel

All cadastral records are collected to reflect the ownership details, extent (area), tenures, and encumbrances for every land parcel and are compiled in a prescribed format. The type of tenure for each land parcel is noted; this is crucial as it has a direct implication on the change of use and transfer of ownership, and usually the same tenure is retained while giving back the newly shaped land parcel. This process is extremely tedious and time consuming, as the land records are of several types, are spread across various agencies, are non-computerized, and are in different formats. Figure illustrates some of these types of records.

Along with the cadastral records, all types of spatial records (maps) are also collected. As in the case of cadastral (area) records, these are of several types, spread across agencies and non-computerized, using not-to-scale drawings and in different formats. The spatial records are vectorized and reconciled with the physical survey of the area. At this point, the area from the maps and records are compared and finalized. This is called the “melavni” in the local language and literally translated means “to match.” This process is a major bottleneck, as it must be certified by the Land Records Department. The base map of the area is now ready for undertaking planning.

Defining the Boundary of the Area

On the final base map of the area that shows the survey, the boundary of the TPS area is clearly marked. At this stage, the intention to prepare a TPS for the area is publicized in a clear fashion in local newspapers.

At this point, the information pertaining to the land prices is collected from the register of land transactions. Based on the information on relevant sales of land, a sales map is prepared. Obviously, sales are not available for all parcels and hence, based on the available transactions and valuation principles, land values are attributed to each plot. This is called the original plot (OP) value; it is the value of the land parcel
before any kind of planning intervention.

**Marking Original Plots on the Base Map**

All the OPs are marked on the base map. If more than one land parcel or plot belongs to one owner or group of owners with exactly the same tenure status, then such land parcels or plots are consolidated and given one OP number. The land parcels need to be contiguous. Thus, at this stage landholdings within a TPS are also consolidated as far as possible.

**Tabulating Ownership Details and Plot Size**

The task of tabulating the information is commenced in a format prescribed in the GTPUDA Rules called the F Form. The first few columns are filled—name of the owners, land tenure, revenue survey numbers, OP number, OP area, and OP value. Figure shows the F Form at this stage.

**Laying Out the Roads in the Area**

The planning of the TPS area begins and at this stage the TPS is called a draft TPS. The first major step is laying out the roads. If a road that is shown in the DP passes through the TPS area, it is usually respected. It may be slightly modified, keeping in view the findings of the survey. While designing the road network, the transportation planning principles are followed, a planning pattern (e.g., a grid or a radial pattern) is devised, and appropriate connectivity with the arterial road network identified in the DP, and the DP roads passing through the TPS is established, if a natural feature such as a water body is present, it is addressed and, most importantly, care is taken to ensure that each OP gets access to it. The GTPUDA indicates
a tentative percentage of areas under roads to the total scheme area of about 15 to 17 percent. Figure shows the road network within the TPS.

**Carving Out Plots for Amenities in the Area**

Plots providing adequate social infrastructure such as schools, hospitals, dispensaries, clinics, open spaces, housing for the poor, etc., are marked on the base map along with the roads. The areas to be allocated for such uses are indicated in the GTPUDA as tentative percentage to the total area of the TPS is about 20 percent. Figure shows the road network and amenity plots within the TPS.

**Tabulating Deduction and Final Plot Size**

The total percentage of area that goes under roads and amenities is about 35 to 40 percent. The GTPUDA allows this to go up to 50 percent. The F Form is continued to be filled further. From each OP this percentage is deducted and a final plot (FP) size is arrived.

At this stage, the process of valuation is continued further. A semifinal (SF) value to the OP is also assigned. Usually, this is the same as the OP value. In some instances, however, there can be a change in the value of the OP before the provision of infrastructure—it may increase or decrease owing to the planning proposals such as zone changes, changes in plot shape, changes in the plot size that are impacted certain development control regulation, a substantial shift in plots, and proximity to features that may negatively impact development, such as a high tension lines, eroded lands, etc. Figure 18 shows the F Form at this stage.
Delineation of Final Plots

After the roads and amenity plots are worked out, each OP is reconstituted or redrawn. At this stage, the irregular shapes of the OPs give way to regularly shaped FPs with the new areas. Figure shows the proposed road network, amenity plots, and FPs.
Tabulating Infrastructure and Betterment Charges

At this stage, costs for a TPS are worked out. These include:

- Costs of key infrastructure—roads, water supply, drainage, and streetlights—are calculated
- Compensation to be paid to each landowner for the land is appropriated based on the SF value
- Administrative costs of implementing the TPS are accounted for
- The final value for each plot is systematically assessed
- A portion of this increase in land value is taken as betterment charges
- A “G Form” summing up the inflows and outflows for a TPS is prepared summarizing the overall financial strategy of the TPS
- The “F Form” is completed—each landowner is given compensation for the land taken and a portion of the land value is taken as betterment; based on the two, the net demand is computed for each owner

- The final value for each plot is systematically assessed
- A portion of this increase in land value is taken as betterment charges
- A “G Form” summing up the inflows and outflows for a TPS is prepared summarizing the overall financial strategy of the TPS
- The “F Form” is completed—each landowner is given compensation for the land taken and a portion of the land value is taken as betterment; based on the two, the net demand is computed for each owner
Owners Meeting

Landowners are consulted and heard at this stage for the first time when the work on the draft schemes is completed. A well-publicized landowner’s meeting is prescribed in the GTPUDA.

Modification of the Draft TPS and its Approval

Based on the suggestions and objections received from each landowner, the draft TPS is modified and published. It is again thrown open for objections and suggestions from the landowners. Based on the second round of objections and suggestions, it is modified and then submitted to the State Government for approval. Once approved, the draft TPS is now called the sanctioned draft TPS. The proposals for roads can be implemented.

Appointment of the Town Planning Officer (TPO)

After approval of the draft TPS, a quasi-judicial officer called the town planning officer (TPO) is appointed. The TPO’s task is to deal with each landowner both on the physical planning proposal—the shape and location of the FP and the financial proposal—the compensation and betterment issues, and eventually demarcate the FP on ground and hand it over to the owner. The TPO divides the sanctioned draft TPS in two parts to facilitate his or her functioning: a preliminary TPS to deal with the physical planning proposal and a final TPS to deal with the financial proposal.

Individual Hearings to Each Landowner on the Preliminary TPS

The TPO gives individual hearings to each landowner and revises the preliminary TPS if required. Inputs from the State Government and local authority and development authority are sought. The preliminary TPS may be modified if required, and the TPO gives a second round of hearings. These hearings, as mentioned above are on the physical planning proposals.

Finalization of the Preliminary TPS and Its Approval

The preliminary TPS is again modified based on the second hearing. At this stage, demarcation of FPs commences. The TPO finalizes the preliminary TPS by writing his or her decisions with regard to every plot. This is referred to as the award of the preliminary TPS and is published in the local newspapers. The preliminary TPS is sent to the State Government for approval. It must be approved within two months. The preliminary TPS comes into effect from the date of sanction and all plots appropriated for public purpose vest with the local authority or development authority.

Individual Hearings to Each Landowner on the Final TPS

At this stage, the financial proposals are taken up with each owner. These pertain to the compensation and betterment charges. The TPS at this stage is called the final TPS.
Finalization of the Final TPS, Its Approval, and Implementation

Once the hearings are done, the financial proposals may be modified and sent to the State Government for opinion. There may be some modifications. The TPO then finalizes the TPS and publishes it in the local newspapers. This is referred to as the “Award of the Final TPS”. A Board of Appeals for further issues on financials is constituted. Once all appeals are resolved and the final TPS is modified, it is sent to the State Government for approval. The State Government is required to sanction it within three months, but it usually takes longer. Once approved, the drawings and documents are sent to the State’s Revenue Department to update the records.

To Sum Up: Key Advantages, Limitations, and Potentials of the TPS

Advantages

• Long history: The legislation has been continuously improved since 1915 to make the process more responsive to the changing context of development.
• Democratic and participatory: The process is democratic and participatory, with a built-in mechanism for dispute resolution—the landowners are involved in the process of planning and have ample opportunity to present their views on the proposals and place on record their objections.
• Fair: The process is fair, as all owners lose the same proportion of land.
• Equitable and inclusive development: The process facilitates equitable and inclusive development; a portion of land is appropriated for accommodating urban poor.
• Respects property rights and is non disruptive: The process respects property rights and is non disruptive; the landowners are not thrown off their lands and are given a better-shaped land parcel, usually very close to the original land parcel.
• Non coercive and non authoritarian: The process is non coercive and non authoritarian; the proposals are reviewed at several stages that are formally prescribed in the act.
• Win-win proposition: Both the landowners and the planning agencies gain from the appreciation in the land values
• Transparent: The process is very clearly described in legislation, planners have mastered it, and people understand and accept it.
• Tested in law courts: It has been challenged in law courts and has withstood the challenges successfully.
• Making development pay for the cost of infrastructure: The cost of infrastructure is in a sense paid for by the owners directly, and the planning agency and development authority is not required to make huge investments up-front.

Limitations

Despite the TPS mechanism being well articulated in the GTPUDA, prepared
since 1915, and widely accepted, there are a few shortcomings, which result in the growth not being managed in time, renewal of areas becomes difficult and development occurs before the provision of infrastructure in some instances. The following are a few of the limitations:

- Lengthy time frames in the regulatory framework: The State Government actually takes much longer to approve the various stages. The TPSs thus take far too long to prepare and implement.
- Inadequate attention to substantial issues: These need to be supported by preparing manuals and guidelines.
- No asset management framework is in place: Most local authorities or development authorities do not even have a comprehensive list of all such land assets created.
- Centralized processes: Too much power is vested in the State Government to approve and sanction the DPs and TPS. The State Government is responsible for undertaking both substantial reviews and procedural reviews of each and every DP (there are about 150 urban areas) and for innumerable TPSs. There are no limits on the time it takes for this and there is a tremendous amount of corruption that takes place at this stage.
- Disconnect with the city budgeting process: At the moment, there is no clear linkage of the DPs and TPS with the city budgeting process.

**Potentials**

The TPS has tremendous potential that needs to be demonstrated effectively to the planners practicing in the public sector. This will considerably reinvigorate the urban planning system that is so critically required at this stage to transform Indian cities.

- TPS as an infrastructure financing tool: Although a land bank is being built up with the planning authorities, there is no systematic asset management framework in place. As a consequence, valuable land parcels created are not efficiently leveraged to finance infrastructure in cities. The present land valuation needs to be overhauled and made more systematic and rational so that it is realistic and in sync with the market prices. At present, land valuation is dictated by the concern to match the revenue in the form of betterment charges to the expenditure incurred by the Development Authority to develop the infrastructure and compensation.

- TPS as a tool to introduce innovative planning concepts: Until now, the task of preparation of DPs has been restricted to land use zoning and the arterial road network structure. The TPSs have until now been treated as mechanical exercises in reconstituting land parcels, and not enough attention has been paid to planning concerns, be it in terms of the road network or responding to special
site features. Three dimensional aspects are not addressed. Although the GTPUDA has a provision for introducing special regulations and urban design guidelines to regulate development, these are never exercised. Further, the manner in which the land for public uses is appropriated is highly fragmented. The TPS tool offers an opportunity to consolidate public lands.

- **TPS as a tool to build accurate maps and land records for the city:** While a DP is prepared, the first task is to prepare a base map. When the TPSs are prepared, very accurate cadastral maps and landownership details are developed. Hence, while the DPs and TPSs are prepared, there is an opportunity created to build a fairly accurate GIS-based base map and land record system that can be used by both the planning and revenue departments.

The urban planning system in Gujarat can be easily reinvigorated and has significant lessons for other states in India. A series of reforms in the form of amendments to the act have already taken place, but a lot more needs to be done.
Annexure 1

Cases for Discussion
Case Study 1: Approval of Projects

Newspaper clipping:

October 1, 2013 Last Updated at 16:53 IST

Over 25% housing projects delayed pan-India; NCR worst hit: JLL

Poor project management, lack of commitment and capital on the part of developers to complete projects, delay in the regulatory approvals are some of the reasons behind delays

Real estate companies have not been able to deliver over 25% of their housing projects on time while developers in the National Capital Region are worst performer, according to property consultant Jones Lang LaSalle (JLL) India.

"Delayed delivery of residential projects has become a significant issue on the real estate market, leading to high levels of ire among customers," JLL India CEO (Operations) Santhosh Kumar said in a statement.

The consultant noted that inventory levels across India have risen significantly due to delay in project delivery.

Kumar cited numbers of reasons behind delays, including poor project management, lack of commitment and capital on the part of developers to complete projects, and delay in the regulatory approvals.

"In terms of the average delay in delivering residential projects across India, more than 25% of the committed supply has not been able to hit the market as per schedule.

"The National Capital Region’s performance in terms of delivery of residential supply due in 2013 has been the worst across all the major Indian cities," Kumar said.

In Gurgaon, JLL said that only one-third of the total committed supply for 2013 has been delivered so far.

"The situation has been even more alarming in other NCR regions such as Noida, where only about one-fifth of the residential supply committed for delivery in 2013 has been delivered so far," the statement said.

In the NCR region, a significant number of residential projects in areas such as Noida have been delayed because of disputes with regards to land acquisition.

In the western region, Pune and Mumbai have shown a much better performance in terms of project completions. These cities could deliver more than 40% of the committed supply of 2013 as per scheduled delivery.

"With delivery delays, inventory levels across India have risen significantly. The Pan India inventory of residential stock is now well above the comfort level of 14-15 months," JLL India said.

Stating that Mumbai has an inventory of close to 48 months, Delhi of 23 months and Bangalore of 25 months, the consultant said that these figures are close to the levels of 2007, when the residential real estate market's inventories were at an all-time high.
Discussion:

What is the current scenario in our State?

What is the average time for approval of a project after it is submitted to Planning Authority/Development Authority/Corporation/CMC?

What could be the reason for some cities performing better than others?

Why delays happen in according development permissions?

How to overcome delays?
Case Study: 02:

Bangalore, September 4, 2013

‘KIADB can’t acquire land without issuing personal notice on land owners’

In a judgement that could prevent the Karnataka Industrial Areas Development Board (KIADB) from acquiring land behind the back of landowners, the Karnataka High Court has declared that serving personal notice on the landowner is a mandatory procedure to be followed by the Board while acquiring land.

The court said affixing the notice on the premises of the landowner could not be termed a proper way of serving notice as required under the provisions of the Section 28 of the KIAD Act.

Justice D.V. Shylendra Kumar delivered the verdict while quashing the action initiated by the KIADB after issuing a preliminary notification for acquiring 12 acres 29 guntas of land, belonging to petitioners S. Anees Ahmed and others, situated at Bandikodigehallipallya in Bangalore north. This land was part of 1,069 acres of land acquired for the prestigious Aerospace Park project developed around Bengaluru International Airport.

‘More harsh’

Describing Section 28 of the Act as “definitely more harsh on landowners” when compared to similar provisions in the Land Acquisition Act, the court said the only safeguard given to land owners in the KIAD Act was issuing a notice to them for acquiring land.

“Though the preliminary notification is gazetted, it is only on issue of notice to the landowner under Section 28(2) of the Act, the landowners get an opportunity to file their objections to the proposal…,” the court said.

Pointing out when the provisions of the KIAD Act enables the authorities to take possession of the land from its owner even before determination and payment of compensation, Justice Kumar said that “in such a situation, if even a personal notice is not served on the landowners on proposal to acquire their lands, the landowners will be surprised and shocked when they receive notice for handing over possession.”

The petitioner had stated that they came to know about proposal to acquire their land only when they received a notice for handing over possession of their land. However, the KIADB claimed that the petitioner was not available at site when they went to serve notice and hence notice was served by way of affixture on their premises.

Without interfering in the preliminary notification issued on January 9, 2007, the court has now left it open to the authorities to proceed further as per law by issuing personal notice to the petitioner or to give up their land or go far a fresh process of acquisition, if so desired and if necessary.
Discussion:

Why Court has asked KIADB to issue personal notice?

What should be the approach of a public agency while acquiring land for development purpose?

Why is it important to take community into confidence?
**Case Study: 3: Procedure for Land Acquisition**

**KIADB acts like real estate agent, says Karnataka high court**

Justice DV Shylendra Kumar made the observation while hearing a petition by Riyaz Mustafa, a resident of Jonahalli in Devanahalli taluk. The petitioner was challenging the KIADB’s acquisition of land for the Aerospace City project.

The Karnataka high court came down heavily on the Karnataka Industrial Area Development Board (KIADB), observing that the board has been acting in a draconian manner and functioning like a real estate agent.

The court directed the KIADB to furnish complete details of the acquisition before January 6, 2011. The board has been asked to submit details about the investors and the land required for the project.

The KIADB had issued final notification for acquiring 1,069 acres near Devanahalli for an aircraft component manufacturing unit, as part of the project. The acquired land included 26 guntas belonging to the petitioner.

In his petition, Mustafa told the court that he was not served a notice before the KIADB had started the acquisition procedure.

“In Kannada, there is a saying, mangana kayyalli manikya kotta hage (like giving diamond to a monkey). The power to acquire land given to the KIADB is like this saying,” the court said.

Justice Kumar also pointed out the recent land scam involving the board. “It (KIADB) has draconian powers. It is acting recklessly. There is no control from anybody. In this land acquisition process, revenue department has become expert. They are not giving any documents to courts and also to the people,” he observed.

The high court further observed that the KIADB was indirectly paving way for real estate business. “The KIADB should have clear plans about industrial development and its implementation. Without any plans, it is just begging multinational companies. In fact, they (MNCs) should come asking for land, but now, the KIADB itself is allotting land voluntarily and also giving concessions. It shows lack of professionalism in the functioning of KIADB, and MNCs are killing local industries. There is not even a single expert officer in the KIADB,” justice Kumar.

The court also said that the aerospace city project seemed to have a “take-off problem.” The KIADB should adopt a business-like approach, since lethargic attitude do not work in modern times.
Advocate-general Ashok Harnahalli submitted that the state government would not hide any documents and was ready to place it before the court. “We need time for that,” he added.

**Discussion:**

Why Court has made harsh remarks on procedure adopted by KIADB for land acquisition?

What should be the approach of a public agency while acquiring land for development purpose?

Why is it important to take community into confidence?

What is the consequence of such court decisions?
Case Study: 4: KTCP Act Provisions for Public Consultation

Public Consultation Must in Planning and Building Metro or any Infrastructure Project

Unprecedented Decision by High Court of Karnataka holds Officials directly accountable for any lapse

Press Release: Bangalore: 17 December 2010

Background:

Environment Support Group and ors had challenged the construction of the southern reach of Bangalore Metro as being in gross violation of the Karnataka Town and Country Planning Act and other statutes in a Public Interest Litigation (WP 13241/2009). This was associated with widespread protests over the highly illegal development of the Southern Reach of the Namma Metro project that fundamentally violated the Comprehensive Development Plan of Bangalore and in the process destroyed many parks and public spaces, and neighbourhoods.

The protests and the Petition highlighted how the Metro authorities callously disregarded sanctity of public commons, especially portions of Lalbagh and the boulevards along K. R. Road and Nanda Road as they destructively tore through the city's fabric with an ill-thought Metro line. A major issue of law that was raised in the PIL was the highly questionable decision of the Government of Karnataka authorising the sale of the portion of Lalbagh as an industrial site acquired for Metro station under the KIADB Act. A Government Order authorised the Deputy Commissioner of Bangalore to sell the Lalbagh land from Horticulture Dept. to Bangalore Metro at a market price. Thus making this world famous and historical living heritage of the city a tradable commodity â€“ a shocking precedent.

Comprehensive arguments on the Petition by all parties were heard by the High Court and the matter was reserved for judgement in June 2009 by a Division Bench of the High Court headed by Justice Mr. Gopalagowda. However, with his elevation as Chief Justice of the Orissa High Court, the judgement was not delivered and the matter had to be reheard. In the meantime, the Metro authorities bulldozed their way with the Southern reach of the Metro, even extending it illegally, unmindful of the serious and irreversible consequences involved.

The ruling:

Disposing the Petition on 16th November 2010, a Division Bench of the Karnataka High Court constituted by Chief Justice Mr. J. S. Khehar and Justice Mr. A. S. Bopanna observed that the "factual controversy brought out through the ... writ petitions" have been "rendered infructuous", given the substantial development of the Phase I of the Southern Reach of the Metro. However, the Court took full cognisance of the submission made by the Petitioners that "if a direction is issued to the State Government, as also, the Bangalore Development Authority to ensure that in future, in case they desire to change the land use, as has been depicted in the master plan, the competent authority shall follow the procedural mandate depicted in Section 14-A of the Karnataka Town and Country Planning Act, 1961 And likewise in case of making a town planning scheme, the State Government, as also the Bangalore Development Authority shall comply with the
procedure contained in Sections 29, 30, 31, 32 and 34 of the Karnataka Town and Country Planning Act, 1961".

Thereafter, the Court observed that "Mr. Basavaraj Kareddy, learned Prl. Government Advocate, who represented the State and Mr. K. Krishna, learned counsel, who on our asking accepts notice on behalf of the Bangalore Development Authority, agree, that the provisions referred to hereinabove, shall be complied with, without any deviation whatsoever". Based on this submission by the Counsels representing the Karnataka Government, the Court in a clear message to all urban planning and infrastructure development authorities in particular, and the Executive in general, warned that "needless to mention, that in case of violation of direction issued by this Court, based on statement made to this Court, the concerned officer/official shall be held responsible, for his having disobeyed the order passed by this Court, as also, the prescribed mandate of law".

Implications of the Judgement to Bangalore Metro and other infrastructure projects:

Such an order is unprecedented in the annals of jurisprudence of the Karnataka Judiciary as it is for the first time that the Karnataka Town and Country Planning Act and its progressive provisions mandating public participation in urban planning and infrastructure development have been fleshed out and made determinant to any urban planning effort and infrastructure development in Bangalore and other cities of Karnataka. This path breaking ruling will also serve persuasive in securing similar relief in other States where Metro and other mega infrastructure projects are being implemented, or proposed, in gross violation of land use planning laws. The judgement has enormous consequences to the further development of the Bangalore Metro (or any other infrastructure project or town and country planning scheme).

Bangalore Metro has been largely developed in blatant disregard of the public consultation requirements as laid down in the KTCP Act. While much of the 43 km. long Phase I of the Metro has been built (or in various stages of in-completion), and the situation as far as this phase is a fait accompli, the subsequent phases of the Metro will have to fully conform with this decision of the High Court. Metro authorities cannot bulldoze their way through neighbourhoods in violation of the KTCP Act, merely on the justification that the project is in the public interest. Every directly and indirectly affected person who in the past has had to go through the arduous struggle of pleading with authorities, can now demand such mega-projects are developed only in strict accordance with law, else the officials involved will be hauled up for Contempt of Court.

Discussion:

What issues have been noticed by Hon. High Court regarding the case?

How this situation could have been avoided?

What is the consequence of such court decisions?
Case Studies: 05

Some national success cases of Local Bodies in raising bonds for infrastructure projects are given below:

**Municipal Bonds by Ahmedabad Municipal Corporation (AMC) for water supply and sewerage program, 1998:** To finance the water supply and sewerage program, AMC floated municipal bonds in January 1998. These were rated AA(SO) specifying having high degree of safety regarding timely servicing of financial obligations or carrying very low credit risk. These bonds were floated for seventy-five per cent private and twenty-five per cent public issue. This was a significant accomplishment at the given time, as it was the first municipal bond issue in India without a state government guarantee and it represented the first step towards fully market-based system of local government finance.

**Tamil Nadu Urban Development Fund (TNUDF), 2003:** Tamil Nadu Urban Development Fund issued bonds for commercially viable water and sewerage infrastructure projects by pooling fourteen municipalities in 2003. A special purpose vehicle, the Water and Sanitation Pooled Fund (WSPF), was set up to issue the municipal bonds. The Indo-USAID Programme on Financial Institutions Reform and Expansion (FIRE-D) supported the efforts of WSPF to structure the bond issue whose proceeds financed small water and sanitation projects in the fourteen small ULBs. USAID provided a backup guarantee of fifty per cent of the bond’s principal through the Development Credit Authority (DCA) mechanism.

**Greater Bangalore Water & Sewerage Project (8 ULBs), 2005:** Government of Karnataka created debt fund called the Karnataka Water and Sanitation Pooled Fund (KWSPF) and successfully floated tax-free municipal bonds during June, 2005. It was done for the Greater Bangalore Water Supply and Sewerage Project (GBWASP). Government of Karnataka was assisted by USAID under its DCA program and provided a guarantee of up to fifty per cent of the principal amount of market borrowing. The GBWASP is planned to provide water supply to 1.5 million people residing in about 300,000 households.

**Alternative Financial Avenues by Private Sector Participation**

Public-Private Partnership (PPP) is a long term contractual agreement between a public agency (central, state or local) and a private sector entity for providing a
public asset or service in which the private party bears significant risk and management responsibility.

The private sector includes consultancy firms, developers, builders and promoters, cooperative societies, non-governmental organisations (NGOs) and community based organisations (CBOs), cooperative bodies, industrialists and businessmen.

‘PPP means an arrangement between a government or statutory entity or government owned entity on one side and a private sector entity on the other, for the provision of public assets and/or related services for public benefit, through investments being made by and/or management undertaken by the private sector entity for a specified time period, where there is a substantial risk sharing with the private sector and the private sector receives performance linked payments that conform (or are benchmarked) to specified, pre-determined and measurable performance standards’.

**Conditions/Situations for PPP Selection**
A project may be considered to be implemented as a PPP project when there are efficiency gains from improved project delivery, operation and management, and access to advanced technology can offset the incidental costs, improvement in human resource etc. In fact, many countries have established value for money as the main criterion in judging the merits of a PPP option for a project. Decision for PPP to be an alternative development mechanism can be selected for a project, if it satisfies the following conditions or is set in the given situations:

- Enhance the supply of much-needed services
- Does not require any immediate cash spending
- Provide relief from the burden of the costs of design and construction
- Transfer of many project risks to the private sector.
### Proposed Land use Structure of Urban Centres

The proposed land use structure for urban centres is:

Table 5.2: Land use structure for urban centres

<table>
<thead>
<tr>
<th>Land use Category</th>
<th>Percentage of Developed Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small</td>
</tr>
<tr>
<td>Residential</td>
<td>45-50</td>
</tr>
<tr>
<td>Commercial</td>
<td>2-3</td>
</tr>
<tr>
<td>Industrial</td>
<td>8-10</td>
</tr>
<tr>
<td>Pub. &amp; Semi Public</td>
<td>6-8</td>
</tr>
<tr>
<td>Recreational</td>
<td>12-14</td>
</tr>
<tr>
<td>Transport &amp;</td>
<td>10-12</td>
</tr>
<tr>
<td>Communicati</td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
</tr>
<tr>
<td>&amp; Water Bodies</td>
<td></td>
</tr>
<tr>
<td>Total Developed</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: UDPFI Guidelines