

**INNOVATIVE APPROACHES TO URBAN DEVELOPMENT**

**A PAPER BY**

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## **INTRODUCTION**

We recognise that theoretical frameworks describing the phenomena of urbanisation are tied to larger issues of social change and economic development, and that these are rooted in different philosophical and ideological assumptions. At present, statements on urbanisation are limited to the delineation of possible strategies for the physical planning of major urban centres in India. These are further limited by the context of severe resource constraints. In such statements, while cross-cultural references can be insightful, the adoption of unrealistic international standards and inappropriate conceptual frameworks have created dysfunctions at many levels.

### **The Urban Phenomenon.**

It would be useful if, in the first instance, we could clarify assumptions regarding the urban phenomenon in India. Settlements (at all ekistic scales) are generated by the dynamics of two broad sets of variables. The first set is composed of people, relating together as formal organisations and as informal groups of individuals or families; the second set is composed of the facts of nature, physical as well as psycho-social.

People produce locational decisions, seen at present, in terms of costs and returns based on a comprehension of opportunities and threats in the environment. They seek to maximise returns in terms of value-hierarchies and resources. These decisions are heavily influenced by public policy decisions made by territorially and functionally fragmented departments of Government - central, state and local. These decisions change the opportunity structure, thus influencing the locational decisions of both formal and informal groups. Public policy decisions are rooted in the logic of public good. However, equities - territorial, economic and social, are sought in the context of a play of power.

### **Planning Approaches.**

Centralised planning in India is based on the assumption that the priorities and allocations made can be realised in actual practice by controlling private decisions in the market through the instruments of policy. This relationship between planned priorities and market forces sets the stage for understanding many of the dynamics of urban development. In

spite of our producing seven plan documents, there is today no national settlement policy, through it may at best be implied. Thus a variety of policies and decisions, public and private, interact to give a pattern of settlements. The hierarchies of settlement size and density vary, and the term 'urban' is normally defined by the ekistic scale used by the Census in India. Thus urban areas would include small towns, medium towns, large cities and metropolises. Planners view urbanisation as a necessary feature of industrialisation, thereby generating polar distinctions such as urban/rural or town/country. However, the urbanisation process is very old, and in India it survives as an abiding pattern from ancient times. This results in a large variety of urban settlements functioning as centres of marketing, production, learning and worship, for a predominantly agrarian society. It is only in this century that rapid industrial changes have generated a new range of problems, highlighting the necessity of providing satisfactory conditions of development for the majority of the people.

We see such conditions as being circumscribed by the following realities :-

First, that the current trends in rate and pattern of urbanisation are not likely to change significantly in the foreseeable future. Second, that the present urban areas consist of three segments, segregated in terms of land use, infrastructure and socio-cultural characteristics. These segments are

- a) the evolved, traditional town ;
- b) the ordered, colonial town, including civil lines, cantonments, and newly developed colonies generated by the decisions of architects and town-planners ;
- c) the spontaneous settlements of extremely poor migrants. Third, that the urban economy in the short run would continue to have a dualistic character : formal and informal. The rate of economic development, especially industrialisation, is not going to be high enough to eliminate the household production sector and the fractionated economy of the poor.

### **Possibilities for Innovation.**

Innovations under these circumstances can range from utopian and radical to barely incremental. This paper is directed towards policy changes which are more than

incremental, but not radial. After all, the root of the word innovation is the Latin innovare, to renew; and one renews by effecting change in the established order by building upon the past.

Ours has been a continuous cultural tradition of over 5000 years, and our freedom movement was especially directed towards maintaining cultural autonomy. This has implications for spatial production as well, because it implies conservation of our inheritance - both natural and man-made; it also implies the need to generate continuities of spatial locations of human life and action, so that people continue to find their environment meaningful.

### **Strategies.**

In this paper we seek to highlight the following goals and objectives as necessary pre-conditions for any urbanisation strategy relevant to the situation described above :-

1. to balance the short-range interests of income and employment with the long-range viability of the physical environment by the management of natural resources, especially land and water;
2. to provide for more equitable access to the resources of the city in order to sustain a better quality of life, especially for the poor;
3. to seek socio-economic integration of the planned city, traditional settlement, and the unplanned, spontaneous settlement;
4. to provide a low-cost model for urban development;
5. to provide conditions so that people can express their deeply held beliefs regarding urban space in their built environment.

We approach these goals and objectives through three broad areas of intervention which are mutually inter-dependant. First we enquire into the theoretical parametres and images which inform our concerns and consequently our actions regarding urbanisation. Secondly we discuss innovations in land use planning; and third we suggest how these changes can be managed within the frame-work of administration and controls.

## **PARAMETRES AND IMAGES**

What is "city"?

This is a question which has to be answered before innovations in urban development can be studied. Development is only a vector - it has to have a starting point. This starting point can be the cultural notion of "city", since urban development is essentially concerned with the generation of a matrix for human settlement where values for a better life could be sustained.

For an ancient civilisation such as that of the Indian sub-continent, the sum of human experience will always be greater than the temporal reality of sectoral configurations. In such a situation, intuitive understanding will dominate over the strictly rational and the definition of culture would encompass a total view of all that is inherited from the past. This would include language and meaning, objects and tools, as well as skills and expertise. Thus the city in India is more than a technocratically efficient system for exchange of goods and services. It is more appropriately understood as an expression, in physical as well as emotive terms, of the civilisation of the people.

The contemporary urban environment is somehow very far from this ideal. Perhaps the most striking verification of this tragic mismatch is the huge and ever-expanding "informal sector" in all cities. Here "informal" acts as an umbrella term which hides the fine-grain of the lives of ordinary people-their geographic, ethnic and economic diversity.

Most often the term "informal" is used to imply the poor, marginalised, or unorganised sections of the urban population, who cause dysfunction in the planned process of urban development. Yet, it is our contention that when viewed in a culturally-defined perspective, the problem appears to be grounded in an inappropriate planning paradigm which reduces the great variety to a homogenised mass easily manipulable by simple tools.

How has this come to pass? The process of urban development is almost as old as human civilisation, and people have lived in harmony with their environment. Structured cities, reflecting pre-determined ideals, have existed on the Indian sub-continent for as long as we

have historical records: from Mohenjodaro and Harappa of the Indus Valley Civilisation; to Ayodhya, Varanasi and Patliputra; Madurai and Sri Rangam; Jaisalmer, Srinagar and Lahore. And in the more recent past we have some outstanding examples from Jaipur, New Delhi and Chandigarh. These were based on strong and highly evolved images and paradigms for urban environment.

However, the great urban migrations of the last forty years, combined with the breakneck pace of technological development, has produced a scenario which confuses the contemporary city planner and reduces the planning process to an almost meaningless exercise. The banality characterising even the planned environment is the result of the loss of meaning in the contemporary urban situation. In order to rediscover this meaning we believe the unifying principles will emerge from a better understanding of the cultural values which inform city-life.

The dominant characteristic of city planning in contemporary India has been the coming-to-terms with the process of rapid industrialisation. Since this is a mode influenced by the European experience, our urban planners, whether fully aware of it or not, have been most powerfully guided by the key images of "city" which emerged in this century in Europe.

Prominent among these was the 'Garden City' idea formulated by Ebenezer Howard in London at the turn of the century. "The idea of the garden city was advanced as a panacea for the many dwelling problems of the late nineteenth century. The essence of the plan was that the community should control the ground, and that all profits through increases in the value of the land should be returned to the community in order to discourage speculation of any sort".<sup>1</sup> This essentially humanist approach was articulated by Howard in his diagrams showing an idealised relationship between Town and Country (Fig. - 1).

New orientations to city planning were also provided by the Spanish highway engineer. Arturo Soria Y Mata, who was fascinated by the idea of transportation being the most important element of city planning. His starting point was the street railway track, on both sides of which he set housing and industry. This idea of the linear-city was taken further in the 1930s in Russia, and also developed by Le Corbusier in his theoretical notions on

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<sup>1</sup> Sigfried Giedion, *Space time Architecture*, rev. ed. 1967, Harvard, P. 782.





'urbanisme'. It was however, in the work of the young Italian futurist architect, Antonio Sant 'Elia, that there merged an artistic expression for dynamic movement. In 1914 he sketched his vision of the "citta nuova", which in many ways anticipated the present urban situation, over half a century later, "when the cancerous growth of automobiles forces the city planner to find ways and means to build in traffic movement as a constituent element of the organism of the city".<sup>2</sup> (Fig-2)

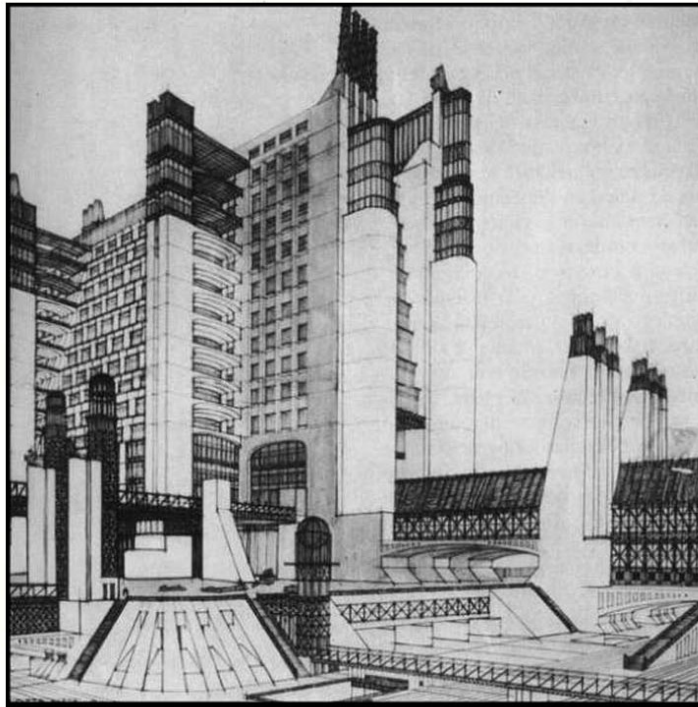
Perhaps the most influential ideas in contemporary town planning were set out by tony Garnier in his concept for the 'Cite Industrielle', between 1901 and 1904. In this plan there is a clear separation of the different functions of the town, defined as - work, residence, leisure, and transport. Garnier was concerned with building construction as much as city planning. He chose ferroconcrete as the primary material for his projected constructions, to provide an appropriate framework for industry, public services, and the life of the average man. His drawings exhibit an uncanny resemblance to city plans and building types which we see emerging from the drawing boards of contemporary city planners and urban designers even today, over 80 years later. (Fig-3)

Another powerful set of symbols for the contemporary city were articulated by Le Corbusier in his design for the 'Radiant City', done between 1931 and 1934 (fig-4). In this plan the mechanical movement systems, both horizontal and vertical, are the dominant organising forces, and these are counterposed with a vision of an idealised landscape having mega-structures rising out of it. Le Corbusier adapted these ideas for the plan of Chandigarh some twenty years later. He combined the cultural symbology of the Garden City and the organising principles framed by Garnier for his City fit for the machine-age being defined by its pattern of vehicular movement. And the Chandigarh plan became the dominant influence on the town planners of post-independence India.

It is significant to note that these notions of 'city' had only the most superficial relevance to the Indian reality. The notable exception to this was the work of Patrick Geddes and is technique of "Conservative Surgery", which was developed on the basis of his field experience in this country.

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<sup>2</sup> Sigfried Giedion, Space, Time and Architecture, rev. ed. Harvard 1967, P. 322.

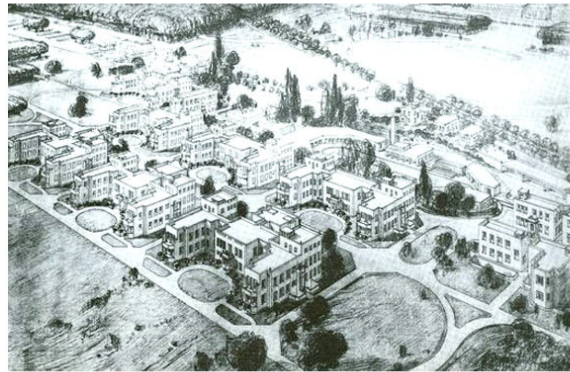


ANTONIO SANT ELIA. Project for a subway. 1914.  
Different street levels, combined with apartmental  
houses and elevators. Sant Elia's Nuovo Citta reflects  
the futuristic delight in interacting streams of movement.

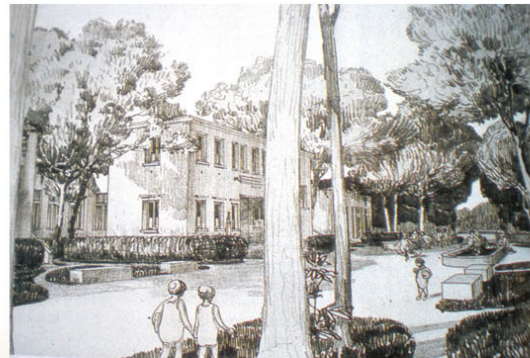
fig 2 : THE ITALIAN ARCHITECT SANT'ELIA'S  
VISION OF THE CITY OF THE FUTURE - 1914



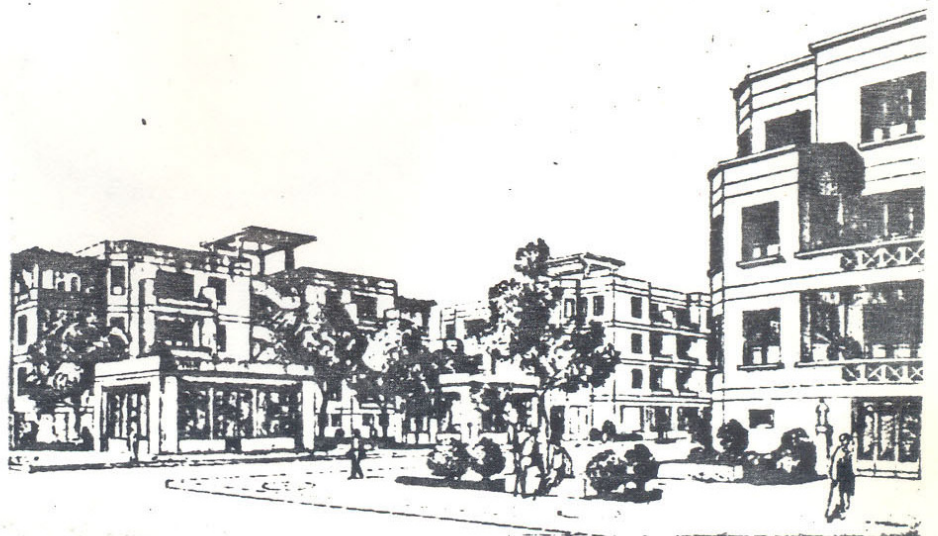
Garnier: Industrial City, 1901-4.



Garnier: Industrial City, 1901-4.



Garnier: Industrial City, 1901-4.



TONY GARNIER. Cité Industrielle, 1901-04. Ferroconcrete houses with open staircases and roof gardens. Through the use of ferroconcrete, Garnier arrived at solutions which would later reappear.

fig 3: DRAWINGS FOR THE "INDUSTRIAL CITY"  
PROJECT BY TONY GARNIER - 1901-04



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# LA VILLE RADIEUSE

(ZONING)

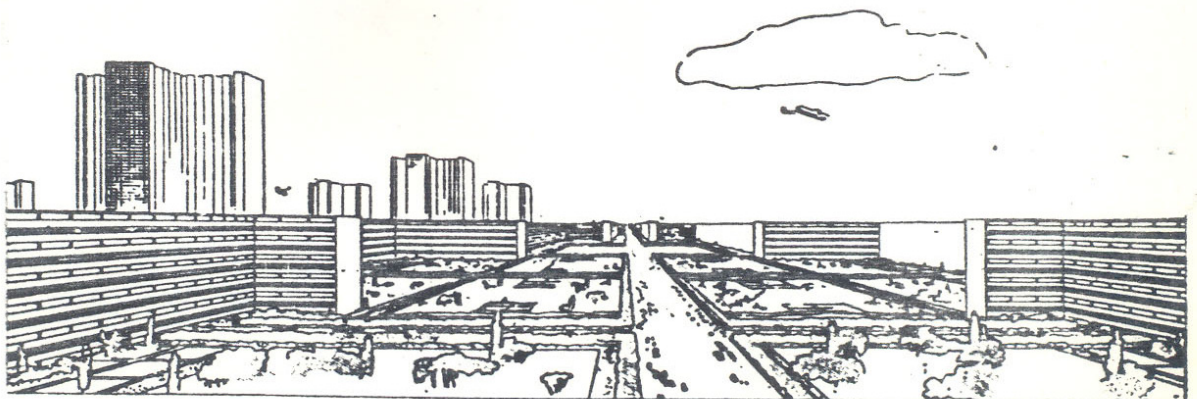
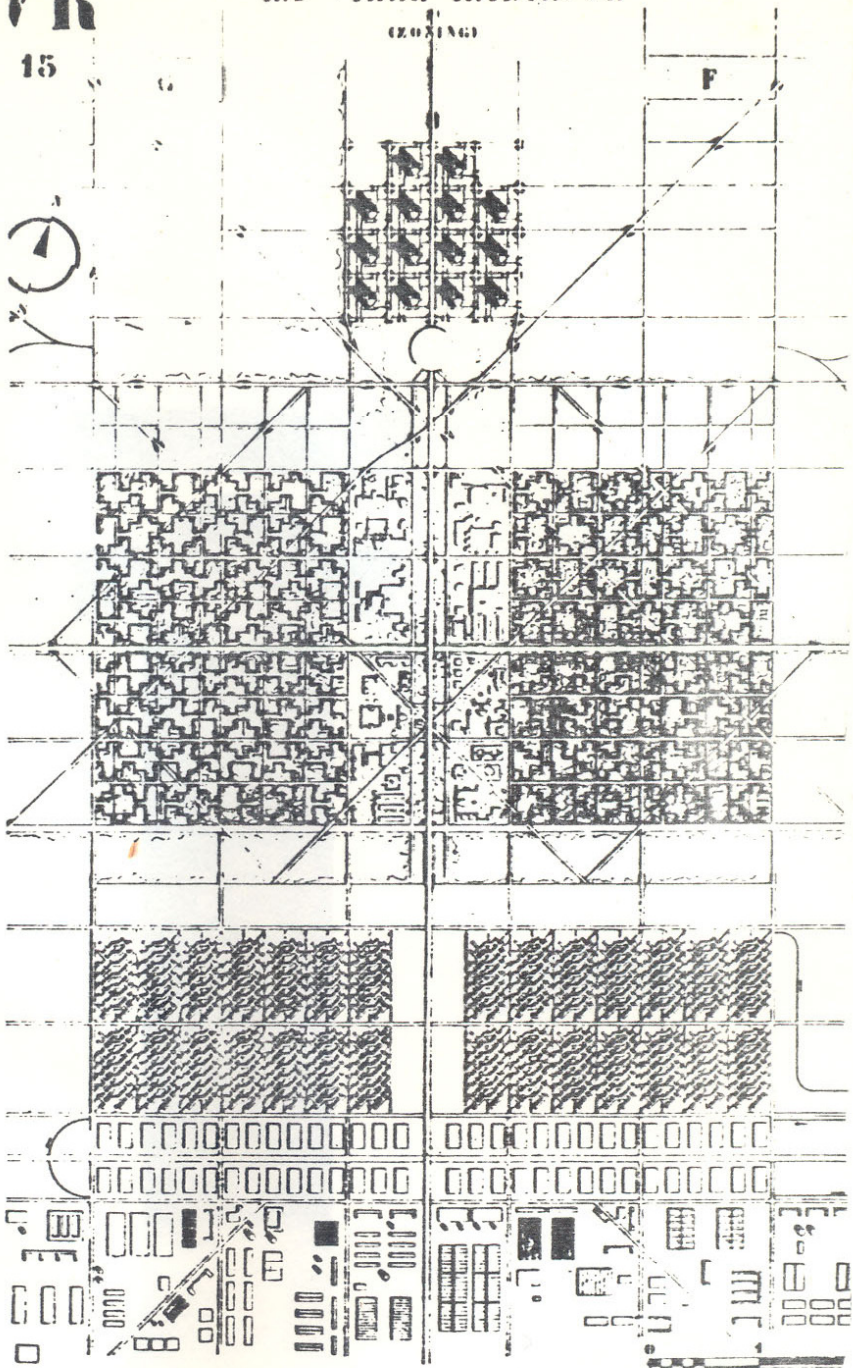


fig 4: LE CORBUSIER'S DRAWINGS FOR  
THE "RADIANT CITY" - 1931-34

Geddes wrote, "Town plans are thus no mere diagrams; they are a system of hieroglyphics in which man has written the history of civilisation, and the more tangled their apparent confusion, the more we may be rewarded in deciphering it."<sup>3</sup> Geddes refined the practical side of his town planning ideas in India where he spent ten years of his life from 1914 to 1924. Yet, surprisingly, it is the work and ideas of Geddes which have been the least important influence on the official ideology of contemporary town planners in India.

This inability to relate progressive ideas to the urban realities of the country has been the single greatest drawback of the urban planning process in our times.

In contrast the plan for the city of Jaipur, founded by Sawai Jai Singh II in 1727, demonstrates a remarkable synthesis (Fig-5). The Indian cosmological view, expressed though the nine square mandala of the layout, is combined with the careful planning of the water-supply and drainage system according to the natural setting and climate; for the distribution of people and facilities, an integrated functional arrangement based on social order is synthesised with the notion of hierarchical street-patterning, and the overriding concern for a scale suited to the needs of the inhabitants.

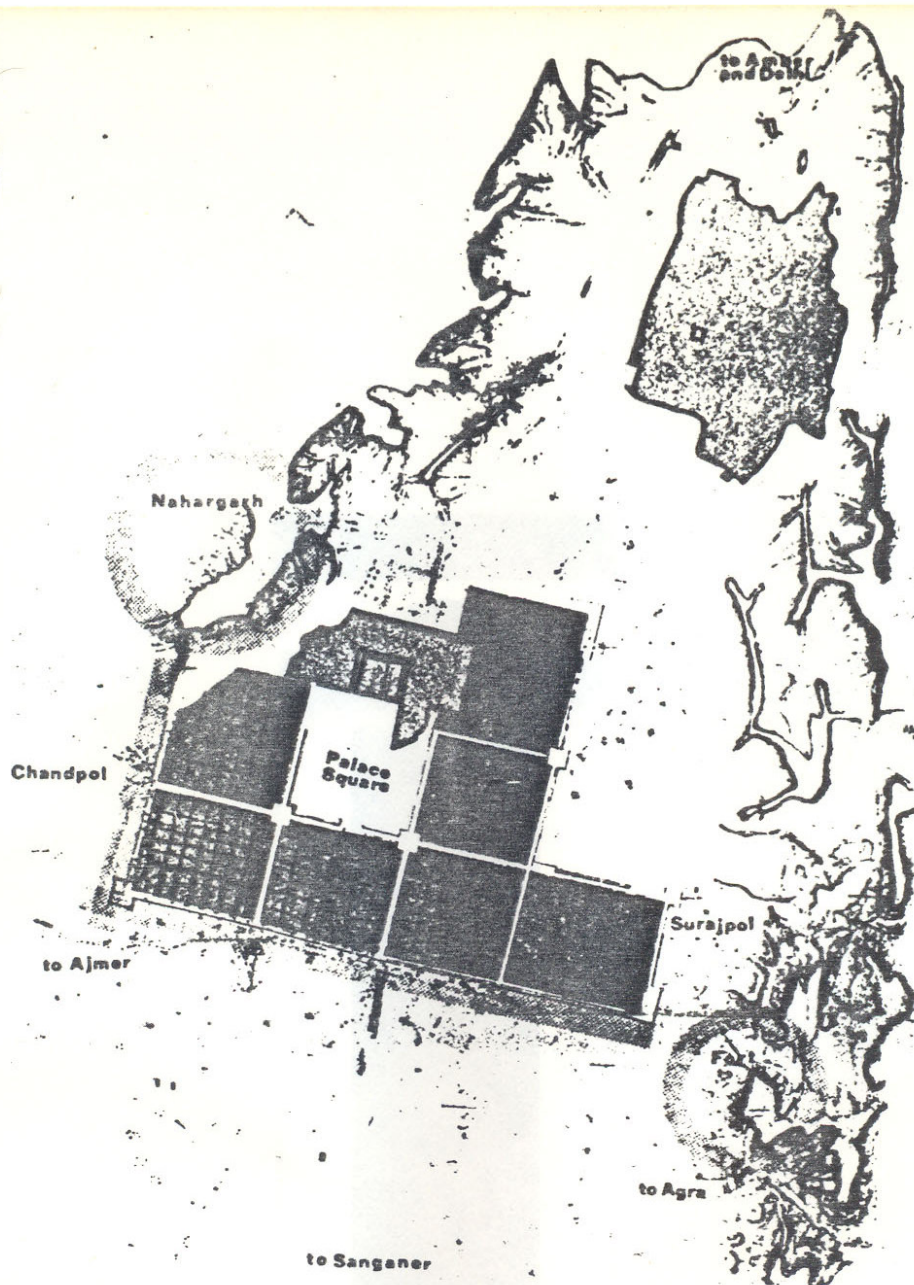
The temple towns of southern India (Fig-6), the mountain city of Srinagar in the Kashmir valley (Fig-7), and even the small fortified settlement of Chanderi in central India (Fig-8), provide examples of the wide range of city types developed indigenously for the great variety of geographic, climatic, and social conditions which shape the culture of the sub-continent.

One of the most striking features which distinguishes the indigenous from the European urban models described above, is the compactness of habitation in the former. There is greater tolerance in the Indian situation of higher density living. Almost as an anti-thesis of the Garden City ideal where dwellings are discrete objects set amidst carefully nurtured vegetation, the traditional Indian city is a compact and interlocked system of built and small open-space configurations placed strategically within the natural setting (fig-9). The other striking feature that can be identified in the indigenous urban models is the prevalence of the "social pact" that determines spatial structure. A detailed study, by the

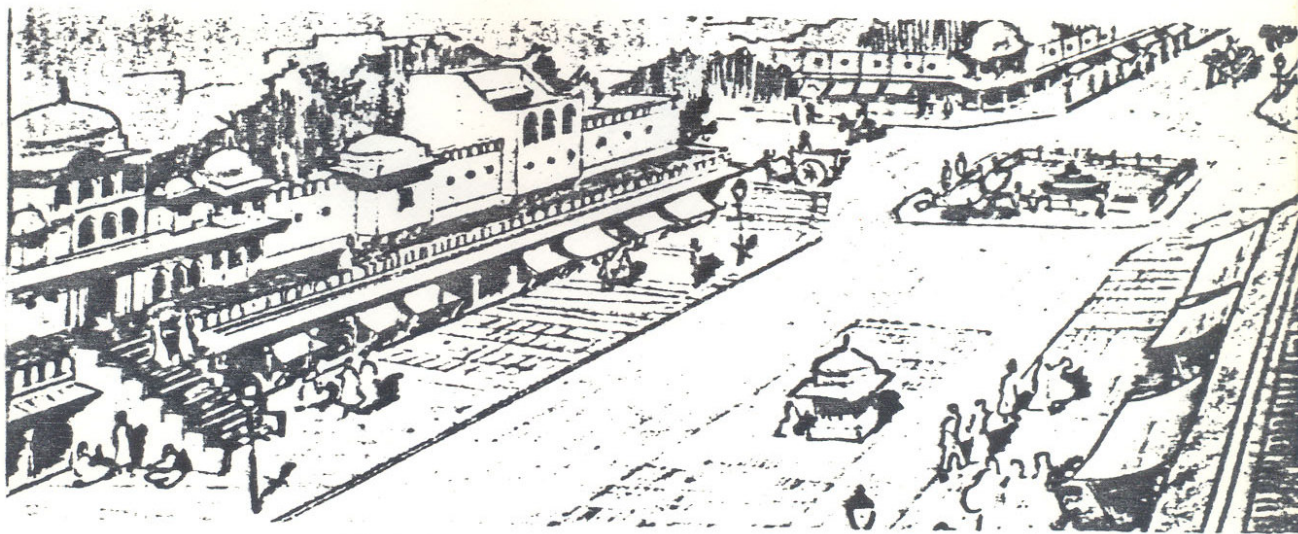
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<sup>3</sup> Patrick Geddes, *Cities in Evolution*, rev. ed. London, 1949, P.170.





*The site plan of Jaipur and its fortifications*



Like its Chaupars, the streets of Jaipur were not mere roads for fast movement. They performed several other functions as well. Lined up with shopping arcades on both sides, streets became bazars. Their colourful shops extended their wares on wide pavements, and occupied as much as a quarter width of the street on each side. These unusually wide pavements emphasize that the streets were designed more for the people than anything else.

fig 5: THE CITY OF JAIPUR, RAJASTHAN - PLANNED IN THE EARLY 18<sup>TH</sup> CENTURY



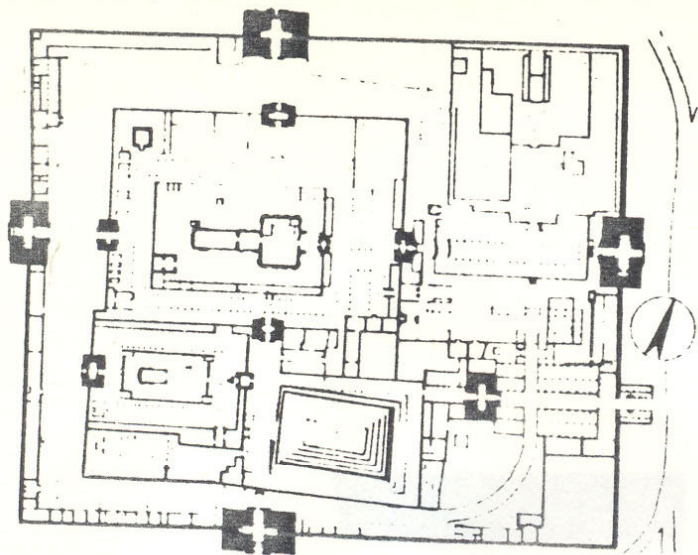


fig 6 : THE TEMPLE TOWN OF MADURAI,  
TAMIL NADU - IN EVOLUTION  
SINCE THE 14<sup>TH</sup> CENTURY

fig 7 : THE RIVERBANK CITY OF  
SRINAGAR, KASHMIR -  
DEVELOPING ALONG A  
TRANSPORT ARTERY FOR  
THE LAST 300 YEARS

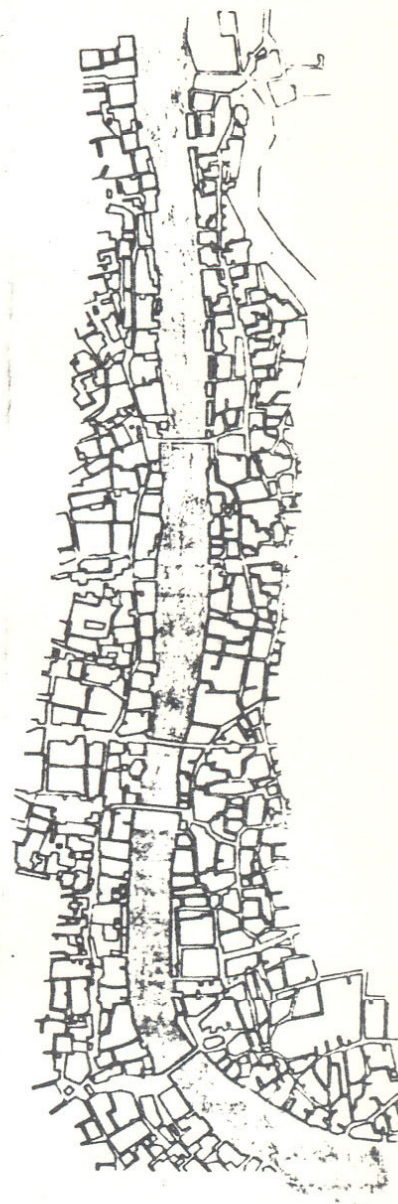


fig 8 : THE WEAVERS' TOWN OF  
CHANDERI, MADHYA PRADESH  
ESTABLISHED IN THE  
15<sup>TH</sup> CENTURY

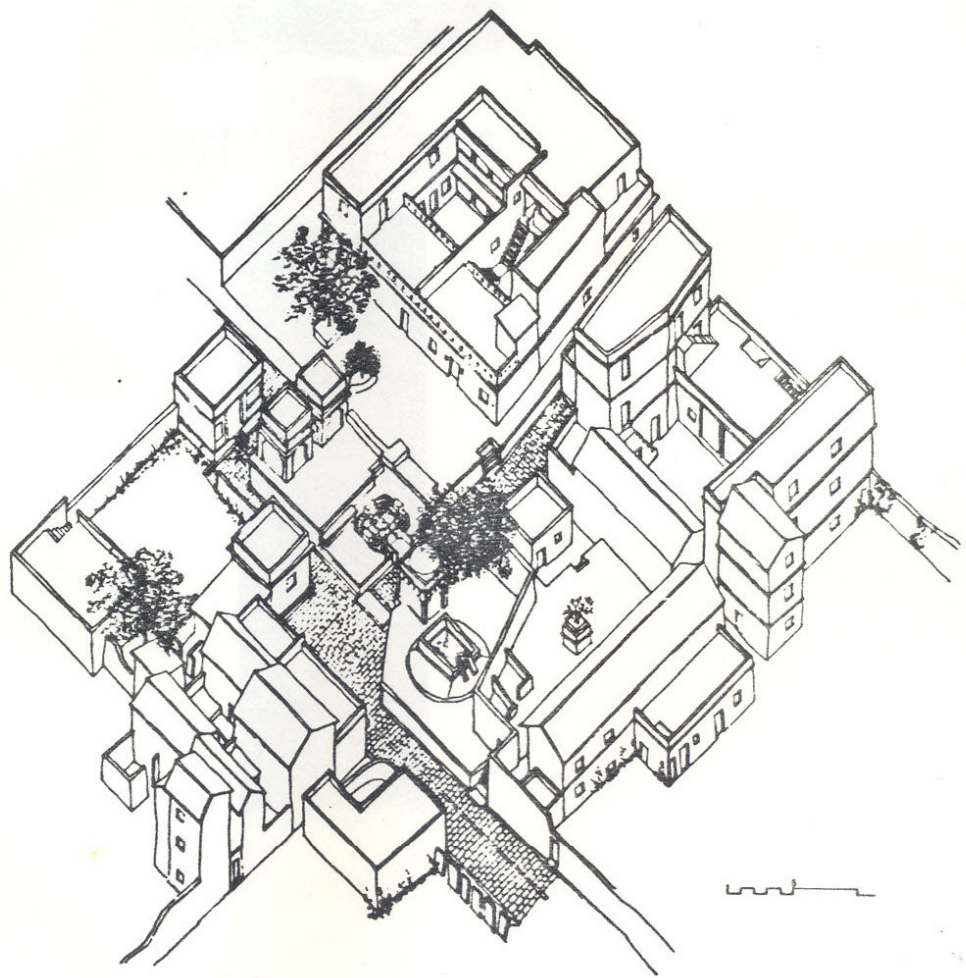


fig 9: A "MOHALLA" IN THE TOWN  
OF CHANDERI, MADHYA PRADESH



authors, of the small town of Chanderi in Madhya Pradesh revealed that, in the traditional Indian situation, the relation between individual needs and societal controls was more humane than the rules and regulations we now use to develop our urban environment.

Another significant feature of the indigenous model of settlement is in the use of vernacular construction techniques. In pursuit of what is considered the modern ideal, the planner/architect has alienated the people from the building process and from access to easily available building materials. Thus people are made more dependent on techniques they cannot control. This external dependency contributes to rising costs and dysfunctions in the built environment.

By recontextualising the image of "city", through a deeper understanding of traditional cities and rural settlements, we can transcend the technocratic ideal of absolute standards applied universally. We could then arrive at minimum thresholds for healthy living, and maintain these within a framework of social equity and cultural diversity.

Such an ideal could generate the unifying principles for an urban reconstruction, as opposed to the present practice of always developing afresh and continually extending the physical limits of existing urban centres.

The great expansion of urban population, anticipated in the next few decades, needs to be accommodated in existing urban centres. Real innovations to make this possible will derive primarily from the logic of original settlements, sensitively adapted to accommodate the pressures of technological growth.

## **LAND GENERATED APPROACHES**

### **1. The Regional Context**

In the absence of a coordinated study of the **characteristics of land**, current planning models determine land-use by economic and political forces rather than the forces of nature ecology. Land value is thus quantified in terms of its relative "friction" with respect to accessibility in the allocation of various land-uses. Indeed, most early studies of urbanisation in the West were based on this simplistic parameter which was then used to explain and predict urbanisation. It is only with the emergence of the study of environmental ecology that other equally quantifiable characteristics of land were enumerated to enable it to be understood by urban planners, and these have now become important determinants of planning land-use. In this approach the planner studies the characteristics of land which have evolved through time and uses these as determinants for deriving the urban pattern and the allocation of land-use. At the broad level this could be an effective and efficient way of identifying the urbanizable land at a regional and national scale and would become the base to formulate a regional or national urbanisation policy.

At a detailed level and finer grain, this should be the primary method of determining urban form and future growth of cities. Figures 10-12 illustrate the potentials of this approach at a sub-national scale, developed as a working-example by the authors for the State of Tamil Nadu.<sup>4</sup>

Figure-10 shows the composite configurations of certain selected physical parametres which are optimally conducive to urbanisation. The areas exclude forest lands, good agriculture land, steep slopes, cyclone prone areas etc. Figure-11 shows existing settled areas and major transportation routes which, when

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<sup>4</sup> The base data is derived from the Resource Atlas of Tamil Nadu prepared by the Department of Geography, University of Madras, 1984.

synthesised with the earlier map, produce Figure-12 indicating recommended areas for future urbanisation. The exercise shows, in brief, how a rational evaluation can be made of potential informed and equitable long-term policy decisions.

There are already several computer-based models to achieve the same results more effectively. At the Institute of Coastal and Offshore Research at Andhra University on Vishakapatnam, an attempt is being made to develop software packages for regional planning by analysing satellite data and corroborating this with ground surveys.

**Analysing the characteristics of land prior to allocating appropriate land uses at a regional scale is therefore a very achievable innovation.**

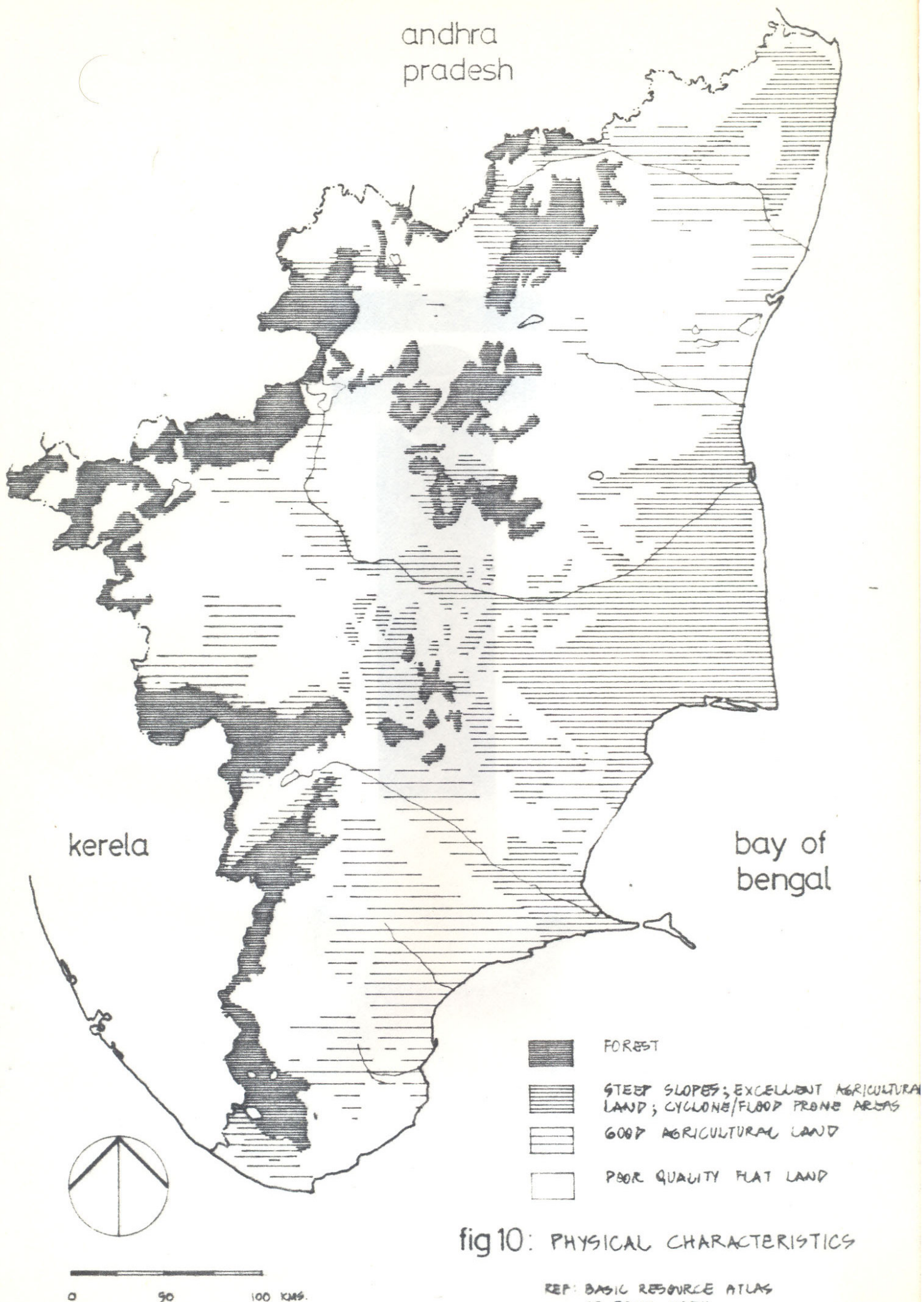
## **2. The Urban Context**

After determining the linkages between urbanizable and non-urbanizable land at the regional scale, there is need to study in the same manner the different qualities within the classification of urbanizable land. Some areas may be found to be naturally suitable for dense developments, and others for parks and playgrounds. Land-uses also need to be analysed carefully before their inter-linkages are designed. As this is often ignored in the normal planning exercise, the result is all manner of unintended consequences arising even out of "planned" courses of action.

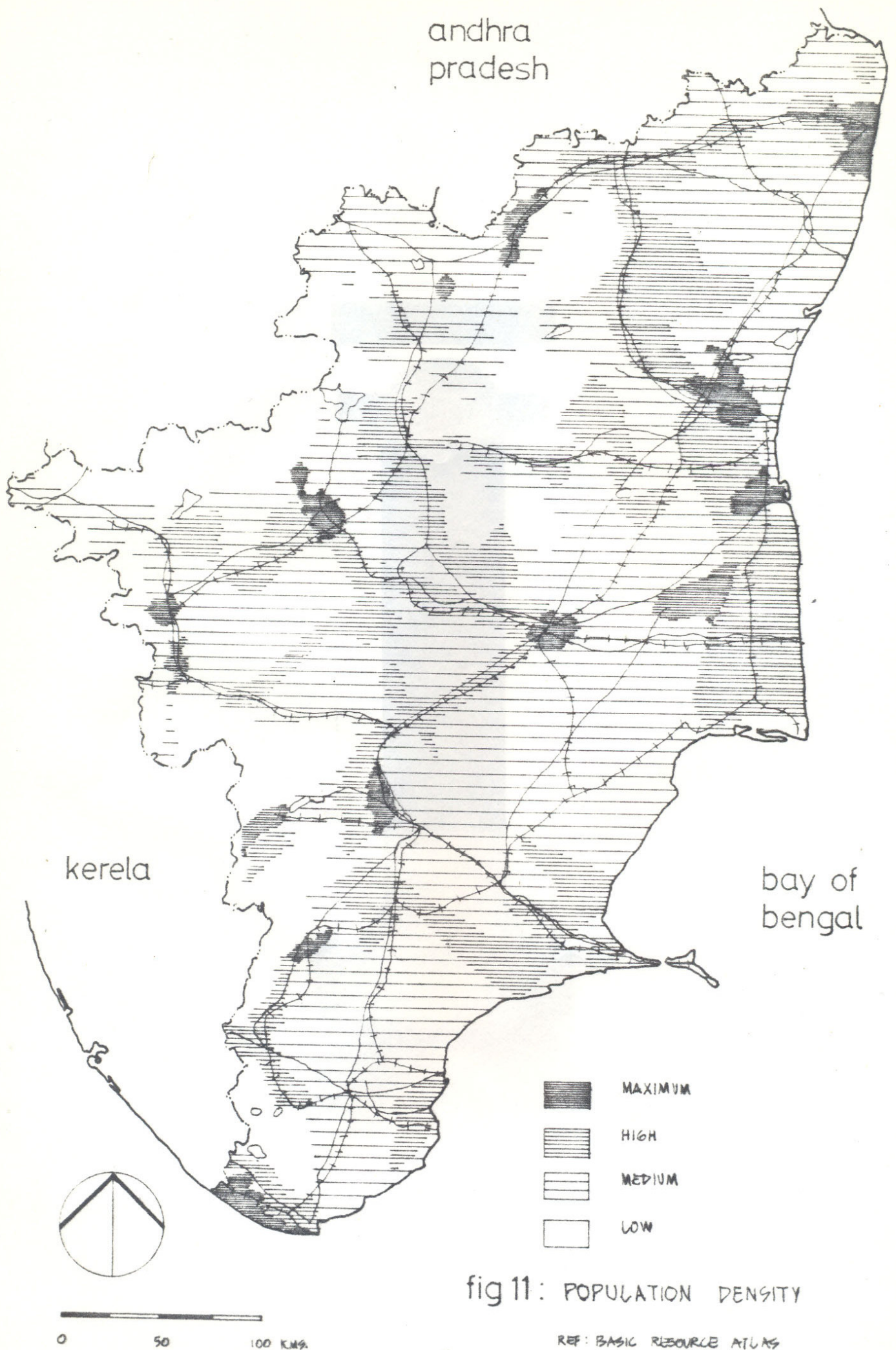
We have, identified here, five broad groups of linkages which could, without radical restructuring of existing planning mechanisms, lead to substantial improvements in the quality of life.

### **a. Using the transportation system as a determinant of land use.**

Affordable and efficient mass transit is the key element in promoting spatial equity in the complex and often contradictory situation of our mixed economy. Systems with low unit-cost of travel would mitigate the problems associated with peripheral land. An example of this approach would be to









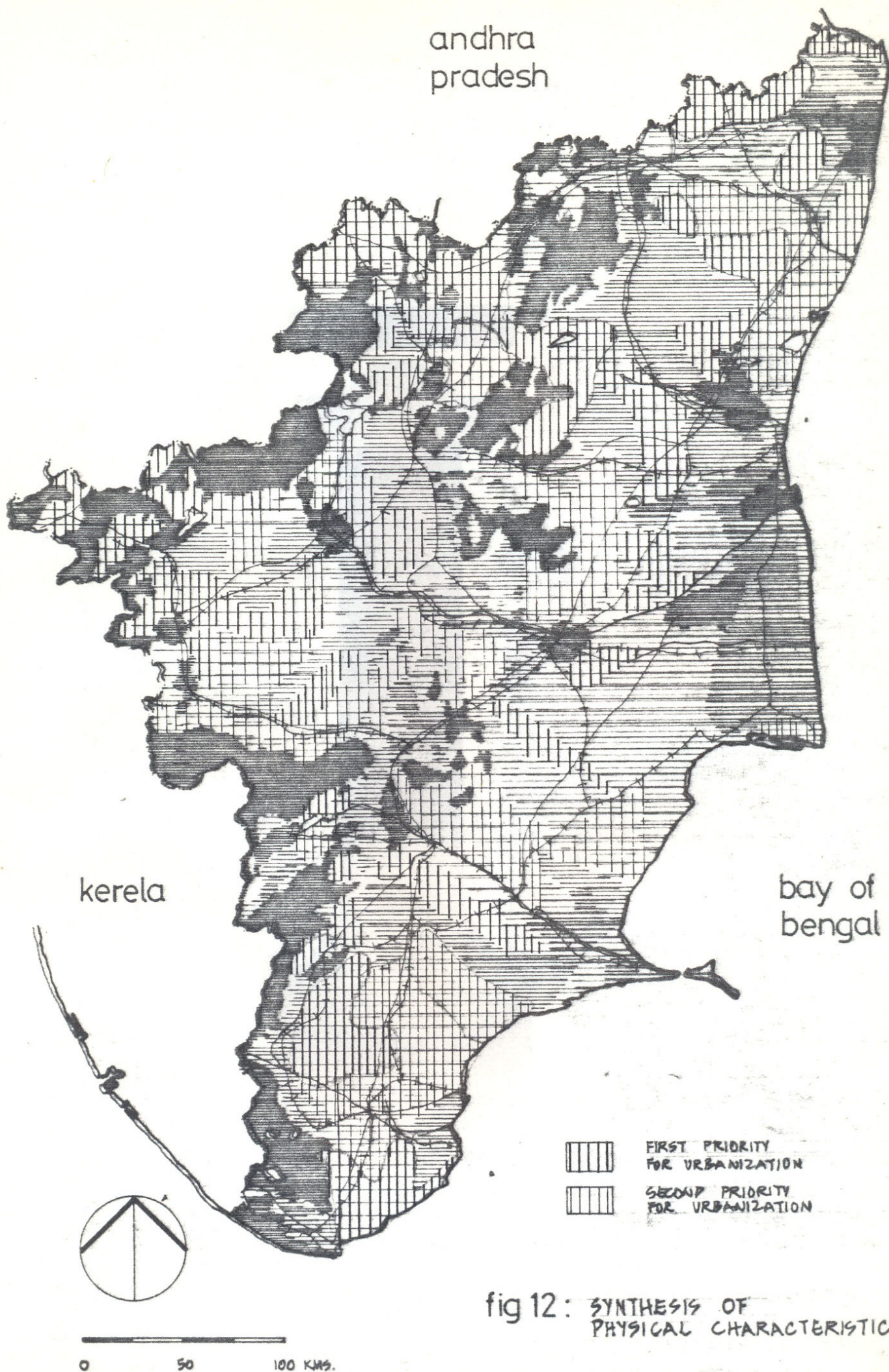


fig 12: SYNTHESIS OF  
PHYSICAL CHARACTERISTICS

take advantage of the existence of the sunken cost of the ring Rail in New Delhi by redensifying the areas which form its hinterland.

On another scale, the possibility of urbanising along traditional transport networks by re-energising these becomes obvious. Historically, civilisations developed emulate the logic of these circumstances. The present level of urbanisation along the Ganga (see Figure-13) shows the very low level of utilization of this natural transportation artery.

**Unless an urbanised region is serviced by an affordable, low unit-cost transport system, the poor will continue to be further marginalised in the evolving conurbations.**

**b. Smaller, more autonomous and resource-efficient public health systems.**

Achievable indigenous technology exists to link, in an appropriate manner, land-use and service systems which are affordable and result in a better quality of life. such linkages would result in a different morphology of settlement pattern by re-prioritising the service systems as a major determinant of the scale of communities, and thus of urban form. Figure-14 shows a system of treating sewage and recycling water in a community of about 500 families. The wastes from the houses or community latrines flow into linear bio-gas digesters, and the effluent is purified through a series of ponds with fish and ducks. This cycle could reduce the requirement of water from the city supply to a fraction of the conventional requirement. Furthermore, the sewage is treated in a manner that makes the by-products useable.

This system is also compatible with the life-style of poor rural migrants - the constituents of a fractionated economy - who need cheap dietary supplements to survive on their minimal incomes in the city. To the city the advantages are that these community sewage systems do not overload the existing infrastructure, while integrating a rural activity like food-production in the fabric of the city.



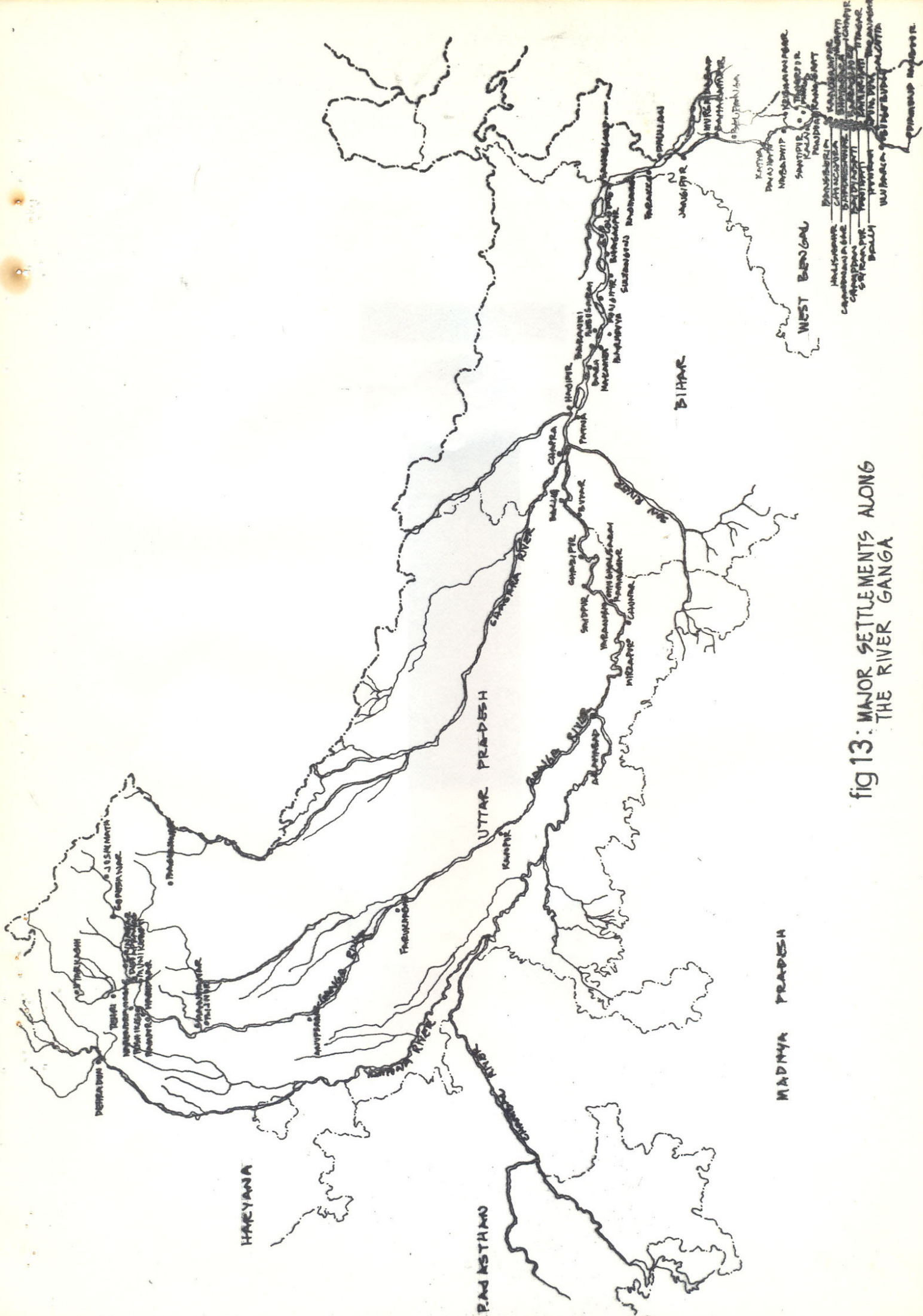


fig 13: MAJOR SETTLEMENTS ALONG THE RIVER GANGA





**A decentralised system of public health provision, based on the socio-cultural characteristics of various urban communities, and planned for efficient recycling of waste, could effect affordable innovations in urban morphology.**

- c. **The social and economic value of land being linked in the practice of land banking.** Because of our mixed economy, the market value of land and the social value of land are often in conflict. There is no absolute shortage of land, but there is an increasing competition for **some** of the land. Under the circumstance it is often the market value of land that determines the logic of urbanisation. The concept of social control of land, when viewed exclusively in the narrow economic framework, actually marginalises the economically weaker sections of society, who are then forced to rely on their own initiative to provide shelter outside the formal framework. The fact that a significant part of Delhi has been "regularised" by the local authorities, rather than planned, is the strongest evidence of such a shortsighted policy.

The great waves of distress migrations from rural areas have generated urban re-settlement measures, which are clearly inappropriate. Figure-15 shows the location of resettlement colonies on the fringes of Delhi. To provide infrastructure and urban services in such locations is prohibitively expensive. Furthermore the city loses a resource in terms of traditional crafts and skills which these migrants bring with them. Social considerations would also include, as an innovation, the dispossessed farmer integrally in the scheme of new development.

**Considerations of social equity in spatial planning must guide the principles and practice of land banking.**

- d. **Integration of new development with original settlements.** Figure-16 shows the dimensions of the problem in Delhi where several historic cities exist in close proximity and need to be integrated rather than isolated. Figure-17 shows the consequence of isolating one such traditional

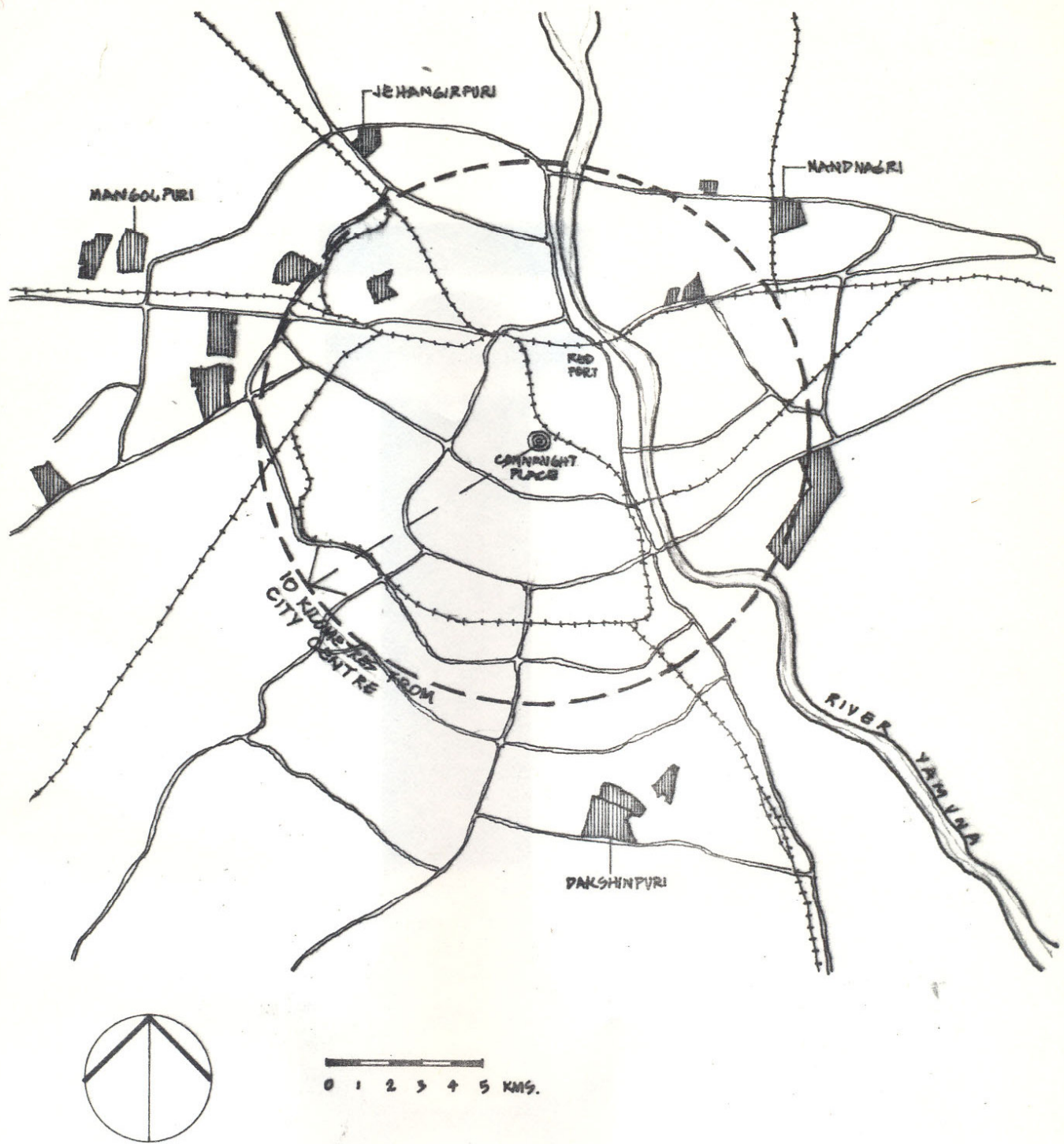


fig 15: LOCATION OF RESETTLEMENT COLONIES IN DELHI



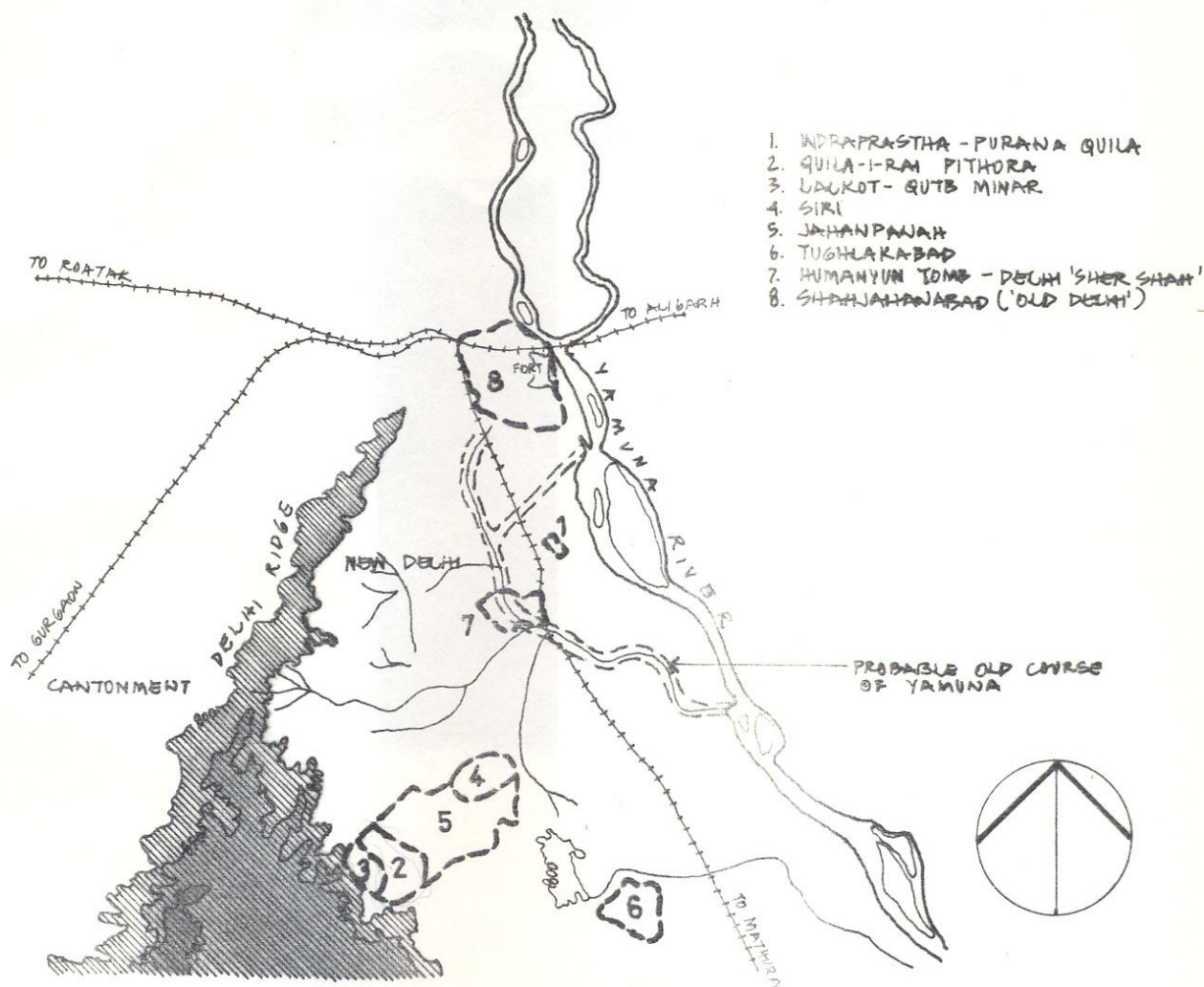


fig 16: THE SITES OF ANCIENT DELHI

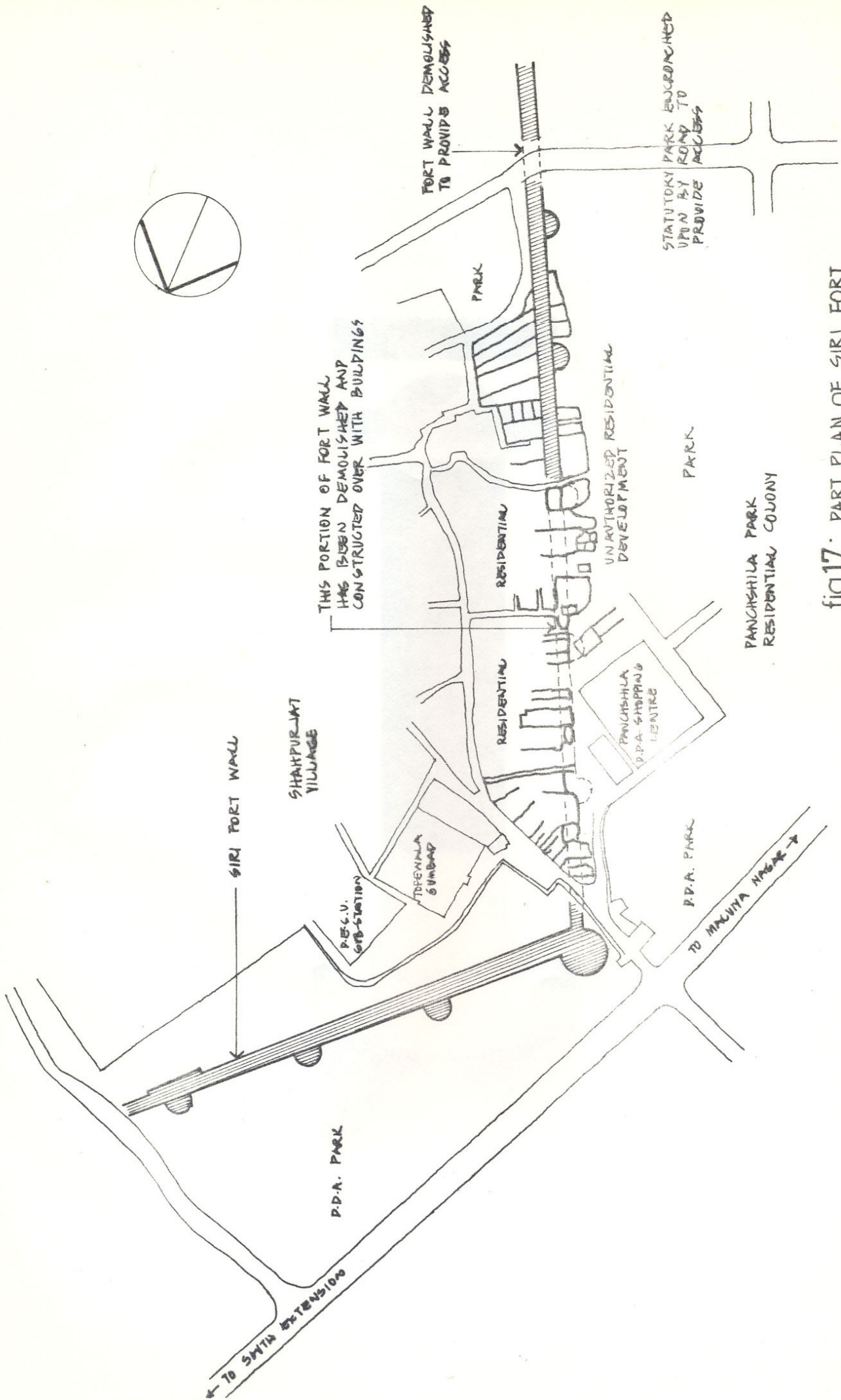


fig17: PART PLAN OF SIRI FORT  
SHOWING UNAUTHORIZED DEVELOPMENT

settlement, Shahpurjat, from the newly planned Panchshilla Park residential colony in New Delhi. It can be seen that the traditional settlement "encroaches" on to contiguous spacious parks, and even punctures physical barriers - in this instance the historic Siri Fort wall - in order to access and share the benefits of urban improvements from which it had been excluded.

Spatial proximity alone does not ensure physical integration. We need to recontextualise the role of conservation in urban development, provide a historic dimension to city form, and ensure the continuity of traditions.

**Contemporary planners need to understand traditional urban patterns to create morphological overlap areas through which old and new urban systems become mutually reinforcing.**

- e. **Integrating land uses through a fine-grain analysis**, as opposed to the present practice of gross functional segregation of residential, commercial, industrial, recreational, and other such zones. The need for zoning and discrete land uses arose in other societies under different circumstances. Even in those societies, urbanologists have rigorously questioned such artificial separation, but here such separation still forms the fundamental logic of planning. Inevitably, the plan is generally characterised by violations rather than adherence to the patently unrealistic patterns of spatial organisation.

Except for obnoxious or large scale industries, the fact is that all other human activities can be comfortably accommodated in a closer mosaic, reflecting felt needs, rather than an abstract, statistically-determined order imposed by modern 'master plans'.

**An innovative consequence of this would be to plan links between fairly autonomous urban districts rather than between different land-uses.**

## **URBAN ADMINISTRATION AND CONTROLS**

Having considered the need to introduce an indigenous cultural bias to planning ideology, and then the possibilities of re-orienting physical planning modes, we now consider ways of realising planned objectives.

### **1. Planning decisions**

Urban planning in India becomes largely an academic exercise because planning organisations operate in relative isolation from the agencies which implement the plan. These agencies are either departments of government or autonomous corporations. The isolation of planning organisations from the implementing agencies is apparently due to the mistaken impression that the rationality of planning as a technocratic, decision-making process can be insulated from the intrusion of politics emanating from democratic institutions of government. This is an unrealistic assumption. Given the nature of our democratic system, these political forces operate at a subterranean level, forcing accommodation of their view point, resulting in post-factum regularisation of their decisions and actions by the planning authorities.

**In a democratic society the frames of democratic decision-making are to be reconciled to the play of power.** Through that process, the values and assumptions which are buried under the jargon of planners, become visible and explicit.

### **2. Delivery Systems**

Organisations responsible for delivery of goods and services pertaining to urban development can be grouped under three heads :

- (i) Producers of semi-public goods, such as housing and related land development, commuter systems, water supply, drainage/sewage disposal, electricity and other forms of energy. These are individually consumed and fair-priced. They are generally provided by autonomous corporations,

private and public, which can be compared with private business, except that they do not aim for "profit-maximisation".

- (ii) Social service institutions such as health-care, education, and care of the socially infirm, which are individually consumed but not necessarily economically priced. These are generally provided by departments of government (central, state, or local) and by autonomous corporations. Here the economic viability of programs and policies becomes tempered by their political viability. Hence an element of subsidy becomes part of the economic calculation.
- (iii) Collective goods/services such as roads, water ways, forests, parks and the provision of public security, which are neither individually consumed nor can be adequately priced. These can best be provided by departments of government, and the play of power between central, state and local authorities directly affects delivery. Here a notion of "the common good" has to be arrived at, and political viability becomes an overriding concern.

### **3. Structuring and Accountability**

Most of the organisational types listed above are not, at present, structured for responsibility and accountability. The first type, being autonomous, is easy to restructure. The various products and services offered can be treated as mini-product firm, subject to can be managed like a multi-product firm, subject to the practices and rules followed by efficient private corporations. It should be noted, that in the efficient provision of these urban utilities, concern with long-range environmental viability should be treated as a necessary cost.

For the second type listed above, government as well as private enterprise are engaged in similar tasks, while subject to different working cultures. The differences are most noticeable with respect to cost efficiency. The other major difference occurs due to the level of satisfaction generated through the service. Hence **innovations would emerge from achieving greater parity between the two work-cultures (government and private enterprise) - by linking performance standards with cost effectiveness.** in recent times techniques have



been developed for measuring and controlling cost and performance. Such techniques include PPBS (Planning, Programming, Budgeting Systems), zero-based budgeting, full-costing techniques, etc. In order to institute these practices, structural re-adjustment are needed of organisations engaged in the task of delivering social services for urban development. Since large-scale restructuring is not feasible, **coordinating sub-structures specially designed for innovative effort should be introduced in the system.**

The third type of organisation deals with those aspects of urbanisation which cut across territorial boundaries defined by central, state and local authorities, and problems of coordination occur between existing and potential urban settlements and the provision of linkages between these.

**These linkages become the ground for innovation.** An example of such linkages is transport. In a country like ours, the means of transport are various, both in terms of carrying capacity as well as speed. The railways provide a national grid which is relatively low-cost and evenly spread, except in environmentally difficult terrain such as mountains, deserts, etc. Airways are also similarly organised, except that they are a high-cost service. Roads and highways, however, pose special problems since they have never been coordinated at a national level for the purpose of creating an urban grid, nor have they been fully coordinated with waterways and railways.

Coordination of planning organisations dealing with these functionally and territorially diverse units is presently hampered by the unrestrained play of power at the national and sub-national level. **In order to balance political considerations with those of optimal use of natural and man-made resources, urban development organisations need to be structured as responsibility centres.** This can ensure accountability-for technical effectiveness as well as social responsibility.

#### 4. Implementation

To realise the objectives of urban development, which have to be effected through diverse agencies, innovations can first occur through enabling legislation. At present, the legislative mechanisms are defined by the land Acquisition Act, Rent Control Act, town and Country Planning Act, and the Urban Land (Ceiling and Regulation) Act, among others. The framing of Rules and Regulations under these Acts have not been integrated fully, since town-planning experience in politically-independent India has been limited to the development of very few towns and cities. An in-depth analysis of these acts, with a view to provide functional integration and public accountability, is now overdue.

The priority in amending legislation should be with the regulations that govern the operations of the Urban Development Authorities. These Authorities were devised as nodal agencies for controlling the development of urban centres, especially metropolises. The fastest growing urban settlements in our country are, however, not metropolises but the small and medium towns. Such towns have special problems related to their location, functional specialisation, history, and culture, which have not even been considered in the framing of rules for development authorities.

The consequence of such insensitivity is that planning decisions do not evoke the trust of the public, leading to resentment, apathy and sometimes agitation. **The key to effective and innovative implementation lies in managing public participation for planning as well as execution.**

At present, a veil of secrecy shrouds the entire planning exercise and the kind of data the public can have access to. While plans, once they are published, become public documents, the process of planning and the parameters on which they are based are not made explicit. Thus the control of the use of land and services requires the increasing use of the coercive police powers of the State to counteract, what planners perceive as 'deviations' and violations of 'their' plan. In India the informal sector is so large, yet so poorly understood by the planning authorities, that we cannot tap the vast potential for constructive action by the people. If

planning authorities can work in closer cooperation with organised as well as informal sectors of the urban population, planning decisions and their implementation can become a matter of community concern. Community action can also help in improving the fiscal base of urban development authorities by making-acceptable taxation measures designed to mop-up the surpluses generated by developmental activities. **Urban planning, therefore, has to be conceived not only as a technocratic system of decision-making, but also as a tool which allows for negotiation of decisions with the concerned public.**

At present, planners offer the choice between a rigid plan and anarchy. Increasingly the public wants a say in decisions pertaining to urban affairs. 'Public' is an amorphous group with diverse priorities, resources, and capabilities. These 'publics' form coalitions whose boundaries are not defined either in terms of objectives or membership. The role of these coalitions, which have the capacity to undo the decisions made by technocrats, should be openly recognised. That would set the stage for negotiating of decisions.

To ensure rationality of such negotiated decisions, scenarios with definite cost-benefit analyses need be worked out in advance for purposes of negotiation. **This process of complex decision-making needs to be absorbed into the methodology of planners.**

## **5. Training and education**

**Significant innovations will also emerge from re-charactering the professional role of the urban planner.** At present urban development is managed by a mixture of administrators, economists, engineers, architects and town-planners. With increasing specialisation in scientific knowledge, there has been a loss of communication across these disciplines. This has resulted in role-conflicts and alienation between members of planning teams. **To evolve integrated and sustainable approaches it is necessary to develop a common technical language which is understood not only internally by experts but also externally by lay-people.** This would also allow for easy imputes into the planning team by

sociologists, historians, anthropologists, ecologists, as well as by artists and visionaries.

To understand the intricate and complex realities of an ancient civilisation which is undergoing a powerful developmental flux, the urban planner needs a special education and training. This task needs to be tackled on a priority basis, since **the matrix for true innovation can best be formed by a new breed of urbanists capable of generating a vision of the future city.**

## **SUMMARY CONCLUSIONS**

### **Parameters and Images**

The city in India is more than a technocratically efficient system for exchange of goods and services. It is more appropriately understood as an expression, in physical as well as emotive terms, of the civilisation of the people. The dominant characteristic of city planning in contemporary India has been the coming-to-terms with the process of rapid industrialisation.

Our urban planners have been most powerfully guided by the key images of "city" which emerged in this century in Europe.

Features which distinguish the indigenous from the 20th century European urban models:

Compactness of habitation,

Prevalence of the "social pact" that determines spatial structure

The use of vernacular construction techniques

Through a deeper understanding of traditional cities and rural settlements, we can transcend the technocratic ideal of absolute standards applied universally.

The great expansion of urban population, anticipated in the next few decades, needs to be accommodated in existing urban centres. Real innovations to make this possible will derive primarily from the logic of original settlements, sensitively adapted to accommodate the pressures of technological growth.

### **Land generated Approaches**

Analysing the characteristics of land, at a regional scale prior to allocating appropriate land uses is a necessary innovation.

The following five broad groups of linkages could, without radical restructuring of existing planning mechanisms, lead to substantial improvements in the quality of urban life :

- a. Using the transportation system as a determinant of land use. unless an urbanised region is serviced by an affordable, low unit-cost transport system, the poor will continue to be further marginalised in the evolving conurbations.

- b. Smaller, more autonomous and resource-efficient public health systems. A decentralised system of public health provision, based on the socio-cultural characteristics of various urban communities, and planned for efficient recycling of waste, could effect affordable innovations in urban morphology.
- c. The social and economic value of land being linked in the practice of land banking. Considerations of social equity in spatial planning must guide the principles and practice of land banking.
- d. Integration of new developments with original settlements. Contemporary planners need to understand traditional urban pattern to create morphological overlap areas through which old and new urban systems become mutually reinforcing.
- e. Integrating land uses through a fine-grain analysis. An innovative consequence of this would be to plan links between fairly autonomous districts rather than between different land-uses.

### **Urban Administration and Controls**

In a democratic society the frames of democratic decision-making are to be reconciled to the play of power.

Innovations would emerge from achieving greater parity between the two work-cultures (government and private enterprises) by linking performance standards with cost effectiveness.

Coordinating sub-structures specially designed for innovative effort should be introduced in the system.

In order to balance political considerations with those of optimal use of natural and man-made resources, urban development organisations need to be structured as responsibility centres.

The key to effective and innovative implementation lies in managing public participation for planning as well as execution.

Urban planning, therefore, has to be conceived not only as a technocratic system of decision-making, but also as a tool which allows for negotiation of decisions with the concerned public.

This process of complex decision-making needs to be absorbed into the methodology of planners.

Significant innovations will also emerge from re-characterising the professional role of the urban planner. To evolve integrated and sustainable approaches it is necessary to develop a common technical language which is understood not only internally by experts but also externally by lay-people.

The matrix for the true innovation can best be formed by a new breed of urbanists capable of generating a vision of the future city.

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