

THE PERSPECTIVE PLAN FOR TAMIL NADU

TOWARDS BETTER URBAN DEVELOPMENT

REPORT OF THE TASK FORCE ON
URBAN DEVELOPMENT
(Including Urban Housing and Regional Planning)
AND TOURISM
1972-1984

Volume I—Urban Development

STATE PLANNING COMMISSION
EZHILAGAM, MADRAS-5

This report of the Task Force on Urban Development and Tourism sets forth its recommendations on Urban Development and is not to be taken as the Perspective Plan for that sector which the Planning Commission will issue in 1973.

STATE PLANNING COMMISSION
REPORT OF THE TASK FORCE ON URBAN DEVELOPMENT.

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STATE PLANNING COMMISSION,
EZHILAGAM, MADRAS-5

N. MAHALINGAM, B.Sc. M.I.E.,
MEMBER.

Dated 25th January 1973.

My Dear Chairman,

[*Subject.*—State Planning Commission—Task Force on Urban Development—Final Report—Letter of transmittal for.]

I have the unique privilege to present to you the report of the Task Force on Urban Development that was set up on 18th November 1971. The report makes an attempt to assess on a perspective basis, the scope and importance of urbanisation in the midst of the rapidly increasing population, with a view to regulate and guide the developments for ensuring safe and comfortable living for the people in urban areas.

The Task Force has emphasised the need for socialisation of land for enabling housing for masses and also for providing public facilities for which the land is the basic need.

Urban Development embraces essentially almost all the daily needs such as water supply, drainage, lighting, transport and communication, housing, recreation and shopping.

Emphasis has been brought out on the varied distribution of population concentration in the State causing imbalances in economic activity and leaving pockets of areas underdeveloped. To ensure uniform economical growth in the State, it is essential that planning is carried out on regional basis with selected urban growth centres. The Task Force also observed that there has been increased concentration of population in class I urban areas especially in Madras, Madurai, Coimbatore, Salem and Tiruchirappalli. Unless further

growth of these cities are regulated and controlled the already existing problems of congestion, deterioration in public services and standards will continue resulting in further congestion, insanitation and inconvenience. These cities along with other major towns of the State will have to be regulated in growth by means of Master Plans covering these areas. As a positive measure of diverting attraction of these major Cities, it is necessary that new towns are formed around these Cities with necessary infrastructure to act as counter magnets. Transportation needs in urban areas require priority for enabling smooth flow of traffic.

There has been a huge backlog in housing activity. This calls for a massive effort on the part of the Housing authorities to build more houses at reasonable cost to solve the problem of housing shortage. Slums have to be rehabilitated for bettering the living conditions of the less privileged.

Cities have to be kept neat and clean, at the same time serving the public and pleasing the visitors; recreations, landscapes and pleasure drives are essential in Modern City.

Urban Development involves large investments of capital. The Madras Metropolitan Plan alone requires about Rs. 900 crores. An overall outlay of Rs. 503 crores has been included in the Perspective Plan. This investment has to be substantially supplemented by external resources other than State and Central Governments. I am sure that the Planning Authorities that will be constituted under the Tamil Nadu Town and Country Planning Act, 1971 can successfully implement the various development plans from out of the resources as mentioned in the Act.

I am presenting this report on behalf of the Task Force on Urban Development. The Convenor of the Working Group on Urban Development Thiru E. C. P. Prabhakar, I.A.S., who spared no small pains to draft the Working Group Report deserves special appreciation.

I would like to express my profound gratitude to all Members of the Task Force for their hard work, devotion and loyalty that have enabled me to present this report.

I wish to mention my heartfelt appreciation to Thiru T. V. Sabapathy, Secretary of the Task Force on Urban Development and Tourism whose sincere and hard work has been responsible for the successful presentation of this report.

I remain at your service to furnish any further information on the Perspective Plan and to assist your good self in any way that I may be called upon to contribute.

With kind regards,

Yours sincerely,
N. MAHALINGAM.

To

DR. KALAI GNAR M. KARUNANIDHI,
Chairman, State Planning Commission,
Fort St. George, Madras-9.

Copy to

HON'BLE THIRU K. ANBAZHAGAN,
Minister for Town Planning,
Fort St. George, Madras-9.

Copy to

HON'BLE THIRU K. RAJARAM,
Minister for Housing,
Fort St. George, Madras-9.

1. CHAPTER 1.

1.1. GENERAL INTRODUCTION.

1.1.1. In pursuance of certain directive principles of State policy laid down in the Indian constitution the Government of Tamil Nadu undertook planned development in the State through the various Five-Year Plans and annual plans. In order to assist the Government to implement its policies effectively by more efficient utilisation of the material, capital and human resources within the State and outside, the State Planning Commission was constituted. The most important assignment of the Planning Commission is to draft the perspective Plan covering the decade 1974-84 drawing up an estimate of the investment in the various sectors of economic activity to achieve the desired target of rate of growth. The sources of investments will cover the private and public sectors, the Central and State Governments, the Co-operative sector and various development Corporations.

1.1.2. Planning for the state will be based on an integral approach covering (1) sectoral profiles and long term planning and (2) District Planning and data collection. For sectoral profiles and long term planning, the State Planning Commission constituted 15 Task Forces with the following terms of reference:—

1. The resources endowment ; the present pattern and intensity of its utilisation ;
2. the critical review of programmes which have been implemented during the last two decades and their impact on production and productivity ;
3. directions of future development based on resources and needs which include the broad strategy of development and a complete inventory of on-going projects as well as the shelf of new projects which are proposed to be taken up in future ;
4. the Task Forces will spell out constraints to development also.

1.1.3. Of these Task Forces, the Task Forces on Urban Development and Tourism (including Urban Housing and Regional Planning) headed by Thiru N. Mahalingam, B.Sc., M.I.E., Member, State Planning Commission, was entrusted with the Task of preparation of the report for Urban Development (including Urban Housing, Regional Planning) and Tourism.

1.1.4. The following persons with knowledge and experience in their various fields of activities were nominated as Members of the Task Force.—

Chairman—

1 THIRU N. MAHALINGAM.

Members—

2 THIRU A. S. AHLUWALIA.

3 „ P. ANANDA RAU,

4 „ A. V. P. ASAITHAMBI.

- 5 THIRU BENNET PITHAVIDIAN.
- 6 „ J. S. BHANGO.
- 7 „ A. K. CHETTIAR.
- 8 „ K. DHARMARAJAN.
- 9 „ SA. GANESAN.
- 10 „ C. GOVINDAN NAIR.
- 11 „ V. JAYARAMAN.
- 12 „ S. KANDAPPAN.
- 13 „ A. V. MEIYAPPAN.
- 14 „ K. S. NARASIMHAN.
- 15 „ E. C. P. PRABHAKAR
- 16 „ RAMA. ARANGANNAL.
- 17 „ N. RANGANATHAN.
- 18 „ J. V. SACHIDANANDHA RAO.
- 19 „ K. J. M. SHETTY.
- 20 „ T. V. VASUDEVAN.
- 21 „ K. VENKATESAN.

Secretary—

- 22 Thiru T. V. SABAPATHY.

1.1.5. The Task Force was inaugurated on 18th November 1971 by Honourable Thiru K. Rajaram, Minister for Tourism. The Task Force formed itself into two Working Groups, namely (1) Working Group on Urban Development and Regional Planning, (2) Working Group on Tourism. The working Group on Urban Development was formed as follows :—

Convenor—

- 1 THIRU E. C. P. PRABHAKAR.

Members—

- 2 THIRU BENNET PITHAVIDIAN.
- 3 „ J. S. BHANGO.
- 4 „ K. DHARMARAJAN.

- 5 THIRU SA. GANESAN.
- 6 „ C. GOVINDAN NAIR.
- 7 THIRUMATHI KAMATCHI JAYARAMAN.
- 8 THIRU S. KANDAPPAN.
- 9 „ KRISHNA RAJ.
- 10 „ M. P. MANIVANNAN.
- 11 „ S. RAJAGOPALAN.
- 12 „ RAMA. ARANGANNAL.
- 13 „ N. RANGANATHAN.
- 14 „ J. V. SACHIDANANDA RAO.
- 15 „ K. J. M. SHETTY.
- 16 „ N. SOMASUNDARAM.
- 17 „ T. V. VASUDEVAN.

1.1.6. The Task Force conducted 3 meetings. The Working Group on Urban Development and Regional Planning conducted 5 meetings, and presented its report.

1.1.7. The Task Force expresses its profound thanks to all its Members, officials and non-officials and Convenor of the Working Group, the experts on various subjects and the various departments of the Government of Tamil Nadu. It also wishes to thank the Tamil Nadu Housing Board, Tamil Nadu Slum Clearance Board, Tamil Nadu Water Supply and Drainage Board, Directorates of Town Planning and Municipalities, the Departments of Central Government and other institutions for their valuable assistance.

1.1.8. The Task Force also would like to place on record the valuable services rendered by its Chairman Thiru N. Mahalingam, who participated in the discussions and guided proceedings at various stages of the preparation of the report.

1.1.9. The Task Force also expresses its grateful thanks to Thiru C. Ramdas, I.A.S., Secretary, State Planning Commission and Thiru K. A. Sundaram, I.A.S., Deputy Secretary, State Planning Commission for their valuable ministerial assistances rendered during the course of the work. The Task Force would also like to place on record the services rendered by Thiru T. V. Sabapathy, Secretary, Task Force on Urban Development, and Tourism, without whose devotion and industry, this report could not have been drafted within a short period of nine months.

1.2. INTRODUCTION—URBAN DEVELOPMENT.

1.2.1. “Urbanised societies in which a majority of the people live crowded together in town and cities, represent a new and fundamental step in man’s social evolution. Although cities themselves first appeared some 5,500 years ago, they were small and

surrounded by an overwhelming majority of rural people ; moreover they relapsed easily to village or small town status. The urbanised societies of to-day, in contrast, not only have urban agglomerations, of a size never before attained, but also have a high proportion of their population concentrated in such agglomerations. The large and dense agglomerations comprising the urban population involve a degree of human contact and of social complexity never before known. They exceed in size the communities of any other large animal ; they suggest the behaviour of communal insects rather than of mammals. Neither the recency nor the speed of this revolutionary development is widely appreciated. Before 1850 no society could be described as predominantly urbanised, and by 1900 only one—Great Britain urbanised, could be so regarded. To-day, all industrial nations are highly urbanised, and in the world as a whole the process of urbanisation is accelerating rapidly” says Kingsley Davis while dealing with “ The Urbanisation of the Human Population ”.

1.2.2. Industrialisation accelerates transformation of society to Urbanisation. Present urbanisation is well understood in terms of its relation with economic growth and its implications are well perceived in its manifestations in advanced countries. Urbanisation of most of the advanced countries began within the past 100 years. It got underway more recently in the underdeveloped countries. In some of the advanced countries it almost tends to saturation. This does not mean that either economic development or the growth of cities will necessarily end.

1.2.3. The modern urbanisation of life introduces the profound change in man's attitude towards land and living room. In the present industrial economy intangible forms of property—money, stocks, credit—have replaced land as the symbols of wealth and power. The use of land itself is measured at a new scale. According to Charles Abrams. West Germany alone could house the present entire population of the earth (at 12 families or 50 persons per acre.) For Urban man, there is no shortage of land. There are problems of effective use and organisation of his space, but essentially the urban system can provide him with plenty of room for work, for sleep, for play, and for a manifold range of activities. This does not mean that land for many of mankind's need, such as production of food, has ceased to be a prime concern, or that urbanisation has reduced the need for population control. It only means that areas from predominantly rural regions are changing into urban complexes which lead to a situation of land abundance from land hunger. The intensive development of the city is still an almost uncharted frontier. The modern metropolis is limited to an area with a radius of about an hour's journey from the centre to the outskirts. Within this area, space must be provided for housing, offices, shops, factories, recreation, parks, government buildings, utilities, roads, airfields, schools, hospitals, and colleges. Along with the growth of cities, all these demands for space also increase. The space problem of metropolitan cities does not arise from actual shortage of land but from lack of planning, wasteful use of space and from the unnecessary despoliation of good environments ; in the less developed countries, the cities have a space problem of a different kind, that is, the migration of population from rural areas into cities. Large scale squatting takes over every vacant space not only on the outskirts but even in the centres of towns (by putting up shelters made of used tins, thatches and planks). Most of these slum settlements lack essential services as water

drainage, light or road. They give rise to fire and health hazards and the city fathers are almost helpless to enforce controls or do much to improve their conditions. Problem of land speculation and high land costs makes the issue more complex in underdeveloped countries.

1.2.4. The control of land is a formidable problem. For shaping the pattern of land use in cities, three instruments could be used, namely, regulation, taxation, and public acquisition of land. Regulation includes strict building codes, zoning specifications for land use and even rent controls. In the less developed countries, regulation as a policy has not met with appreciable success due to lack of effective enforcement machinery. The taxation of land is a more effective method of controlling its use than regulation is. It can be a potent and versatile instrument for desirable development of urban real estate. Acquisition of land not only for the purposes of roads, parks, Government buildings or other public utility but also for industry, commerce, housing, parking and a host of purposes long considered as being in the private domain, can be effected. Policies concerning the land ownership differs substantially from country to country. Some lean towards predominantly private ownership, some towards "Socialist" ownership, others towards a mixture of the two systems. The desire for a piece of land or dwelling house calling his/her own remains an unquenchable human aspiration. The defiance of the thousands of city squatters who are seizing tiny plots of land for themselves is an expression of such human urge.

1.2.5. With the process of industrialisation, the problems of urban transport has assumed importance and the vehicular traffic presents a serious problem in growing cities. Among the complaints commonly heard about modern system of urban transportation are congestion, overcrowding of routes and facilities, irregularities and inconvenience of these public services and the difficulty of parking private vehicles at desired destinations. These problems arise not only out of the sheer size of modern cities but also out of the organisation of their land uses, the rhythm of their activities, the balancing of their public services with private rights of access and movement, and the tastes and preferences of their citizens with respect to mode of travel, route, comfort and cost. In fact, there is isolated "transportation problem" in the modern metropolitan cities; there are problems of the special organisation, of human activities, the adaptability of existing facilities and investments, and the needs and aspiration of the people in moving themselves and their goods.

1.2.6. The task of urban transportation system, i.e., to move people and goods from one place to another, is a problem. This elementary statement of purpose is useful because it reminds one that the task is defined by the location of the terminal points as well as by the channels of movement. Thus the problem of urban transportation is one of the city layout and planning as well as one of transport technology. The planner's approach to the transportation problem can be viewed as having two aspects :

1. The definition of the task and requirements of the system.
2. The devising of socially acceptable and economically feasible means of achieving those objectives.

This approach depends on the existence of basic studies of the use of land in cities to relate these uses to transportation needs.

1.2.7. Different types of land use generate different or variable traffic flows. Thus the emphasis shifts from the study of flows to study of the land uses that gives rise to the flows. This underlines the basic city planning proposition which can be manipulated by controlling and rearranging the land uses that represent the destinations and purposes of transportation. Since this approach emphasises the relation between the city functions and transportation, it is often called the functional approach and it has come to dominate large urban transportation studies. The important and major contributions of the present transportation studies, apart from the accumulation and organisation of data, have been—

1. the approach to transportation as a comprehensive system of inter-related activities ;

2. the recognition of the importance of land uses, demographic and social characteristics and consumer choices in determining transportation requirements ;

3. the appreciation of the role of transportation itself in shaping the development cities and metropolitan areas ;

4. the acceptance of the inevitably metropolitan scale of transportation planning in a society in which daily activities that generate travel move freely across the borders of Local Government and form the functionally interdependent fabric of metropolitan region.

1.2.8. In focussing the whole system of relations between users and facilities, these elaborate studies should furnish the material for a solution to the two major problems of urban transportation, i.e., efficient movement and promotion of new activities.

1.2.9. A series of factors arising from changes in consumers' task and expectations have worked out to the disadvantage of the fixed rail system. Comfort, convenience, privacy, storage capacity, guaranteed seating, freedom from dependence on scheduled departure times and a number of intangible satisfactions, all favour the use of private automobiles. On the other hand, the engineering efficiency of trains, which can move many times more people and much more cargo for a given road space and energy output than automobile can, has persistently held out the promise that mass transportation would lower costs. Most of our cities are of ancient origin and have become obsolete for the modern requirements of society. The central areas have become highly congested and services in them are heavily strained and transport is becoming uneconomical in these areas because of the narrow roads and heavy traffic. These areas need urban renewal. Renewal embraces all the process whereby cities are maintained or rebuilt—the replacement of old house by new house, of old streets by wider streets, the transformation of commercial areas, the relocation of industries, the rebuilding of public utilities and creating open spaces. It also refers to rehabilitation as well as demolition and rebuilding, the laws of administrative and financial mechanism by which this rebuilding and rehabilitation are accomplished. The concept of a new society, its economic ideas and changing pattern of social behaviour has to be kept in mind in the new changes that are proposed in an old city.

1.2.10. The forces of urbanisation are gaining momentum all over India and the next 20 years will witness it in an unprecedented scale. This process, if not regulated and canalised is likely to forebode catastrophe to the entire nation. Urban population is now rising very much faster than new employment opportunities and the City's capability of meeting the rising demand for social services is fastly declining. Moreover, the social overhead investment, instead of meeting the conditions of the City dwellers, has caused deterioration in the quality of urban life. A growing proportion of the urban population is today forced to live at the margin of existence in slums. Inadequacy of infrastructure is retarding industrialisation and inhabiting growth of employment. Consequently, a culture of poverty is being spawned by these overcrowded cities. However, it must be remembered that historically, urbanisation and industrialisation have been complementary to each other and the City with its concentration of industry, commerce, capital, labour and technology is a powerful generator of national economic growth and the power of the City as an instrument to development cannot be underestimated. Naturally, this implies that it is essential to devise policies that would go a long way to canalise the immense source of urbanisation for achieving a harmonious economic development of the nation.

1.2.11. The last Census, completed in 1971, has revealed that the urban population of India is 109 million in a total of 547 million, that is, 20 per cent of the total population. The urban content of population in Tamil Nadu is higher than the national average and has risen from 26.7 per cent in 1961 to over 30 per cent in 1971. It is estimated that the urban population of the nation in 1981 will definitely increase by 30 per cent of the total population and it will not be surprising that by 1991 it forms 40 per cent of the total population. Today, apart from the Madras City—the largest in Tamil Nadu and the fourth largest city in the country—there are 43 cities having a population of half a lakh of which 16 have a population of one lakh. Many of these are growing at the rate of 2.5 per cent per annum and a significant number at a very much faster rate.

1.2.12. A growing population, increasingly making their homes in large cities, has not only made effective public control over land indispensable but it has also made indefensible a system which allows land owners or land speculators wholly to appropriate the increases, often very large, in the value of urban land resulting from Government action whether Central or State or from the growth of social wealth of population. If an effective land policy for acquisition is not evolved, the problem of providing houses for the millions in India will become an impossibility in the not distant future.

1.2.13. There is no novelty in proposals to secure for the community at least a share in the values it has itself created. In fact, in England, in 1427, an Act was passed which sought to recover the increases in the value of property attributable to public expenditure on works for sea defence. Again, in the reign of Charles II, there was statutory appropriation of a part of land owner's unearned enhancement or "melioration" assessed upon the benefits of street widening in London. In the last 19th century, schemes to generalise this principle of betterment resulted in various legislative expedients. In 1942, the whole subject was authoritatively dealt within the report of the Expert Committee on Compensation and Betterment headed by Mr. Justice Uthwatt.

1.2.14. The main recommendations of the Uthwatt Committee were implemented by the Labour Government in the Town and Country Planning Act of 1947 which vested in the State all development rights in land. Anyone wishing to develop land had to recover the right to develop by payment of a development charge to the Central Land Board in England.

1.2.15. The Central Land Board were also given powers to buy land compulsorily for the purpose of disposing of it for development. The Uthwatt Committee has considered that public acquisition, if need be, by compulsion was the only satisfactory answer to the problem of comprehensive development and of securing betterment. There is a feeling that it is wrong that planning decisions which are public decisions about land use should so often result in the realising of unearned increments by the owners of land to which they apply and that the desirable development should be frustrated by owners withholding their land in the hope of higher prices. Hence, the two main objectives of the land policy of the Government should be :

1. to secure that the right land is available at the right time for the implementations of national, regional and local plans ;

2. to secure that a substantial part of the development value created by the community returns to the community and that the burden of cost of land for essential purpose is reduced.

1.2.16. The Government can introduce a Bill designed to achieve these objectives by establishing a Land Acquisition Authority, which will have widespread powers to acquire land compulsorily. This Authority will do so on a basis which will give the owner the value of the land on the basis of his current use and an amount sufficient to cover any of his contingent losses. The proposed Bill should apply to all the States in India as well as to the Island possession and will also include any adaptations made necessary by the different systems of land tenure that prevails in the country. These adaptations are expected to be long or complex.

1.2.17. It may be impracticable for the land Authority to buy all land needed for the development at the start of their operations. The Bill has to provide for a levy at a uniform rate on development value which will have to be collected by the proposed Land Acquisition Authority for private land development and paid to the Exchequer.

1.2.18. The Land Acquisition Authority can have its counter parts in the States; Centre-State co-ordination will also have to be undertaken by this authority.

1.2.19. Although the Land Acquisition Authority will have a considerable degree of independence, it will be subject to the policy directions by the Union Cabinet and will, of course, operate entirely within the frame-work of the Act and the regulations made under the Act.

1.2.20. The Land Acquisition Authority will be able to buy, by agreement, any land, which it has reason to think, is needed for development. But it must also have effective powers of compulsory purchase if it has to ensure that the right land is available

at the right time. Some owners of land, which ought to be developed, may be unwilling to incur levy by selling to a private purchase and may also be unwilling to sell to the Authority. The Bill has to confer on the Land Acquisition Authority comprehensive powers of compulsory purchase which will enable it to acquire any land on which there has been a planning decision that it is suitable for development.

1.2.21. The Authority will have the normal purchase powers appropriate to a Government Department. In order to accelerate the process of land acquisition after the confirmation of a compulsory purchase order the Land Acquisition Authority will acquire the Land, by means of a vesting declaration. The advantage of such a declaration is that it gives the Authority a good title to the land at once and they can dispose of it for development as soon as the declaration takes effect. This avoids the delays in the normal conveyance procedure.

1.2.22. If a Bill can be passed for bestowing State monopoly on the acquisition of land for development purpose, a scheme for the socialisation of urban development can be envisaged on the following lines :—

(a) Abolition of private layouts in cities in the first stage and all Municipalities in the second stage ;

(b) Legislation to be adopted for paying minimum compensation at a fixed rate for agricultural land acquired for urban development ;

(c) the provision of roads, power, water and drainage to be undertaken by the State on a planned basis ;

(d) the powers of purchase and sale of urban lands to be made an exclusive State monopoly ;

(e) the acquisition procedure to be so simplified as to suit the present tempo of development ;

(f) the process of development to be distributed over a period of ten years.

CRUX OF THE COST.

1.2.23. At the rate of Rs. 10,000 per acre of land as land-cost and Rs. 40,000 per acre for providing such amenities as drainage, water-supply, electricity and roads, the total cost will work to Rs. 50,000 per acre. In other words, the cost of development per cent of land including land cost will be Rs. 500. However, distribution or sale of developed sites cannot be done at this rate as 1/3 of every acre will have to be covered by roads and amenities and only the balance of 2/3 will be available for allocation in the shape of building sites. Hence, the average price per cent may be fixed at Rs. 700 thereby covering the 1/3 meant for the provision of roads and amenities.

1.2.24. If adopted on an all India basis, a total of 1,352,000 acres in 251 urban centres can be developed at a cost of about Rs. 6,760 crores distributed over a period of ten years. On an average, the cost per year will be about Rs. 676 crores. When implemented at least as much as Rs. 5,408 crores (6,760-1,352) will be drawn from the people and consumer goods in the form of dwelling house-sites will be created.

1.2.25. In addition to this, there are about 2,442 urban centres in India having a population below 50,000. If this scheme is to be adopted in these centres on the basis of 500 acres for each town, the extent will work to an additional 1,221,000 acres and the cost will be Rs. 6,105 crores for ten years. The annual cost for these 2,442 centres will come to about Rs. 610 crores. The whole scheme is thus self-financing in its character.

1.2.26. This proposal of socialisation of Urban Development by Thiru N. Mahalingam, has been accepted in principle at Ooty Conference as well as by the Union Cabinet. Hence it is only fair for the State government to adopt the necessary legislation to see that all agricultural land around cities, Municipalities and major Panchayats are only developed by Housing Board, Municipality, etc.

1.2.27. Area development, as is done in U.S.A. has to be adopted for the purpose of preventing the growth of housing colonies in a hap-hazard manner. The number of storeys to be had for each building in a particular area has to be fixed and all future construction in an area has to conform to the standard prescribed. This will pave the way of uniformity in house construction.

2. CHAPTER II.

2.1. URBAN POPULATION.

2.1.1. Tamil Nadu has been recording steady growth in population during the past decades. From 19.3 millions in 1901, the population has reached 41.1 millions in 1971. In the course of 70 years, the Urban population has increased from 2.7 million to 12.45 millions. Among highly urbanised States in India, Tamil Nadu stands a close second position to Maharashtra in the proportion of urban population to the total population of the State. While the All-India urban component of the total population is 19.87 per cent, that of Tamil Nadu works to 30.28 per cent as per 1971 census. Table 1 indicates number of towns and percentage of urban population by large States in India. Table 2 indicates the growth of urban population in Tamil Nadu; Table 3 shows the District-wise distribution of total population, growth rate and density. The trend of urbanisation by categories of towns from 1961 to 1991 (estimated) is shown in Table 4. The distribution of urban population among the different classes of towns (*vide* Table 5 and 6) reveals that 43.80 per cent of the total population concentrate in only 17 Class I towns. Also, towns of Classes I to III put together (123 towns) account for 78 per cent of urban population. The total number of urban towns (Classes I to VI) in 1971 is 433. The above facts establish that the larger towns grow faster and the urban potential prospects and problems of Tamil Nadu are concentrated in these 123 towns.

2.1.2. The City of Madras, with population exceeding one million, accounts for nearly 20 per cent of the State's urban population, thereby exposing the overconcentration.

(2.1.1.) TABLE 1.

NUMBER OF TOWNS AND PERCENTAGE OF URBAN POPULATION BY STATES—1971.

State.	Class I to III.	Class IV to VI.	Total.	Percentage to Urban population.
1. Maharashtra	107	182	289	31.20
2. Tamil Nadu	123	320	443	30.28
3. Gujarat	69	148	217	28.13
4. West Bengal	58	79	137	24.59
5. Mysore	60	171	231	24.31
6. Andhra Pradesh	90	117	207	19.35
7. Rajasthan	44	113	157	17.61
8. Madhya Pradesh	61	181	242	16.26
9. Uttar Pradesh	109	184	293	14.00
10. Bihar	62	99	161	10.04
11. Assam	16	59	75	8.39

(Source : Census of India—1971).

(2.1.1.) TABLE 2.

GROWTH OF URBAN POPULATION IN TAMIL NADU.

Year.						Urban population size.
						(IN LAKHS.)
1901	..	..	..	..	..	27.49
1911	..	..	..	..	..	31.83
1921	..	..	..	..	..	34.57
1931	..	..	..	..	..	42.70
1941	..	..	..	..	..	52.22
1951	..	..	..	..	..	73.67
1961	..	..	..	..	..	89.90
1971	..	..	..	..	..	124.45

(2.1.1.) TABLE 3.

DISTRIBUTION OF POPULATION, GROWTH RATE AND
DENSITY OF POPULATION BY DISTRICTS.

State/District.				Population 1971 (Total).	Density of population per square kilometres		Decennial growth rate of population.	
					1961.	1971.	1951-1961.	1961-1971.
Tamil Nadu	..	..	..	41,103,125	258	316	11.85	22.01
Madras	..	..	..	2,470,288	13,615	19,299	22.11	42.86
Chingleput	..	..	..	2,889,143	278	365	12.17	31.54
North Arcot	..	..	..	3,738,273	257	305	8.51	18.81
South Arcot	..	..	..	3,606,961	280	331	9.77	18.34
Dharmapuri	..	..	..	1,674,193	139	174	22.05	25.66
Salem	..	..	..	2,986,686	297	346	8.44	20.83
Coimbatore	..	..	..	4,357,373	228	278	12.78	22.47
The Nilgiris	..	..	..	491,330	161	193	31.30	20.04
Madurai	..	..	..	3,931,104	255	311	11.05	22.42
Tiruchirappalli	..	..	..	3,844,901	224	269	8.36	20.52
Thanjavur	..	..	..	3,832,740	335	394	8.82	17.89
Ramanathapuram	..	..	..	2,857,424	194	227	16.33	17.99
Tirunelveli	..	..	..	3,194,494	239	279	8.99	17.06
Kanyakumari	..	..	..	1,228,215	596	729	20.64	23.20

(Source : 1971 Census—Provincial.)

(2.1.1) TABLE 4.

TREND OF URBANISATION BY CATEGORIES OF TOWNS (ESTIMATED)—
IN TAMIL NADU.

<i>Category.</i>		1961.	1971.	1981.	1991.
Class I Town ..	Population ..	3,716,114	5,452,314	7,320,749	9,647,479
	Percentage to total Urban.	37.76	43.81	44.25	45.77
Class II ..	Population ..	1,452,791	1,684,551	3,013,674	4,368,149
	Percentage to total Urban.	14.15	13.53	18.22	20.72
Class III ..	Population ..	1,843,631	2,599,414	3,396,188	4,216,272
	Percentage to total Urban.	20.51	20.89	20.53	20.00
Class IV ..	Population ..	1,302,822	1,664,609	2,026,464	2,318,507
	Percentage to total Urban.	14.49	13.37	12.25	11.00
Class V ..	Population ..	615,049	742,170	496,277	368,853
	Percentage to total Urban.	6.84	5.96	3.00	1.75
Class VI ..	Population ..	60,121	303,802	289,495	158,080
	Percentage to total Urban.	0.67	2.44	1.75	0.75

Source : Census of India 1961, and provisional population Table 1971.

(2.1.1) TABLE 5.

POPULATION OF TOWNS IN TAMIL NADU.

<i>Total of each size class/towns of population. size 20,000+</i>				<i>Population 1971.</i>		<i>Proportion of Urban population to total population.</i>		<i>Growth. rate.</i>	
								1951-61.	1961-71.
						1961.	1971.		
All Classes	..	..	P	12,446,360	}	100	100	22.59	38.44
I to VI	..	..	M	6,380,759					
(No. of towns 443)	..	..	F	6,066,101					
A. Total Class I	..	..	P	5,452,314	}	37.76	43.80	30.38	60.62
(100,000+)	..	..	M	2,827,703					
(No. of towns 17)	..	..	F	2,624,611					
B. Total Class II	..	..	P	1,684,551	}	14.15	13.53	58.22	32.37
(50,000—999,999)	..	..	M	889,821					
(No. of Towns 27)	..	..	F	824,730					
C. Total Class III	..	..	P	2,599,414	}	20.85	20.89	9.36	38.69
(20,000—49,999)	..	..	M	1,318,002					
(No. of towns 79)	..	..	F	1,281,412					
D. Total Class IV	..	..	P	1,664,609	}	18.07	13.38	19.05	2.48
(10,000—19,999)	..	..	M	837,813					
(No. of towns 117)	..	..	F	826,796					
E. Total Class V	..	..	P	742,170	}	7.95	5.96	-4.23	3.83
(5,000—9,999)	..	..	M	377,872					
(No. of towns 100)	..	..	F	364,298					
F. Total Class VI	..	..	P	303,802	}	1.22	2.44	8.92	176.24
(Less than 5,000)	..	..	M	159,548					
(No. of towns 103)	..	..	F	144,254					

Source : 1971 Census (Provisional).

P = Population (Total).

M = Males.

F = Females.

(2.1.1.) TABLE 6.

URBAN POPULATION AND ITS DISTRIBUTION IN THE DIFFERENT CATEGORIES OF TOWNS—1931 TO 1971 IN TAMIL NADU.

	1931.	1941.	1951.	1961.	1971.
Tamil Nadu. Total ..	23,472,099	26,267,507	30,119,047	33,686,953	41,103,125
Urban ..	4,230,382	5,173,682	7,333,525	8,990,528	12,446,860
Per cent.	18.02	19.70	24.35	26.69	30.28
Class I .. Population.	1,258,985	1,647,133	2,764,481	3,716,114	5,452,314
Per cent.	29.76	31.84	37.70	41.33	43.80
Class II	466,379	631,364	922,473	1,452,791	1,684,551
Per cent.	11.02	12.20	12.58	16.13	13.53
Class III.	981,231	1,124,597	1,726,105	1,843,631	2,599,414
Per cent.	23.19	21.74	23.54	20.51	20.89
Class IV	853,144	991,607	1,122,559	1,302,822	1,664,609
Per cent	20.17	19.17	15.31	14.49	13.38
Class V	620,115	719,445	696,941	615,049	742,170
Per cent.	14.66	13.90	9.50	6.84	5.96
Class VI	50,528	59,636	100,966	60,121	303,802
Per cent.	1.19	1.15	1.38	0.67	2.44

Source : 1. Census of India 1961 General Population Tables.

2. Provisional Population figures 1971 census of India.

Next in order of population follows Madurai and Coimbatore with 5.48 and 3.53 lakhs respectively. The rest of class I towns have a population of less than 3 lakhs. It is also observed that apart from large increase in proportion of population concentration in Class I towns, the growth in Class II and III towns has remained more or less stationary and Class IV to VI has been declining

2.1.3. The urban content of the population has risen from 15.8 per cent in 1921 to 30.3 per cent in 1971 for the State (from 3.43 million to 12.45 million). The total number of towns have increased from 179 in 1921 to 443 in 1971.

2.1.4. The distribution of urban population is not even over the entire State (*Vide* table-7). The Madras city absorbs 20 per cent of the population ; Districts of Coimbatore (12.5 per cent), Madurai (10.6 per cent), Tirunelveli (8.3 per cent) and Chingleput (8 per cent) account for about 40 per cent. Districts of Salem, Tiruchirappalli, Thanjavur, North Arcot and Ramanathapuram account each about 6 to 7 per cent. District of South Arcot accounts for 4 per cent. Districts of Dharmapuri, Nilgiris and Kanyakumari each account for less than 2 per cent. This clearly indicates the uneven distribution of the urban population. Three important major concentrations of urban population in the State can be identified as :

(i) Madras city and towns closeby. (Madras, Thiruvottiyur, Alandur, Tambaram) with population of 2.7 million.

(ii) An urban centre belt astride the centre of Tamil Nadu in the districts of Coimbatore, Tiruchirappalli and Thanjavur (Coimbatore, Singanallur, Tiruppur, Erode, Tiruchirappalli, Thanjavur and Kumbakonam) with population of 1.8 million.

(iii) An axis connecting Dindigul with Nagercoil (Madurai, Dindigul, Tirunelveli, Tuticorin and Nagercoil), with population of 1.8 million.

(2.1.4.) TABLE 7.

RURAL URBAN COMPOSITION OF POPULATION.

State/District.	Population, 1971.	Percentage of Urban to total population.		Decennial growth rate.
		1961	1971	
Tamil Nadu	T 41,103,125			T 22.01
	R 28,656,265	26.69	30.28	R 16.02
	U 12,446,860			U 38.44
Madras	T 2,470,288			T 42.86
	R ..	..	..	R ..
	U 2,470,288	100	100	U 42.86
Chingleput	T 2,889,143			T 31.54
	R 1,884,558			R 8.20
	U 1,004,585	20.75	34.47	U 120.46
North Arcot	T 3,738,273			T 18.81
	R 2,957,051			R 17.57
	U 781,222	20.06	20.90	U 23.76
South Arcot	T 3,606,961			T 18.34
	R 3,094,054			R 16.51
	U 512,907	12.87	14.22	U 30.74
Dharmapuri	T 1,674,193			T 25.66
	R 1,530,328			R 23.51
	U 1,43,865	7.00	8.59	U 54.28

(2.1.4.) TABLE 7—cont.

RURAL URBAN COMPOSITION OF POPULATION—cont.

State/District.	Population, 1971.		Percentage of Urban to total population.		Decennial growth rate.	
			1961	1971	1961—1971	
Salem	T	2,986,686			T	20.83
	R	2,191,919			R	12.53
	U	794,767	21.20	26.61	U	51.64
Coimbatore	T	4,357,373			T	22.47
	R	2,804,162			R	10.76
	U	1,553,211	29.01	35.65	U	50.48
The Nilgiris	T	491,330			T	20.04
	R	248,806			R	8.44
	U	242,524	43.94	49.37	U	34.84
Madurai	T	3,931,104			T	22.42
	R	2,608,945			R	18.83
	U	1,332,159	31.63	33.63	U	30.17
Tiruchirappalli ..	T	3,844,901			T	20.52
	R	2,989,861			R	19.02
	U	855,040	21.26	22.24	U	26.10
Thanjavur	T	3,832,740			T	17.89
	R	3,044,645			R	17.81
	U	788,095	20.38	20.56	U	19.13
Ramanathapuram ..	T	2,857,424			T	17.99
	R	2,111,833			R	15.89
	U	745,591	24.75	26.09	U	24.37
Tirunelveli	T	3,194,494			T	17.00
	R	2,166,216			R	15.08
	U	1,028,278	31.05	32.19	U	21.28
Kanyakumari	T	1,228,215			T	23.26
	R	1,023,887			R	20.91
	U	204,328	15.05	16.64	U	36.15

[Source : Census 1971 (Provisional).]

T=Total.

R=Rural.

U=Urban.

TABLE 8.

DECADAL VARIATION IN POPULATION SINCE 1901.

State/District.		Percentage decadal variation in population.							
		1901-11	1911-21.	1921-31	1931-41	1941-51	1951-61	1961-71	
Tamil Nadu	..	..	8.57	3.47	8.52	11.91	14.66	11.85	22.01
Madras	..	..	4.07	2.81	24.01	20.07	60.64	22.11	42.86
Chingleput	..	..	7.09	5.15	9.30	10.00	8.11	12.17	31.54
Nqrth Arcot	..	..	12.24	(—) 5.05	13.21	13.69	10.95	8.51	18.81
South Arcot	..	..	12.19	(—) 1.80	5.79	6.28	6.44	9.77	18.34
Dharmapuri	..	..	4.65	(—) 4.45	16.73	15.65	12.53	22.05	25.66
Salem	..	..	3.51	7.93	12.57	19.13	20.34	8.44	20.83
Coimbatore	..	..	7.14	6.31	11.33	15.01	17.21	12.78	22.47
The Nilgiris	..	..	5.08	6.66	33.84	23.85	48.65	31.30	20.04
Madurai	..	..	12.81	4.15	9.42	13.22	16.89	11.05	22.42
Tiruchirappalli	..	..	8.42	4.05	(—) 0.67	12.11	13.48	8.36	20.52
Thanjavur	..	..	5.25	(—) 1.53	2.40	7.44	16.36	8.82	17.89
Ramanathapuram	..	..	9.17	3.27	7.02	7.62	4.52	16.33	17.99
Tirunelveli	..	..	8.10	6.42	7.29	9.80	9.52	8.99	17.00
Kanyakumari	..	..	17.54	17.02	17.75	16.35	22.07	20.64	23.20

[Source : 1971 Census (Provisional).]

2.1.5. This again indicates that there are large areas of “urban deserts” in between high concentrations. Between Madras and Salem on the South-west, and Madras and Tiruchirappalli on the south, practically there is no major urban centre except the slowly growing towns of Vellore and Villupuram respectively.

2.1.6. Future population of the State has been estimated by adapting various statistical methods of projection. Table-4 gives the projected populations worked out by the census department. By 1981, four more million people will have to be accommodated in urban areas. If the present trend of concentration continue, almost 35 per cent of this population (1.4 million) would rush into the major five towns of the State namely Madras, Madurai, Coimbatore, Salem and Tiruchirappalli. This trend is not to be encouraged as that will widen the existing regional disparities and also result in increased costs of public and private consumption. The central cities will be unable to provide adequate employment for their citizens. It may become uneconomical to provide and maintain efficient public services

beyond certain limits. The migrating rural population into city will give rise to more slums and insanitation. The surrounding small towns, around the city, may get affected economically. Thus series of complicated problems will have to be faced.

2.1.7. The above trends firmly indicates the need for a State urbanisation plan for minimising the uneven distribution of population and to effect balanced growth in the economy. Regional plans should form basis for State urbanisation plan in as much as Regional studies lead to balanced distribution of population and economical growth of the state as a whole. Growth centres and heirarchy of settlements are spotted out in Regional plans. The regional plans take into consideration the geographical distribution of population, both urban and rural; identify existing urban centres, indicating either reduction, continuance or increase in rates of growth of population in specific centres, and suggest also new centres for large scale development to remedy regional imbalances and arrest flow of migrants.

2.2. URBAN POLICY :

2.2.1. For Implementation of such a state urbanisation plan, within the context of an overall regional policy, it would be necessary to frame an urban policy to broadly serve three objectives, namely:—

1. ensure reasonably balanced spatial distribution of urban population within the state ;
2. ensure availability of basic economic and social infrastructure in urban centres at reasonable cost ;
3. ensure sizes of cities and towns not becoming so large as to discreate economics in the scale of provision of infrastructure or in the maintenance of services and facilities of urban dispersal becoming so broad based as to fritter away scant development resources over a wide field.

Such a policy should be applicable to all spheres of activity which have either direct or indirect impact on urbanisation. The following instruments may prove helpful in exercising the policy:—

1. sitting of public sector and Government or quasi-Government undertakings ;
2. bulk acquisition and development of vacant lands and undeveloped areas within cities and towns ;
3. development of physical and social infrastructure ;
4. equipping adequate water-supply and drainage facilities and an efficient mass transport and communication system.
5. providing adequate public open spaces for recreation and sports and improving landscape and aesthetics ;
6. controlling and regulating the extend, form and quality of urban growth by means of Urban Master Plans and Area Development Plans ;
7. by undertaking urban renewal programmes to rebuild blighted localities in central areas and rehabilitate slum dwellers ;
8. intensive and high density development of sites abutting major and important roads within cities ;

9. financial incentives for development of new industries and trades through loans, grants and subsidies and tax rebates ;

2.2.2. It is possible to frame such a policy since Government have power to decide public investment programmes and influence private investment through a series of incentives and controls. Public provision of infrastructure facilities and fiscal policies act as powerful forces towards development of urban centres.

CLASSIFICATION OF URBAN AREAS :

2.2.3. As per the census of India, 1961 urban areas are those which—

1. are constituted as Municipal Corporation, Municipality, Town Committee, notified area committee or contonment board ;
2. have a density of not less than 1,000 persons per square mile ;
3. have a population of 5,000 and over; and
4. have three-fourth of their working population in non-agricultural activities.

2.2.4. The 1971 census has maintained this definition except in regard to item 4 where it has specified that three-fourth of male working population of an area should be in non-agricultural sector for it to qualify as urban. This definition is based on a few empherical tests which cannot be considered reflecting clearly the real urban characteristics of an area. In fact in any classification of areas as urban characteristics, which effectively make the area urban only, should be taken into account. The mere fact that 75 per cent of the working force is engaged in non-agricultural occupations or the area has a high density of population will not make an area urban. Availability of the facilities and amenities normally associated with urban living can be an essential indicator for qualifying the area as truly urban. However, the areas whose population content exceeds 20,000, i.e., classes I to III of census towns would satisfy the later definition too ; hence priority treatment is given for these towns in this report since 78 per cent of the total urban population are distributed among these 123 towns. The census towns of classification IV to VI, which answer for 22 per cent of the total urban population, can be treated as Semi-urban since they are mostly on transition stage of urbanisation. Table-9 shows the proportion of urban population in towns of classes I to III (population over 20,000). Tables 10 and 11 indicate the growth rates and growth of state urban total and classes I to III total during the periods 1961 to 1971. The urban content of the I to III class towns has increased from 9.1 per cent in 1921 to 22.7 per cent in 1971 thereby indicating an advanced level of urbanisation.

(2.2.4) TABLE 9.

PROPORTION OF URBAN POPULATION IN TOWNS OF (CLASSES I,II AND III) + 20,000 FOR 1921 TO 1971 (FIGURES IN PER CENT).

<i>Categories of town.</i>	1921	1931	1941	1951	1961	1971
Town of population over 20,000.	55.3	59.7	60.2	69.8	72.7	78.2
Town of population less than 20,000 (Class IV, V, & VI).	44.7	40.3	39.8	30.2	27.3	21.8

(Source : Census of India.)

(2.2.4.) TABLE 10.

**GROWTH RATES OF TOTAL AND URBAN POPULATION IN CLASS I, II
AND III TOWNS.**

<i>Year.</i>	<i>Total population.</i>	<i>Growth rate.</i>	<i>Urban population Class I to III.</i>	<i>Growth rate.</i>
(1)	(2)	(3)	(4)	(5)
	(IN MILLION.)	PER CENT.	(IN MILLION.)	PER CENT.
1921	21.63	3.47	1.98	
1931	23.47	8.52	2.71	36.82
1941	26.27	11.91	3.40	25.72
1951	30.12	14.66	5.41	59.06
1961	33.69	11.85	7.01	29.54
1971	41.10	22.00	9.77	39.25

(Source : Census of India.)

(2.2.4.) TABLE 11.

**GROWTH OF POPULATION IN CLASS I, II AND III TOWNS DURING
1921 to 1971.**

<i>Category of towns.</i>	1921	1931	1941	1951	1961	1971	
						<i>Urban.</i>	<i>Urban agglomeration.</i>
	PER CENT OF URBAN POPULATION.						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Class I (100,000 and above).	47.4	46.5	48.4	51.1	53.0	55.8	57.20
Class II (50,000 to 99,999)	23.0	17.2	18.5	17.0	20.7	17.7	15.44
Class III (20,000 to 49,999)	29.6	36.3	33.1	31.9	26.3	26.5	17.36

(Source : Census of India.)

SPATIAL DISTRIBUTION OF URBAN (CLASS I TO III) POPULATION. (9.77 MILLION)

2.2.5. Over 50 per cent of the 9.77 million population in census towns of over 20,000 population is concentrated in and around Madras City and in the large urban agglomeration. The Madras Urban agglomeration itself takes in 3.1 million (nearly one-third—32.4 per cent of the total) and the four agglomerations of Coimbatore, Madurai, Tiruchirappalli and Salem account for 2.3 millions (or 23.4 per cent of the total). It is observed that the major concentrations of population are along the existing main transportation routes. Leaving out Madras district which is co-terminus with Madras city, the highest urban population

per square kilometre of district area is in Madurai followed by Kanyakumari, Coimbatore, Chingleput and Salem. Dharmapuri has the least urban population density followed, by South Arcot, Nilgiris, Tiruchirappalli and Ramanathapuram. Regionwise, Madras-Chingleput has the highest urban density, followed by Madurai and Coimbatore, Tirunelveli, Kanyakumari and Tiruchirappalli-Thanjavur; the lowest is in Ramanathapuram followed by Vellore-Dharmapuri and Salem-Cuddalore.

2.2.6. *Migration* is one of the main factors contributing to growth of cities. Details of inter-district and inter-urban shifts of population for 1971 are not available yet. So based on 1961 census figures, broad observations are made here. An analysis of the first nine cities and towns of the State indicated that 35 per cent of their population are migrants. Rural migrants predominate in all the cities and the percentage of urban migrants is above 40 per cent in Thanjavur, Madras, Vellore, Tiruchirappalli and Coimbatore. An inter-district migration study reveals that—

(i) Madras city attracts sizeable migrants from all other districts of the State but the largest number came from the adjoining districts of Chingleput, North Arcot and South Arcot.

(ii) Nilgiris and Kanyakumari, the border districts of the State draw most of their migrants from their adjoining districts only, viz., Coimbatore and Tirunelveli respectively.

(iii) Most of the migrants to other districts are from all the districts surrounding them.

(iv) North Arcot, South Arcot, Salem, Ramanathapuram, Tirunelveli and Kanyakumari are the major areas from where out migration is considerable while immigrants exceed emigrants only in the case of Madras and Nilgiris.

2.3. FUTURE URBAN POPULATION.

2.3.1. The past growth of urban population relating to Classes I to III towns has been linear; if this trend is to continue, the State will have nearly 30.0 per cent of its population in 1984 in its Classes I to III urban centres. Table 12 presents the urban (Classes I to III towns) Semi-urban (Class IV to VI towns) and rural population in 1971, and the population in 1984 based on trend growth. It will be observed that the classes I to III will have to provide for almost one-third the total population in 1984.

(2.3.1.) TABLE 12.

ESTIMATE OF URBAN (TOWN CLASSES I TO III) SEMI-URBAN (TOWN CLASSES IV TO VI) AND RURAL POPULATION (IN MILLIONS).

	1971.	1981.	1984.	1986.	1991.
(1)	(2)	(3)	(4)	(5)	(6)
1 Total	41.20	47.31	49.35	50.77	54.45
2 Urban (Town classes I to III) ..	9.77	13.49	14.90	15.90	18.39
3 Semi-Urban (Town classes IV to VI).	2.70	3.03	3.17	3.12	3.34
4 Rural	28.73	30.79	31.28	31.75	32.72

2.3.2. The total content of (Classes I to III) urban population is 14.94 million by 1984; the extra population to be anticipated is of the order of 5.1 million. While deciding on the spatial distribution of this population within the State, the following aspects have to be considered:

1. Economic implications of distribution of the population in various ways, viz.—

- (i) Extreme dispersal ;
- (ii) Concentration in a few large centres ; and
- (iii) Selective concentration ;

taking into consideration land policies, transport policies and economics of large urban agglomerations :

- 2. Balancing the urban population throughout the State, to serve as focal points for regional economic growth and to serve the needs of rural hinterland ;
- 3. Feasibility of development ;
- 4. Maintaining a livable urban environment ;
- 5. Conservation and optimum utilisation of public investments;
- 6. Choice of private investments.

Before examining this aspect in detail, it will be helpful to have overall estimates of the needs of urban areas in the various sectors such as employment, housing, water-supply, drainage and other social infrastructure.

3. CHAPTER III.

3. URBAN NEEDS.

3.1. EMPLOYMENT.

3.1.1. Of the Urban population in 1961, workers constituted 34.4 per cent, with the participation rates of 53.15 per cent males and 14.95 per cent females. Table 13 shows the corresponding figures for all urban centres and Class I towns for 1971.¹ Because of the change in the definition of "workers", the figures for 1971 in all classes of urban centres are lower but reflecting a more true employment profile.

TABLE 13.

PARTICIPATION RATE OF URBAN WORKERS—1971.

	<i>All urban centres.</i>	<i>Class I towns.</i>
Percentage of workers to total population	30.5	30.3
Participation rate for males (Percentage to male population).	50.0	52.0
Participation rate for females (percentage to female population).	10.0	6.00

In the absence of correct estimates of urban employment, it is possible to arrive at a rough estimate by comparison of the total male working force to the number of males in the working age group. The difference between the two figures after subtracting the number of persons attending studies would roughly give the level of unemployment among males which constitute the bulk of total unemployment. Assuming the number of women non-workers seeking employment is negligible the unemployment in classes I to III towns can be approximated to 133,000 in 1971. The anticipated future growth of population will bring into the employment market an additional 1.54 million persons (assuming that there will be no great change in the participation rates), and so by 1984, 1.68 million work place may have to be provided. The pattern of employment varies among different classes and types of towns. For instance, the employment in Madras city in different sectors does not differ radically from the average of the corresponding sectors for all towns taken together. But employment in towns like Tiruppur and Ranipet in manufacturing sector is higher; in Tiruchirappalli the percentage workers in trade and commerce are higher than the normal for all towns. Table 14 furnishes the percentage of working force in selected towns of varying functions in the State (in 1961). Table 15 indicates the percentage of workers (1961) in the classes I to III towns. In Class I towns, employment in manufacturing trade and transportation and services (all characteristically urban function) are much higher than in Class II and III towns, and employments in agriculture and household industry are considerable in Classes II and III towns. Taking all classes of towns together, it is seen that more than two third of the workers are engaged in manufacturing, commerce and service while 20 per cent are engaged in agriculture (including mining) and household industries. Transportation and construction account for only 11.5 per

cent of total workers. In as much as the household industry and agriculture will play a less roll in urban areas, the employment pattern in future in class I to III towns will be different from the present one. Hence it might be assumed that the percentage of additional workers in manufacturing services, transportation and construction will be higher than the present levels and would approximate to conditions in diversified towns. Table 16 gives the percentage of employees assured for each sector of the economy and the number of workers based on these figures.

(3.1.1) TABLE 14.

PERCENTAGE OF WORKING FORCE IN SELECTED TOWNS OF VARYING FUNCTIONS,
TAMIL NADU, 1961.

				<i>Per cent of workers in</i>						
<i>Towns.</i>				<i>Agri- culture.</i>	<i>House- hold industries.</i>	<i>Manu- facture- ing industries.</i>	<i>Trade.</i>	<i>Con- struction.</i>	<i>Trans- portation.</i>	<i>Services.</i>
(1)				(2)	(3)	(4)	(5)	(6)	(7)	(8)
UNIFUNCTIONAL.										
Tiruppur*	..	..	..	4.0	12.8	37.8	16.1	3.6	3.9	21.8
Salem†	..	..	..	2.5	36.4	18.0	16.1	2.1	4.7	20.2
Tiruchi‡	..	..	..	4.2	7.1	26.4	21.1	4.0	11.7	26.5
Ooty§	..	..	..	21.5	1.1	9.7	13.1	3.5	5.9	46.2
BIFUNCTIONAL.										
Madurai*†	..	..	..	1.7	12.4	28.9	21.0	3.0	7.7	25.3
Tuticorin* ||	..	..	..	6.3	1.3	31.1	18.8	2.9	17.0	22.6
Sivakasi*†	..	..	..	6.0	38.3	40.0	6.8	3.0	2.9	13.0
Erode‡ ||	..	..	..	4.7	3.5	22.0	23.6	4.2	11.7	30.3
TRIFUNCTIONAL.										
Coimbatore*†¶	..	..	..	2.9	7.2	30.0	19.4	5.2	5.9	29.4
DIVERSIFIED.										
Madras City	..	..	..	1.8	2.5	24.5	18.7	4.3	11.8	36.4

* Manufacturing other than household industry.

† Household industry.

‡ Trade and Commerce.

§ Services.

|| Transportation.

¶ Construction.

(3.1.1) TABLE 15.

PERCENTAGE OF WORKING FORCE IN DIFFERENT CLASSES OF TOWNS,
TAMIL NADU, 1961.

(1)	<i>Urban</i> <i>I. II and</i> <i>III classes.</i>			
	<i>Class</i> <i>I.</i>	<i>Class</i> <i>II.</i>	<i>Class</i> <i>III.</i>	
	(2)	(3)	(4)	(5)
Agriculture	4.1	15.9	20.3	10.1
Household industries	8.2	15.2	13.9	11.3
Manufacturing industries	24.4	17.7	14.7	21.3
Trade	18.8	16.3	14.1	16.9
Construction	3.9	3.3	3.2	3.6
Transportation	9.8	6.4	5.6	7.9
Services	30.8	25.2	28.2	28.9

(3.1.1) TABLE 16.

ANTICIPATED NUMBER OF ADDITIONAL WORKERS IN DIFFERENT
SECTORS IN URBAN I, II AND III CLASSES AREAS—1984.

<i>Sector.</i>				<i>Assumed</i> <i>(Per cent).</i>	<i>Employment</i> <i>('000).</i>
(1)				(2)	(3)
Agriculture and mining	..	..	..	3	51
Household industry	..	..	..	5	84
Manufacturing	..	..	..	25	420
Trade and Commerce	..	..	..	17	285
Transportation	..	..	..	10	168
Construction	..	..	..	5	84
Services	..	..	..	35	588
All sectors				100	1,680

3.2. LAND FOR URBAN DEVELOPMENT.

3.2.1. Residential use occupies the major extent of land in any settlement; next comes communication and industries and later comes parks and play-fields. Commerce uses the least land. Our cities run on high residential densities and low provision of lands for parks and play-fields, thus resulting in congested and unhealthy environment. Table 17 indicates the extent and percentage under various uses in industrial towns of England compared to its new towns.

(3.2.1) TABLE 17.

PLANNED LAND USE IN TOWNS OF ENGLAND.

Use.	Major Industrial Towns.		New Towns.	
	Acres/1,000 persons.	Per cent to total area.	Acres/1,000 persons.	Percentage to total area.
(1)	(2)	(3)	(4)	(5)
Residential	21.9	42.6	31.9	47.1
Business and Commercial	3.5	6.8	3.6	5.3
Education	3.5	6.8	5.7	8.4
Industry	5.6	10.9	7.2	10.6
Parks and Playground	10.4	20.2	13.1	19.4
Railways and Waterways	2.5	4.9	1.8	2.7
Others	4.0	7.8	4.4	6.5
Total ..	51.4	100.0	67.7*	100.0

Source.—P.A. Stone : The economics of housing and urban development J. Royal Statistical Society series A 1959 Vol. 122 Part IV.

* Roads which take up 9.1 acres are not included.

3.2.2. Our present resources may not allow adoption of such standards but it is certain that the present environmental conditions require improvement. Table 18 shows the suggested standards for adoption under our conditions.

(3.2.2) TABLE 18.

URBAN LAND USE STANDARDS.

(1)	Existing towns between 1 lakh and 2 lakhs* (Acres of land/1,000 person.)	Proposed.
	(2)	(3)
Residential	16.0	20.0
Industrial	1.5	5.0
Commercial	0.8	1.0
Public and Semi-Public	2.8	5.0
Playgrounds	0.7	4.0
Communication	3.5	5.0
Others	2.2	5.0
Total ..	27.5	45.0

* C.S. Chandrasekhara—Land Use Zoning—Table 2 I. I.P.A. Journal Vol. XIV No. 3—1968.

3.2.3. At least in future expansion and development of our towns, these minimum standards should be adopted. Based on these suggested standards, the land requirement for the additional population in 1984 will be 2,29,500 acres as per detail given in Table 19. Lands needed for making up the present deficits particularly in the sectors of housing

and recreations (Parks and play fields) have to be added to this. Assuming this deficit at 5 acres per 1,000 persons the total additional requirement of land will be 279,000 acres by 1984. (i.e. 24,000 acres of land annually would be needed for Urban Development.)

(3.2.3) TABLE 19.

LAND REQUIREMENT FOR URBAN DEVELOPMENT IN 1984.

<i>Land use.</i>	<i>Acres/1,000 persons standard.</i>	<i>Land requirement in acres for a population of 5.1 million in 1984.</i>
(1)	(2)	(3)
Residential	20	102,000
Commercial	1	5,100
Industrial	5	25,500
Public and Semi-Public	5	25,500
Playgrounds	4	20,400
Communication	5	25,500
Others	5	25,500
	Total ..	229,500
To make up existing deficiencies at 5 acres/1,000 persons for the existing population.		50,000
	Grand total ..	279,500

URBAN LAND REQUIREMENT.

3.2.4. As per the space standards suggested the land requirements for urban population is estimated as 279,500 acres by 1984. Annual requirement works out to nearly 24,000 acres. Lands lying within developed towns or in the periphery of such towns will be required for development. Cost of such lands are already high. Development in these areas is bound to further increase land costs. For planned development in urban areas, land should be available at desired locations at reasonably low costs at the appropriate time. The initial development efforts should mobilise resources for further development to enable adequate progress in land development and housing. By public investments and regulations, land prices appreciate in value. These increases in value are "unearned", for owners and it is reasonable and justifiable to mop up a substantial portion of the increase for financing community facilities. The objectives of urban land policy should therefore be to—

1. Increase the supply of urban land for development at desired locations at the right time.
2. make land acquisition quicker and cheaper ;

3. influence the pattern of land use in a way that development occurs in an orderly and planned manner ;
4. achieve a greater measure of distributional equity ;
5. secure for public use a satisfactory share of unearned (increased) values in private lands.

A satisfactory method of optimising returns from increase in land values without enhancing unduly the cost of land acquisition for public uses should be devised for striking compromise in objective 2 and 5 above. Socialisation of land is the only approach to meet the above objectives.

ACQUISITION LAWS.

3.2.5. The Land Acquisition Act, 1894 empowers Government to acquire lands for public purposes on payment of compensation based on market value plus a solatium of 15 per cent. Lands required for public housing and other common uses are acquired under this act. The existing procedure is a tedious and time-consuming one normally extending for two to three years for the completion of the entire process. The market value basis of compensation renders land acquisition in a locality more expensive on every successive occasion. Also often instances occur challenging the "public purpose" in courts. In considerable number of appeals for enhanced compensations for lands acquired, awards have been passed directing payment of higher costs. Existing acquisition laws should be amended to relate value of land to existing land use and also to fix the "amount" by Government in lieu of compensation (based on the amendment to clause 25 of the constitution of India). Private development should be taxed on the basis of actual cost of developing the land, varying from 30 to 40 thousands per acre. There should be no agricultural tax for any land comprised within a city or town and all lands in towns should be treated as urban and non-agricultural for purposes of taxation.

3.3 ZONING LAWS.

3.3.1. The Municipal, Corporation, Public Health and Town-Planning Acts empower respective authority to lay restrictions on exercise of private rights in property without compensation. The Municipal, Corporation and Public Health Acts provide for zoning areas for industrial and residential uses in urban areas but neither regulation nor enforcement is adequate. Under the Tamil Nadu Town-Planning Act, 1920, land use regulations are enforced in areas notified and sanctioned as Detailed Town-Planning Schemes by Government but they cover only a small portion of the total urban area in the State. There is provision in this Act for assembling, splitting and reconstituting of plots without actually acquiring the lands; but this provision does not find frequent application.

3.3.2. Statutory Master Plans of a comprehensive nature for regulating land use in towns do not exist as yet even though regulation of use in specific areas is being statutorily carried out under Detailed Town-Planning Schemes. Building and street making regulations are being enforced by local authorities under respective Municipal and Corporation Acts in consultation with the Directorate of Town-Planning.

3.4. HEALTH SERVICES.

3.4.1. The reorganisation of the Health services in the State contained in the perspective plan report of the Task Force on Health, Family Planning, Nutrition and Sanitation, State Planning Commission, Tamil Nadu 1972-84 is as follows :

<i>Proposed designation.</i>	<i>Present designation.</i>
District General Hospital	District Headquarters Hospital.
Polyclinic Hospital	Taluk Headquarters Hospital.
Polyclinic Centre	Primary Health Centre.
Mini Health Centre	Sub-Centre or Maternity and Child Welfare Centre.

Each District General Hospital will have from 400 to 650 beds except those of Ootacamund, Dharmapuri and Kanyakumari each of which will have 300 beds. Of these 30 will be for Tuberculosis and 20 for Infectious Diseases. Each of them will in addition have a 20 bedded siddha wing and 10 bedded homeopathic wing. In order to provide self-contained and integrated services at the district level, the hospital will have all the specialists. The District General Hospital will have adequate laboratory and X-ray services ; Dental and Tuberculosis clinics ; a Family Planning Clinic, a blood transfusion service ; rehabilitation facilities for the orthopaedically handicapped and a workshop ; a steam laundry and cold storage mortuary ; a separate out-patient polyclinic ; an intensive coronary care unit ; a dialysis unit ; a psychiatric clinic ; adequate ophthalmic services ; ambulances and a mortuary van ; a Centralised medical store for the district ; a library and seminar room ; residential quarters for house Surgeons, etc.

3.4.2. Each polyclinic hospital will have a minimum of 90 beds of which ten will be reserved for tuberculosis patients, five for infectious diseases and some beds for the family planning clinic. There will also be a 10 bedded siddha wing. The hospital will have ambulances and mobile vans.

3.4.3. The polyclinic centre will cater to a population of 80,000 to 100,000. Each centre will have 30 beds for medical, surgical, obstetrical and gynaecological cases inclusive of four beds for tuberculosis and two beds for infectious diseases.

3.4.4 The mini health centre will serve a population of 10,000 people and will have a full or part-time doctor and other auxiliary personnel.

It will be a small, economical, multi-purpose, independent health unit undertaking preventive and curative work and it will refer more complicated cases to the polyclinic centre.

3.4.5. These centres are to be created by redesignating the present sub-centres and Government dispensaries dispensing modern medicine as well as municipal and panchayat union dispensaries. The latter will be taken over by the State Government and merged to form the mini health centres.

3.5. EDUCATIONAL FACILITIES

3.5.1. Compulsory elementary education system is in force in the State. Our State Government have a policy of affording free education upto Pre-University Course. There are other concessions extended to students belonging to Scheduled Classes, tribal classes and backward classes in the educational field by Government. Hence every parent desires to educate his/her children to the maximum affording capacity. A large expansion has taken place in recent years in opening number of schools and colleges in the State. The future requirements of educational facilities in the State can be estimated on the basis of—

1. Present deficiencies that have to be made up; and
2. requirements of future population (depending on the study age-group of population and the target of enrolment desired).

3.5.2. As exact details of existing deficiencies are not available, the educational facilities at various levels are estimated for the future population only based on a ten year schooling course. Table 20 indicates the percentage of children in the different age groups for the year 1971 and 1981 as estimated by the National-Planning Commission.

(3.5.2.) TABLE 20.

PERCENTAGE OF CHILDREN IN DIFFERENT AGE-GROUP—1971 AND 1981.

<i>Age-group.</i>		<i>Grade.</i>		<i>Percentage of children.</i>	
				1971.	1981.
(1)		(2)		(3)	(4)
5	.. ..	Pre-school	.. ..	2.4	2.2
6—10	.. ..	Primary	.. ..	11.8	11.1
11—15	.. ..	Secondary	.. ..	10.8	10.7
16—19	.. ..	Graduate	.. ..	7.4	7.9
20—24	.. ..	Post-Graduate	.. ..	8.3	9.3

SOURCE.—Compiled from report on Population projections—office of the Registrar General, India, 1968.

3.5.3. The assessed number of total additional places required by 1984 is given in Table 21. This would amount to construction of about 1,250 primary schools and 440 high schools in the Class I to III towns of the State by 1984 (assuming a strength of 500 pupils for a primary school and 1,000 pupils for a high school) apart from Colleges and Universities.

(3.5.3.) TABLE 21.

NUMBER OF PLACES REQUIRED IN EDUCATIONAL FACILITIES BY 1984.

<i>Grade.</i>	<i>Enrolment target (Per cent).</i>	<i>Number of pupil.</i>	<i>Number of additional places.</i>
(1)	(2)	(3)	(4)
Pre-School	50	1,13,000	56,500
Primary	100	5,70,000	5,70,000
Secondary	80	5,49,000	4,39,000
Graduate	..	4,05,000	1,00,000
Post-Graduate	..	4,77,000	

ACCOMMODATION FOR EDUCATIONAL INSTITUTION.

3.5.4. Considering the large magnitude of space requirements and the corresponding financial investments, it becomes necessary to introduce shift systems in running high schools and colleges to save space and building requirements. The timings of the shifts have to be so arranged as to enable working persons also to get the benefit of attending these Educational institutions after returning from their respective works. The forenoon shift can work from 8 hours to 13 hours and the evening shift can be from 16 hours to 21 hours. The shift system will have to be continued in all towns where shortage of building accommodation exists now.

3. 6. WATER RESOURCES.

3. 6. 1. The climate of Tamil Nadu which occupies the Southeast portion of the Indian peninsula, between 8° and 13° north latitudes, is tropical with temperatures ranging from 60° F. to 100° F. The annual average precipitation is 945.7 mm. resulting from the south-west and north-east monsoons and transitional dry seasons. Surface water and ground water recharge are influenced by the varying precipitation caused by the monsoons. Evaporation of available water in different forms is also high. About 750 mm. of the annual rainfall flows into storage in the soil, without run off. It is reported that the annual ground water recharge for Tamil Nadu is 12 million acre foot, while the present extraction is 3 million acre foot. Thus about 9 maf. is available as ground water for irrigation, human consumption and industrial and other uses. The state has harnessed all its rivers and is using 94 per cent of the total available surface water.

URBAN WATER SUPPLY AND DRAINAGE.

3. 6. 2. The urban population of the state is distributed in two Corporations, ninety four Municipalities, ten Townships and 234 Panchayats, while the rural population is scattered in 58,595 villages and hamlets. Water is essential for human life ; As a preventive control of water borne diseases like Cholera, Typhoid, Dysentery and infectious Hepatitis, protected water supply assumes highest importance. In urban areas, it becomes essential to have adequate water supply for industries too. Equally essential is well planned drainage systems to control spread of water borne diseases in urban areas. They are also essential for prevention of Filariasis and hookworm infections. Hence both water supply and drainage

are equally important in urban areas and these two are considered as basic amenities and have been provided in urban areas of all developed countries. Water borne diseases have been virtually eradicated in these countries. Water-supply and drainage contribute substantially towards improving environmental hygiene and as such these projects amply justify even as financially self supporting propositions in the long run. Much of the expenditure on curative medicine can be reduced by strengthening the preventive side by equipping urban areas with proper and adequate water-supply and drainage facilities.

3. 6. 3. There are 443 urban towns in Tamil Nadu as per census 1971. The census classification of towns and villages as urban or rural depends on the following basis :—

1. An area should have a population of 5,000 or above.
2. 75 per cent of male population of the area should depend on non-agricultural resources for the livelihood.
3. The density of population should be over 1,000 persons per square mile (or 400 persons per square kilometre).

As per this definition the census authority has classified 340 urban towns into classes I to V towns depending on the population ranges, above one lakh, 50,000 to 99,999, 20,000 to 49,999, 10,000 to 19,999 and 5,000 to 9,999. Apart from these 340 urban towns, there are another 400 units (townships and town panchayats in the state) which have not been classified as urban under census but which have to be considered under water supply and drainage and these have population above 5,000.

TABLE 22.

DISTRICTWISE RURAL-URBAN POPULATION.

<i>District.</i>					<i>Total.</i>	<i>Rural.</i>	<i>Urban.</i>
(1)					(2)	(3)	(4)
Madras (city)	..	..	..	..	24,70,288	..	24,70,288
Chingleput	..	..	..	..	28,89,145	17,22,558	11,66,585
Coimbatore	..	..	..	..	43,57,373	23,36,162	20,21,211
Dharmapuri	..	..	..	..	16,74,193	13,14,528	3,59,865
Kanyakumari	..	..	..	..	12,28,215	7,51,887	4,76,328
Madurai	..	..	..	..	39,31,104	22,84,945	16,46,159
North Arcot	..	..	..	..	37,38,273	27,45,051	9,93,221
Ramanathapuram	..	..	..	..	28,57,424	19,63,833	9,93,591
Salem	..	..	..	..	29,86,686	18,93,919	10,42,767
South Arcot	..	..	..	..	36,06,961	28,38,054	6,68,907
Thanjavur	..	..	..	..	38,32,740	27,98,645	10,34,095
Tiruchirappalli	..	..	..	..	38,44,901	27,41,868	11,03,040
Tirunelveli	..	..	..	..	31,94,494	18,42,216	13,52,278
Nilgiris	..	..	..	..	4,91,330	2,02,806	2,88,524
Total				..	4,11,03,125	2,55,36,265	1,55,68,860

The percentage of population served with protected water-supply and with underground drainage on the total population of the 740 Towns is 58 and 24 respectively. In almost all these cases, the water-supply and drainage schemes have been inadequate. The present perspective plan 1972-84 aims at ensuring protected water-supply and proper drainage for all the towns that do not have the same up to now and also in improving the existing schemes wherever there is need.

PROGRESS IN WATER-SUPPLY AND DRAINAGE.

3. 6. 4. Only towards the end of the last century, water supply schemes were initiated in the State. Even now only 141 out of 740 towns have water-supply schemes but in most of the cases, the water-supply is inadequate. Drainage has been almost a neglect; only a handful of towns are served with underground drainage now. In 1947, a water-supply and drainage committee was constituted by the State Government as a first planning step. This Committee formulated a priority list of towns and a compedium of requirements. The previous three Five-Year Plans and the three annual plans implemented schemes broadly based on the above recommendations. The oldest water-supply schemes taken up for Madras city and Ootacamund in the State were completed by 1874. In 1900, four more towns and in 1947, 45 towns were provided with water-supply schemes. Prior to 1951 water-supply schemes were in operation in 36 Municipalities (including Madras City), five townships and three Town Panchayats. Under ground sewage schemes were available for three Municipalities. Open drainage schemes were provided for six Municipalities. In two townships partial underground drainage schemes operated. The total urban population covered by the water-supply and underground drainage schemes were 2.51 million and 0.86 million respectively.

(3.6.4.) TABLE 23.

PROGRESS OF SCHEMES DURING 1951 TO 1972 IN STATE (EXCEPT MADRAS CITY).

Year.				Water-supply new.	Water-Supply Improve-ment.	Drainage new.	Drainage under-ground (Improve-ment).
(1)				(2)	(3)	(4)	(5)
1951-56	..	..	..	8	2	2	..
1956-61	..	..	..	18	10	2	3
1961-66	..	..	..	19	9	2	1
1966-69	..	..	..	15	11	3	1
1969-72	..	..	..	12	9	1	..
Total				72	41	10	5

PRESENT STATE.

3. 6. 5. The present position as regards water-supply and drainage relating to urban areas in the State and the goal aimed during the 12 years perspective plan period (1972-1984) are given in Table 24.

3. 6. 6. At present the total urban population served by protected water-supply schemes in the State is 8.99 million (viz., 58 per cent) and the corresponding figure in respect of drainage schemes is 3.75 millions (viz., 24 per cent). New water-supply schemes are under execution in 10 Municipalities and 27 towns ; investigations have been taken up in 4 Municipalities, 2 Townships and 99 towns. Improvements to the existing schemes are underway in both the cities, 32 municipalities, 2 townships and 3 towns and are under investigation in 13 municipalities and 2 townships and 2 towns. New underground sewerage schemes are under execution in 7 Municipalities only. Investigations are carried on in 16 Municipalities, 1 Township and 6 towns. Improvements to the existing schemes are under execution in both the Corporate cities and in one Municipality and are under investigation in both the cities, 2 Municipalities and one Township.

(3. 6. 5.) TABLE No. 24.

WATER-SUPPLY AND DRAINAGE POSITION.

1. Number of towns provided with protected *Water-supply* Schemes as at the end of 1971.—

(a) Corporations	2
(b) Municipalities	75
(c) Town Panchayats and Townships ..	64
(d) Population served with protected water-supply schemes at the end of 1971.	8.99 million.

2. (a) Number of towns where water-supply schemes are now under execution.	37
(b) Population served	0.86 million.
3. (a) Number of towns yet to be served ..	562
(b) Population to be served	5.63 million.
4. (a) Existing rate of water-supply per head/ per day.	10 to 15 gallon.
(b) Proposed rate of water-supply per head/ per day.	25 gallon.

5. Number of towns provided with *Drainage* schemes.—

(a) Corporations	2
(b) Municipalities	5
(c) Town Panchayats and Townships ..	4
(d) Population served	3.75 million.

6. (a) Number of towns where drainage schemes are under execution. 7

(b) Population served 0.86 million.

7. (a) Number of towns yet to be served .. 722.

(b) Population to be served 10.90 million.

3. 6. 7. The urban areas which are not served by water-supply and drainage schemes at present and which have to be served newly are classified below :—

	<i>Urban areas.</i>							<i>Water supply.</i>	<i>Sewerage.</i>
	(1)							(2)	(3)
Municipalities	..	..	..	..	..	..	..	4	77
Townships	..	..	..	..	..	..	..	6	12
Towns	..	..	..	..	..	..	..	552	633
								562	722

3. 6. 8. The population to be served by the new water-supply schemes and sewerage schemes will be 5.63 million and 10.90 million respectively.

3. 6. 9. It will be surprising to note that only Rs. 3.0 crores were invested on Urban water-supply and drainage schemes in the State during 1870 to 1951.

TABLE 25.

PLAN EXPENDITURE ON URBAN WATER-SUPPLY AND DRAINAGE.

<i>Year.</i>							<i>Expenditure.</i>
							(RUPEES IN CRORES.)
1951-56	..	..	..	..	..	..	1.4
1956-61	..	..	..	..	..	..	6.6
1961-66	..	..	..	..	..	..	6.0
1966-67	..	..	..	..	..	..	1.8
1967-68	..	..	..	..	..	..	1.7
1968-69	..	..	..	..	..	..	1.2
1969-70	..	..	..	..	..	..	2.5
1970-71	..	..	..	..	..	..	5.9
1971-72	..	..	..	..	..	..	7.8
Total							34.9

FINANCIAL OUTLAY.

3.6.10. Based on the broad assumption of a rate of Rs. 100 per head for future schemes of water supply for the unserved urban areas of Tamil Nadu to serve the remaining urban population of 5.63 million, the total finance required for executing the new schemes will be Rs. 56.3 Crores. It is estimated that the cost of effecting improvements to the existing water supply systems for enabling adequate water to all will be Rs. 80 Crores. Thus the total outlay required for the water supply will be Rs. 136.3 Crores.

3.6.11. Based on the broad assumption of a rate of Rs. 125 per head for future schemes of drainage for all the unserved urban areas of Tamil Nadu to serve the remaining urban population of 10.90 millions, the total finance required for executing the new schemes will be Rs. 136.25 Crores. It is estimated that the cost of improving the existing drainage systems will be Rs. 20 Crores. Thus the total outlay required for the drainage schemes will be Rs. 156.25 Crores.

3.6.12. In spite of existence of underground sewerage systems in some of the cities like Coimbatore, Madurai, Tiruchirappalli and Salem, there are still large number of dry earth latrines in these towns giving rise to insanitation and unsatisfactory disposal of sullage and sewerage. The Municipal and Corporation authorities find it not easy to enforce the provision of the Local Acts to effect the house service connections. The full benefits of the sewerage scheme can be achieved only when all the houses are connected through house serve connections to the city sewers. Financial implications in converting dry earth latrines into water seal latrines and linking them with the city sewers present a problem for house owners, especially of the lower-income community. Both the Government and the Local body should create incentives by way of partial subsidies and loans to deserving individuals for this purpose. The loan can be on the basis of long-term instalment recovery. With this type of financial assistance, the Local Authorities will be able to strictly enforce the statutory provisions for effecting the sanitary house connections. Often many of the urban local bodies are not attracted by the present full loan assistance towards cost of executing the drainage schemes, reason being prohibitive cost. Looking at the health angle, the urban Local Authorities can ill afford to ignore this vital aspect of sanitation. It is observed that areas having increased water supply but not having drainage facilities have deteriorated in sanitation. Water supply and drainage should go hand in hand for satisfactory sanitation in urban areas. The coverage achieved on sewerage is almost at inverse proportion to the water supply. Hence it is essential that the expenditure on drainage schemes is met by Government on basis of 25 per cent grant and 75 per cent loan to local bodies to afford relief on the financial burden and also to create an incentive to this important sector. Wherever necessary, amendments to existing Acts should be made for insisting house owners to avail the full benefit of the sewerage scheme. Since such schemes are executed at considerable cost, they should be fully utilised to their maximum capacity. Rational methods of levy and collection of sewerage taxes have to be evolved for strengthening the resources to effect repayment of loans with annuity and accumulate funds for future improvements.

MADRAS CITY—WATER SUPPLY.

3.6.13. The Water Supply Scheme for Madras City was started about a century ago (in 1870) by causing a diversion weir across the Kortalaiyar river with the flood waters flowing into the Cholavaram lake and from these to the Red Hills lake. An open earthen channel carried the Red Hills Lake water to Kilpauk from where water distribution to various parts of the city was effected by gravity pipes. The scheme was improved in 1914 to 1918 by providing.—

- (i) Covered masonry conduit from Red Hills up to Kilpauk ;
- (ii) slow sand filters at Kilpauk for treating the water ;
- (iii) pumping station at Kilpauk for supply of water under pressure ; and
- (iv) a distribution system and ancillary works.

A next major improvement was effected in 1940 to 44 by constructing a storage reservoir across the Kortalaiyar River, named as “Sathyamoorthy Sagar”. Subsequent to 1944, the following major improvements have been carried out :—

- (i) Duplicating the conduit from Red Hills lake to Kilpauk ;
- (ii) provision of 40 mgd. rapid gravity filters ;
- (iii) increasing underground and overhead storages ;
- (iv) extending the distribution system ; and
- (v) improvements to the pumping station.

The present water supply to—the city is about 45 mgd. from the Red Hills Lake and connected resources. This fluctuates to 20 mgd. during periods of monsoon failure.

IMPROVEMENT WORKS IN PROGRESS.

3.6.14. With the object of enhancing the quantum of supply to the city, the following works have been undertaken :—

- (i) An open lined canal from Poondi to reduce the transit losses ;
- (ii) increasing capacities of the Cholavaram and Red Hills lakes ; and
- (iii) acquisition of the ayacut under the two lakes to enable utilising fully the re-source for city supply alone (giving up irrigation supply).

These measures are expected to increase the supply from Red Hills sources by about 20 mgd. Comprehensive improvements to the city Water supply distribution system have been undertaken ; the city is divided into 12 zones, each zone being fed by separate trunk main; the zonal distribution systems are being redesigned. These improvements are designed for a population of 23 lakhs at 25 gpcd. Another major work in progress for augmenting the quantum of water supply to city is the Veeranam scheme by which 40 mgd. of water will be pumped to the City from the Veeranam Lake in South Arcot district, the lake being fed by the Coleroon river. On completion of the execution of the scheme, about 30 mgd. will be made available for City water-supply. With these improvements, the City supply will be assured of minimum of 70 mgd.

FURTHER SOURCES FOR FUTURE.

3.6.15 By 1974, with the completion of the Veeranam scheme, 70 mgd. will be available for the City water-supply. Bearing in mind the population growth and industrial expansion in immediate future, steps will have to be initiated from now onwards for further augmentation of water resources. The Veeranam Scheme has already been designed to allow for a second main at a later date. Thus the duplicate main may bring in another 40 mgd. Another possibility is to exploit more of the ground water reserve; but the potential is limited and over extraction without adequate recharging the aquifer may result in sea water intrusion. Desalination of sea water is one more possibility that could be attempted on further research and investigation; the atomic energy from Kalpakkam may perhaps be of immense use for such a process. The Veeranam Project and the present improvement schemes under progress will be completed by the end of the Fourth Plan period at a carry over expenditure of Rs. 24 crores. Outlays of Rs. 5 crores and 9 crores may be needed in the perspective plan period towards (1) Experimental Desalination plant and (2) improvements to distribution system respectively. Securing water from the Krishna river appears promising in the context of the award of the Gulhati Commission which leads us to expect 15 tmc. of water as our share. This is equivalent to 270 mgd. which can well serve the needs of the Greater Madras too. The cost of the Krishna water scheme by openlined channel carrier is estimated as 60 crores, and the treatment works may cost another 3 crores.

MADRAS CITY-DRAINAGE.

3.6.16. The sewerage system for the Madras City was initiated in 1910 for a projected population of about 6.5 lakhs in 1961 on the basis of 25 gallons per head per day of water-supply. Major improvements are under progress now. The City and its population have considerably grown subsequent to 1910. Areas as Guindy, Adyar, Saidapet, Kodambakkam, Ayanavaram and Sembiam have been included in the City's expansion in 1946; the total extent of the City has increased from 80 sq. km. to nearly 130 sq. km. The drainage facility has been extended only to some parts of the City and does not serve the full area of the City. The existing drainage system is heavily over-loaded and strained resulting in overflow on streets and into the City waterways like Adyar river, Cooum river and Buckingham canal. During rains, the City roads and low lying areas often get flooded with water, causing great inconvenience and insanitation. The sewerage and drainage of the City requires immediate attention. The sewerage system will also have to be extended to the new areas.

3.6.17 During the Fourth Five Year Plan, certain major improvements to drainage have been taken up for implementation and they are in progress; the City has been divided into 5 zones. Each zone is to have independent treatment works so that final discharge of sewage effluent does not cause any pollution or health hazards. Sewage farming is to be adopted in the case of two zones utilising part of the sewage. There is also a proposal to reclaim and utilise the sewage from these two zones for industrial purposes. These comprehensive improvements have been designed for a population of 23 lakhs on the basis of a rate of water-supply of 25 gpcd. The works have reached advanced stage and they

have to be completed before the end of Fourth Five-Year Plan period. The present position in respect of storm water drainage is far from satisfactory as often observed from the stagnation on roads and areas during the short spells of heavy rains. A Master Plan for remedying this flooding and stagnation of rain water has to be brought out immediately for being implemented during the Perspective Plan period. The improvement works now in progress are estimated to cost Rs. 13.92 crores. Already an expenditure amounting to Rs. 5.44 crore has been incurred. The balance 8.5 crores has to be carried over to the Perspective Plans. The comprehensive improvements to the sewerage system of Madras City to match the improvements to the water-supply schemes (including serving unsewered areas) is expected to cost Rs. 15.00 crores. The construction of storm water drains in various parts of the City is estimated to cost Rs. 20.00 crores.

MAN-POWER.

3. 6. 18. For efficiently and expeditiously implementing the Plan projects necessary man-power should be available. Persons with previous experience in the field as well as those who are specially trained for the particular technical line are required in large numbers to execute the Projects under the Perspective Plan. The present organised strength in the Public Health Department for the execution of the Urban Water-supply and Drainage Schemes is reported to consist of about 600 Engineering personnel and about 700 others. The present annual rate of execution of these schemes is reported as about 6 crores. The Perspective Plan projects will definitely require the human power resources to be strengthened for the sector. The requirement of man-power both skilled and unskilled, in categories of Engineers, Technical Assistants, Draughtsmen, Surveyor Ministerial staff, Electricians, Mechanics, Pipeline Fitters, Filter Bed Operators, Pump Operators, etc., will at least be double the existing number. The staff required would have to be trained in the water-supply and drainage works. Adequate steps should be initiated for co-ordinating the various technical institutions in the State in this effort of securing qualified and trained man-power for the plan project.

MATERIALS.

3.6.19. Almost 60 per cent of the cost of water-supply and drainage schemes is accounted for by materials used therein (viz., pipes, specials, valves, pump materials, etc.). The most important among the materials required are pipes like C.I., A.C., P.V.C., or R.C.C. stone ware pipes will be required for drainage works. In view of the large quantities of materials involved, their procurement itself will be a challenging task. Hence sufficient advance action will have to be initiated in this direction for ensuring adequate availability of materials for prompt implementation of the Plan targets.

FINANCING.

3.6.20. Water-supply and Drainage Schemes of Urban areas other than Madras City are sole responsibility of the respective Local body; and normally no grant is given by the Government. The Local Bodies levy and collect Water-supply and drainage taxes along with the Property-tax. The Local bodies who have no surplus funds to invest capital of their own on such schemes are assisted by loans, repayable in long term. In the case of Madras City, Government's policy is to give half grant and half loan. Till

recently all commitments of loans and grants were being met by the Government from its funds or from block grants and loans received from the Central Government. Recently the Life Insurance Corporation of India finances two-third of the cost of projects on loan basis, the balance one-third being met from the State loans. The Life Insurance Corporation has a direct interest in the health of its policy holders and as such in all fitness it should come forward with liberal loans for improvements of environmental hygiene. Apart from the assistance from the Life Insurance Corporation and State Government, substantial resources will have to be raised from other Financial Institutions as Nationalised Banks, Public Corporations etc. At Present the Government loans are to be repaid in 30 years and for Life Insurance Corporation loans 20 years, with a moratorium of three years. The Government have declared a policy that the Water supply and Drainage schemes should be run on commercial basis and the local bodies will have to realise the costs from revenue collected from beneficiaries. Water rates are collected as Tap rates and Meter rates.

WATER SUPPLY IN DRY AREAS.

3-6-21. There are dry areas in the State as Ramanathapuram district where ground water is scarce and as such drinking water supply presents a serious problem. Often the limited ground water source available is utilised for agricultural purposes by deep bore wells in the areas, which again reduces the supply for drinking purposes. With a view to protect both interests (drinking and agricultural) it is worthwhile to conduct detailed studies on the availability of ground water and also prescribe different depths of wells for irrigation purposes and for drinking water supply. As drinking water has to be given priority, deeper wells should be utilised exclusively for drinking purposes and shallow wells for agricultural purposes so as to ensure better supply of drinking water. The Task Force recommends to Government to take up this kind of study and examine the feasibility of fixing up depths of wells for agricultural and drinking purposes in dry areas.

3.7. URBAN TRANSPORT.

3.7.1. Transportation has a very important and major share in Urban development. Men and material movement in urban areas poses serious problems in large urban agglomerations, as could be witnessed in the City of Madras. Some of the existing old streets, which were originally formed years back to serve the slow moving type prove inadequate to cope up with the present day increasing automobiles. The mixed traffic on our City road causes the greatest annoyance, discomfort and delays. Cities grow; development activities increase; population grows; transport vehicles increase; all lead to congestion of existing streets and roads in the built up Central areas. Commuters, majority of them, in large cities as Madras, Madurai, Coimbatore, Salem and Tiruchirappalli depend more on the public bus transport. None of the old cities can claim adequacy of fleet strength and frequency of trips to meet the present day requirements. The suburban train services come to the rescue to some extent in larger cities but here again congestion and inadequacy is equally applicable. Mass transport system of movement of people requires special and concentrated attention in all major towns. Apart from serving the movement of people, transportation of goods and commodities plays a vital role in economic development. Efficient transport contributes substantially

towards prosperity in domestic, inter-regional and international trade and contacts. It induces market enlargement and a wide exchange economy thus facilitating economic growth and development of regions.

The chief instruments of economic development namely agricultural and industrial production could be successfully geared up and distribution effected equatably only through an efficient transportation medium. The decentralisation of industries and setting up new towns and Satellite towns cannot effectively function without proper and adequate transportation system.

3-7-2. The arms of transport are road, rail, water and air. The road system takes the larger share in mobility of persons and movement of goods in urban areas. Next comes the railways. Water transport within the State in urban areas is very limited; but for dealing with export and import of raw materials and finished products to other parts of the world and country, marine transport plays important role. Inland water transport can be more suited for pleasure trips; water transport is the cheapest mode of conveyance. Airways, in modern urban life, with value for time, serve as the quickest transport for busy people throughout the world, both at international and domestic levels, for long distances in particular.

ROADS.

3-7-3. The total length of roads of different categories in the State as on 31st March 1971 is 66,929 kilometres. Table 26 furnishes the break of the length, by categories of roads, road surfaces and road widths. The standards evolved at the second conference of Chief Engineers of States held at Bombay in 1959 are the present accepted standards in the country for length of roads. (Known as the "Bombay Plan".) Considering in general the future economic growth of the country in the succeeding 20 years certain standards have been prescribed for achievement by 1981. Even though the targetted road lengths were not correlated to traffic density, emphasis had been on accessibility; the specified standards are given below :—

Nature of area.	The maximum distance of any village.	
	From any road/miles.	From a main road/ miles.
1. Developed area	1.5	4.0
2. Semi-developed area	3.0	8.0
3. Undeveloped and uncultivable area	5.0	12.0

Even though these targets have been achieved as a whole in Tamil Nadu, deficiencies still continue in certain backward districts and in the interior parts of certain other districts too. The Bombay plan contemplated provision of "Two lanes" width over the entire length of National Highways. For the remaining half of the State Highways, 12 feet wide black topped surface with 6 feet wide gravelled shoulders was specified. The other roads are to have a 12 feet wide carriage way; roads of heavy traffic nearer to larger cities are to be of "four lanes" width. The existing roads fall short of these standards, since only 75 per cent of the length of National Highways and 30 per cent of the length of the State Highways have two lane widths;

(3.7.3.) TABLE 26.

THE BREAK-UP OF LENGTH BY CATEGORIES OF ROADS, ROAD SURFACES AND ROAD-WIDTHS.

Serial number and category of road.	Total length of roads of the category.	Length with different types of surfaces.			Length with different road widths.		
		Cement con- creted.	Black top- ped.	Metalled. Un-metalled.	Single lane. Double lane.	Multiple lane.	
							(IN KILOMETRES.)
1. National Highways	1,804	224	1,580	.. ..	404	1,353	47
2. State Highways	1,780	208	1,572	.. ..	1,246	534	..
3. Major District Roads	13,776	138	12,266	1,372	12,949	827	..
4. Other District Roads	9,537	18	4,040	5,188	9,355	182	..
5. Panchayat and Panchayat Union Roads.	40,032	2	861	19,779	40,032	..	..
Total ..	66,929	590	20,319	26,339	63,986	2,896	47

3.7.4. The existing road bridges in the State are of various types with different load carrying capacities, many of them having been constructed in the distant past and not of uniform standards. The permissible laden weight for trucks as at present in force in the State is 15 tonnes. About 16.5 per cent of the total number of bridges and culverts of National Highways and about 12 per cent of those on State Highways require to be improved and strengthened to permit the present standards of loading. The total length of roads in the State has progressed from 34,115 kilometres in 1951 to 66,929 kilometres in 1971. Table 27 shows the progress. Along with increase in lengths, the quality of road surfaces also progressed substantially.

(3.7.4.) TABLE 27-a.

PROGRESS IN LENGTH OF ROADS DURING THE PAST PLAN PERIODS.

<i>Year.</i>	<i>National Highways.</i>	<i>State Highways.</i>	<i>Major district road.</i>	<i>Other districts and vil- lage roads.</i>	<i>Pancha- yat and pancha- yat union roads.</i>	<i>Total.</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
(LENGTH IN KMS.)						
1951	1,704	1,745	13,182	17,484	..	34,115
1956	1,746	1,745	13,435	21,771	..	38,679
1961	1,754	1,754	13,742	1,194	19,748	38,192
1966	1,754	1,780	13,591	6,859	35,160	59,144
1969	1,783	1,780	13,591	8,629	39,231	65,014
1971	1,804	1,780	13,776	9,537	40,022	66,929

(3.7.4.) TABLE 27-b.

PROGRESS IN SURFACES OF ROADS DURING THE PAST PLAN PERIODS.

<i>Year.</i>	<i>Cement.</i>	<i>Surface black top.</i>	<i>Water bound maca- dam.</i>	<i>Unsur- faced.</i>
(1)	(2)	(3)	(4)	(5)
(LENGTH IN KMS.)				
1961	530	12,402	16,054	9,206
1966	531	15,817	23,226	19,570
1971	590	20,319	26,339	19,681

TABLE 28.

EXPENDITURE ON CONSTRUCTION OF ROADS AND
BRIDGES AND IMPROVEMENTS.

<i>Period.</i>	<i>Expenditure.</i>
	(RUPEES IN LAKHS.)
First Five-Year Plan, 1951-56	753
Second Five-Year Plan, 1956-61	1,085
Third Five-Year Plan, 1961-66	1,438
Annual Plan, 1966-69	585
Fourth Five-Year Plan (up to) 1969-72	1,618

The conditions of the existing (40,000 kms.) rural roads in the State vested in the Panchayats and Panchayat Unions require proper attention as most of them are earthen or improvised metalled roads without adequate cross drainage. The Local Bodies suffer from lack of finance ; the State Government have, therefore, decided to launch a phased programme of providing well maintained access roads to all habitations of population 1,500 and above ; the existing access roads to villages will be improved to all weather standards. The entire scheme is estimated to cost Rs. 200 crores.

3.7.5. Most of the National Highways pass through hearts of towns ; on account of rapid urbanisation and industrial developments, the traffic densities on these stretches of the highways are increasing, leading to heavy congestion. This state of affairs interferes with the normal flow of traffic which is of a mixed nature both intracity and intra-region and also of mixed type, slow and fast moving vehicles and results in delays and national loss in terms of manpowers and fuel. For enabling through traffic taking different route avoiding entry into towns, bye-pass system of roads have been introduced in the case of larger and busy towns, as Madurai and Tiruchirappalli. Proposals for ring roads for Madras Metropolitan Area, Sriperumbudur, Poonammallee, Vaniambadi, Vellore, Koilpatti, Tirunelveli, Virudhunagar and Manamadurai are in different stages of consideration or progress. Another bottleneck often causing delays and hold ups of traffic is the Railway-road crossings ; such delays also result in substantial economic loss. There are 2,718 level crossings on the Southern Railway in Tamil Nadu (1,101 manned and 1,617 un-manned). There are 66 level crossings within the Madras Metropolitan Area and some of them remain closed for about 30 minutes in an hour. Considering the shortfalls in the existing transport system, the future needs of the increasing population and economic growths,

during the perspective period up to 1984, an assessment of new roads (other than bye-pass roads and rural roads) have been made as follows :—

New Roads :

Period.	<i>Two lane and wider roads.</i>		<i>Single lane roads.</i>		<i>Other than black topped or cement concreted.</i>	
	<i>Black topped or cement concreted.</i>		<i>Black topped or cement concreted.</i>		<i>Black topped or cement concreted.</i>	
	<i>Length.</i>	<i>Rough cost.</i>	<i>Length.</i>	<i>Rough cost.</i>	<i>Length.</i>	<i>Rough cost.</i>
	(KMS.)	(RUPEES IN LAKHS.)	(KMS.)	(RUPEES IN LAKHS.)	(KMS.)	(RUPEES IN LAKHS.)
1972-74	10	20	20	20	20	10
1974-79	232	464	25	25	30	15
1979-84	638	1,256	60	60	40	20

The length of roads in the State per 100 square kilometre is expected to progress from 55.1 in 1972 to 61 in 1984. The construction of the East-Coast Road is one of the items of importance included in the perspective plan as this coastal road is meant to serve as a direct link from Madras to Kanyakumari, and also facilitate the economic development of the entire area through which it traverses (especially the backward regions of Ramanatha-Puram district) ; its length will be about 768 kms. The major important plans of bye-pass roads or ring roads contemplated in the perspective plan are :—

- (1) Madras ;
- (2) Tirunelveli ;
- (3) Vellore ; and
- (4) Coimbatore.

Widening of culverts and bridges along highways are already taken up on hand and works are in progress ; Further improvements to existing highways as widening and improving standards and surfacing are also to be undertaken during the period in phased programmes.

3.7.6. It is observed that the Highways passing through Urban areas are narrow and congested, obstructing free flow of traffic. These stretches as well as the stretches of such roads at their approaches to the towns should be widened to allow for six lane traffic, to enable smooth flow of traffic.

3.7.7. Junctions of roads and streets in cities are vantage points of location and hence mostly shops develop in these corners ; this kind of shop development gives room for inconveniences, nuisance, risks and obstructions by people crowding in front of shops, exhibiting of advertisement boards, blocking pedestrian way, forming encroachments and even encroaching upon vehicular lanes, and obstructing clear view of traffic movements. To avoid these inconveniences, strict ban on location of shops at junction of streets should be effected by legislation.

RAILWAYS.

3.7.8. *Railways.* are essential mode of transport for mass movement of passengers and goods in the State. The Rail routes in the State total up to 3,757 kilometres (869 and 2,888 kilometres of broad gauge and metre gauge respectively). Comparatively Tamil Nadu is much better served in the matter of railway lines in the country but less adequately served relative to its population; one adverse factor here is that the bulk of the railways in the State is metre gauge, while the bulk of the goods traffic getting in and going out of the State from and to are served by broad gauge. Of the total 869 kilometres of broad gauge in the State, 11 kilometres are of quadruple track, 634 kilometres of double track and the balance single track. None of the broad gauge track is electrified; only steam or diesel power is used for hauling. Of the metre gauge total 2,888 kilometres, 24 kilometres are of three lines, 3 kilometres of double lines and 2,861 kilometres of single line. The section of railways leading from Madras Beach to Villupuram is already electrified. In the rest of the sections either steam or diesel power is used for hauling. Three factors that generally count for the problems of railway transportation capacity are :—

(i) section capacity ;

(ii) the availability of adequate number of wagons ;

(iii) the constraints imposed by the capacity of the transshipment points, where there is break of gauge.

Section capacity is the limit on the capacity of each particular section of Railway to deal with traffic, arising from its physical features as broad gauge or metre gauge, single line or double line, distance between successive stations and mode of signalling. The measures of the capacity of any particular section is expressed in terms of the number of trains that can be run over it each way daily and it is influenced by the power used for the haul as steam, diesel or electricity. The railway section capacity has intimate relationship with the economic and industrial development activity in this State. The inadequacy of section capacity was being felt not so much within the State as in the sections Madras-Vijayawada-Waltair lying mainly in the adjacent State of Andhra Pradesh. This position has been relieved by the improvements effected by doubling of lines between Madras and Vijayawada and between Arkonam and Renigunta, and with the conversion of the Renigunta-Gudur section into broad gauge. The electrification of the Madras-Vijayawada section which work is in progress now will further render the position satisfactory up to 1984. The position as regards availability of Rail wagons cannot be considered satisfactory for meeting the requirements of the steadily increasing tempo of the economical activity in the State; the limitations imposed by the capacities of break of gauge transshipments as at Arkonam and Tiruchirappalli are constraints in the free flow traffic. The perspective plan should not only aim at removing these constraints but also a further improvement to meet the higher demands of the future.

3.7.9. The overall traffic movement in Southern Railways shows an upward trend both in passenger and goods sides. The following proposals require serious consideration and implementation during the perspective plan period.

(1) **Electrification of the entire section Madras to Arkonam to replace steam and diesel traction.** The increasing trend of commuters to city of Madras (sub-urban traffic) calls for electrification of Madras-Tiruvellore and Madras-Gummudipoondi sections. It is to be mentioned here that both Tiruvellore and Gummudipoondi are being planned for development to serve as counter magnets to city of Madras.

(2) **Improving the capacity needs of the section Erode-Karur to meet the growing requirements.** At present the section exists as a single line track. This requires to be improved to double line track (66 km.) from Karur to Erode. An alternative will be to open out a new direct broad gauge line from Salem to Karur (84 km.). The latter is preferable on account of its future prospects of opening up new territory in areas not now served by Railways and accelerating development.

The present metre gauge sections are getting congested due to heavy overcrowding of traffic. By 1979 it is expected that there will be definite shortage of capacity over the section Madras to Tuticorin, via Villupuram, Tiruchirappalli and Dindigul as also between Thanjavur and Tiruchirappalli. By 1984 this shortage will be intensified. The Central Government has announced their policy to convert all metre gauge line into broad gauge in course of time. Hence the above sections will have to be converted into broad gauge in phased programmes. It is understood that proposals to open up a new broad gauge line from Karur to Madurai, via Dindigul and to convert the sections Madurai-Virudhunagar-Maniyachi-Tuticorin-Tirunelveli into broad gauge have already been investigated and under the active consideration of the Railway authority. These proposals need to be implemented soon in view of the Petro-chemical and Fertilizer complex coming up with newly developing harbour town of Tuticorin. The sections Virudhunagar-Tenkasi and Tirunelveli-Shencottah will have to be converted into broad gauge along with the conversion of sections in the Kerala State; so as to facilitate free flow of long distance inter-State traffic. With the incoming of the Salem Steel Plant and the improvements to Cuddalore Port the Salem Cuddalore line gets more importance and as such the existing metre gauge requires conversion into broad gauge. The work of constructing a new line (broad gauge) connecting Tirunelveli to Trivandrum via Nagercoil with a loop from Nagercoil to Kanyakumari is being taken up now. The Railway works that are needed to be implemented during the perspective plan period are listed below :—

(1) Electrification of Madras-Arkonam line.

(2) Construction of new broad gauge line from Karur to Madurai.

(3) Conversion of the sections Madurai-Virudhunagar-Maniyachi-Tuticorin-Tirunelveli into broad gauge.

(4) Additional broad gauge line from Madras to Villupuram, bearing the existing metre gauge in tact.

(5) Conversion of Villupuram-Dindigul section via Vriduhachalam and Tiruchirappalli into broad gauge.

(6) Conversion of the Salem-Cuddalore section into broad gauge.

(7) Conversion into broad gauge of the Villupuram-Mayuram-Thanjavur-Tiruchirappalli section along with the existing metre gauge line Madras-Villupuram and the section Chingleput-Arkonam.

(8) Construction of a new broad gauge line from Salem to Karur.

(9) Conversion into broad gauge of the Virudhunagar-Tenkasi-Tirunelveli-Shencottah lines.

(10) Introduction of Diesel train services to meet the demand for short (sub-urban) distances, with increased frequency of runs, in all important cities as Coimbatore, Madurai, Tiruchirappalli utilising the existing Rail lines wherever necessary;—(Stretches between Coimbatore to Mettupalayam to Pothanur, to Pollachi and to Tiruppur);—Stretches between Tiruchirappalli to Lalgudi and to Tiruverambur;—(Stretches between Madurai to Cholavandan and to Tirumangalam).

AIRWAYS.

3.7.10. *Airways*.—serve the business and the affluent section of population for whom time and comfort are considerations. Tamil Nadu had its air stations in Madras, Coimbatore, Tiruchirappalli and Madurai even in 1951. Madras has links with other important and major cities of the country; Madras and Tiruchirappalli connect Sri Lanka (Ceylon) by air; so also Singapore. Air travel facilities attract foreigners to visit our country and State; more tourist are attracted by the charm of the state and the air travel. facilities serve an incentive for increasing tourist traffic. International contacts essential for development of Industries, Commerce and culture, etc., are rendered easier by air flights. Suitability of the air field to take commercial flights, to take the existing type of air crafts which are in use of Indian Airlines, the affinity of traffic from the new station to the other stations and the traffic potential to and from the new station are all important factors to be considered in locating air ports. Points as the commercial activity of the particular area of air port location, the additional Industrial activities in the area, the existing transportation facilities to the new station and the scope of an air link traffic wise, the number of persons of monthly income exceeding Rs. 1,000 the air-mindedness of the citizens and the expected traffic growth in the particular area will also be gone into in establishing an airport. Some of the essential infrastructures required prior to opening an airport are—

- (i) Good road links to the airport from the town;
- (ii) Adequate and suitable sanitary facilities;
- (iii) Taxi service;
- (iv) Guest house with courteous service;

3.7.11. At present there are four air ports functioning in Tamil Nadu, namely Madras, Tiruchirappalli, Madurai and Coimbatore. There is need for more air ports in the State to cope up with the demand in air traffic that is anticipated during the perspective period on account of development of economy and increased tourism. Salem has high potential for development in view of its steel plant project and consequential industrial and commercial development; it lies almost midway between Madras and Coimbatore and hence is ideally suited for location of air port from air stage lengths. With the existing Commercial importance of Salem town, the industrial pick ups of Mettur and the newly coming steel plant, Salem essentially needs an air link. Next in importance to Salem is Tuticorin, the developing new harbour town with its vast potential for development as Petrochemical and Fertiliser Complex in the South. As it is there is no airport in the State to the south of Madurai. Kanyakumari, Tirunelveli and Ramanathapuram districts look as if they

are kept aloof from air travel facilities. Ulundurpet is a growing urban centre situated on the Grand Southern Trunk Road with a Railway station too on the Madras-Tiruchirappalli line (Chord line). The South Arcot district with its Neiveli Lignite Complex and Salem with its Steel Complex are bound to have impacts on both these districts ; Location of an Airport at Ulundurpet will serve the expected future requirements of Air transport. Hence it is recommended that location of an Airport at Ulundurpet needs to be examined in detail by the Airline authorities. There is no air connector for any of the coastal areas on the east from Madras to Tuticorin. (which is being recommended here). Nagapattinam is a port town on the east coast situated almost midway between Madras and Tuticorin. It has commercial, religious and tourist importance. An Airport located in Nagapattinam can also serve for the whole Thanjavur district which has high tourist potentials. It is recommended that location of Airport at Nagapattinam needs to be examined in detail by the Airline authorities.

3-7-12. Table 29 shows the distances of places by air flight.

TABLE 29.

<i>Route (distance by Air).</i>	<i>Approximate distance.</i>
	<i>K.m.</i>
Madras to Salem	262
Madras to Coimbatore	407
Madras to Ulundurpet	170
Madras to Tiruchirappalli	295
Madras to Madurai	420
Salem to Ulundurpet	115
Salem to Coimbatore	140
Salem to Madurai	190
Salem to Tiruchirappalli	115
Tiruchirappalli to Nagapattinam	120
Tiruchirappalli to Madurai	115
Madurai to Tuticorin	115

Table 30 furnishes the statistics pertaining to number of passengers by air for the past three years.

3-7-13. Apart from direct flight services from Madras, short distance services could be flown on route Madras-Ulundurpet, Salem, Tiruchirappalli and Nagapattinam and back ; Another short distance route could be Madras, Salem, Coimbatore, Madurai and Tuticorin.

(3·7·12.) TABLE 30.

PASSENGERS BY AIR.

Year.				<i>Ex-Madras.</i>	<i>Ex-Madurai.</i>	<i>Ex-Tiruchirappalli.</i>	<i>Ex-Coimbatore.</i>
1969-70	..	..	..	1,75,011	10,366	9,552	14,171
1970-71	..	..	..	1,71,992	9,893	6,958	14,237
1971-72	..	..	..	1,76,765	8,750	8,352	13,810

PORTS AND HARBOURS.

3·7·14. Tamil Nadu has a lengthy coast line of nearly 1,000 kms. Ancient classics in Tamil literature refer to the popular trade relationship of South Indian ports with foreign countries. At present there are thirteen ports in Tamil Nadu classified as follows :—

A. Major port	..	..	..	..	Madras.
B. Intermediate port			..	..	1. Tuticorin.
					2. Cuddalore.
					3. Nagapattinam.
C. Minor port	..	..	..	..	1. Colachel.
					2. Veppalodai.
					3. Rameswaram.
					4. Pamban.
					5. Keelakarai.
					6. Thondi.
					7. Kanyakumari.
					8. Porto Novo.
					9. Kulasekarapattinam.

3·7·15. Madras is the only major port in Tamil Nadu today ; it has glorious history of the past and serves as an important centre of commerce and trade ever since 1639 when the British East India Company established the centre. Commencing from open sea anchoring, the port has progressed to its present stage of having 18 quay berths besides four mooring berths, yard and rail facilities, passenger-cum-transit sheds, etc. The artificial harbour construction commenced in 1876 has now grown through years (including the past plan periods) to the level of a modern harbour. During 1927-30 the traffic reached 1·52 million tonnes. At the end of the second world war trade at the port reached 2·5 million tonnes, and caused heavy strain on the existed facilities. Hence expansion schemes were formulated during the latter half of the First Five-Year Plan and completed by end of Third Plan period. The volumes of trade-import and exports which passed through the Madras Ports are shown below :—

Year.					<i>Imports.</i>	<i>Exports.</i>	<i>Total (Million tonnes).</i>
			(1)		(2)	(3)	(4)
1960-61	..	..	..	..	2·13	0·91	3·04
1965-66	..	..	..	..	3·30	1·57	4·87
1970-71	..	..	..	..	3·74	3·19	6·93

Fertilisers, Coal, Iron and Steel (manufacture) are some of the important commodities under import from countries like U.S.A., U.K., U.S.S.R., and Yugoslavia, etc., Hides and skins and ores are important exports to countries like Japan, Rumania, etc. The passenger traffic is mainly to and from Malaysia. Table below gives the number of passengers embarked and disembarked at the Madras Port.

TABLE.
PASSENGER TRAFFIC AT MADRAS PORT.

<i>Year.</i>						<i>Passengers disembarked.</i>	<i>Passengers embarked.</i>	<i>Total.</i>
(1)						(2)	(3)	(4)
1960-61	..	..	..	..	..	35,573	29,957	65,530
1965-66	..	..	..	..	..	76,083	31,858	107,941
1970-71	..	..	..	..	..	43,431	33,531	76,962

Table below furnishes the anticipated imports and exports traffic (as per Madras Port Authority).

TABLE.
ESTIMATE TOTAL IMPORT AND EXPORT.

<i>Year.</i>				<i>Million tonnes.</i>
1973-74	..	..	..	9.74
1978-79	..	..	..	17.72
1983-84	..	..	..	21.11

The Madras Port has taken up the construction of an outer harbour to accommodate—

- (i) an oil berth ; and
- (ii) an ore berth.

with mechanical handling facilities on the north side of the existing harbour and this work is expected to be completed by 1973. There are proposals to remodel the Boat Basin to accommodate all the crafts of the port; a slipway of about 2,000 tonnes capacity essentially to take the drudgers of the Port Trust is proposed also on the slipway.

3.7.16. Government of India (in Ministry of Food and Agriculture) have accorded sanction for construction of a Fisheries Harbour at Madras ; the work is expected to be taken up and completed by 1973. The future increasing traffic at the Madras Port on account of agricultural and industrial developments warrants further improvements by construction of additional berths (each costing about 3 crores).

INTERMEDIATE PORTS.

3.7.17. *Tuticorin* Port has been leading the intermediate ports of India in respect of the annual volume of traffic handled during a number of years. It is an open roadstead with anchorage situated roughly 10 km. off shore to the east of Hare Island. The bay formed by Hare Island, Devils Point and the mainland provides adequate protection to the lighters from monsoonic weather conditions. This port is older than Madras. History reveals the entry of the Portuguese at Tuticorin first in 1532 and the Dutch captured them in 1658. In 1818, Tuticorin was ceded partially for trade between the Dutch and British; and finally the whole administration of the town came to the hands of the British in 1825, this status continued till the independence of India. In 1842, a light house was constructed and thereafter Tuticorin functioned as a depot in the south for all cotton ships bound for the Chinese and British markets. The Industrial and trade activities of the hinterland influence the pattern and volume of traffic at any port and its growth capacity; the size and ships of the hinterland are determined by the physical geography, the pattern of trade, siting of industries, transport facilities for movement of raw materials and distribution of agricultural and manufactured goods. The districts of Kanyakumari, Tirunelveli, Ramanathapuram, Madurai and southern taluks of Tiruchirappalli contribute the hinterland for Tuticorin. Salt, Cotton, Dried Fish are some of the main exports and coal, fertilisers, machinery form the main imports. The exports go to United Kingdom, Sri Lanka, Western Germany, etc., and the imports are from Japan, United States of America, etc. Traffic projections for the Tuticorin Harbour discloses that the total traffic in tonnes for 1975-76 and 1980-81 will be 37.70 and 32.00 as against the figures of 24.34 in 1971-72. Tuticorin links Maniyachi by rail from where all other stations are served by rail again. Cargo to and from the hinterland can be taken through rail wagons. The normal loading and unloading capacity of the port is about 4,000 tonnes per day and at shore and there is traffic throughout the year.

3.7.18. It has been decided to improve the Port at Tuticorin to upgrade it to that of a major port, second to Madras and the work has already been commenced and proceeding. All works connected with land acquisition, formation of roads, construction of quarters, field offices, water supply, sewerage, electrification and rail access to harbour have been completed in the first stage. The construction of wharf wall, pier heads, filling of wharf area and dredging including under water blasting are to be taken up for commissioning the port. This Tuticorin Harbour Project, a spill over scheme from the Third Five-Year Plan, is being continued to be completed during the Fourth Five-Year Plan period itself. The Southern Petrochemical Industries Corporation (SPIC) at Tuticorin has commenced the work on Fertilisers project; Naphtha and Fuel oil to the tune of 4.60 lakhs tonnes (liquid cargo) and raw materials such as sulphur, phosphate and potash to the tune of 2.92 lakh tonnes (solid cargo) are to be imported through Tuticorin Major Harbour. About 2.1 lakh tonnes of manufactured fertilisers are to be shipped from Tuticorin Major Harbour. To facilitate the import and export of the Fertiliser Project the oil jetty and the two berths have to be made available by the middle of 1973. Hence it is highly essential that the deep sea harbour at Tuticorin is completed and at least two berths

commissioned by 1973 itself. the remaining berths (two) are expected to be completed by the end of 1973-74. The facilities proposed for the Port are :

<i>Berth.</i>			<i>Draft.</i>		
1	Salt		30'-0"	}	to be depended to cater to 35'-0" draft vessels at a later date.
2	Coal	.. ..	30'-0"		
3	Cement	.. ..	30'-0"		
4	General Cargo	.. ..	30'-0"		

CUDDALORE PORT.

3.7.19. The recommendation of the Intermediate Port Development Committee as regards Cuddalore Port lay stress on its development into a harbour of 2.75 metre draft with a handling capacity of about 6.6 lakh tonnes. The development works relate to—

1. Stabilising the Bar by constructing river training works and
2. Deepening the Bar by construction of R.C. pier.

Item one above was completed in 1971 ; the second is likely to be completed by end of 1972. In view of the further Industrial Development that is anticipated on account of further expansion of Neiveli Project and the Salem Steel Complex, there may arise the need for a third major port to reduce the strain of Madras Port. Hence the possibility of future up-grading of the Cuddalore Port to act as a major port need to be examined.

3.7.20. *Nagapattinam Port*.—serves mainly passengers proceeding to Singapore, Penang, etc. About 116 tonnes of Cargo as onions, etc., were exported in 1970-71 ; and 57,147 tonnes of fertilisers were imported through this port. With the improvements of Cuddalore Port, there may not be immediate need for improving this port. However the existing facilities can be developed during the Plan period for establishing a fishing port.

MINOR PORTS.

3.7.21. (1) *Cotachel* is located in the West Coast of India about 29 km. north-west along the coast from Kanyakumari (Capecomorin). Large scale export of illuminate sand, available in the area, to Japan is carried through this port. The existing facilities can be developed for establishing a fishing port here to utilise the fishing potential of the area.

(2) *Veppalodai* is situated close to Tuticorin and hence there does not appear to be any need to improve the port now.

(3) *Rameswaram*.—is an open roadstead port having very limited handling of goods, but it serves for transport of passengers to various countries from Rameswaram to Talaimannar and *vice versa*. For the present no improvement appears necessary.

4 to 7 : *Pamban, Keelakarai, Thondi and Kanyakumari*.—These ports do not take in passenger traffic ; the goods traffic is also limited or practically negligible. For the present, no improvement seems necessary.

8 and 9 : *Porto Novo and Kulasekarapattinam* are better suited for developing into fishing harbours during the plan period.

3.7.22. There is a place known as Valianokkam in the backward district of Ramanathapuram. The possibility of manufacture of salt at this place by the repatriates from Ceylon is under consideration. The hydrographic survey necessary for opening a port at this place is already over and the results of the survey are expected shortly. About 5,500 acres of Government lands are available near Valianokkam and the lands are considered suitable for salt manufacture. The sea is also deep just about 3 km. from this place which will enable handling of ships up to 20,000 tonnes. This place can also be developed into a fishery harbour.

FISHING HARBOURS.

3.7.23. Provision of additional fishing harbours and developing existing fishing harbours along the sea coast of Tamil Nadu will facilitate growth of fishing industry in the State.

SETHUSAMUDRAM PROJECT.

3.7.24. This project envisages cutting of a canal for ship movement connecting Gulf of Mannar with the Palk Bay near the Pamban in Ramanathapuram district, to enable ships proceeding from west coast of India to east coast and *vice versa*. This idea was conceived as early as 1860 but the proposals made earlier had limitations and hence did not materialise. In 1964, the Government of India constituted a high level committee to go into the subject. The Committee has reported that the project is feasible and recommended alignments. The estimate of cost for a scheme providing for 48 km. draft ships will be Rs. 37.50 crores for Rameswaram and Rs. 55.60 crores for Mandapam crossings (alternatives). The State Government recommended the Rameswaram crossing to Government of India. With the implementation of the Sethusamudram canal project, a saving of 600 kms. for ships proceeding from the east to west coast (i.e., the detour round Ceylon) can be effected. It would also reduce the distance from off the Cape Comorin (common point for all traffic from west) to Madras, Vizaghapatinam and Calcutta by 353, 295 and 259 nautical miles respectively. Additional 81 miles will be saved for ships touching Tuticorin Port en route. The development of Tuticorin Port and Sethusamudram canal project will stimulate the industrial potential of the hinterlands. Both banks of the Sethusamudram canal can be developed into international attraction for tourists too. The State Government are requested to pursue the matter further with the Union Government and get the project finalised soon for enabling implementation during the perspective plan period.

INLAND WATERWAYS.

3.7.25. History reveals that waterways promoted more trade and commerce as movement of men and materials at comparatively cheaper cost by this mode of transport. The modern development of rail and road transport has considerably affected the importance of inland waterways; mostly for movement of cargo, waterways are used now. Inland waterways have their own attractions as a transport moving in natural surroundings with scope for enjoying and appreciating landscape on either side. The time factor in modern days favours fast moving system of transport but still for pleasure trips and sight

seeing inland waterways can be primarily important. The three waterways worth mention in Tamil Nadu are :—

1. Cooum river.
2. Buckingham Canal.
3. Vedaranyam Canal.

3.7.26. The *Cooum river* traverses through 41 miles from Sattarai village to the sea (including the distance of $6\frac{1}{2}$ miles within the Madras city); its width within Madras city ranges from 75' to 100'. Its catchment area is 111.6 sq. miles; the average rainfall in the basin is 41" per year the maximum flood discharge by the river is 19,111 cusecs. It floods during the north-east monsoon period. In other seasons, water stagnates in the river. The river within the city limits is being improved for navigation, especially pleasure-boating at two stages costing Rs. 32 lakhs and 62 lakhs respectively.

3.7.27. The *Buckingham Canal* is a navigable canal running through the back waters and parallel to the coromandel coast at an average distance of less than a mile from the sea. It extends to a length of 262 miles from Pedda Ganjam in Krishna district in Andhra Pradesh to Mercanam in South Arcot district in Tamil Nadu. About 100 miles of the canal traverses in Tamil Nadu; within the city of Madras, its length is 12 miles. The canal is used only for movement of cargo such as firewood, salt, lime and shell, which find chief market in Madras city. Country boats of capacity 5 to 30 tonnes ply in the canal. Several committees were appointed to examine the technical feasibility and financial implication of developing the Buckingham Canal so as to augment cheap transportation facilities in the city. The Bhagavathi Committee, constituted by Government of India, has recommended an outlay of Rs. 20 lakhs for dredging the canal. The Madras Metropolitan Plan has suggested a mass transportation system being taken alongside of the canal alignment to solve the rapidly growing transport problem within the city and the feasibility of this proposal is being examined by the Railways now by the recently set up special Metropolitan Cell in Madras. The width of the canal ranges from 90' to 120' and hence it is possible to take suburban rail or an express way within the canal width leaving adequate waterway by deepening and paving the canal to serve as waterway. The one great advantage in this alignment of mass transit system is savings in cost of land and avoiding the delays in acquisition process.

3.7.28. *Vedaranyam Canal* in Thanjavur district is the oldest waterway in Tamil Nadu (excavated in years 1863-67). The canal runs to a distance of about 35 miles. The original object of cutting this canal was to connect Vedaranyam salt pans to the then newly opened Railway terminus at Nagapattinam. Soon after introduction of Thiruthuraipoondi—Agasthianpatti Railway line in 1919, the canal lost much of its importance as means of communication; at present it serves chiefly as a drainage channel. A few cargo boats ranging from 2 to 10 tonnes ply in this canal at present carrying straw and firewood. It serves as drainage course for rivers like Kaduvayar, Vellayar, Harichandranadhi and Adappar in the Vennar delta. The Inland Water Transport Committee constituted in 1957 by the Government of India recommended that one dredger be provided for the canal maintenance. A traffic study made has highlighted the good traffic potentialities of the

canal. It has estimated that the salt production at Vedaranyam will be of the order of 6 lakhs tonnes by 1975-76 and 12 lakhs by 1980-81. It has also assessed that the canal transport would enjoy an advantage of Rs. 2.50 per tonne over rail transport and Rs. 4.75 per tonne over road transport. The cost of large scale improvement scheme (involving 50' bed width and 6.5' draft) suggested works out to Rs. 490 lakhs and the scheme is worth consideration by Government during the perspective plan period.

3.8. URBAN HOUSING.

3.8.1. Housing is one of the three essential needs of man. From times immemorial, man has been toiling hard in pursuit of better living with comforts and conveniences. Commencing from the stone age, man has gradually advanced to the present civilization, from open shelters to modern skyscrapers. It was easier in the past to provide shelters and individual homes because of the limited population and surplus availability of land and materials. Times have changed with the growing population and their ever increasing needs of life. The rapid urbanisation, and population growth combined with migration of people in search of employment and better facilities of life have resulted in overcrowding urban areas, seriously straining existing services—water supply, drainage, transport and communications as also housing accommodation. The migrants seek their dwellings in temporary structures put up on available open sites and along canal banks and low lying areas. No serious and systematic attempts had been made in the past to provide adequate housing for the new entrants to cities and towns nor even to equip the existing houses with essential facilities and environments for better and healthy living. Only recently some serious thought has been bestowed on this vital issue of housing. The previous five year plans have touched the fringes of the problems but not adequately to erase the huge backlog in housing. No country in the world has solved its housing problem to the fullest extent even though some of the advanced countries have been approaching the problem with priorities and programmes. Till date, economists were of the view that housing need not be treated with priority in economic development; but there is a change for better in the trend of thinking now. Housing plays a very significant role in the national economy of every country by exhibiting itself as an essential element in the standard of living, as a vital component of investment in the national economy, as an industry with considerable employment potential and as one of the essential items that go to make up the social overheads necessary for economic development.

3.8.2. There is the normal growth of population and also migration into urban areas; many houses go into neglect and dilapidation. The changing social system of fragmentation in joint families adds to the housing problem. The deficiency in housing are of two types namely qualitative and quantitative. Housing is not after all the end in itself. But at the best it is a means to healthy and purposeful living. Hence merely building a few million houses cannot solve the problem. The qualitative aspect of the housing need is equally important, if not more. The size and type of housing has to be correlated with the family structure, income, economic rent, etc. The housing needs of a given population,

are to be determined not merely by its growth but also by its differentiation into different types of family units ; hence formulating a housing policy and working out a house building programme involves basic social judgments. Such a fact provides the link between demography, sociology and housing. It is necessary to consider how the people want to live, how they live at present, the effect of environment on their lives, the relationship that exists between the dwellings, and social characteristics of the households, the social classification of the dwellings and the relation between dwellings and the community facilities such as shops, schools, health centres, parks and playfields, entertainment centres, etc.

3.8.3. A correct estimation of the housing requirements should form the very first step in planning for achieving self sufficiency in housing. The second step should be to formulate a housing policy and socio-economic objectives in planning and housing. Planning for housing requires a clear and complete knowledge of the relevant facts and figures about population and its characteristics. There is need to have accurate and complete factual data regarding—

1. Available residential and non-residential building stocks ;
2. Number of residential and non-residential buildings constructed, repaired, reconditioned, demolished, etc. ;
3. Capital investment in building industries, the number of man powers spent on house construction ; trends in employment and wages in building trade; cost of building over heads ; quantum of various building materials used and required each year ;
4. Number of houses subdivided into two or more separate dwellings due to partition of immovable property of joint families or to fetch more rent in case of rental housing;
5. Number of houses in which a room or portion of house is sub-let to bachelors and families without children ;
6. Number of dwelling units lost annually to the housing stock on account of conversion of dwellings into shops or offices, etc., and street widening and slum clearance work ;
7. The rate of formation of families (largely depending on marriages taking place);
8. Complete and comprehensive data regarding socio-economic characteristics of people migrating from rural to urban areas.

3.8.4. Correct and accurate statistics about existing stock of houses is lacking. The census of India figures relevant to housing is based on a 20 per cent sample survey. It is high time the Statistical Department of Government collects accurate data on existing stock of houses practically by 100 per cent counts rather than relying on per centage samples. The assistance towards this direction from the local authorities (who are house licensing authorities) can be utilised by the statisticians. Once the correct position on existing stock on a particular date is known, it is easier to keep the records on housing by supplementing with the additional information on fresh addition and alterations received from these local authorities periodically.

3.8.5. It is observed that the dwellings are shrinking in size with the increasing deficiency in housing and increasing rents in urban areas. To certain extent Government's policy is primarily oriented to satisfy the housing needs of the poorer income groups. In private sector, the real estate investors hesitate to invest money on housing for low income groups on account of its unremunerative nature. Upper middle class and luxury houses being capable of fetching good returns, private investor prefers to invest on such housing-

3.8.6. The remedy to the present acute shortage of housing lies in increasing housing facilities and improving urban services. By redeveloping villages, the exodus of population from rural to urban areas can be slowed down.

3.8.7. Housing deficit is world wide phenomenon and all countries suffer from it. The problem is more acute in developing countries where the shortage is in terms both of quantity and quality. Housing is to be conceived as house as well as the environment. Lack of community services is a vital factor of the housing problem in developing countries as ours. Disorganised growth and congestion is another feature. Absence of basic services and community facilities are chief causes for deterioration in housing conditions and growth of slums. The housing shortage relates more to masses of the lower income groups. Large masses of the under privileged humanity which needs housing of a modest type have no means to afford it. In the competitive field of investments, housing gets a very low priority for the reason, housing investments has not only high capital output ratio but also no appreciate growth potential. House satisfies a basic human need and influences indirectly the efficiency of labour or reduce many social costs even though it does not directly create further investible surplus, i.e., will not "reproduce" itself economically as steel plant or cement factory or a power project.

3.8.8. The investible surplus resources of the people should be mobilised to the maximum extent possible towards channelling to housing investment. Housing in our country is still the field of private enterprises and no Government can afford so much housing investment or the amount of subsidies which may otherwise be needed. So the masses have to help themselves with limited assistance of Government. For helping themselves proper environment and climate to enable them to react favourably have to be created by means of a net work of housing finance institutions which may encourage people to save and invest. Government has to act as catalytic agent and to initiate a system of multiple incentives conducive to the growth of housing finance. Institutions as the Co-operative Housing societies, the Life Insurance Corporation, the Housing and Urban Development Corporation and Nationalised banks form the net work. The Co-operative Societies, for instance, do not create surplus but their existence does act an incentive to the community for effecting compulsory savings. Housing cannot be regarded a sphere to be left exclusively to private enterprise, as it is a matter of direct concern to Government. A number of techniques can be evolved and experimented in the aspect. In almost all countries the Government offer aid by loans to housing finance institutions at rates of interest lower than the prevailing in the markets. In some countries Government aid is in the form of building materials or in the form of permanent foundation. Some Governments subsidise the construction costs or rents of houses of low income groups. In many countries insurance companies have contributed

considerably to housing finance. In many countries provident fund and social security funds have been utilised for housing investment. In certain countries tax reliefs and incentives are provided ; construction of rental dwellings are encouraged. All these techniques aim to stimulate saving and investment for housing. Even backward countries, whose economic condition of Government are not in surpluses, some kind of techniques like making long term loans available to housing finance institutions at low rates, Government contributing to the share capital of such institutions and Government guarantees for investment in large institutions, and tax incentives can be adopted. The techniques to be adopted should be such that they are effective but at the same time do not act as strains on Government revenues. It is a known fact that in underdeveloped countries the amount of resources mobilised by above measures may not be adequate to meet the needs and hence adequate attention should be paid to make the best use of the finances available. The following measures will assist in making the best use of the resources:—

(a) Expanding domestic building materials industry and enabling mass production of essential materials , with a view to reduce the cost of the products.

(b) Effecting reductions in cost of construction of houses by maximum use of locally available cheap building materials (such as use of compressed mud walls, stabilised earth instead of the traditional brick and cement walls in lower income group housing adopting suitable designs).

THE TAMIL NADU HOUSING BOARD.

3.8.9. The Government keeping in with the concepts of welfare State and a stable democracy have been taking earnest and concerted efforts to provide housing facilities to the increasing populations, with special emphasis to slum dwellers, industrial workers and the masses in the low income group. The Tamil Nadu Government, to commence with, released financial assistance for house construction mainly to Co-operative institutions. In 1945 the City Improvements Trust for Madras City was established for meeting the demand for housing to considerable extent with the financial assistance from the Government. The progress was intensified year after year in the previous plan periods, when slum clearance and improvement and Plantation Labour Projects were taken up. With the object of extending the benefits of the organisation to all districts beyond the city too, the Tamil Nadu Housing Board was established in April 1961, with three mofassal Housing Units, one at Tiruchirappalli, another at Madurai and a third at Coimbatore, each with jurisdiction over three and more districts besides the one at Madras City. The Board consists of both official and non-official members presided by an official Chairman. The Co-operative Housing wing formerly under the control of the Registrar of Co-operative Societies has now been attached to the Tamil Nadu Housing Board. The Board obtains its legal authority from the Tamil Nadu Housing Board Act.

3.8.10. At present the Tamil Nadu Housing Board undertakes large scale housing projects for the various categories of people and also land development schemes for allotment of developed plots to public on hire purchase system. Formerly only single storeyed inde-

pendant house used to be put up by the Board, but new flats and tenements are constructed and allotted to public on either outright sale or on hire purchase. This statutory Board acquired large areas of vacant lands in major cities and their outskirts, develops them in planned manner as neighbourhoods with all essential amenities as roads, water-supply drainage, lighting, also essential facilities as shops, Community Centres, Children's playground are provided. The Board finds its financial resources from—

- (a) funds of the State Government.
- (b) open debentures.
- (c) funds from Housing and Urban Development Corporation.
- (d) private investment.
- (e) life Insurance Corporation of India.

3.8.11. The funds allotted by the State Government are found to be inadequate and hence other resources are being resorted to. The sale proceeds of land and buildings are ploughed back and loans are floated. Public loans of Rs. 110 lakhs, Rs. 220 lakhs, Rs. 110 lakhs and Rs. 100 lakhs were raised during 1969, 1970, 1971 and 1972. The "HUDCO", New Delhi, has sanctioned loan of Rs. 625 lakhs during 1972; for four schemes towards need capital during the previous year a loan of Rs. 238 lakhs for another scheme had been sanctioned. The period of repayment of the loan will be 10 years with a moratorium of 3 years. The Tamil Nadu Housing Board furnishes a guarantee from the Government of Tamil Nadu for the due and timely payment of the loan and interest. Fixed deposits are received from private individuals, during 1971-72 Rs. 5 lakhs were collected as deposits. The Life Insurance Corporation of India has advanced a package loan of Rs. one crore during 1972-73.

SUBSIDISED INDUSTRIAL HOUSING.

3.8.12. With the rapid urbanisation and industrialisation going on in the State under the Plan projects, the population engaged in Industries are increasing and form a considerable group in cities and towns. Much of these workers cannot afford to have houses of their own or reside in places away from their workspots. Some Industrialists provide quarters for their working staff but this is limited. Government of India have therefore sponsored this scheme to facilitate the industrial workers in sound environments near about their work places. This scheme extends financial assistance to Public Sector, Private Sector and Co-operative Sector to construct houses for the benefit of Industrial workers, covered by Factories Act. The financial assistance rendered by Government is included in the Block loans and grants given by the Government of India for all the State Plan schemes put together. The Government of India have fixed a ceiling cost of Rs. 4,850 for small two-roomed tenements in single storeyed buildings and Rs. 5,600 for regular two-roomed tenements in single storeyed buildings for purpose of financial assistance. In cities and towns where the population exceeds three lakhs, an extra amount of Rs. 1,000 and where the population ranges from one to three lakhs, an extra amount of Rs. 450 respectively per tenement are allowed.

3.8.13. The Government are constructing tenements under the scheme for allotment to industrial workers of private establishments on subsidised rent. The Housing Board executes the work of construction on behalf of the Government ; the houses so constructed vest with the Government. In the Government Industrial Estates, the Director of Industries and Commerce is constructing tenements under the scheme for allotment to the workers of private industries in the Estates. These houses also vest with the Government. In the matter of co-operative sector, financial assistance to the Industrial Housing Societies is given only as loan. Eighty per cent of the estimated cost of the site and building is granted as loan and the balance twenty per cent is to be met by the Members as share capital. The managements of private establishments undertaking construction of tenements for their industrial workers, are eligible for an assistance of 50 per cent as loan and 25 per cent subsidy on the ceiling cost, the balance 25 per cent being met by the managements. These houses are to be allotted to their workers at subsidised rents. Special appeals are being made to the Industrialists to provide housing for at least to 4 per cent of their labour force every year; the response is encouraging.

LOW INCOME GROUP HOUSING.

3.8.14. This scheme was initiated in 1955. The State Government is implementing the scheme at present through the Tamil Nadu Housing Board and through its co-operative wing. This scheme is intended to benefit persons whose annual income does not exceed Rs. 7,200. Loans not exceeding 80 per cent of the cost of construction (including cost of land) but subject to a maximum of Rs. 12,500 per house are given.

Plan achievements—

	<i>Public Sector.</i>	<i>Co-operative Sector.</i>	<i>Private Sector.</i>
(1)	(2)	(3)	(4)
Number of houses constructed during First to Third Plans.	2,998	2,055	278
Amount utilised during First to Third Plans (Rs. in lakhs).	182.43	94.27	7.34
Number of houses constructed during Annual Plans (1966 to 1969).	327	561	..
Amount utilised during 1966 to 1969 (Rs. in lakhs).	28.62	25.46	..
Allocation for Fourth Plan (Rs. in lakhs) ..	150.00	(for all the three sectors)	
Number of houses constructed during 1969-70 ..	..	308	..
Amount utilised during 1969-70 (Rs. in lakhs) ..	3.22	5.57	..
Number of houses constructed during 1970-71 ..	12	55	8
Amount utilised during 1970-71 (Rs. in lakhs) ..	0.27	3.73	0.24

	<i>Public Sector.</i>	<i>Co-operative Sector.</i>	<i>Private Sector.</i>
(1)	(2)	(3)	(4)
Budget estimate for 1971-72 (Rs. in lakhs) ..	9.00	3.73	2.00
Physical target for 1971-72 (Houses)	112	65	45
Amount utilised during 1971-72 (Rs. in lakhs) (upto December 1971).	..	3.73	—
Number of houses constructed during 1971-72 (upto December 1971).	..	72 + 70 under construc- tion.	—
Budget estimate for 1972-73 (Rs. in lakhs) ..	Token.	5.00	2.97
Physical target for 1972-73 (Houses) ..	246	90	310

3.8.15. The Fourth Five-Year Plan envisages issue of loans to the extent of 220 lakhs towards Co-operative Societies.

An amount of Rs. 300 lakhs have been allocated to the Housing Board in the Fourth Five-Year Plan.

Plan achievements—

	<i>Co-operative Societies.</i>	<i>Tamil Nadu Housing Board.</i>
(1)	(2)	(3)
Number of houses constructed during First to Third Plans.	3,223	2,142
Amount utilised during First to Third Plans (Rs. in lakhs).	215.10	169.67
Number of houses constructed during Annual Plans (1966-69).	737	1,126
Amount utilised during 1966 to 1969 (Rs. in lakhs) —	60.50	76.19
Allocation for Fourth Plan (Rs. in lakhs)	2.20	3.00
Target for Fourth Plan (Houses)	6,300 (for both sectors).	
Number of houses constructed during 1969-70 — —	150	600
Amount utilised during 1969-70 (Rs. in lakhs) .. —	22.79	52.69
Number of houses constructed during 1970-71	386	500
Amount utilised during 1970-71 (Rs. in lakhs)	33.99	22.60
Budget Estimate for 1971-72 (Rs. in lakhs)	30.00	30.00
Physical target for 1971-72 (Houses)	350	150

	(1)	Co-operative Societies.	Tamil Nadu Housing Board.
	(2)	(3)	
Amount utilised during 1971-72 (Rs. in lakhs) (up to December 1971).	8.37	23.64	
Houses constructed during 1971-72 (up to December 1971).	265 + 340 under construction.	162 flats + 320 under consideration.	
Budget estimate for 1972-73 (Rs. in lakhs)	30.00	30.00	
Physical target for 1972-73 (Houses)	350	150	

MIDDLE INCOME GROUP HOUSING.

3.8.16. This scheme was initiated in March 1959 ; it is intended to provide housing facility to persons of annual income range Rs. 7,200 to 18,000. The Tamil Nadu Housing Board executes the scheme, the Co-operative wing also implements the scheme. Eighty per cent of the cost of the houses and site, subject to a maximum of rupees 25,000 per house are given by way of loans. The cost of construction should not exceed Rs. 35,000 excluding the cost of land. The Tamil Nadu Housing Board utilises these loans for constructing houses for sales to eligible persons or for letting them out on rental basis to eligible persons. Loans are issued to individuals for construction of houses by the Co-operative wing through co-operatives.

Plan achievements :—

	(1)	Co-operative Societies.	Tamil Nadu Housing Board.
	(2)	(3)	
Number of houses constructed during Second and Third Plans.	838	776	
Amount utilised during Second and Third Plans (Rs. in lakhs).	139.50	209.15	
Number of houses constructed during Annual Plans (1966 to 1969).	146	489	
Amount utilised during 1966 to 1969 (Rs. in lakhs)	37.50	83.01	
Allocation for Fourth Plan (Rs. in lakhs)	500 for both sectors.		
Number of houses constructed during 1969-70	50	450	
Amount utilised during 1969-70 (Rs. in lakhs)	10.00	64.48	
Number of houses constructed during 1970-71	100	550	

			<i>Co-operative Societies.</i>	<i>Tamil Nadu Housing Board.</i>
Amount utilised during 1970-71 (Rs. in lakhs)	..	..	20.01	89.57
Budget estimate for 1971-72 (Rs. in lakhs)	..	..	10.00	55.00
Physical target for 1971-72 (houses)	..	..	50	700
Amount utilised during 1971-72 (Rs. in lakhs) (up to December 1971).			12.00	85.51
Number of houses constructed during 1971-72 (up to December 1971).			116+140 under construc- tion.	238 units +730 flats under construc- tion.
Budget estimate for 1972-73 (Rs. in lakhs)	..	..	25.00	..
Physical target for 1972-73	..	..	100	180

LAND ACQUISITION AND DEVELOPMENT SCHEME.

3.8.17 The aim of this scheme is bulk acquisition of lands well in advance thereby preventing speculation in land prices, and to make developed plots available for housing at a reasonable cost and also assisting in easing congestion in large growing towns. Vast areas of lands in and around the towns are acquired by the Tamil Nadu Housing Board for developing them into self contained residential neighbourhoods with standard roads, streets, lights, water-supply, drainage, parks, playgrounds and other amenities like schools, hospitals, shops and community halls; thereafter the house plots are allotted to public, individuals, co-operative societies or other institutions. Some of them are allotted houses, tenements or flats on freehold basis for payment to be effected in instalments over long periods of 15 to 20 years. The allottees of house sites are prohibited from reselling the plots within a period of five years from allotted date and it is also stipulated that they should build house on the plots within that period. The normal rate per ground of developed site is Rs. 7,000 to 8,000 in the larger cities.

Plan achievements.

Extent of land developed during Second and Third Plans	..	2,759.54 acres.
Amount utilised during Second and Third Plans	..	Rs. 383.23 lakhs.
Extent of land developed during Annual Plans (1966 to 1969)	..	796.15 acres.
Amount utilised during 1966 to 1969	..	Rs. 419.14 lakhs.
Allocation for Fourth Plan	..	500.00 lakhs.

Extent of land developed during 1969-70	..	..	..	..	251.90 acres.
Amount utilised during 1969-70	..	..	..	..	187.42 lakhs.
Extent of land developed during 1970-71	..	..	..	..	161.86 acres.
Amount utilised during 1970-71	..	..	..	..	284.50 lakhs.
Physical target for 1971-72	..	..	..	..	35.00 acres.
Amount utilised during 1971-72 (up to December 1971)	..	..	..	..	167.80 lakhs.
Extent of lands acquired during 1971-72 (up to December 1971).					12.78 acres.
Budget estimate for 1972-73	..	..	..	..	25.00 lakhs.
Physical target for 1972-73	..	..	..	..	87 acres.

TAMIL NADU GOVERNMENT SERVANTS' RENTAL HOUSING SCHEME.

3.8.18. This scheme is intended mainly to provide housing flats for the lowpaid employees of the State Governments on a purely rental basis. The State Government collect only subsidised rent of 10 per cent of pay of allottee and foregoing house rent allowance. The recovered rent in this manner is less than the economic rent and the difference in rent is met by the Government. The Tamil Nadu Housing Board is the agency for execution of the scheme and maintains the property after execution. The Government owns the buildings. Most of the houses under this scheme are constructed on Government lands with a view to minimise the cost.

Plan achievements.

Number of houses constructed during Second and Third Plans	..	2,228 houses.
Amount utilised during Second and Third Plans	.. ..	Rs. 187.15 lakhs.
Number of houses constructed during the Annual Plans (1966 to 1969).		2,560 houses.
Amount utilised during 1966 to 1969	.. ..	Rs. 130.82 lakhs.
Allocation for Fourth Plan	.. ..	500.00 lakhs.
Physical target for Fourth Plan	.. ..	5,000 houses.
Number of houses constructed during 1969-70	.. ..	502 houses.
Amount utilised during 1969-70	.. ..	53.10 lakhs.
Number of houses constructed during 1970-71	.. ..	500 houses.
Amount utilised during 1970-71	.. ..	75.78 lakhs.
Budget estimate for 1971-72	.. ..	Rs. 100 lakhs.

Physical target for 1971-72	1,800 flats.
Amount utilised during 1971-72 (up to December 1971)	Rs. 82.46 lakhs.
Number of houses constructed during 1971-72 (up to December 1971).	Rs. 100 lakhs.
Number of houses constructed during 1971-72 (up to December 1971).	420 flats + 1,256 under construction.
Budget estimate for 1972-73	Rs. 100 lakhs.
Physical target for 1972-73	500 units.

CELLULAR CONCRETE PLANT.

3.8.19. As housing and building programmes in the economic and social development of the State expand, the demand on building materials like bricks also increases enormously which reflects not only in availability but also the price of such materials. Non-availability of stock leads to speculative prices. With a view to make available large scale manufacturing substitutes for bricks and also to introduce a lighter material for easy working in constructions, the Government of India in co-operation with the Government of Polish Peoples Republic enabled the Tamil Nadu Housing Board to get into an agreement with Messers. Cekop of Poland in 1966 for establishment of a Cellular Concrete Plant at Ennore near Madras. The Government of India have agreed on the basis of the original estimate of Rs. 230 lakhs to provide for necessary loan assistance for this project outside the State Plan ceiling. The revised cost of the plant is estimated at Rs. 365 lakhs; the foreign exchange involved is Rs. 115 lakhs. Over Rs. 296 lakhs have already been spent by the Tamil Nadu Housing Board. Government of India have already granted a loan of Rs. 245 lakhs for the project. The plant was commissioned on 6th February 1972 and the finished product was released on 7th February 1972. The Cellular concrete is produced out of the ingredients—

- (i) sand or fly ash ;
- (ii) lime ; and
- (iii) aluminium.

The plant's production is expected to be one crore worth Cellular concrete which could be used for construction works costing four crores. This material facilitates quick construction and involving less labour.

URBAN HOUSING SCHEME.

3.8.20. This scheme was implemented prior to 1969 by the State Governments through the Co-operative Wing of the State Housing Board, and financed outside the Plan allocations. The scheme was discontinued from April 1968 ; the maximum loan under the scheme was Rs. 12,000 per house ; no income limit had been prescribed. 7,473 houses had been constructed out of a sum of Rs. 483.73 lakhs under the scheme.

HOUSING IN HILL STATIONS.

3.8.21. While housing accommodation is provided in hill stations at Ootacamund, Coonoor, Kodaikanal, Yercaud, it is necessary to see that the buildings are suitably designed taking into consideration the climatic conditions of such stations. Along with the design of the buildings, proper attention has to be paid for their environments and locations too. Some of the cottages in Hill stations recently constructed by the State Housing Board may have to be modified suitably with due consideration of the special climatic conditions prevailing in such attitudes.

3.8.22. *Own Your Home Scheme*.—Taking advantage of the “Own Your Home Scheme” of the Life Insurance Corporation of India, the Tamil Nadu Housing Board formulates a scheme for the public. The policy holder will have to pay one fourth the cost of the house at the time of entry to the scheme and the balance over a period of 20 years taking up a policy under the scheme, this scheme offers the benefit of securing a house in case of premature death.

3.8.23. *Save a Rupee a Day Scheme*.—This is a novel scheme recently introduced by the State Housing Board in which the element of daily saving also finds place. An individual saves a rupee a day in special Hundi boxes supplied by the Board and kept with the individual. At the end of each month, the money deposited in the Hundi will be duly credited to the account of the individual kept with the Housing Board. The accumulation of such deposits will be utilised for the purchase of plot and construction of house after a period of five years.

HOUSES FOR BURMA REPATRIATES.

3.8.24. The Government entrusts the State Housing Board with construction of large housing colonies for the repatriates from Burma both in urban and rural areas of the State. One such scheme relates to construction of 2,760 houses at a cost of 1.14 crores at Vyasarpady tank bed in Madras. The State funds are utilised in the scheme.

HOUSE BUILDING ADVANCE TO GOVERNMENT SERVANTS.

3.8.25. Government sanctions advances to its officers and staff for construction of houses, including purchasing plot and also for purchase of ready built houses and enlarging living accommodation in houses already owned by them. All Government servants who are permanent members or who have put in five years service continuously under this Government and also the All India Service Officers serving in the State are eligible for this advance. They sanction advances up to 60 times their pay or Rs. 55,000 whichever is less, the actual amounts in each case being fixed with due reference to the repaying capacity in service period, calculated according to rules. Thus the scheme affords financial assistance to Government servants for securing a house of their own. *Table 31 gives the progress made by the Housing Board during the plan periods.*

3-8-25, TABLE 31.

URBAN HOUSING—PROGRAMME AND ACHIEVEMENTS (STATE SCHEMES).

A. Physical.

Number and item.	I, II, and III Five Year Plans (1951-66).	Annual Plans (1966-69.)	Fourth Five-Year Plan.			Total at the end of IVth Plan.	
			1969-70.	1970-71.	1971-72. (anticipated).		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Housing—							
1 Industrial	2,998	327	..	12	..	998	4,335
2 Low Income Group ..	2,142	1,126	600	500	201	199	4,768
3 Middle Income Group ..	776	489	450	550	560	140	2,965
4 Land Acquisition and Deve- lopment (Acres).	2,760	796	252	162	95	691	4,756 (Acres.)
5 Tamil Nadu Government Servants Rental Housing.	2,228	2,566	502	500	929	569	7,294
			Housing Units.		19,362		
			Acres		4,756		
6 Slum Clearance/Improvement Scheme.	8,849	4,746	1,800	1,400	7,000	16,000	Hg. units. 34,795
	7,332*	6,938*	..	..	...	and open Developed Plots.	14,270

3.8.26. The Housing Board is able to contribute substantially to the housing needs of the State by implementing the various schemes referred to above. With additional finances being made available, its activities in the field of housing could be expanded for the benefit of improving the housing conditions in the State.

SLUM CLEARANCE AND IMPROVEMENTS.

3.8.27. The work related to clearance and improvement of Slum areas in Madras City was attended to by the Corporation of Madras and the City Improvement Trust prior to 1961. With the inception of the Tamil Nadu Housing Board the work was transferred to it from 1961 onwards. Initially the Slum Clearance and improvement was carried out by two methods, namely (i) provision of Open developed plots and (ii) provision of built up houses or tenements. The Open Developed Plot Scheme allotted to each slum family a developed plot measuring 22 feet by 40 feet with a plinth, a latrine and a bath, a lump sum financial assistance by way of bamboo and thatch material was also given to them to put up thatched hut over the plinth by self help method. By this system the environments and sanitation aspects were taken care of. About 8,000 Open Developed Plots have been allotted by the Tamil Nadu Housing Board in Madras City prior to September 1970. The main draw back in this system was that it required vast areas of land in the City. Hence this mode of allotment has been given up. These Open Developed Plots used to be charged a nominal rent of Rs. 3 per month. Thatched sheds and huts run risks during rainy seasons and are open to fire havocs and have been a source for periodical recurring expenditure to the Government, besides causing great hardships to slum dwellers. As an after effect of series of successive fire havocs occurred in 1968, destroying many slum huts in the city, the then Chief Minister Dr. Arignar Anna resolved to put up fire proof tenements with asbestos sheet roofing and the work was proceeded with in a massive scale. The area of each tenement was 112 sq.ft. (14' x 8'). The services of the Revenue Department, Public Works Department, Tamil Nadu Housing Department and Corporation were mobilised for creating 4,999 fire proof tenements in the various parts of the City. Basic amenities had to be provided for these areas. Apart from this, the Housing Board also constructed about 2,500 tenements of multi-storyed buildings (with ground and first or with ground and two floors). Street foundations for Corporation Water Supply were also provided in these areas. The fire proof tenements did not solve completely the problems eventhough it served as a temporary measure of relief. With a firm view to tackle the problem on a massive scale, scheduling time by more of slum clearance rather than improvement, the present Government decided to give a new fillip to the programmes of such slum clearance in the City aiming at the clearance of these such slums in the City within a period of seven years. With this object in view, a separate organisation to handle this gigantic problem was set up in 1970, namely 'The Tamil Nadu Slum Clearance Board'. The Tamil Nadu Slum Areas (Improvement and Clearance) Act, 1971 was introduced granting powers to the Tamil Nadu Slum Clearance Board in its task of clearing the slums and preventing growth of new slums.

32-a. TABLE.

**FIRE PROOF SHEDS TAKEN OVER FROM GOVERNMENT DEPARTMENTS
BY SLUM CLEARANCE BOARD.**

<i>Name.</i>	<i>From whom taken over.</i>	<i>Number of fire proof sheds.</i>
(1)	(2)	(3)
1 Puliyenthope	Government Public Works Department.	1,630
2 North Scheme	Corporation of Madras ..	478
3 Kottur, Rear side of Guindy Engineering College.	Tamil Nadu Housing Board.	669
4 Opposite to Chintadripet High School..	Corporation of Madras ..	242
5 Washermenpet (Adyar). .. .	Do.	160
	Total ..	3,179

32-b. TABLE.

FIRE PROOF SHEDS CONSTRUCTED IN MADRAS CITY BY THE TAMIL
NADU HOUSING BOARD PRIOR TO FORMATION OF SLUM
CLEARANCE BOARD.

	<i>Location.</i>	<i>Number of tenements.</i>
1	Vyasarpadi	566
2	Sivashanmugapuram (North Giriappa Road)	551
3	Valleeswaran Thottam	350
4	Andimanyam Thottam	185
5	K. Pudur Part I	108
6	Venkatapuram	60
	Total ..	1,820

32-c. TABLE.

**TEMPORARY SHEDS CONSTRUCTED IN MADRAS CITY BY THE
TAMIL NADU HOUSING BOARD PRIOR TO FORMATION OF
SLUM CLEARANCE BOARD.**

	<i>Location.</i>								<i>Number of tenements.</i>
1	Mambalam Tank Bund	..	..	..	..	..	..	..	478
2	Appavoo Nagar	..	..	..	..	..	..	..	55
3	Visalakshi Thottam	..	..	..	..	..	..	..	54
4	Venkatapuram	..	..	..	..	..	..	..	24
5	Ramanathapuram	..	..	..	..	..	..	..	19
									630

The number of tenements constructed within the city of Madras by the Tamil Nadu Housing Board prior to formation of Slum Clearance Board was 7,384. The number of open development plots within the city of Madras under the Tamil Nadu Housing Board prior to formation of Tamil Nadu Slum Clearance Board was 8,446.

32-d. TABLE.

SLUM CLEARANCE (IN THE MOFUSSIL) AS ON 1st DECEMBER 1971.

<i>Name.</i>	<i>Number of units completed.</i>	<i>Number of units under construction.</i>	<i>Estimate amount in lakhs.</i>
(1)	(2)	(3)	(4)
1. Coimbatore City—			
(a) Slaughter House Area	246	77	26.85
(b) South of Perur, Phase I & II	677	179	40.48
(c) North of Perur, Phase I & II	710	228	56.70
(d) Lingai Gowder Thottam	217	77	19.02
(e) Balaiyan Thottam	243	49	14.36
(f) Sidhapudur Area	..	216	14.15
(g) Vincent Road Area	..	306	15.76
(h) Arunthathiyar Colony	..	138	8.48
	2,093	1,270	195.80

2. Madurai City—

So far no slum clearance scheme has been taken up for execution even though there are large number of slums requiring immediate attention. It is likely that in the current and coming years a few slums will be taken up for rehabilitation.

	<i>Number of units completed.</i>	<i>Number of units under construction.</i>	<i>Estimate amount in lakhs.</i>
(1)	(2)	(3)	(4)
3. Tiruchirappalli Town—			
(a) Kalmandi	64	..	6.10
(b) Poochankulam	391	..	23.25
	455	..	29.35

	<i>Number of units completed.</i>	<i>Number of units under construction.</i>	<i>Estimate amount in lakhs.</i>
(1)	(2)	(3)	(4)
4. Salem Town—			
(a) Narayanaswamipuram	82	..	5.40
(b) Na'ukalmandapam	66	..	4.38
(c) Annadanapatti	68	..	4.45
(d) Erumapalayam	282	..	9.05
(e) Court Road Area	162	..	5.91
(f) Ponnammamet	89	..	3.02
	749	..	32.21

5. Coonoor Town—

Vannarpet Slum	..	81	4.99
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6. Thanjavur Town—

North Rehani	199	..	6.12
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7. Cuddalore—

Gundusalai Road	177	..	4.71
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8. Tirunelveli—

(a) C. N. Village	64	..	3.33
(b) South Mount Road	..	16	

TAMIL NADU SLUM CLEARANCE BOARD.

3.8.28. The First Slum Clearance Board in India has been formed only in Tamil Nadu and this contributes to the very many distinctions of the State in the pioneering field. The Board consists of a non-official chairman with Members nominated from among officials and non-officials. The objectives of the Board have been formulated as follows :—

1. Primarily the Board is to give protection to the slum dwellers during any eviction. Whenever eviction of the Slum area has to be done by any department or local body they have to inform the Tamil Nadu Slum Clearance Board and the Board undertakes to give them alternate temporary accommodation till such time new tenements could be constructed for them.

2. It also aims at guarding against the creation of new slums.

3. Platform dwellers and squatters who not only expose themselves to all inconveniences, hardship but also to accidents by such encroachments on road pavements are to be rehabilitated paying them Rs. 50 and arranging to provide temporary site in some other part or in the outskirts of the City to erect their own sheds.

4. In any emergency when there is a fire accident in any of the slums, the Board comes to their rescue and arranges to give them all possible help and relief in their time of distress.

5. In addition to the construction of permanent tenements in the various areas, the Board also undertakes to provide basic amenities such as drinking water supply, latrine, electric light and street lights in the slum area. Pavements in the rear of slum blocks are also provided whenever necessary. Storm water drains are constructed to keep the area neat and clean.

ALLOTMENT OF TENEMENTS.

3.8.29. The slum⁷ tenements are allotted to slum dwellers in the order of priority at a subsidised rent of Rs. 15 per month ; the subsidy per family works to about Rs. 500 per annum. The Government have since considered the possibility of sale of these tenements to willing occupants on a hire purchase basis. Orders of Government have since been issued to the effect that out of 520 tenements constructed in Mambalam Tank Bund Area, 128 tenements may be earmarked for allotment to slum dwellers on hire purchase basis subject to the following conditions :—

(1) The tenements allotted on hire purchase basis should not be resold to any subsequent purchasers but only back to the Tamil Nadu Slum Clearance Board.

(2) Any improvements or changes effected in the tenements allotted on hire purchase should only be with concurrence of the Tamil Nadu Slum Clearance Board.

(3) In allotting such hire purchase tenements, priority should be given to the low paid employees of Government or Quasi-Government undertakings.

(4) Maintenance of these tenements should be the responsibility of the allottees.

(5) The hire purchase instalments should be fixed at Rs. 40 per mensem per tenement for the first 5 years and Rs. 45 per mensem per tenement for the remaining 20 years.

Lands required for slum clearance are alienated by Government in favour of the Board in the case of slums already existing on Government lands. Apart from this, Government vacant lands nearby are also get alienated for purpose of the Board. Similarly private lands are also purchased, appointing a committee for negotiation and settlement. There are philanthrophists who are magnanimous enough to donate land to the Board for the noble work undertaken by the Board.

3.8.30. The technical officers and staff employed in the Tamil Nadu Slum Clearance Board attend to the work of preparing layouts and designs of houses for the respective slum clearance schemes; usually multi-storeyed tenements are being constructed in the City area, in view of the scarcity of land and the high land cost. The carpet area of 232 sq. feet, originally prescribed by the Government of India per family has been modified to that ranging from 197 to 215 sq. feet; generally one living-cum-bed room, kitchen place with lobby for dining and sleeping, a bath and water closet are attached to the tenement. Water supply, drainage and lighting facilities are provided for the tenements. In the preparation of layout generally provision is made for space to accommodate school, playground, community hall, etc. Many of the slums in the city area situated in important localities and adjacent to main roads. In such cases, a row immediately facing the main road is set apart for commercial use which indirectly contributes to the Board financially apart from acting as a barrier between the slum tenements and the main road.

3.8.31. The present system of financial assistance by Government to the Board is based on half grant and half loan, the loans being repayable with interest in equal instalments in 30 years.

Plan achievements :

Number of houses constructed during Second and Third Plans.	3,849 tenements.	7,332	Open developed plots.
Amount utilised during Second and Third Plans..	..	Rs. 380.16 lakhs.	
Number of houses constructed during Annual Plans 1966-69.	4,746 tenements.		5,938 Open developed plots.
Amount spent during 1966-69.	..	..	Rs. 295 64 lakhs.

FOURTH PLAN.

Allocation for Fourth Plan ..	..	..	..	Rs. 800 lakhs.
Target for Fourth Plan ..	..	..	..	15,000 tenements.
Number of houses constructed during 1969-70 ..	..			1,800 tenements.
Amount spent during 1969-70 ..	..	..	..	Rs. 83.29 lakhs.
Number of houses constructed during 1970-71 ..	..			1,400 tenements

Amount spent during 1970-71	..	..	..	Rs. 99.67 lakhs.
Number of houses proposed during 1971-72	..	..	..	6,837 tenements.
Number of houses so far constructed	..	..	..	1,981 tenements.
Budget estimate for 1971-72	..	..	..	Rs. 365 lakhs.
Amount spent during 1971-72	..	..	..	Rs. 399.46 lakhs.
Budget estimate for 1972-73	..	..	..	Rs. 362 lakhs.
Physical target for 1972-73	..	..	..	6,000 tenements.

SOCIAL SERVICE.

3.8.32. A number of social organisations have come forward to do social service to the slum dwellers.

Social Service Organisations : (for social work in the slum areas).

1. *Voluntary Health Service :* have set up clinics in many slum areas offering both day to day and preventive treatment for the slum dwellers.

2. *Thatikonda Rajamannar Trust :* is particularly interested in pavement dwellers ; has come forward with offer of a donation of Rs. 12,000 every year towards slum clearance work.

3. *Guild of Service :* does yeoman service to slum dwellers by provisions of creches for young children during women's working hours ; also teaches handicrafts to enable women to work in their spare time and improve their economy.

4. *Young men's Christian Association :* arranges supply of bread and milk to the school children in slum areas.

5. *Prosperity Brigade :* undertakes projects like laying roads, construction of schools, digging wells, construction of storm water drains, etc., Bread distribution to children in slum area is done through the Brigade.

6. *Swallows in India limited :* is a Swedish Social service organisation doing social service in North Madras. They conduct adult schools, educating the children and teaching handicrafts to women in certain slum areas.

7. *Womens Welfare Department :* undertakes social service for women by educating them in healthy habits, in family planning, etc. They also arrange entertainments and film shows of educational value to slum dwellers.

8. *Madras Christian Council of Social Slum Sanitation Project :* has come forward to construct public conveniences in such of these slums feeling the acute need for such amenity; this will be highly useful social and sanitary service for those slums, which have to wait for 3 to 5 years for rehabilitation.

9. *The New Residents' Welfare Trust* : has been formed at the initiative of Thiru Rama Arangannal, the present Chairman of the Tamil Nadu Slum Clearance Board, and Rt. Rev. L. Newbigin, Bishop in Madras Christian Council of Social Service and the 77th Society ; it offers expert social service to the new residents of the Tamil Nadu Slum Clearance Board, Housing estates. The residents will be encouraged in various kinds of group activities contributing to their sense of well being and ensuring community participation, in the maintenance of these estates. The activities of the Trust cover guided utilisation of existing services, vocational guidance aimed at employment, provision of recreational facilities for children and adults ; formation of residents' association for good maintenance and womens' association for health education, craft training, public health programmes, etc.

10. *Polygons* : This organisation has also come forward to render service in slum areas.

3.8.33. Slum clearance work in the mofussil areas in the State is still being attended to by the various units of the Tamil Nadu Housing Board. So far slum clearance works have been implemented only in major towns as Coimbatore, Madurai, Tiruchirappalli, Thanjavur and Tirunelveli. Due to lack of funds not much progress had been made in the past compared to the magnitude of the problem.

HOUSING IN TAMIL NADU BY OTHER AGENCIES.

3.8.34. Apart from the State Government Departments as Public Works, Highways, (Police) Home, Transport, Municipalities and Municipal Corporations and Port Trusts constructing Residential quarters for their officers and staff, Central Government Departments also execute housing projects for their officers and staff serving in Tamil Nadu. Life Insurance Corporation of India (South Zone), Reserve Bank of India, State Bank of India and some of the Nationalised Banks also contribute to housing activity in the State either by directly involving themselves or by assistance to staff through associations or co-operative societies.

3.8.35. During the past ten years (1961-1971) Southern Railways has constructed over 5,000 residential quarters for its staff in the following divisions :—

<i>Division.</i>				<i>Number of house or flats.</i>
Madras	..	..	..	1,380 (Tamil Nadu, parts of Andhrapradesh and Kerala).
Olavakkot	..	..	..	1,662 (Tamil Nadu and parts of Kerala).
Tiruchirappalli	..	..	..	1,497 (Tamil Nadu).
Madurai	..	..	..	1,189 (Tamil Nadu and part of Kerala).

3.8.36. The Central Public Works Department in its Central Circle, Madras, has constructed 393 residential quarters for its staff during the past 20 years (1951 to 1971) in Tamil Nadu. It has housing projects for 710 houses, flats to be implemented during 1972-74 and for 525 houses, flats during 1974-79.

3.8.37. The Posts and Telegraph Department has constructed 370 houses/flats for their staff and it has projects for construction of 326 houses/flats during 1972-74 in Tamil Nadu.

3.8.38. The Life Insurance Corporation of India through its Southern Zone has been assisting house construction under the "Own Your Own Home" scheme for its policy holders from 1964 onwards (when the scheme was introduced) in the four divisions of the Zone in Tamil Nadu. The achievements are indicated below :—

<i>Division.</i>					<i>Period.</i>	<i>Applicants.</i>	<i>Sanctioned amount.</i>
							Rs.
Madurai	..	..	..	..	1970 and 1971	58	15,61,000
Coimbatore	..	..	..	..	1964 to 1971	153	62,68,100
Madras (South Zone)	..	..	..	..	..	845	2,62,33,850
Thanjavur	..	..	..	..	1964 to 1971	88	31,83,240
					Total	1,144	1,12,46,190

3.8.39. Apart from the Own Your Home Schemes, the Life Insurance Corporation has completed 6 flats for their own staff (let on rental basis) in Madras City. It has also projects for 228 flats to be implemented during 1972-74.

3.8.40. The Tamil Nadu Co-operative Central House Mortgage Society Limited, Madras, issues loans to its affiliated Primary House Mortgage Societies. Its transactions for the period 1959 to 1971 are furnished below :—

Construction of new houses—applications received—5,169.

Loan amounts sanctioned for new construction—Rs. 5,05,03,140.

Improvements, additions and alterations to existing houses—Applications received—5,234.

Loan amounts sanctioned for additions and alterations—Rs. 2,28,35,094.

Discharge of previous debts—applications received 4,865

Sanctioned amounts Rs. 1,78,33,027

Total number of applicants 15,268

Total amount Rs. 9,11,71,261

PRESENT POSITION IN URBAN HOUSING.

3.8.41. Detailed statistics are not available for correctly assessing the housing shortage in the State. However certain data could be gathered from the sample housing surveys conducted during enumeration by the census department which throws some light on the subject. *Vide* Table 33, the total number of Census houses is 8,025,780. Out of these houses 4,041,495 or 40 lakhs are reported to be either katcha type or unsuited for living and requiring replacement. (nearly 50 per cent). The total household population works out to 3.99 crores. Thus about 11 lakhs of population requires new housing, roughly 2.4 lakhs of new houses are to be provided for. Thus if, as per the census statistics, the total housing shortage including replacement of existing substandard houses works out to 42.4 lakhs. Even assuming an average cost of Rs. 6,000 per house, the total cost of meeting the 42.9 lakhs housing amounts to nearly Rs. 2,570 crores. This clearly indicates the huge magnitude of the problem of housing that has to be faced. Such large deficiencies in housing cannot be erased even partially unless massive efforts are taken in the direction. The bulk of the shortage would be in the group of economically backward and low income.

3.8.42. Slums in larger cities as Madras, Madurai, Coimbatore, Salem and Tiruchirappalli are posing serious problems. A recent survey conducted in Madras city reveals that there are over 1,100 slums accommodating nearly 7 lakhs of people (nearly 30 per cent of total city population). Position cannot be said to be better in the rest four of the larger agglomerations in the State. Thus a rough assessment of slum families in these five large cities indicates the figure as 370,000 families.

3.8.43. The number of houses required for future population of 5.1 million by 1984 can be estimated (by assuming the size of family as 4.5) as 1.13 million dwelling units. Making an allowance of 5 per cent, the total additional requirement of housing works out to 1.2 million dwelling units. An assessment based on National sample survey data on distribution of incomes in Madras city (1968) indicates that about 39 per cent of population can be classified as economically backward (including slum dwellers) and 45 per cent come under the low income group.

3.8.44. The requirement of housing construction to meet the backlog as well as future requirements in different categories of housing is estimated as given in Table below :—

TABLE.—Estimate of Housing Construction to meet full deficits and future needs till 1984.

<i>Category of Housing.</i>	<i>Percentage of population in each range.</i>	<i>Number of dwelling units to clear present deficits.</i>	<i>Number of dwelling units to provide for new families.</i>	<i>Total.</i>
Economically backward including slum rehabilitation.	39	15,60,000	93,600	16,53,600
Low Income Group	45	18,00,000	1,08,000	19,08,000
Middle Income Group	9	3,60,000	21,600	3,81,600
Higher Income Group	7	2,80,000	16,800	2,96,800
All categories	100	40,00,000	2,40,000	42,40,000

TABLE 33.

CENSUS PARTICULARS—1971.

TAMIL NADU.

I. Total number of Census houses (Residential)	..	..	..	..	80,25,780	
Number of Census houses to be replaced	..	..	..	..	40,41,495	
(Houses having mud, etc. as predominant material for both wall and roof.)						
Percentage of existing houses to be replaced	..	..	..	..	50.35	
II. Total households population	..	..	..	..	3,99,01,035	
Total population	..	..	..	..	4,11,03,125	
Houseless population	..	..	..	..	12,02,090	
Percentage of houseless population	..	..	..	..	2.93	
III. Total number of households	..	..	..	..	81,80,930	100 per cent.
Households with one room	..	..	..	..	51,06,525	62.40 per cent.
Households with two rooms	..	..	..	..	19,83,185	24.25 per cent.
Households with three rooms	..	..	..	..	6,33,060	7.75 per cent.
Households with four rooms	..	..	..	..	2,52,705	3.09 per cent.
Households with five rooms	..	..	..	..	1,89,290	2.31 per cent.
Households with unspecified rooms	..	..	..	..	105	..
Households with details unspecified	..	..	..	..	16,060	0.20 per cent.

IV—

	<i>Number of households with</i>	<i>Total persons living.</i>	<i>Average size of households.</i>
1 Room	51,06,525	2,22,36,480	4.36
2 Rooms	19,83,185	1,06,91,790	5.39
3 Rooms	6,33,060	38,90,775	6.15
4 Rooms	2,52,705	16,74,125	6.63
5 Rooms	1,89,290	14,07,190	7.40

Average size of households 4.876

V—

<i>Number of households having</i>				<i>Percentage to total households.</i>	
1 Person	..	..	..	4,68,685	5.74
2 Persons	..	..	..	9,34,765	11.42
3 Persons	..	..	..	11,59,395	14.18
4 Persons	..	..	..	13,71,440	16.75
5 Persons	..	..	..	13,33,695	16.30
6 Persons	..	..	..	28,93,830	35.37
Unspecified persons	..	..	..	19,120	0.24
Total ..				81,80,930	100.00

Ratio of census households to census house 1.02

3.8.45. The number of existing dwelling units requiring replacement, that is 40 lakhs as per Census include all deficits such as space, accommodations, standards of ventilation, roof height, temporary materials for wall and roof, sanitary and environmental unsuitability and age old and dilapidated dwellings due to neglect to maintenance, etc.

3.8.46. If we assume that improving environments and sanitation and also attending to maintenance of neglected buildings will reduce the total number of dwellings that need to be reconstructed by half, then the total number of replacement works to 20 lakhs in which case the total houses (including new for additional population and replacement of existing) number 22.4 lakhs only as against the 42.4 lakhs indicated in the table above.

These 22.4 lakhs houses have to be constructed in the course of 12 years (i.e. the perspective plan period), or annually 1.86 lakh houses have to be built.

REQUIREMENTS OF NEW HOUSES FOR ADDITIONAL POPULATION IN 1984.

<i>Category of housing.</i>	<i>Percentage of population in each range.</i>	<i>Number of dwelling unit (new).</i>
Economically backward and slum rehabilitation.	39	93,600
Low Income	45	108,000
Middle Income	9	21,600
High Income	7	16,800
All categories total	100	240,000

METHODS OF ECONOMISING COST OF HOUSE CONSTRUCTION.

Soil Cement bricks in House construction :

3.8.47. The prices of building materials and labour are rising every day. The most important component in building construction is brick and its price is becoming so exorbitant that alternatives have to be thought of. Such substitutes should be capable of reducing the cost of construction, simultaneously assuring stability and permanency to the building. Next to brick, soil cement can be used with advantage. This has been experimented in housing at Lower Bhavani and they are standing well. Soil with correct proportion of clay is available in plenty in many of our villages ; it is not costly. Stabilised soil with 5 per cent cement can give good results ; the bricks do not require burning which effects saving in cost since costly fuel, coal used for burning is eliminated. Soil cement bricks can replace burnt bricks.

3.8.48. These bricks have a crushing strength ranging from 20 to 50 tons per sq.ft. in dry state and 8 to 30 tons range per sq. ft. when soaked in water for 24 hours. By efficiently operating the machine, a uniform quality of brick can be ensured. The size of bricks can be $11\frac{1}{2}'' \times 5\frac{1}{2}'' \times 4''$. Machine required for pressing the bricks can be locally made and may cost about Rs. 800. Two men can produce in 8 hours bricks adequate for 100 cft. of masonry. The soil cement bricks can satisfactorily substitute burnt bricks, provided the soil bricks are not allowed to get wet on and often. No damage to walls is caused when the bricks are kept dry. Machine pressing is preferred to hand pressing for better compactness. Soil cements can be used for roofs and flooring also for economical single roofed houses. Costs of labour and material can be considerably reduced in this method of construction. Country wood and bamboos after treatment could well be used in housing for reducing costs.

3.8.49. *Mechanisation in building Industry.*—Will help to economise the available skill, introduce quickness and economy in constructions and lead to overall increased productivity in the building industry resulting in more and better homes for people. Except the use of some simple type of machinery such as concrete mixers and vibrators for mixing and compacting concrete and polishing machines for floor polishing the mechanisation in building industry does not appear to have made much headway. Industrialisation of building industry involves continuity of production implying a steady flow of demand, standardisation, integration of the whole production process, a high degree of organisation of work, mechanisation to replace manual labour, research and experimentation with production.

Brick being the most important building material, its quality and production need to be improved through mechanisation.

3.8.50. Considering the demand and price levels of important materials and labour, it is necessary that special systems of construction which may be mixture of traditional work, such as brick work for walls, and prefabrication with mechanisation for roofs, stairs, etc. should be evolved.

3.8.51. Mechanisation should be introduced by stages giving preferences to items of mechanisation which would ensure quality control and thereby assist in increasing design efficiency.

3.8.52. Country wood should be liberally used for ordinary type of doors and windows for houses. The Forest Department should encourage this method by mass production of timber useful for this purpose.

3.8.53. With a view to reduce cost of ordinary house construction for economically weaker population, in the private sector, plenty of cheap materials as bamboo should be made available to the public. Forest Department should take special steps to produce bamboo in bulks and allot them for housing purposes. Research studies and experiments have to be undertaken by Government or the Housing Board for utilising locally available cheaper materials as palmyrah and cocoanut rafters and leaves for housing purposes after suitable chemical treatment either by spraying or coating them with chemicals to protect them from fire risks.

3.9. INDUSTRY IN URBANISATION.

3.9.1. Industry constitutes the secondary sector for employment and hence has always been the chief cause for urbanisation. Urbanisation in the State can be considered as a reflection of its industrialisation, occurring either in a balanced or imbalanced manner. Balance in Industrial distribution leads to corresponding balance in economic well being of the people. Hence a policy for industrial distribution should aim at a policy of economic dispersal and balanced urbanisation.

3.9.2. Considering the town building process in terms of requirements of economic growth, its major issues can be analysed into two categories, viz.—

1. the need for a sufficiently extensive net work of towns aiming at a proper marketing integration of the economy ; and
2. the need of towns to act as centres of industrial growth.

3.9.3. As regards achieving of marketing integration of economy, the need is clearly large number of intermediate sized towns suitably interspersed all over the State. For Industrial growth it can be considered in terms of an alternative between manufacturing mostly concentrated in large cities and manufacturing, relatively widely distributed over cities and towns ; under conditions of spontaneous growth, the former type of growth will be fostered. But under conditions of planned growth, there is need for fostering the growth of the latter type of towns. It would bring about not only an integration of the economy through a network of towns serving as suitable marketing centres but also an equitable spatial distribution of Industries over a wide region and minimise drain of resources from rural to large towns.

SPATIAL DEVELOPMENT.

3.9.4. Notwithstanding the stress laid on the need for a regionally balanced pattern of development under the Five-Year Plans, the two types of growth of towns mentioned above are both existent. It is the promotion of viable rural areas that is now required in economic development. Decentralised urban economy should develop facilities in the small areas to gear up the agro-industrial town development of the surrounding villages

In its awake, it would absorb the surplus manpower. But the acute shortage of infrastructures and socio-economic opportunities at the outskirts of the urban areas, have handicapped development of small towns and villages alike. The needed number of market towns in a particular area depends on a number of factors, on population density, the state of economy and its potentialities in the area. This would also involve in provision of basic amenities such as protected water, sewer and sanitation facilities, educational and similar public facilities to the selected locatives.

INDUSTRIAL DEVELOPMENT IN TAMIL NADU.

3.9.5. Today, Tamil Nadu is the most industrialised State among the four Southern States in India. The economy of Tamil Nadu was predominantly agricultural prior to the introduction of Five-Year Plans. Now it occupies the third place among the industrialised States of the Country, next only to Maharashtra and West Bengal. Considering the physical resources position, the State is deficient in key minerals, such as Coal, Iron-ore and other metallic ores. Its forest resources too are meagre. In spite of these handicaps, the State started its roll of industrialisation with few textile industries to commence with, which during the Plan period transformed itself into a diversified and sophisticated complex.

LARGE-SCALE INDUSTRIES IN THE PUBLIC SECTOR—CENTRAL GOVERNMENT INDUSTRIAL UNDERTAKINGS.

3.9.6. At the end of 1969-70 the investment of the Central Government in its public sector undertakings in Tamil Nadu stood at more than Rs. 377 crores. These undertakings have an annual turnover of about Rs. 90 crores and employ about 50,000 persons. The undertakings are :—

1. Neiveli Lignite Corporation Limited, Neiveli.
2. Integral Coach Factory, Perambur, Madras.
3. Surgical Instruments Plant, Nandambakkam.
4. Hindustan Teleprinters Limited, Guindy, Madras.
5. Hindustan Photo Film Manufacturing Company Limited, Ootacamund.
6. High Pressure Boiler Plant, Tiruvarambur, Tiruchirappalli.
7. Madras Refineries Limited, Manali.
8. Madras Fertilizers Limited, Manali.
9. Heavy Vehicles Factory, Avadi, Madras.
10. Ordnance Factory, Tiruchirappalli.
11. Indian Oil Corporation Limited, Madras.

STATE GOVERNMENT INDUSTRIAL UNDERTAKINGS.

3.9.7. The Tamil Nadu Industrial Development Corporation Limited has been set up by the State Government with the objective of establishing, administering, promoting and financing vital large-scale industrial undertakings in the State. The Corporation has set up a large-scale unit cement factory at Alangulam. It is also setting up a

continuous steel casting plant at Arkonam. The State Government have also participated in the share capitals of twelve co-operative spinning mills. With a view to developing and promoting agro-based industries, the State Government has set up an Agro-Industries Corporation.

FUTURE DEVELOPMENT.

3.9.8. The focal points of further industrial development appears to be Manali Industrial Complex, with its petro-chemical and fertilisers settings, Neiveli, Salem (proposed steel plant) and the proposed fertiliser plant at Tuticorin.

SMALL-SCALE INDUSTRIES.

3.9.9. Tamil Nadu has been one of the pioneers in the country in encouraging the growth of small-scale industries. From 3,000 small-scale units in 1961, it has grown up to 23,208 units by June 1971. A survey conducted by the Directorate of Industries and Commerce, Madras reveals that the total capital invested by 11,800 registered units in the State at the end of 1967 was about Rs. 64 crores, employing 1.86 lakhs persons. On an average a small-scale unit employs 16 workers; a small-scale unit invests as an average about 45 per cent of its total investment on machinery alone. About 30 per cent of the units in the State do not use power [e.g., safety matches, leather, utensils (non-ferrous), agricultural implements, bricks, bakery and confectionery units]. For uplifting the economic prosperity of rural population and for dispersal of job opportunities, it is essential that small-scale industry is promoted. Considering districtwise, the highest share of the total investment in plant and machinery is in Madras (27.1 per cent) followed by Chingleput (24.3 per cent) and varies from 0.18 per cent to 12.2 per cent in other districts. It is also seen, from the development of the industry in the past, that apart from Ramanathapuram where a higher percentage of persons are employed, Madras city and Chingleput have larger percentage of small-scale industries; the cottage industries around Virudhunagar and Sivakasi have contributed to the industrial activity of the Ramanathapuram district which is one of the industrially backward districts.

3.9.10. Power-loom development is a sphere where the small-scale section can play a considerable role. There is good demand in foreign countries for goods of artistic value. A number of agro-industries too can be developed in the small-scale sector. As the economy of the State is largely based on agricultural resources, the food processing industry has significance. Vegetable processing, fruit processing, grain processing, etc., could also be adopted. There is quite a good scope for small-scale industries, utilising the available raw materials, on food processing line both of plant origin and animal origin, marine, poultry, and dairy based. The natural coast line of Tamil Nadu extending to 1,000 Kms. offer scope from different types of raw materials like fish, prawns, seaweeds, etc.

3.9.11. Assistance to small-scale industrialists is available in different forms such as technical advice, improved utilisation of equipment and tools, provision of credit facilities, supply of raw materials, supply of power at subsidised rates, provision of service facilities through common facility workshops, general purpose engineering workshops, rural work centres and establishment of model production units. The Government have set up the Tamil Nadu Small Industries Corporation Limited with a capital of two crores to formulate plans to develop small-scale industries and to actively assist them with finance, raw material

and marketing. The industrial estates established by the Government of Tamil Nadu have contributed considerably towards the development of industries in the State. These estates provide on a rental basis factory accommodation and other basic common amenities to group of small entrepreneurs who would otherwise find it difficult to secure these facilities at a reasonable rate.

3.9.12. Development of Tuticorin Port is bound to aid the development of the southern region of Madras. Apart from the Port Development, the State Government are setting up a fertilizer plant in Tuticorin, involving an outlay of over Rs. 40 crores; both private and public sectors will participate in the project. The development of the harbour town is bound to give rise for very many ancillary industries of small-scale nature.

3.9.13. The iron ore magnesite deposits in Tamil Nadu are mainly concentrated in Salem district. A pelletisation plant at Kanjamalai near Salem is being set up; the prospectus are bright for a viable plant for the manufacture of special steel. The Salem Steel Plant is estimated to cost Rs. 80 crores. This project when developed is bound to give rise for very many ancillary industries of small-scale nature.

3.9.14. There are 23,208 registered small-scale units and 585 large-scale units in the State. The districtwise break-up of these units are given in Annexure I. From a study of the districtwise basis, it is observed that there is vast disparity in the number of industrial establishment; thus indicating marked imbalance. Annexure II shows the industrywise break-up of the registered small industries as on 30th June 1971 in the State.

(3.9.14) APPENDIX I.

DISTRICTWISE BREAK-UP OF REGISTERED SMALL-SCALE UNITS IN
TAMIL NADU AS ON 30TH JUNE 1971.

<i>District.</i>	<i>Number of units registered as on 30th June 1971.</i>
1 Chingleput	1,863
2 Coimbatore	2,340
3 Kanyakumari	191
4 Madras	6,429
5 Madurai	1,555
6 Nilgiris	59
7 North Arcot	1,029
8 Ramanathapuram	2,265
9 Salem	2,373
10 South Arcot	890
11 Thanjavur	1,473
12 Tiruchirappalli	1,089
13 Tirunelveli	1,388
14 Dharmapuri	264
Total ..	23,208

(3.9.14) APPENDIX II.

**INDUSTRYWISE BREAK-UP OF THE REGISTERED SMALL-SCALE UNITS
IN TAMIL NADU AS ON 30TH JUNE 1971.**

1 Iron and steel	4,367
2 Textiles	2,026
3 Food Products	1,644
4 Mathematical, drawing and other instruments	1,493
5 Non-ferrous metals and alloys	1,147
6 Printing Industry	1,054
7 Matches, fireworks and amorces	887
8 Automobile parts, etc.	778
9 Chemicals and fertilisers	75
10 Wooden articles and furniture	690
11 Cosmetics and toilet	644
12 Cement and gypsum products	630
13 Agricultural implements	607
14 Plastic and Polythene products and plastic moulded goods	581
15 Machinery used in industry including boilers and steam generating equipment.	450
16 Leather, leather goods and pickers	450
17 Glass and ceramics	467
18 Paper and paper products	424
19 Beverages such as coffee, sachrine, etc.	385
20 Electrical accessories and equipment	388
21 Soaps, washing and toilet	303
22 Paints and varnishes	211
23 Radio receivers	202
24 Machine tools	145
25 Electric motors	139
26 Miscellaneous and others	2,321
Total ..	23,208

3.9.15. The districts of Kanyakumari, Ramanathapuram, South Arcot, North Arcot, Nilgiris, Salem and Dharmapuri require special attention in the matter of industrialisation. It is also observed that there is growing concentration of industries and consequent urbanisation in places like Madras and Coimbatore. To discourage this rush, it is necessary to divert new industries to neighbouring areas by developing new towns to serve as counter magnets. Already the State is now considering development of Senkundram, Tiruvallur and Gummidipoondi. These towns will be developed with complete infrastructure to encourage rapid growth of the areas. The object of such town development is to assist development of industries and accompanying activities thereby also discouraging the overcrowding of the already crowded city of Madras. The same principle could be extended in the case of other major cities to prevent further congestion.

3.9.16. It is the small-scale industries together with the cottage industries that will go a long way in employment of workers. The focal points of industrial development for the State now may be centered around Neyveli, Salem, Manali and Tuticorin.

CENTRAL GOVERNMENT UNDERTAKINGS.

3.9.17. There are about a dozen industrial undertakings by Central Government in Tamil Nadu. Housing colonies for their staff have been constructed in most of them, such as in Neyveli. It is observed that there is considerable waste of space and the township has also not been growing sufficiently in a self supporting manner. This is mainly due to the reason that private activity is restricted. As the township accommodates only the staff employed in the project, it is unable to expand or increase its economical activity. Hence it is recommended to Government that whenever such townships are taken up, they should make provision for private development too, in addition to public housing to infuse adequate economic activity and dynamic life to the township. Sites may either be leased out on long-term basis or allotments made to private persons (other than their staff) for housing as well as commercial use.

4. CHAPTER IV.

PATTERN OF DISTRIBUTION OF FUTURE URBAN POPULATION.

4.1.1. The State total population in 1984 will reach 49.35 million including 14.90 million in urban. Class I to III centres, the increase of 5.13 million over the present population will have to be distributed rationally among the urban centres during the plan perspective period of twelve years. This distribution can be effected in number of ways from extreme dispersal in all urban centres to intense concentration in a smaller number of settlements. Our ultimate goal is the achievement of a pattern of urbanisation that would best promote the economic and social objectives of development. The case for large metropolitan centres rests mainly on the "external economies" that accrue in such settlements. The infrastructure as water supply, power and communication in large cities is so developed that it assists further development. Services as financial, business and credit institutions are available in large cities, they facilitate pooling of managerial and labour skills that are not easily found elsewhere. The readily available markets for manufactured products in large urban centre is an important advantage; ancillary industries developing close by in the same area utilising the labour force available in the city facilitates industrial diversification. It is observed that these conditions have been the cause for concentration of industry in large metropolitan centres during the past decades. Large cities serve as origins for modernisation; Innovations find better field in such cities for being put to practical use. Apart from being beneficiaries of external economics, large urban centres also make possible "Internal economics". These centres serve as better locations for small scale industries in view of better prospects. There are greater opportunities for higher and technical education, research and exhibition of culture and art in major cities. The above points speak of the main advantages.

4.1.2. On the other side, these cities have disadvantages too. High incidence of urban poverty exposes itself in the numerous slum concentrations within the city. Intensive use of modern automotives in large cities cause heavy pollution in atmosphere apart from congestion, overcrowding and road risks. Uniform level of infrastructure is difficult to be maintained from considerations of economy. The creation of modern attitudes and skills required for development call for specific training facilities and do not automatically emerge from an Urban environment. The high social and economic costs—public costs—of large urban centres is viewed as a negative point while arguing weighing advantages. Large scale investments are demanded in provision of high cost transportation infrastructure necessitated by heavy and congested flow of traffic on roads. Supply sources for adequate provision of water to large cities have to be found at considerable distances which again involve heavy investment. Eventhough services are generally better in urban centres, sanitary conditions are often bad due to congestion, overcrowding, pollution, housing shortage, strain on public services, insufficiency of recreational open spaces and psychological tensions of city life. Urban unemployment and underemployment are more prominent and intense in large centres and industrial unrest often upsets production schedules. Large urban concentrations accentuates regional imbalances.

4.1.3. Small urban centres have all the advantages listed as disadvantages for large urban centres. Dispersing population over a large number of small settlements would aid developmental action at a multitude of points which in the context of scarce resources is helpful in achieving a rapid rate of growth. The above points of advantage and disadvantage in concentration and dispersal clearly indicate that no one pattern could be emphasised as the ideal one to apply in all situations; this means that sufficient care should be exercised in deciding whether decentralisation is the best policy. In arriving at a policy decision, the following questions have to be answered.

Which pattern of settlement will minimise overhead costs and maximise social and economic benefits?

What is the cost of developing infrastructure (facilities as communications, water-supply, drainage, lighting, power, educational and medical institutions, etc.).

4.1.4. Medium sized settlements combining the merits of both large sized and small sized centres occur to be increasingly favoured, land values are cheap, density is fairly low, problems of transportation are minimum in medium sized communities and they have a fairly wide range of economic activities and enjoy the economics flowing from agglomeration without the evil effects of economics of high concentration. However there is no general agreement on the size of medium sized settlement, but the estimate ranges from population 20,000 to a million.

4.1.5. Economic considerations, particularly costs of providing services/capital and productivity capita in different sizes of towns, would play a vital role in deciding the pattern. A study of cities with different population ranging from 48,000 to 1 million to determine costs of urban infrastructure for industry in relation to size of city has led to the conclusion that "beyond a city of about 1.3 million, unit cost differences for industrial infrastructure are insignificant. The results substantiate the first part of the cost hypothesis that unit costs decline from the smallest to the next size city—but do not support the hypothesis of rising unit costs in large cities atleast for the range of cities studied".* The expenditure of providing developed land for housing and industry, providing water-supply and drainage, schools and hospitals will be almost same everywhere. Although labour may be cheaper in smaller urban centres, its productivity is also comparatively lower.

4.1.6. Studies on the aspects of per capita expenditure on services are not many even in developed countries and the conclusions arrived at in these studies may not entirely be true in our conditions. Nevertheless these studies would throw some light on these neglected aspects of urban costs. Scotland Foster gathered from a study of 196 Californian communities that "per capita expenditure for all local Government services were not significantly affected by population size". While reviewing of municipal output, Schmandt and Stephens concluded that the important consideration is not per capita expenditure but levels of service and that "there is a distinct possibility that economies of scale exist for some municipal functions when service levels are considered". In a later study the authors have arrived at the conclusion "neither population nor density appear to affect total per capita spending in any significant measure".*

*Cost of urban infrastructure for industry as related to city size in developing countries, 1968. In this study all infrastructure costs other than land costs were studied.

4.1.7. Abhijit Datta **study on "financing Municipal Services" in our country quotes certain figures taken from the Report of the Rural Urban Relationship Committee on service costs in cities of different size. It is revealing to note that out of 28 towns which have a per capita expenditure of Rs. 15 to 30, three are Corporation cities, four are class I towns, six class II towns and ten class III towns. Out of eleven towns having per capita expenditure of Rs. 40 and above only two are Corporations, two are class I towns, one class III town and there are two towns each belonging to class IV, V and VI. These figures indicate the costs of providing services in a large urban area is not any different than in a small urban area. Thus while the per capita cost for services does not increase the city size and may even indicate some tendencies towards economies of scale it is true that the level and quality of services demanded and provided increase with the size of urban areas. This statement is reinforced by the estimate of the Zakaria Committee on "Augmentation of financial resources of urban local bodies" where the desired per capita expenditure is highest for large cities and lowest in small towns. The studies made on productivity and costs in large versus small urban centres again in the American context however indicate a positive correlation between city size and productivity up to the two million population range.

4.1.8. Thus economic considerations discourages urban growth beyond two millions and also indicate that below this population the larger urban centres have a distinct advantage over smaller urban areas. Therefore in the absence of clear evidence that further growth is inimical to aggregate communal welfare (welfare of the State as a whole) policies promoting the economic growth should get priority over other choices. The final choice on the pattern of development therefore depends in the last analysis on

1. the prevailing situation; and
2. the defined objectives and goals.

The important urban centres of the State are fairly evenly distributed except for Madras urban area of 3.2 million population lying in the north-eastern corner dominating the State. Madurai, Coimbatore, Salem and Tiruchirappalli, the four major urban agglomerations, next to Madras, serving as focal points of regional growth fall within 100 miles of each other and are located centrally in the State. Eleven out of the fourteen districts of the State (exceptions being Dharmapuri on the north-west, Ramanathapuram on the south-east and Nilgiris on the west) have one or more class I cities within them. Ramanathapuram and Nilgiris districts have a few urban centres with population exceeding 50,000. Considering at micro level, there are 53 taluks (out of 133 in the State) not having any urban centre with population exceeding 20,000. It is observed that most of these are concentrated in three areas, namely :—

1. A belt extending from Madurantakam in Chingleput district to Sankari in Salem district embracing parts of North Arcot, South Arcot and Dharmapuri districts.
2. Central part of the State comprising most of Tiruchirappalli district and parts of Thanjavur, Madurai and Ramanathapuram districts

3. Most part of Kanyakumari and Southern part of Tirunelveli district. " (Apart from these, four small pockets of such areas, two in Chingleput (Ponneri and Tiruttani), one in Dharmapuri (Hosur) and one in Ramanathapuram (Mudukalathur).

4.1.9. The growth trends of all class I to III urban centres in the State with their population in 1984 has been projected and furnished in Table 34. The important points that emerge are :

1. Madras urban agglomeration will have a population of 3.48 million in 1984. (Nearly 24 per cent of 1984 urban class I to III population).

2. The four large agglomerations of Madurai, Coimbatore, Salem and Tiruchirappalli together will have a population of 1.97 millions.

3. Dharmapuri and East Ramanathapuram areas will continue to have no major urban centres in them.

4. Many of the 53 urban free taluks will continue to have low level of urbanisation. The implications of this trend of growth are clear and compel the following conclusions:—

(1) Madras will continue to grow rapidly unless urban centres of adequate pull are developed within its hinterland.

(2) The four urban agglomerations of Madurai, Coimbatore, Salem and Tiruchirappalli will continue to be vital urban centres in the centre of the State and to a certain extent counter act the overall dominance of Madras Urban agglomeration.

(3) Ramanathapuram and Dharmapuri areas would call for development of regional growth centres and

(4) At the micro level, development of urban foci will be called for in taluks which lack those particularly in the three areas mentioned in the foregoing paragraph to act as growth points and service centres to surrounding areas.

TABLE 34.

POPULATION ESTIMATES OF CLASS I, II, III URBAN CENTRES—
TAMIL NADU.

Town.			Population,	Growth rate per cent.		Population
			1971.	1951-61.	1961-71.	estimate,
CLASS I (+100,000)						
1 Madras City	..	..	2,470,288	22.11	42.86	3,478,000
2 Madurai	..	..	548,298	17.42	29.07	699,300
3 Coimbatore	..	..	353,469	44.78	23.46	487,500
4 Salem	..	..	308,303	23.13	23.74	394.400
5 Tiruchirappalli	..	..	306,247	14.13	22.57	385,000

TABLE 34—*cont.*POPULATION ESTIMATES OF CLASS I, II, III URBAN CENTRES—
TAMIL NADU—*cont.*

Town.				Population, 1971.	Growth rate per cent.		Population estimate, 1984.
					1951-61.	1961-71.	
CLASS I (+ 100,000)— <i>cont.</i>							
6 Tuticorin	..	..	..	154,804	25.65	24.61	205,300
7 Nagercoil	..	..	..	141,207	33.96	32.95	199,600
8 Thanjavur	..	..	..	140,470	10.35	26.44	181,100
9 Vellore	..	..	..	138,220	7.28	21.52	160,100
10 Dindigul	..	..	..	127,406	18.61	37.07	137,000
11 Singanallur	..	..	..	113,397	24.29	359.58	162,400
12 Tiruppur (Palladam taluk).				113,171	52.01	41.87	161,400
13 Kumbakonam	..	..		112,971	1.02	22.02	132,000
14 Kanchipuram	..	..		110,505	9.32	19.19	130,600
15 Tirunelveli	..	..	..	108,509	19.75	23.32	143,300
16 Erode	..	..	..	103,704	28.11	40.59	146,200
17 Cuddalore	..	..	..	101,345	14.60	28.01	135,000
CLASS II (50,000 TO 99,999).							
1 Valparai	..	..	..	94,939	..	18.64	114,400
2 Rajapalayam	..	..		86,946	16.99	22.11	108,400
3 Tiruvottiyur	..	..		82,415	67.78	119.36	144,500
4 Palayamkottai	..	..		70,050	27.47	37.35	118,500
5 Pollachi	..	..	..	68,589	30.24	26.15	94,140
6 Nagapattinam	..	..		68,015	2.09	15.16	71,580
7 Pudukottai	..	..		66,388	13.39	31.49	104,700
8 Karur	..	..	..	65,526	19.95	29.59	84,180
9 Alandur	..	..	..	464,221	41.65	190.44	100,900
10 Gudiyatham	..	..		63,007	10.33	25.05	73,310
11 Ootacamund	..	..		63,003	21.20	25.65	81,640
12 Aruppukottai	..	..		62,227	3.39	23.96	75,930

TABLE 34—*cont.*POPULATION ESTIMATES OF CLASS I, II, III URBAN CENTRES—
TAMIL NADU—*cont.*

Town.				Population, 1971.	Growth rate per cent.		Population estimate, 1984.
					1951-61.	1961-71.	
CLASS II (50,000 TO 99,999)—cont.							
13 Virudhunagar	..	..		61,904	18.39	12.91	78,840
14 Tiruvannamalai	..	..		60,478	14.06	30.23	77,090
15 Villupuram	..	..	..	60,237	21.89	38.49	83,450
16 Mayuram	..	..	..	60,196	18.32	17.13	79,660
17 Neyveli	..	..	..	58,289	..	466.13	64,090
18 Karaikudi	..	..	..	55,450	13.64	26.89	63,890
19 Bodinayakanur	..	..		54,118	25.07	20.49	72,190
20 Tambaram	..	..		54,050	80.36	61.34	90,530
21 Ambur	..	..	..	54,022	—1.34	36.92	67,630
22 Srivilliputhur	..	..		53,859	15.78	15.04	66,580
23 Avadi	...	..	..	53,338	..	308.72	66,530
24 Vaniyambadi	..	..		51,795	8.62	23.18	59,060
25 Srirangam	..	..	..	51,066	14.30	21.73	64,600
26 Kadayanallur	..	..		50,258	8.38	21.84	58,220
27 Pallavaram	..	..		50,165	36.11	208.65	92,640
CLASS III (20,000 TO 49,999).							
1 Palni	..	..	..	49,576	15.50	24.46	56,390
2 Paramakudi	..	..	..	48,884	13.98	92.70	76,740
3 Chidambaram	..	..		48,819	17.17	19.97	62,760
4 Kovilpatti	..	..	..	48,532	27.91	45.72	68,820
5 Mettupalayam	..	..		48,375	32.64	32.55	63,250
6 Melapalayam	..	..		47,728	3.06	22.99	61,730
7 Madakulam	..	..		46,336	..	141.22	67,330
8 Tindivanam	..	..		45,028	15.82	31.12	61,840
9 Sivakasi	..	..	..	44,868	35.35	46.20	67,470

TABLE 34—*cont.*

POPULATION ESTIMATES OF CLASS I, II, III URBAN CENTRES—
TAMIL NADU—*cont.*

Town.				Population, 1971.	Growth rate per cent.		Population estimate, 1984.
					1951-61	1961-71.	
CLASS III (20,000 TO 49,999)—cont.							
10 Arkonam	..	..	..	43,344	33.11	41.38	62,240
11 Mannarkudi	..	..	..	42,785	12.38	27.50	56,230
12 Ambattur	..	..	..	42,750	..	284.17	64,570
13 Tenkasi	..	..	..	42,611	10.71	23.86	58,510
14 Attur	..	..	..	41,559	27.03	43.22	58,380
15 Periyakulam	..	..	..	41,515	17.21	14.26	50,240
16 Ponmalaipatti	..	..	..	41,074	25.33	74.34	59,740
17 Cumbum	..	..	..	40,800	20.85	25.47	59,620
18 Kurichi	..	..	..	40,532	38.04	42.68	61,390
19 Tiruppattur	..	..	..	40,300	14.06	30.85	50,890
20 Vikramasingapuram	..	..	..	40,021	12.32	21.52	48,200
21 Dharmapuri	..	..	..	40,021	16.34	42.77	53,800
22 Udumalpet	..	..	..	39,343	21.61	38.80	52,040
23 Arni	..	..	..	38,647	27.61	23.27	51,750
24 Puliyangudi	..	..	..	38,399	10.97	25.29	48,010
25 Mettur	..	..	..	38,390	2.58	38.60	53,510
26 Chingleput	..	..	..	38,291	14.64	47.40	55,970
27 Pattukottai	..	..	..	37,673	35.51	52.36	57,100
28 Coonoor	..	..	..	37,663	28.40	22.72	48,600
29 Nellikuppam	..	..	..	37,626	7.12	69.73	56,430
30 Erode	..	..	..	37,079	..	62.87	56,100
31 Tiruchengole	..	..	..	36,983	11.23	72.03	58,890
32 Gobichettipalayam	..	..	..	36,347	11.04	34.60	42,900
33 Ramanathapuram	..	..	..	36,123	11.79	34.34	48,050
34 Tiruvarur	..	..	..	35,359	10.59	18.96	43,480

TABLE 34—*cont.*

POPULATION ESTIMATES OF CLASS I, II, III URBAN CENTRES—
TAMIL NADU—*cont.*

Town.				Population, 1971.	Growth rate per cent.		Population estimate, 1984.
					1951-61.	1961-71.	
CLASS III (20,000 to 49,999)—cont.							
35 Krishnagiri	..	..	..	35,359	20.50	48.40	50,280
36 Theni-Allinagaram	..	..	..	34,831	31.79	41.55	49,300
37 Dharapuram	..	..	..	34,452	9.63	30.06	44,450
38 Panrutti	..	..	..	33,954	28.59	81.05	53,230
39 Edappadi	..	..	..	33,003	3.96	35.45	48,450
40 Gudalur	..	..	..	32,835	23.70	33.29	46,910
41 Sankaranayinarkoil	..	..	..	32,808	9.98	36.18	42,920
42 Manapparai	..	..	..	32,095	32.77	175.64	58,370
43 Vridhachalam	..	..	..	31,864	26.30	122.05	54,340
44 Telungupalayam	..	..	..	31,764	..	..	54,210
45 Kumarapalayam	..	..	..	30,841	150.27	24.57	39,240
46 Villivakkam	..	..	..	30,656	33.78	101.64	51,310
47 Arcot	..	..	..	30,229	18.49	20.78	37,960
48 Namakkal	..	..	..	29,866	18.45	49.82	41,380
49 Ranipet	..	..	..	29,281	21.27	27.45	38,100
50 Devakottai	..	..	..	28,989	1.79	13.58	29,140
51 Rasipuram	..	..	..	28,491	3.23	19.35	32,750
52 Ambasamudram	..	..	..	27,713	10.27	23.46	34,100
53 Chinnamanur	..	..	..	26,681	8.84	29.61	34,070
54 Sangapur	..	..	..	26,117	..	..	31,750
55 Sathyamangalam	..	..	..	25,922	37.22	34.76	32,480
56 Tiruvallur	..	..	..	25,325	4.83	28.18	30,580
57 St. Thomas Mount-cum- Pallavaram.	..	..	..	25,181	4.40	59.47	36,090
58 Kaniyamuthur	..	..	..	25,126	15.19	45.01	33,280
59 Chinnalapatti	..	..	..	24,403	..	35.85	31,770

TABLE 34—*cont.*
POPULATION ESTIMATES OF CLASS I, II, III
URBAN CENTRES—TAMIL NADU—*cont.*

Town				Population, 1971.	Growth rate per cent		Population estimate, 1984.
					1951-61.	1961-71.	
(CLASS III 20,000 TO 49,999)—cont.							
60 Shencottah	..	..	..	23,894	18.44	16.40	28,770
61 Kilakarai	..	..	..	23,797	4.15	41.14	25,930
62 Avaniapuram	..	..	..	23,213	..	76.51	38,330
63 Bhavani	..	..	..	23,127	30.72	45.82	33,150
64 Thirumangalam	..	..	..	22,890	9.30	29.81	25,520
65 Sirkali	..	..	..	22,745	27.86	16.46	30,610
66 Pernapathi	..	..	..	22,705	6.97	16.35	24,440
67 Sattur	..	..	..	22,222	16.17	41.01	30,690
68 Usilampatti	..	..	..	21,875	12.34	38.62	27,940
69 Ganapathi	..	..	..	21,831		54.00	32,450
70 Kallidaikurichi	..	..	..	21,549	1.06	6.51	23,930
71 Vedaranyam	..	..	..	21,476	6.42	19.09	26,800
72 Thuraiyur	..	..	..	21,135	10.42	32.60	27,010
73 Golden Rock	..	..	..	21,058	—1.27	7.66	25,510
74 Madhavaram	..	..	..	21,025	..	..	29,940
75 Suramangalam	..	..	..	20,965	..	32.65	27,670
76 Sivaganga	..	..	..	20,809	9.34	33.03	27,270
77 Ilayangudi	..	..	..	20,654	—2.09	43.10	27,170
78 Kallakurichi	..	..	..	20,644	20.22	50.08	29,760
79 Jalarpet	..	..	..	20,085	..	22.39	26,970

The following Class IV Towns are also anticipated to Cross the 20,000 population mark by 1984.

Town.	Population 1971.	Growth rate per cent.	
		1951-61.	1961-71.
(1)	(2)	(3)	(4)
CLASS IV (10,000 to 19,999).			
1 Thirupparankundram	19,916	+ 108.10	+ 6.22
2 Melur	19,883	+ 5.37	+ 34.08
3 Tiruvattipauram	19,272	+ 6.77	+ 25.26
4 Kayalpattinam	18,989	+ 18.85	+ 41.37
5 Colachel	18,816	+ 15.19	+ 20.05
6 Poovirunthavalli	18,706	- 42.45	+ 57.19
7 Arumuganeri	18,687	+ 7.99	+ 25.38
8 Maduranthakam	18,611	+ 51.56	+ 33.24
9 Kottagiri	18,446	+ 19.20	+ 12.94
10 Tiruppattur	18,314	- 6.58	+ 26.22
11 Tirukkoyilur	18,265	+ 17.71	+ 32.94
12 Adirampattinam	18,115	+ 1.80	+ 36.11
13 Polur	18,093	- 8.23	+ 22.55
14 Uttamapalayam	18,059	+ 12.83	+ 27.99
15 Tiruchendur	17,963	+ 14.89	+ 18.32
16 Ariyalur	17,698	+ 15.01	+ 39.82
17 Porto Novo	17,419	+ 0.36	+ 15.06
18 Tranquebar (Poraiyur)	17,318	- 1.74	+ 17.38
19 Kulithalai	17,214	+ 16.61	+ 25.15
20 Udangudi	17,162	+ 13.21	+ 12.41
21 Thiruthuraipundi	17,117	+ 21.62	+ 26.72
22 Tiruttani	17,055	+ 4.02	+ 65.20
23 Tiruvanmiyur	16,822	..	..
24 Padmanabhapuram	16,889	+ 8.17	+ 16.55
25 Natham	16,786	+ 22.21	+ 21.58

Town.					Population 1971.	Growth rate per cent.	
						1951-61.	1961-71.
	(1)					(3)	(4)
CLASS IV (10,000 TO 19,999)—cont.							
26 Thirukkalikundram	..	..	..	..	16,689	+ 12.92	+ 29.56
27 Hosur	..	..	..	..	16,575	+ 34.10	+ 41.87
28 Melvisharam	..	..	..	..	16,521	+ 7.29	+ 14.10
29 Kodaikanal	..	..	..	..	16,476	+ 17.54	+ 28.12
30 Walajapet	..	..	..	..	16,401	+ 4.59	+ 24.45
31 Arantangi	..	..	..	..	16,307	+ 24.81	+ 58.97
32 Rameswaram	..	..	..	..	16,301	+ 25.50	+ 139.69
33 Kuzhithurai	..	..	..	..	16,202	+ 26.22	+ 18.19
34 Kuthanallur	..	..	..	..	16,184	+ 17.12	+ 16.03
35 Uttramerur	..	..	..	..	16,146	+ 14.44	+ 16.33
36 Lalgudi	..	..	..	..	16,128	+ 8.88	+ 16.25
37 Madukkarai	..	..	..	..	16,082		+ 28.78
38 Wandiwash	..	..	..	..	16,081	+ 4.26	+ 28.18
39 Srivaikuntam	..	..	..	..	16,076	+ 9.47	+ 27.69
40 Kurinjipadi	..	..	..	..	16,013	+ 22.50	+ 31.42
41 Pallapatti	..	..	..	..	15,946	+ 18.52	+ 41.00
42 Thiruthangal	..	..	..	..	15,872		
43 Gudalur	..	..	..	..	15,553	..	+ 86.76
44 Velur	..	..	..	..	15,058	..	..
45 Karamadai	..	..	..	..	15,016	..	+ 28.90
46 Anamalai	..	..	..	..	14,773	+ 7.00	+ 33.43
47 Vattalakundu	..	..	..	..	14,751	+ 2.67	+ 40.23
48 Thallakulam	..	..	..	..	14,749	..	+ 114.00
49 Perambalur	..	..	..	..	14,742	+ 19.14	+ 32.00
50 Sholinghur	..	..	..	..	14,700	+ 4.91	+ 28.05
51 Bhuvanagiri	..	..	..	..	14,549	+ 9.23	+ 29.47
52 Denkanikottai	..	..	..	..	14,463	+ 25.83	+ 28.96
53 Kunrathur	..	..	..	..	14,432	+ 15.59	+ 17.87
54 Ponmeni	..	..	..	..	14,401	..	+ 116.95
55 Taramangalam	..	..	..	..	14,354	- 0.09	+ 55.30

4.1.10. The objectives and goals of an urban policy can now be defined. Since regional imbalances are such that they may be corrected without heavy investment in areas which are least urbanised and that agriculture cannot be the main driving force in raising further economy of the State—there is very little additional land possible of cultivation and there are serious constraints to increasing production such as shortage of water—the objective should be to promote the economy of the State through manufacture and industrial production. This could be achieved only by concentrating developmental efforts in a small number urban centres, making use of available resources. Therefore it becomes necessary to select growth centres for promoting industrial growth in appreciable way and discourage the growth trend in other urban centres where conditions of growth are not favourable on account of one or more of the following reasons :—

1. Where the increase in population will upset economics of scale and cause deterioration in environmental standards (as in Madras urban complex).

2. Where the increase in population will call for comparatively costly investments in infrastructure (such as water-supply at distant sources).

3. Where the increase in population will adversely affect the present character and importance of certain areas of special value (such as towns in Nilgiris and other hill areas noted for natural scenic beauty).

4. Where the increase in population will call for conversion of valuable agricultural land into urban land (as in the case of towns in Cauvery delta).

5. Where towns are located in unfavourable climatic zones (as for instance the coastal area around Nagapattinam and Ramanathapuram exposed to cyclonic storms).

4.1.11. Growth centres have been identified after eliminating areas not suitable for development as specified above on the basis of the following criteria and are shown in Table 35:—

1. Growth rate in the previous two decades is high.

2. Towns having high accessibility both by road and rail.

3. Towns with population one lakh or above or within the orbit of large urban agglomeration.

4. Towns where nucleus infrastructure facilities already exist and further improvements will not be difficult.

5. Towns located in areas of very high rural population and lower potential areas of outmigration.

6. Towns which have ready access to exploitable minerals or other industrial raw materials.

TABLE 35.

LIST OF URBAN CENTRES SELECTED FOR PREFERENTIAL DEVELOPMENT.

I. MADRAS.

1. Madras Metropolitan area,
2. Satellite Towns—
 - (a) Sengunram-Chingleput.
 - (b) Tiruvallur.
 - (c) Gummudipoondi.

II. OTHER METROPOLITAN CENTRES.

- | | |
|----------------|---------------------|
| 1. Coimbatore. | 3. Tiruchirappalli. |
| 2. Madurai. | 4. Salem. |

III. URBAN CENTRES.

- | | |
|--------------------|-------------------------|
| 1. Vellore. | 16. Thanjavur. |
| 2. Kancheepuram. | 17. Kumbakonam. |
| 3. Tirupattur. | 18. Nagapattinam. |
| 4. Tindivanam. | 19. Vedaranyam. |
| 5. Tiruvannamalai. | 20. Pudukkottai. |
| 6. Dharmapuri. | 21. Dindigul. |
| 7. Attur. | 22. Theni-Allinagaram. |
| 8. Cuddalore. | 23. Rajapalayam. |
| 9. Neyveli. | 24. Karaikudi. |
| 10. Vriddhachalam. | 25. Paramakudi. |
| 11. Erode. | 26. Tirunelveli. |
| 12. Tiruppur. | 27. Tuticorin. |
| 13. Mettupalayam. | 28. Tenkasi-Courtallam. |
| 14. Pollachi. | 29. Nagercoil. |
| 15. Karur. | |

IV. SPECIAL AREAS.

- | | |
|-------------------|--------------------|
| 1. Mahabalipuram, | 7. Coonoor. |
| 2. Javadi Hills, | 8. Kodaikkanal. |
| 3. Yercaud. | 9. Adirampattinam. |
| 4. Kolli Hills. | 10. Tondi. |
| 5. Chidambaram, | 11. Kanyakumari. |
| 6. Ootacamund. | 12. Rameswaram. |

V. BACKWARD AREAS.

- | | |
|------------------|----------------------------------|
| 1. Gingee. | 9. Harur. |
| 2. Chengam. | 10. Sathyamangalam, |
| 3. Ariyalur. | 11. Gudalur. |
| 4. Turaiyur. | 12. Arantangi. |
| 5. Manapparai. | 13. Tiruvadanai. |
| 6. Tiruchengode, | 14. Tirupattur (Ramanathapuram). |
| 7. Mettur. | 15. Kovilpatti. |
| 8. Hosur. | 16. Tiruchendur. |

5. CHAPTER V.

5. URBAN PLANNING.

5.1. URBAN LAND.

5.1.1. Urban areas, especially cities and major towns experience heavy pressure on urban land on account of increasing urbanisation, and influx of population from rural areas into urban areas. Cities and towns offer greater job opportunities in addition to better standards of living and civic amenities (such as medical, educational, recreational and hygienic and transport). Based on the fundamentals of economics, as the demand on urban land requirements (arising out of various urban uses) increase and the supply being limited, the land values naturally tend to swell up in such areas. Lands required for public purposes (inclusive of housing) have to be acquired by the concerned authorities based on the compensation awards passed by the Land Acquisition Officer after observing all the statutory procedures laid down in the Land Acquisition Act. As per existing legislation, compensation for land property to be acquired is to be based on existing market rate. Due to various causes (such as urban pressure, inflatory conditions, exploitations), the land property values at market goes on increasing rapidly and thus the acquisition and compensation cost correspondingly go high. Apart from this, there is also the element of the private owners getting the benefit of the unearned income on the property. The main hardship experienced in going in for such acquisitions is that it involves heavy investment of finance due to high value of compensation for which the concerned department, on whose behalf the acquisition is carried out, is unable to find adequate financial resources. Apart from the high cost involved in the award passed by the Acquisition Officer, there is provision in the present legislation enabling the owner of the property to move Civil Courts for higher awards. Such Court appeal cases are becoming quite common as observed in the case of the Tamil Nadu Housing Board. At times, the Court too decide on a higher award of compensation, with the result that the allottees of sites by the Housing Board are faced with the problem of remitting extra amounts towards the enhanced cost of land and this causes real hardship and additional financial implications. Even in cases of acquisition of lands for public purposes by various Government Departments, a considerable bulk of cost of projects is absorbed by way of compensation to properties.

5.1.2. The existing State of affairs referred to above in the matter of acquisition of lands, if allowed to continue, no major project to serve public interest could be implemented. When the Nation and States are having the socialistic pattern of development as main objective, it is contrary to allow private owners of lands to exploit situations and exclusively enjoy the benefits of unearned income that derives out of such sale of lands. Hence it is time that necessary legislative measures are pursued immediately to rectify the above defects and pave way for purchase of lands for public purposes at reasonable cost that may be fixed by Government.

LAND POLICY.

5.1.3. There has been abnormal increase in Urban land values during the last two decades, the highest being registered in Metropolitan and major cities. The trend of abnormal increase in urban land values is not keeping in with our national ideal of growth with social justice. Some of the undesirable effects of the above trend are :

(i) Less affluent land owners from central areas of cities are pushed gradually to suburbs.

(ii) It induces speculation with all its attached evils of rapid market—fluctuations, under valuation of properties and extensive use of black money.

(iii) the enormous rise in urban land values accentuates wide wealth and income disparities.

(iv) It unduly inflates building costs, urban infrastructure and other community facilities.

To counteract all these tendencies, it is necessary to adopt a long term urban land policy.

5.1.4. An urban land policy must be capable of ensuring its balanced use for various economic and social activities. It should prevent concentration of accumulation of wealth in fewer hands by mopping up by suitable steps, unearned income of rich land owners, providing simultaneous protection to owners of small units through suitable fiscal means against expropriation by affluent sections. It should also ensure public acquisition of land in minimum time and at fair (but not excessive) compensation.

5.1.5. In arriving at a desirable urban land policy, due consideration has to be given to the purposes for public acquisition, principles for fixation of compensation and procedures involved in the process. The Land Acquisition Act, 1894 forms the basis for all State enactments connected with acquisition, of properties. The existing Statutory provisions are criticised because of the excessive compensation or inordinate delay in the acquisition procedure. In the Land Acquisition Act, 1894 compensation is to be based on the market value on the date of the issue of preliminary notification plus 15 per cent solatium for compulsory acquisition.

5.1.6. The provisions of the Land Acquisition Act, 1894 have been examined by a number of expert groups. The Law Commission brought out a comprehensive review of the whole Act sometime in the fifties. Later, in the sixties, the Committee of Ministers on Urban Land policy examined the issue. Thereafter a group of Experts appointed by the Ministry of Agriculture examined the Act. (Confining to a few provisions of the Act). A Committee of a few Housing Ministers under the Chairmanship of Professor M. S. Thacker appointed by the Ministry of Works and Housing to suggest measures for expediting the acquisition of land for Housing purposes had presented its report. The Committee on the Review of Land Acquisition Act under the Chairmanship of Mr. A. N. Mulla has, of late, come out with its report and is under consideration of the Government. However, the recent enactment of the 25th Constitutional Amendment paves a

new path for solving the vexed question of compensation. Under this enactment, the "Compensation" is replaced by "amount" and will be non-justiciable in the Court of Law. It may not be fair to fix the amount arbitrarily at low level. The Mulla Committee recommended compensation at market value plus 30 per cent (as against present 15 per cent) solatium would go against the spirit of the present thinking. The enactment of the 25th Constitutional Amendment replaces compensation by "amount" fixed by Government; it also seeks to eliminate appeals by owners of property in Court of law in the matter of costs. This enactment could be taken note of and necessary amendments to legislation at State level will have to be effected by fixing up values of undeveloped lands in urban areas, classifying these areas in relation to their population. Cities and towns could be grouped into categories based on population and values fixed for each category. A maximum value for one acre of undeveloped land in urban area, of say over ten lakhs population, must not exceed Rs. 10,000; similarly maximum value for all the categories may be fixed by Government ranging from Rs. 10,000 downwards. If the land to be acquired is wet, this value may have to be enhanced suitably. Also the price of developed plots in cities should be fixed according to a zoning system, proceeding from centre of the city towards extremities of the city, grading from Rs. 15,000 to Rs. 4,000 per ground (roughly). For smaller towns the scale of Rs. 15,000 to 4,000 per ground may be suitably altered. Such a fixation of land values by statute will enable easy availability of land for area developments, housing, slum improvements and for other public purposes. This will also arrest exploitation, speculation and increase in land costs. Needed legislation at State level for giving effect to above mentioned recommendations should be immediately enacted in the matter of land acquisition for public purposes.

5.1.7. To discourage speculative values for lands in urban areas and to enable the community to share quite a substantial part of this unearned value accruing on lands, one method is to allot all public land on leasehold basis thereby enabling a share in the increase in the value of land to accrue to the community; Deviations involving more intensive use of the land than that envisages in the lease should be permitted, subject to the condition that the benefits derived out of the additional use capacity accrues to the State or to the less prosperous members of the community, thereby preventing undue concentration of urban land holdings.

5.1.8. There is need for decentralising acquisition authorities so as to facilitate quick acquisitions and avoid delays. Revenue Officials at local (district levels) should be vested with powers for acquisition purposes. The procedure involved in acquisition needs to be simplified for enabling local authorities to finalise acquisitions with greater speed.

5.1.9. The valuation of land should be based on the existing use and not on potential use to which the land is required.

5.2. TAXATION MEASURES ON URBAN LAND.

5.2.1. The chief among the taxation measures on urban land and property tax, land transfer tax, urban land tax, wealth tax, betterment contribution and development charges.

5.2.2. *Property tax*.—is the tax levied on properties (in the form of buildings) by local authorities based on either capital value or annual rental value. This forms the major revenues of local bodies but nowadays it is barely sufficient to meet the maintenance expenditure of most of the local bodies leaving no surplus to invest on capital works, of public utility. Normally the rate of this tax varies from 20 to 30 per cent of annual rental value.

5.2.3. *Land transfer tax* : is realised through registration of documents while executing sale deeds or mortgage deeds and effecting transfer of immovable property on meeting the scheduled Stamp duty to Government. The stamp duty is charged on the “market value” of the property involved instead of the sale amount exhibited on the document (as per the India stamp—Tamil Nadu Amendment—Act of 1967). The State Government have moved an appeal against the judgment of the High Court striking down this amendment. The revenue receipts under this tax during 1970–71 was Rs. 256 lakhs for the entire State and Rs. 28 lakhs for Madras City alone.

5.2.4. *Urban Land Tax* : was introduced in Madras City by State Government in 1963 and was modified in 1971 to a graded system of levy on all urban lands exceeding one ground in area. The tax is levied at 0.5 per cent of market value on lands of area less than 2 grounds, 0.7 per cent on lands ranging from 2 to 5 grounds and 0.8 per cent on lands ranging from 5 to 10 grounds and 1 per cent on lands exceeding 10 grounds. The anticipated revenue out of this levy during 1972–73 is about 1.5 crores. The basis for the tax levy namely “market value” of land could be revised once in ten years. This levy has been extended to the four other large towns of Madurai, Coimbatore, Salem and Tiruchirappalli. As urban land has been subjected to many a taxation as property tax and wealth tax and the new Tamil Nadu Town and Country Planning Act, 1971 makes way for levy of development charge on land, Government may examine the question of dropping the Urban land tax to lessen the burden on owners.

5.2.5. *Wealth tax* : is levied on urban land and buildings (other than business premises by the Union Government, ranging from 1 per cent to 4 per cent of the excess over the exemption limits.

5.2.6. *Betterment tax* : is intended as a charge on the increase in values of land resulting from development activities in the area under Town Planning Schemes, authorised by the Tamil Nadu Town Planning Act, 1920. The Local authority (i.e. Responsible authority under the Town Planning Act) may collect the levy and use it for financing implementation of development schemes. This levy and collection had not proved successful due to challenges in the Court and legal implications. This levy was mainly intended to mop up “unearned” incomes for providing financial assistance to implement development schemes. The levy is based on certain per cent (not exceeding ten per cent) over the increase in the value of land but in experience, it was found to be cumbersome to levy and collect. Most local bodies who had taken up detailed Town Planning Schemes abandoned this levy at some stage or other. The former Madras City Improvement Act and present Tamil Nadu Housing Board Act also provide for levy of betterment tax on properties within the influence area (one to two miles) adjoining the property.

5.2.7. *Development charges* : is intended to replace the present Betterment levy and this concept has been newly incorporated in the Tamil Nadu Town and Country Planning Act, 1971. This levy would be applicable to every change of use of land and building in all areas for which a plan has been made under this Act.

5.2.8. *Income Tax and Sales Tax on city users* : Persons living in large cities turn over considerable business and professional transactions which also result in increased revenues in the form of Sales Tax and Income Tax. It is reasonable that the percentages levy of these taxes are increased (by about say 30 per cent) for those living in cities and carrying out business or professions there and the revenues collected through these additional levy in large cities are made over for utilisation towards city development works. This suggestion is recommended to Government for pursuing further action.

5.2.9. *Land Tax* : Due to urbanisation trends, pressure on land within cities and towns has been increasing ; it is not desirable to continue a lower levy of land tax on lands situated at the heart of towns and used for agricultural purposes. These lands should also be considered on the same basis as any other urban land within the town and it should also be subjected to the same land tax and this procedure will discourage non-urban use in the midst of urban areas. Such a procedure should be applied to all Corporations, Municipalities and Townships.

5.2.10. *Bulk acquisition of land* : Acquisition of land in bulk in the periphery of large cities is an essential measure for supply of developed land for urban use. This measure has been followed in the case of cities as Madras, Madurai, Coimbatore and Tiruchirappalli by the Tamil Nadu Housing Board in recent years. About 1,800 acres have been acquired and developed in all the major urban centres during past ten years of which about 1,300 acres have been developed during the last five years. These achievements have only touched the fringe of the problem of supply of urban land for housing development in the State.

5.2.11. *Urban land ceiling* . “Ceiling on urban property” has been engaging the attention of Government both in the Centre and State. The possible approaches in fixing such a ceiling are :

- (i) Ceiling on value of property.
- (ii) Ceiling on the extent of area of the property (land or building).

The latter would facilitate eliminating concentration of property among a few and ensuring equitable distribution of property and it does not involve the assessment of market value of properties which is subject to escalation. Ceiling on urban property would make available land in developed areas for building. Such excess lands have to be put to properly planned use to avoid clash or disruption of density patterns and traffic generation and movement within the cities.

5.2.12. *Urban land Bank* : Lands proposed to be acquired for urban development and those acquired as a result of fixing ceiling on urban land should be made available to the developing agencies through an “Urban Land Bank” that may be established for

the purpose. This bank should be given the first option to buy any land that is put up for sale, initially in the Metropolitan area of Madras and other large urban Centres. The aim of this measure would be to eliminate all private land sub-divisions; all land transactions should be carried through the "Land Bank" only. Required finances should be made available to this bank, initially by the Government and later on the bank can function with the finances recouped from the transfer of lands.

5.2.13. The taxes and enactments are not effective in mopping up increase in land values. Even present procedures of approving sub-division of lands, issue of buildings permits and relaxations from regulations do not bring in any resources for development. It is thus considered necessary—

(i) to levy a charge for every conversion of use, whether any development plan is in operation or not.

(ii) to levy penal fees for constructions and uses not in conformity with rule- and regulations.

5.2.14. Often owners of lands in urban areas are tempted to change the use of their land for better remuneration. For instance, if an agricultural land is converted to an industrial site in an urban centre, where there is high demand for industrial sites, the owner naturally changes the use and gets the benefit of higher value. This increase in value i.e., the "unearned income" has to go to Community use instead to the individual owner. Hence every conversion of use of land should be charged with a levy of fee by the Local Authority. Also to ensure conformity to rules and regulations in urban areas, penal fees should be levied for constructions and uses not in accordance with rules and regulations.

5.3. LEGISLATION

5.3.1. For implementing development Plans, it is necessary to have legal backing. The Tamil Nadu Town Planning Act of 1920, even though it serves as an instrument to notify areas, prepare and implement detailed Development Plans for chosen urban areas, does not contain adequate provisions for notification and processing of Master Plans for cities and towns or for preparation of Regional Plans or New Town Plans. Regional concept and New Town theories have become essential features of modern planning and hence any modern legislation on Town and Country Planning should provide for such concepts and thinking. Tamil Nadu Government have brought out a new legislation "Tamil Nadu Town and Country Planning Bill of 1971" and had it processed through legislature. This new Act enables notification and implementation of Regional Plans, Master Plans, New Town Development Plans and Detailed Area Development Plans in the State. The new legislation also makes provision for constitution of a State Planning Board and Planning Authorities at Regional and Local levels, for effectively implementing the various development plans at the respective levels. It has been experienced so far that finance has been the main bottleneck in implementing development plans. The Corporations, Municipalities and Townships do not have the required amount of finance for executing the plans; and Town Planning is not given priority in budgets. There are over 600 Detailed Development Plans notified and about 160 are sanctioned but the progress on their implementation is not appreciable. The present source of finance for the Local authorities towards execution of these plans is either loan from Government or the

general funds of the Local Authority. Even though there is a provision in the Tamil Nadu Town Planning Act of 1920, for levy of betterment charge on development areas, it had been subjected to legal complications in Civil Courts and hence not proved effective in practice. The new Act replaces this Betterment levy by a Development charge based on the use of land and building in development areas and it is expected that this modified approach will prove practicable and earn revenues for the local authorities.

5.3.2. The State Town and Country Planning Board contemplated in the new Act in its constitution, includes the Minister for Town Planning as the Chairman, with Members from officials and non-officials. This Board will be of advisory nature for over-all guidance at State level. There is provision in the new Act enabling the planning Authorities to raise finances by floating loans, for purposes of development projects. They can also avail the facilities provided by Financial Institutions such as Housing and Urban Development Corporation Limited, Life Insurance Corporation of India and Nationalised Banks. The new legislation includes control and regulation of developments. The State Planning Board and the Planning Authorities at various levels will have to be constituted for attending to preparation and implementation of development plans throughout the State.

5.4. PLANNING CONTROL.

5.4.1. Urban land is subjected to severe pressure especially in cities and big towns on account of large demand for competing uses, such as Industries, Commerce and business and public purposes. Land being limited commodity has to be very carefully used for appropriate purposes aiming at maximum benefit for society. This can be achieved only through land use planning of a comprehensive nature for the whole town by means of a Master Plan. Such Master Plans prepared after careful surveys, studies and analysis, lay down zoning of land uses for different planning purposes; apart from zoning for uses (as industry, commerce and business, offices, residences, schools and colleges, hospitals and health centres, recreation, community and public purposes) density zoning also is arrived at in Master Plans, the major communication lines are also worked out therein. Such a Master Plan assists in properly regulating the development of areas and achieving the overall objective of planned growth of the town. Density plays a very important part in development of areas. It is observed that land costs in already developed cities and towns are high and special attention is needed for regulating constructional activities in these areas and emphasising on intense use of such valuable lands. The high values of sites abutting on National and State Highways amply justify adoption of multistoried structures on these sites. It is essential to effect necessary legislation insisting upon construction of multistoried structures of minimum five floors along the important corridors (National or State Highways) within developed cities and also along future roads of the kind. A question may arise whether all the owners of such properties can afford to invest capital on such constructions even though the sites have ample potential to pay back the investment in early periods. In such cases where the owners by themselves are unable to invest capital, financial loan assistance may be made available from State financial investment Corporations, repayable in fixed instalments. Also Bank loan facilities at reasonable interest to pay $7\frac{1}{2}$ per cent to $9\frac{1}{2}$ per cent in the case of construction of residential and commercial buildings respectively should be made available for public. An alternative suggestion

can be for the Government or the Local Planning Authority to acquire such lands and construct buildings and thereafter let them out or lease them for the planned use and this can serve as a remunerative enterprise too.

5.4.2. Central areas of developed cities are often highly congested but their land values too are high. They serve as the centre of economic activity. Some of its buildings are obsolete and are in State of neglect; many of its streets are narrow and incapable of coping up with the present day traffic which is mostly of mixed types. Parking of vehicles are becoming acute problems on the communication system in those areas—(Instance Madras—George Town and Mint Area). These roads are congested and traffic often have to move on snail speed, thereby resulting in national loss of time and fuel apart from personal inconveniences. These areas warrant bold steps on the part of Government and Local Authority to formulate Area Development Plans and implement them effectively to ease the situation and create better environments and smooth flow of traffic. Some such urban pockets even require complete redevelopment which is a costlier process. Urban renewal and redevelopment programmes are inevitable in rapidly growing cities. These programmes can be on long range policy to be executed in phased manner. But as an immediate remedy widening of such narrow streets in busy areas and opening out at junctions and crossings as also providing parking lots for vehicles can be taken up now. Area development plans are self financing projects that could be commenced with investment of initial seed capital. The developed sites and buildings could be sold to public and portion of the sale proceeds reinvested in further development works.

5.4.3. Areas of Historical and Cultural values, archaeology, and natural beauty have to be preserved and regulatory control is necessary to prevent spoilation of such areas by hapazard building activity and improper use of adjoining sites. The new legislation provides for such regulation.

5.4.4. High density and intense development of land need be encouraged in central areas of cities but such development should be in accordance with regulation related to construction of buildings, the Floor space index and other open space requirements. Special regulations will have to be framed for multistoried structures that are essentially to be encouraged in Central areas of cities. At present implementing authority for the Detailed Development Plans in Urban Areas vests with the Local Authorities (as Corporations, Municipal Councils, Townships and Town Panchayats) and it is observed that there has been slackness in enforcement of regulations with the result that a number of buildings and developments take place in contravention of rules. It becomes difficult to pull down such building when once it gets completed, even though penal provisions of the existing Act are applicable. It is necessary in the overall public interests to tighten enforcement of rules by the concerned authorities and prevent hapazard developments.

5.4.5. Parking of vehicles in busy areas of cities poses an acute problem. This aspect had not received adequate attention during the past in our State. Recently parking regulations have been framed for adoption as bylaw by the Madras Corporation. The recently published amendment to Building rules include provision for enforcement of

park space regulations in mofussil towns. These regulations are applicable for private buildings; but there is greater need for public parking lots where private cars can be parked while their owners do shopping, etc., in busy areas, avoiding street parkings and encroachments on roads. Shopping centres and business localities are concentrations of economic activity and roads in such localities are subjected to heavy traffic. Cars parked within the street edges form encroachments on street and reduce the width of the street intended for vehicular movement, thereby causing further congestion and inconvenience and risks too. Hence sites in chosen localities should be acquired by Government or Local Authority for use as car parks. Neglected and aged buildings can be acquired in congested areas and the sites after dismantling the building could well be used for the purpose. In localities like Broadway in Madras there is need for vehicle park to accommodate large number of private cars visiting the locality on business and also the numerous lorries that are now being sheltered near Loan Square. Since land is costly in such areas multi-storeyed type of park is to be thought of. There are similar localities in other parts of the city requiring large public parks (instances—Mount Road and Subash Chandra Bose Road). In George Town, the whole sale marketing business area in Mint Street is another locality immediately warranting lorry parking facility. These public car and lorry parks can be run on self supporting lines by suitably fixing up stoppage rates for vehicles and strictly enforcing regulations preventing parking vehicles on roads.

5.4.6. The Metropolitan Madras Plan (1971—1991) which has been prepared after careful studies, deals with the main aspects of urban development namely Land Development, Public Services as Water Supply and Drainage, Housing, Transport, recreation, education and health. It is highly essential that this Metropolitan Plan is implemented soon as otherwise the plan may require revision and that means further delay. On the Transportation side, strengthening of the existing major corridors, opening out inner, intermediate and outer ring roads and a mass transit system for the large movement of persons on the north, south, (eastern) corridors, are some of the main proposals. The special traffic cell set up (by co-ordinating Highways Department) in the Directorate of Town Planning have completed its studies and submitted the report to Government. The Union Government have set up a special cell in the Railway wing for carrying out feasibility studies of the mass transportation system suggested in the Metropolitan Plan for the city and this cell is attending to the work. There is also a nucleus staff in the Directorate of Town Planning at the Head quarters assisting this special Railway Cell.

5.4.7. In the midst of busy urban life, man's hunger for recreation and diversified activity increases. After days hard labour, he seeks for solace in nature's gifts or desires to get closer to nature, some take to games, some enter recreational parks of greens and blooming flowers, some walk along sea beach enjoying nature. Landscape has not received the much deserved attention in our State. No doubt hill stations like Ootacamund, Coonoor, Kodaikanal have developed in their natural climate and surrounding and are maintaining valuable botanic gardens but apart from these very few cities and towns can claim specially attended landscape. Government of Tamil Nadu have constituted a Landscape Implementation Committee, under the Chairmanship of the Minister for Works, consisting of top officials of departments connected with landscape and gardening for implementing the recommendations of a previous Landscape Committee appointed by Government) under the Chairmanship of the then Secretary for Industries

department. The Landscape improvement schemes along the South Beach Road, Marina, Anna Square and Raj Bhavan approach road form the major schemes among the recommendations of the Committee. The coovun improvement schemes now under progress provides good scope for developing landscape on either banks of the river. The stretch of the Southern Trunk Road extending from Meenambakkam Airport up to Marimalong Bridge is to be landscaped with suitable flowering trees and stretch of Mount Road in between the Highland grounds (north and south portions) is another vulnerable spot with good scope for landscaping. These are some of the items relating to the Madras Metropolitan Area and deserves priority consideration for implementation.

5.5. Madras Metropolitan Plan (1971—1991):

5.5.1. The Directorate of Town Planning during 1963—68 took up comprehensive surveys and studies of the Area, delineated for Madras Metropolitan Area and submitted a report to Government. Based on this report, Government in the Rural Development and Local Administration Department drafted the Madras Metropolitan Plan 1971—1991. The salient features of the Madras Metropolitan Development based on the above Plan are dealt with here.

5.5.2. Madras, the seat of the Government of Tamil Nadu is the largest city in the southern region with a population of 17.29 lakhs in 1961 and 24.70 lakhs in 1971. Ever since the settlement was first founded by the East India Company, it served as commercial and military centre for the entire south. The establishment of a harbour and the laying of main rail and road lines radiating from it in all directions linking the major cities of India and the vast hinterland have further strengthened its predominant position. Madras City served as the administrative capital of a presidency which included parts of the three States of Andhra, Mysore and Kerala apart from Tamil Nadu. The cosmopolitan character of the city is still retained.

5.5.3. The Madras Metropolitan Area, the unit for planning defined and delineated by the Directorate of Town Planning extends over the Madras City and adjoining areas in Chingleput district to approximately 450 sq. miles with a population of 23.42 lakhs in 1961. It accounts for 20 per cent of the total urban population of the State, 22.5 per cent of the total workers, 27 per cent of all industrial workers and 30.4 per cent of students pursuing higher education in the State. Madras City is the only city with its population exceeding one million in the whole State; the second larger city Madurai has

only about half million people. A summary of the growth of population in Madras City as well as the Metropolitan Area is given below :—

GROWTH OF POPULATION WITHIN MADRAS CITY AND MADRAS METROPOLITAN
AREA 1901—1961 (POPULATION in '000).

<i>Year.</i>					<i>Population in the Metropoli- tan area.</i>	<i>Percentage variation.</i>	<i>Population within Madras city.</i>	<i>Percentage variation.</i>
(1)					(2)	(3)	(4)	(5)
1901	..	..	..	..	808	..	553	..
1911	..	..	..	..	830	2.75	575	3.98
1921	..	..	..	..	876	5.54	592	2.96
1931	..	..	..	..	1,056	20.55	734	23.99
1941	..	..	..	..	1,250	18.37	881	20.31
1951	..	..	..	..	1,762	40.96	1,416	60.73
1961	..	..	..	..	2,342	31.90	1,729	22.10

Source : Based on Census 1961.

5.5.4. The growth has been considerable and the increase of population immediately adjoining the city limits has been sharp and striking indicating the expansion of urban influence. While reducing to some extent the pressure within the city, it is observed this has occurred in an unplanned, unco-ordinated and haphazard manner which intensified the planning problems within the city and the metropolitan area. Migration has also been responsible for the growth of population as may be seen from the figures below :—

RATE OF MIGRATION TO MADRAS CITY 1891—1961.

<i>Year.</i>					<i>Total migrants.</i>	<i>Percentage to the total population.</i>
1891	..	..	..	..	127,172	28.1
1901	..	..	..	..	160,623	31.5
1911	..	..	..	..	173,344	33.4
1921	..	..	..	..	176,500	33.4
1931	..	..	..	..	225,225	34.8
1951	..	..	..	..	574,425	40.5
1961	..	..	..	..	642,828	37.1

Source : Census of India 1961.

In 1961, 69.56 per cent (447,173) of the migrants were from other parts of the State ; 9.23 per cent (59,355) from Andhra Pradesh, 8.68 per cent (55,818) from Kerala, 3.40 per cent (21,829) from Mysore and the balance 9.13 per cent (58,653) from other parts of the union and from outside the country. Based on the projections, the population in the Madras Metropolitan Area will be 4.149 million in 1981 and 5.340 million in 1991.

5.5.5. The goal of all development planning is to strive towards better standards of living for every citizen within the context of available resources. In the industrial sector, Madras City along with Chingleput provided for 48.6 per cent of all employment in the registered factories of the State in 1965. The total number of workers in Madras Metropolitan Area as per 1961 census was estimated to be 23.7 per cent of all employment in the urban areas in Tamil Nadu. Of the total population 1,729,141 of Madras City in 1961, 526,981 were workers. The corresponding figures for the Metropolitan Area 2,341,930 and 73,614 respectively. The sectoral break-up of employment is given below :—

SECTORAL BREAK-UP OF EMPLOYMENT.

Sector.	Madras.		Madras Metropoli- tan area as per cent of urban Tamil Nadu.	Madras Metropoli- tan area as per cent of Union India.
	City.	Metropoli- tan area.		
Total employment	526,981	736,514	23.80	2.8
Primary Sector	7,462	86,046	17.48	..
Secondary Sector	164,592	218,390	20.64	2.5
Tertiary Sector	354,927	432,078	27.99	2.9

The employment in tertiary sector as a whole is higher than in the secondary sector within the city ; within this sector employment in services tops the list with 247,000 workers followed by manufacturing (128,991), trade and commerce (114,000) and Transport (72,000). The growth of employment in the secondary sector in Madras City is of recent origin. The employment in manufacturing industries accounts for most of the total employment. Household industries (13,103) and construction (22,498) are poorly represented.

5.5.6. Madras City has attracted a number of large industries like Transport equipment, electrical machinery and appliances, basic metal industries and more recently chemical and chemical products including rubber, petroleum and petro-chemicals.

5.5.7. There is considerable unemployment and underemployment in the City. Some figures are available regarding unemployment but no data on underemployment is available. As per 1961 census, the number of persons unemployed (i.e. seeking employment and subsequently without employment) is 31,122 persons for Madras City and

47,211 for the city and Chingleput district. Most of these persons are in the age-group of 15 to 34 and this poses a serious problem. The main approaches in improving the economy of the Metropolitan Area therefore are :

(1) Increasing employment and (2) increasing output of goods and services. The second approach could be achieved by fuller capacity utilisation particularly in the secondary sector. This largely depends on National and State policies but at local levels they could be induced by improvement to urban infrastructure. Along with the fuller utilisation of capacity in existing industries, the creation of new industry within the Metropolitan Area is important for achieving both income growth and employment. The Industrial policy has to aim at both balanced regional development to reduce the scale of migration into the city and also stepping up the rate of industrial growth within the Madras Metropolitan Area itself. One more factor to aid production is personnel training and fuller utilisation of manpower. The provision of general and vocational education health services and a variety of urban industrial services is important in the creation of such potential.

5.5.8. The approach to future economic programme is through provision of the required levels of employment. Based on Union Planning Commission's participation rates ; the number of workers within the Metropolitan Area in 1981 and 1991 will be in the order of 1,304 and 1,750 thousands respectively. This would mean additional employment for about 538 and 775 thousands workers will have to be found in the next 10 or 20 years respectively not taking into account the present unemployment. The working population projections for Metropolitan Area are given below :—

THE WORKING POPULATION PROJECTIONS FOR METROPOLITAN AREA :
WORKING POPULATION IN '000.

	<i>Year.</i>			<i>Male.</i>	<i>Female.</i>	<i>Total.</i>
1961	..	..	..	627	110	737
1971	..	..	..	809	167	976
1981	..	..	..	1,044	260	1,304
1991	..	..	..	1,358	393	1,751

Future employment will necessarily have to be created in the secondary and tertiary sectors since employment in primary sector has reached saturation limits and also the extent of agricultural land diminishing due to urban uses. An estimate of distribution of sectoral working Force in Madras Metropolitan Area.

ESTIMATE OF DISTRIBUTION OF SECTORAL WORKING FORCE IN MADRAS
METROPOLITAN AREA (WORKERS IN '000).

<i>Sector.</i>				1961.	1971.	1981.	1991.
Primary	..	..	..	86.0	80.3	74.6	68.8
Secondary	..	..	..	218.4	325.1	490.3	753.6
Tertiary	..	..	..	432.1	570.4	739.5	928.4
Total				736.5	975.8	1,304.4	1,750.8

(PHYSICAL FRAME WORK FOR DEVELOPMENT).

5.5.9. The needs of a doubling population (from 25 lakhs to 50 lakhs) in the course of next 20 years warrants a greater effort in the provision of urban services which at present are functioning far below the desired standards for a large metropolis. The main considerations in defining a metropolitan form are—

(i) Choice—the individual should have the greatest variety of services and facilities readily available.

(ii) personal intersection and participation—it should be possible to provide maximum degree of neighbourliness commensurate with privacy.

(iii) comfort.

(iv) efficiency of environment—particularly for the functioning of economic activity.

(v) growth and adaptability—the urban pattern will necessarily shift and expand and therefore it is of importance whether the new functions will be relatively easy to locate whether growth is achievable with a minimum of control, Central initiative and intervention.

(vi) Imageability—the metropolis should be “imageable”, that is, it should be visually vivid and well structured, its component parts should be easily recognised and easily interrelated.

(vii) Economy in cost—it should be conducive to minimum first cost and minimum generating cost.

No one form can satisfy all the above points. However, comparing and contrasting merits and demerits of various forms, and also studying the trends of development, the concept of Satellite towns linked to major existing radial corridors has been chosen as most suitable, easy of direction and less costly of adoption, for the Madras Metropolitan Area development. The flexibility of the corridor concept allows preservation and utilisation of existing urban centres and tie in future ones along the regional transport routes. Since transportation lines have produced the present pattern of development, the regulation of future developments would be easier; future communication lines can be planned and directed. Each corridor leads to a counter-magnet where important developments are expected or planned. The existing developments along the corridors will be grouped in well organised almost self-sufficient urban nodes with their own employment, housing and commerce. The

possible distribution of population within the city and along the various corridors envisaged in the Metropolitan Area is indicated below :

<i>Area.</i>					<i>Population in lakhs.</i>
Madras City	..	..	..	..	30.0
Ennore-Manali	..	..	..	..	3.0
Minjur	..	..	..	..	2.0
Ambattur	..	..	..	..	3.0
Avadi	..	..	..	..	3.0
Alandur St. Thomas Mount	..	..	..	..	2.0
Tambaram-Pallavaram	..	..	..	..	3.0
On Calcutta Trunk Road	..	..	..	..	2.0
On Poonamallee Road	..	..	..	..	1.0
On Mahabalipuram Road	..	..	..	..	2.0
Rest of the Metropolitan Area ..					2.4
Total					53.4

Note.—The three Satellite Towns of Gummidipoondi, Tiruvellore and Sengundram, outside Madras Metropolitan Area are proposed to be developed initially with a population of one lakh each.

5.5.10. *Land uses* have been classified under the main use categories of residential, commercial, industrial, public and semi-public, recreation and open spaces and transport and communication. The land use break-ups as on 1964 for Metropolitan Area (excluding Madras City) and Madras City alone are given below :—

THE LAND USE BREAK-UPS AS ON 1964 FOR METROPOLITAN AREA
(EXCLUDING MADRAS CITY) AND MADRAS CITY ALONE.

<i>Land-use.</i>	<i>Metropolitan Area (excluding Madras City).</i>		<i>Madras City.</i>		
	<i>Extent in acres.</i>	<i>Percentage to developed area.</i>	<i>Extent in acres.</i>	<i>Percentage to total area.</i>	<i>Percentage to the developed area.</i>
(1)	(2)	(3)	(4)	(5)	(6)
Residential	8,292	19.6	10,571	33.4	38.1
Commercial	305		1,025	3.2	3.7
Industrial	6,255	14.8	1,198	3.8	4.3
Public and Semi Public	4,924	11.6	3,357	10.6	12.1
Open spaces	2,986	7.1	1,074	3.4	3.9
Utility and Services ..	134		274	0.9	1.0
Transport and Communi- cation.	7,227	17.1	5,488	17.3	19.7
Vacant lands	12,220	28.9	4,776	15.0	17.2
Non-urban uses ...	2,17,950	..	3,943	12.4	..

* These uses constitute less than 1 per cent of the developed area. (Source: Directorate of Town Planning.)

5-5-11. George Town has been the centre of commercial activity for the South since the times of the East India Company. All roads diverged from this area in to the hinterland—Mount Road (present Anna Salai) towards south-west, Bangalore Road towards west and Calcutta Road towards north. The subsequent venture of Railway also established its terminal near the Central area. The city grew along these radial roads and railway lines animilating in the process existing small independent settlements. This trend continues even today. The Plan envisages the development of six major urban nodes outside the city proper but close to it along the three-corridors, apart from limited development along Calcutta Trunk road, Poonamallee Road and Lattice Bridge Road. Each major node is designed for a population of 2 to 3 lakhs and will be self-contained units. These nodes would be linked with rapid transit rail systems and Express ways to the city on one side and to the Satellite towns on the other. Amongst themselves the nodes would be connected by both road and rail systems to facilitate intra-urban movement.

5-5-12. The Madras City's population in 1991 is limited to 30 lakhs. The proposed distribution of population will result in the future gross residential density (within the city) of 125 persons per acre and in the urban nodes 50 persons per acre. The development densities in the presently undeveloped areas of the city will have to be very much higher, since most of the lands within the city have developed with low densities. To attain a gross density of 150 to 200 persons per acre all future constructions within the city will have to be multistoreyed structures. The gross residential density of 50 persons per acre for urban nodes works out to an overall density of about 40 persons per acre and would indicate that a good percentage of development even here would have to be in multi-storeys. The proposed land use break up (1991) is given below for city and urban nodes.

<i>Land use.</i>	<i>Madras City.</i>		<i>Urban nodes.</i>	
	<i>Extent (acres).</i>	<i>Percentage to total.</i>	<i>Extent (acres).</i>	<i>Percentage to total.</i>
(1)	(2)	(3)	(4)	(5)
Residential	13,134	40.8	40,880	51.9
Commercial	1,241	3.9	2,330	2.9
Industrial	2,048	6.4	15,200	19.4
Public and Semi-public	5,221	16.2	8,520	10.9
Open spaces	2,911	9.0	11,790	14.9
Transport and Communications	7,585	23.7	*	..
	32,140	100.0	78,690	100.0

* not separately computed.

THE LAND USE STANDARDS PROPOSED IN URBAN NODE DEVELOPMENT ARE:

<i>Item.</i>	<i>Standard.</i>
(1)	(2)
Gross Residential Density	50 persons per acre.
Industrial use	5 acres per 1,000 persons.
Commercial use	1 acre per 1,000 persons.
Public and Semi-public uses	1 acre per 1,000 persons.
Recreations	4 acres per 1,000 persons.

5.5.13. The proposals under land use require that about 45,000 acres of additional land outside the city will have to be brought under development for Residential, Industrial and Commercial uses. The bulk of it will come under public sector. Assuming (undeveloped) land cost at Rs. 10,000 per acre and cost of development at Rs. 40,000 per acre, a minimum of Rs. 150 crores will be required. The cost of development of Satellite towns would involve an outlay of Rs. 33.75 crores. In urban planning, development of new areas for various purposes for growing population is one aspect, renewal of the older parts of the existing urban areas is another aspect. The renewal of the city is always taking place as old buildings are renewed and reconstructed but the process is slow and unrelated to the total environment. The need for initiating comprehensive urban renewal programmes by public authorities to inject new life into the city is therefore realised widely. The areas of George Town, Triplicane, Mylapore and Chintadripet are ripe for renewal. But considering the huge costs involved in such programmes, it is suggested to move with caution and initiate urban renewal programmes, for small areas in these congested localities and later on with the experience gained larger areas can be tackled. A modest and practicable programme of urban renewal costing Rs. 50 crores for a period of 20 years may be taken up. Urban renewal programmes can be made self-paying by investing seed capital initially and revolving the funds and reploughing them on further programmes.

5.5.14. Efficient *Transportation* is a fundamental requirement in metropolitan areas. The preparation of a comprehensive traffic plan to achieve balance among various nodes and provide for safe, convenient and efficient movement must necessarily take into account present traffic movements, its characteristics, population growth, future land use and future desire lines. Such a study for Madras Metropolitan Area has already been undertaken by the Directorate of Town Planning and recommendations have been submitted to Government. Consequent on this study report, the Railways are examining the feasibility of the mass transport system suggested in the report. The main road system consist of five radiating roads from the centre of the city. They are—

- (i) the recently constructed Ennore Highway.
- (ii) the Calcutta Trunk Road—N.H. 5.
- (iii) the Poonamallee High Road—N.H. 4.
- (iv) the Great Southern Trunk Road—N.H. 45.
- (v) the South Beach Road.

The three National Highways—N.H. 5 leading to Vijayawada and beyond to Calcutta N.H. 4 leading to Cochin, Bangalore and Bombay, N.H. 45 leading to Tiruchirappalli and beyond to Madurai and Kanyakumari are roads of regional importance. There is a net work of distribution roads, connecting these five roads. But this net work is inadequate to promote efficiency traffic flow. All kinds of traffic (long and short journeys, local), and all types of vehicles ranging from hand pulled rickshaw and cart to lorries and heavy travels use these roads. These cause delays and accidents too.

5.5.15. Mass transportation services are provided by buses and suburban trains. In Madras Railways play only a secondary role, as seen from 9.70 lakhs and 2.60 lakhs of persons being transported by Buses and Railways respectively in the city. Both the bus and train systems operate under overcrowded conditions. The doubling of the present population by 1991 would involve a quadruple increase in the number of motor vehicles. The commuters number is estimated to increase from 10 lakhs to 30 lakhs a day by 1991 and this warrants establishment of a balance between various systems of mass transport. An analysis of interzonal movements has indicated heavy movements along the following six corridors :

(1) North south (Eastern) Corridor running approximately parallel to the coast connecting Ennore-Manali Area to Thiruvanniyur.

(2) North-south (Central) Corridor following the Mount Road (Anna Salai).

(3) North-south (Western) Corridor connecting the Annanagar and Ashok Nagar Neighbourhood Complexes.

(4) East-west (Central) Corridor running from George Town to Poonamallee High Road-Anna Nagar area.

(5) The East-west (Northern) Corridor running from Royapuram to Villivakkam through Perambur.

(6) The East-west Corridor (South) running between Mylapore-T Nagar-Kodambakkam.

5.5.16. The following major proposals are outlined on a preliminary assessment of travel characteristic based on the future form of development contemplated in the Madras Metropolitan Area.

(i) Electrification of Madras-Gummidipoondi and Madras-Tiruvallur sections with separate tracks and special rolling stock for suburban traffic.

(ii) Extension of double tracks up to Chingleput in the first stage and conversion of suburban metregauge to broadgauge line in next stage.

(iii) Construction of new Express ways parallel to Madras-Gummidipoondi and Madras-Tiruvallur rail line, the former to connect Calcutta trunk road and the latter to connect Bangalore Road.

(iv) Conversion of Mount Road outside the city limits up to Chingleput to Express way standards.

(v) Major redesign of the three national Highways within the city for segregating through traffic from local traffic.

(vi) Construction of a rapid transit rail line along the highest density corridor identified. This could be in the form of an underground "metro" in the built up areas and surface railway outside.

(vii) Construction of Ring railway to connect St. Thomas Mount with Thiruvottiyur via Ambattur and Manali to facilitate movement between new urban nodes.

(viii) Construction of three Ring roads to connect the major highways (existing and planned).

(ix) Replacement of all major level crossings over railways with grade separators.

(x) Improving terminal facilities both at Central and Egmore and construction of bus terminals with exchange facilities.

Annexure III shows the distance and number of trips in Travel corridors.

5.5.17. *Housing* shortage in the city is revealed by the figures of Census. 1961 as 350,943 house holds, and 278,500 dwelling units in 147,694 houses. Not all these houses were fit for dwellings. 59,573 dwellings were slum dwellings. Housing condition and standard of houses in the rest of the Metropolitan area is worse and shortage area chronic. The shortage in 1971 is estimated at 3.78 dwelling units. The existing shortage of dwellings and the future requirements for the next 20 years are indicated below.

DWELLING NEEDS OF MADRAS METROPOLITAN AREA—1971-1991.

<i>Year.</i>	<i>Estimated number of households.</i>	<i>Stock of dwelling units.</i>	<i>Anticipated shortage of dwelling units..</i>
(1)	(2)	(3)	(4)
(FIGURES IN LAKHS.)			
1971	6.17	2.39	3.78.
1976	7.49	2.98	4.51
1981	8.61	3.67	4.94
1986	9.84	4.43	5.41
1991	11.20	5.24	5.96

5.5.18. There were 300 slums in the city prior to 1954 ; the number increased to 548 in 1961 (containing 4.12 lakhs persons) ; and 650 prior to 1969 and the latest figure exceed 1,000 slums ; almost sheltering a little less than one third the city's population. The State Government have taken a decision to clear all the existing slums within the city by

1977 at estimated cost Rs. 40 crores. The recently set up Tamil Nadu Slum Clearance Board is progressing with the slum clearance work through planned tenements in three to four storeyed structures.

5.5.19. *Water-supply and Sewerage* are essential amenities in city for safeguarding health of citizens as well for industrial uses too. The Madras Metropolitan Plan 1971-1991 has worked out the requirements of water-supply based on standards of 45 g.c.d. and 50 g.c.d. for domestic supply and 10 g.c.d. and 15 g.c.d. for industrial supply for the years 1971 to 1981 and 1981 to 1991 and arrived at the following :

ESTIMATED PRESENT AND FUTURE WATER DEMANDS WITHIN MADRAS METROPOLITAN AREA.

<i>Year.</i>	<i>Urban population</i>	<i>Water requirements</i>
(1)	(2)	(3)
	(IN MILLION)	(IN MGD).
1971	2.78	153.0
1981	3.70	204.0
1991	4.81	313.0

5.5.20. The sewerage system has to be suitably redesigned to deal with the effluents based on a water-supply of 55 mgd. in 1981 and 65 mgd. in 1991, for a population of 30 lakhs against 23 lakhs.

5.5.21. The Corporation of Madras has evolved a scheme for provision of storm water drains at an estimated cost Rs. 20 crores.

5.5.22. *Education, medical and social facilities* form the essential base for promoting economic growth in the city. The Madras Metropolitan Plan 1971-1991 has dealt with these aspects and estimated the future requirements and rough costs.

5.5.23. *Recreational facilities.*—There is greater need for providing adequate recreational facilities as parks, playgrounds and open spaces for the benefit of all levels of population from toddlers to old persons in urban areas since with the expansion of urban areas the country side recedes and one has to travel long distances to enjoy pure, unpolluted and rural surroundings. Open spaces and parks apart from recreation also serve as living space in purifying the air, which in city often gets polluted. There are barely 87 parks and 37 playgrounds for the entire city most of them small and inconveniently located. The total area covered is only 300 acres, which works out to 1/7th of an acre per 1,000 persons. These are the following, only three metropolitan level open spaces in the city:—

1. the area behind the Corporation offices consisting of a stadium, zoological gardens and Mylady's garden,
2. the Guindy Park near Raj Bhavan, and
3. the Beach extending over $4\frac{1}{2}$ miles along the coast line.

The only place of considerable value to the open space starved city at present is the beach ; but here too non-recreational uses by way of encroachments by fisherman, etc., are found. The beach needs to be kept clear of encroachments and better landscape treatment given for people to enjoy nature's beauty at the sea side.

5.5.24. The availability and requirements of open spaces in Madras Metropolitan Area are as follows :—

AVAILABILITY AND REQUIREMENTS OF OPEN SPACES IN MADRAS
METROPOLITAN AREA.

Category.	Available		Total needs, 1991 extent.
	Number.	Extent.	
(1)	(2)	(3)	(4)
	(Extent in acres).		
Local parks, urban parks	124	300	10,000*
Metropolitan parks and open spaces ..	3	940	9,060†
Regional open spaces	..	..	5,000
			24,060

Note.—Needs based on

*=2 acres per 1,000 population.

†=200 acres for every 1,00,000 population.

It is suggested that an amount of Rs. 10 crores may be provided for recreational purposes within the next 20 years.

5.5.25. *Other services and utilities* deserve special consideration here not only for the reason that they are important but also because significant results to improve the general environmental qualities of the city could be secured by comparatively small attention to these services. These are :—

1. Removal of cattle, poultry and other animals outside urban area.
2. Improving garbage collection and disposal, and
3. Beautification of places resorted to by a large body of people.
4. Control of advertisement and hoardings.

Cattle often roaming on roads within the city cause inconvenience to pedestrians, risks to children and interferes with vehicular movement, obstructing smooth flow of traffic. Necessary legislation to ban cattle effectively from city need be introduced. Garbage collection and disposal is the responsibility of the corporation within the city and the respective Local Authorities in the metropolitan area outside the city. Rubbish in the city is being cleared by carts and lorries. From considerations of health, it is felt

necessary to mechanise the cleaning services for providing quick and effective service in metropolitan city like Madras. Initiation of mechanical handling may cost about Rs. 5 crores.

5.5.26. To make city life pleasing to senses, trees and flowers, water sheets and fountains, statues and monuments are essential. Aesthetics have admirable effects on human senses. Moneys spent on beautification schemes in cities, apart from indirect influence of pleasing people and softening them, also invite tourists which results in earnings. The improvement works in Cooum now in progress ; on completion, will present its landscaped banks as Central attraction for the city. The implementation of the recommendations of the Landscape Committee constituted by Government will render the city beautiful and attractive. An annual provision of Rs. 25 lakhs towards beautification schemes has been recommended in the Plan.

5.5.27. *Advertisements and hoardings* in Madras City remains an almost untouched subject. They are essential for trade and publicity. But uncontrolled and unregulated exhibits on roads in huge size and bold lettered and often pictured advertisements distract attention of vehicle drivers causing risks of accidents ; often powerful illumination causes greater risks and affects the eyes. Obscene advertisements are no exceptions. Hence it is felt necessary to bring in legislation to regulate size, mode of presentation, level of exhibit, etc., of Hoardings and advertisements within the city area.

FINANCE.

5.5.28. The approximate overall costs of the various sectors of development envisaged in the Madras Metropolitan Area are given in Table 36. The ten-year break up of the programmes relating to Land Development and Housing for the period 1974 to 1984 is indicated in Table 37.

TABLE 36.

SUMMARY OF FINANCES REQUIRED FOR THE MAJOR
URBAN DEVELOPMENT SCHEMES IN THE MADRAS METROPOLITAN
AREA IN 20 YEARS.

[illegible]

5-5-29. Large outlays are required for the plan implementation. Apart from both Central and State Government resources, Corporation resources and external resources from financial institutions as the Life Insurance Corporation, HUDCO and Nationalised Banks and Corporatives have to be gone in. The possibilities of enhancing the revenues of the Corporation and also the levy and collection of development charges have to be explored. It may also be recommended to the Union Government to examine the possibility of securing financial assistance from International institutions such as the World Bank and United Nations.

5-5-30. TRAVEL CORRIDORS IN THE MADRAS CITY.

<i>Name of corridor.</i>	<i>Distance.</i>	<i>Present number of trips.</i>
	KMS.	
I. North-south eastern corridor following approximately the Buckingham Canal alignment and passing through Ennore, Kathivakkam, Tiruvottiyur, Royapuram, Tondiarpet, George Town, Chepauk, Triplicane, Santhome, Mylapore, Mandaveli, Adyar and Tiruvanmiyur	38.8	5,46,886
II. North-south central corridor following approximately the alignment of the Mount Road and extending on either side.	33.6	2,89,163
III. East-west northern corridor following approximately the alignment of the broad gauge railway line to Bombay from approximately Royapuram area westwards to Villivakkam, Ambattur, Avadi, etc.	38	2,28,136
IV. East-west central corridor following approximately the Great Western Trunk road and touching George town, Anna Nagar and Poonamallee	28	3,02,464
V. East-south west corridor following approximately the alignment of the present suburban electric line and the Grand Southern Trunk road	28.8	2,25,700
VI. The inner circular corridor following approximately the periphery of the urban area and touching Manali complex, Anna Nagar, Ashok Nagar and Shastri Nagar	33.6	2,30,300
VII. The intermediate circular corridor approximately touching Ennore, Red Hills, Ambattur, Poonamallee, Meenambakkam and Muthukadu	52.8	5,600
VIII. The outer circular corridor approximately touching Minjur, Avadi, Tambaram and Injambakkam.	76.8	2,200

5.6. Ring Towns--and new Towns .

5.6.1. Development of ring towns around larger cities is essential strategy for regulating the future growth of such cities and diverting population concentrations to these new towns.

5.6.2. England was the first country in the world to adventure upon the development of New Towns based on the Greater London Plan broughtout by Abercrombie. These towns are ring towns centred around city of London whose developments are designed with the object of decentralising London's growth and taking in the spillover population of the Metropolitan city. These towns have come into existence and they are reported to be an overall success. Definitely these towns have substantially assisted in the decentralisation of the London city.

5.6.3. The Madras Metropolitan Area extends over 450 square miles, comprising of present Madras city (50 sq. miles) and adjoining area in Chingleput district, its population in 1971 was 37 lakhs. Its' anticipated population in 1991 is 53.4 lakhs. The regulation of its' future growth is to be effected in three tiers—

(i) restructuring the present city to take in a population of 30 lakhs;

(ii) creation of six urban nodes (each of 2 to 3 lakhs population) along the existing three main transportation corridors. (North, west and south) ;

(iii) developing three ring towns along the three main corridors away from and outside the metropolitan area.

5.6.4. The restructuring of the present city will involve reallocation of land uses and assigning density zoning for the whole city. Urban renewal programmes for conjested central areas will have to be taken up. The land use pattern will be suitably modified bearing in mind avoidance of imbalance in flow of traffic within the city. New Industries will be discouraged within the city. The six urban nodes proposed in the Metropolitan area will be developed and strengthened to absorb the increasing population by adequate planning with incentives for development. Also limited development will be permitted along Calcutta Trunk Road, Poonamallee road and Mahabalipuram road. The three ring towns will be self-contained and self-sustaining with an initial population of one lakh. These towns are so designed to have their own viable economic base for providing employment for the population and also to afford opportunities for healthy and comfortable living. The most essential function of these towns is to divert and absorb the present continuous flow of imigrants into the metropolis and also a possible dispersal of population from the

city, so as to keep the development in the city within manageable magnitude. The Metropolitan Area population of 53.4 lakhs in 1991 has been proposed to be distributed as follows :—

TABLE 38.

**DISTRIBUTION OF POPULATION IN THE METROPOLITAN
AREA IN 1991.**

<i>Area.</i>	<i>Population.</i> (IN LAKHS.)
Madras City	30.0
Ennore-Manali	3.0
Minjur	2.0
Ambattur	3.0
Avadi	3.0
Alandur.St. Thomas Mount	2.0
Tambaram-Pallavaram	3.0
On Calcutta Trunk Road	2.0
On Poonamallee Road	1.0
On Mahabalipuram Road	2.0
Rest of the Metropolitan Area	2.4
Metropolitan—Total ..	53.4

SITES FOR RING TOWNS.

5-6-5. The three Ring Towns chosen along the three main corridors radiating from Madras are—

- (1) Tiruvallur on the west,
- (2) Gummidipoondi on the north, and
- (3) Sengundram on the south.

5-6-6. *Tiruvallur* is an existing municipal town situated 40 km. west of Madras on the Madras-Bangalore Railway and Madras-Tirupathi Road. Its population as per 1971 census is 23,450. At present it has a functional industrial estate for electrical goods, a stoneware pipe industry, an earth moving plant, an electrical testing laboratory and adequate potential for developing a multiple industrial base. The developments are scattered in the present urban area and large extends are left undeveloped. There is good scope for future developments on both sides of the river cooym, the road to Sriperumbudur can form the base line for development. Considering the scattered nature of the present development in the town the ring town has been designed for a population of 1.5 lakhs. The location of the town on the main Madas-Bangalore Rail route and the Madras-Tirupathi Road is of primary importance and enhances its potential development value.

5-6-7. *Gummidipoondi* is a rural settlement situated 40 kms. north of Madras on the Madras-Calcutta Railway and the Grand Northern Trunk Road. It had a population of 7,249 in 1961. Signs of urban character are just now noticed in its development. At

present there is a major pipe manufacturing factory operating at Elavoor, 4 kms. north of the town. The siting of the town on the Madras-Calcutta Rail route and on the National Highway namely, the Grand Northern Trunk Road is of potential value for its future developments. There is quite good scope for developing this town to that of a medium size with an industrial base. This ring town is designed to take in a population of one lakh. The development plan envisages consolidating the three scattered development areas, namely Old Gummidipoondi, New Gummidipoondi and Paleswaram Kandigai to form the new town.

5-6-8. *Sengundram* is a virgin site for a ring town, situated 40 kms. south of Madras (and 15 km. north of Chingleput) in between the Grand Southern Trunk Road and Madras Tiruchirappalli Railway. There are large stretches of continuous forest land, mostly of shrub jungle in the area and this factor has been one of the chief considerations, for choice of the site. Being undeveloped land, there is good scope for planning this ring town as a new town with no barriers; the existing communication lines bordering the site are added advantage for the development of the ring town. This ring town is intended to take in one lakh of population.

5-6-9. The legal organ for notification and implementation of these ring town development plans lies in the Tamil Nadu Town and Country Planning Act 1971. As provided in the above Act, New Town Development Authorities will be constituted for development of these towns and they will also be vested with powers to control the developments beyond the New Town boundaries up to a radius of 5 miles from its limits. The New Town developments require at their initial stages some incentives for attracting entrepreneurs and people to ensure success in their attempts. Incentives can be in various forms such as concession on land allocation, erection of buildings, technical assistance and information, taxes, financial assistance such as loans, etc.

5-6-10. Acquiring of land and providing essential infrastructure facilities in development of Ring towns, which serve as the basis, involves heavy investment of money; such huge money cannot be expected entirely from Government finances. The possible financial assistances from institutions as the Housing and Urban Development Corporation, Life Insurance Corporation will have to be availed of in addition to whatever initial capital that could be obtained from Government (both Centre and State) resources. The amounts should be invested on procuring lands and developing then allotting them for various uses and selling portions of developed land to public institutions and private individuals. On a revolving principle, the sale proceeds should be reinvested or ploughed back for development.

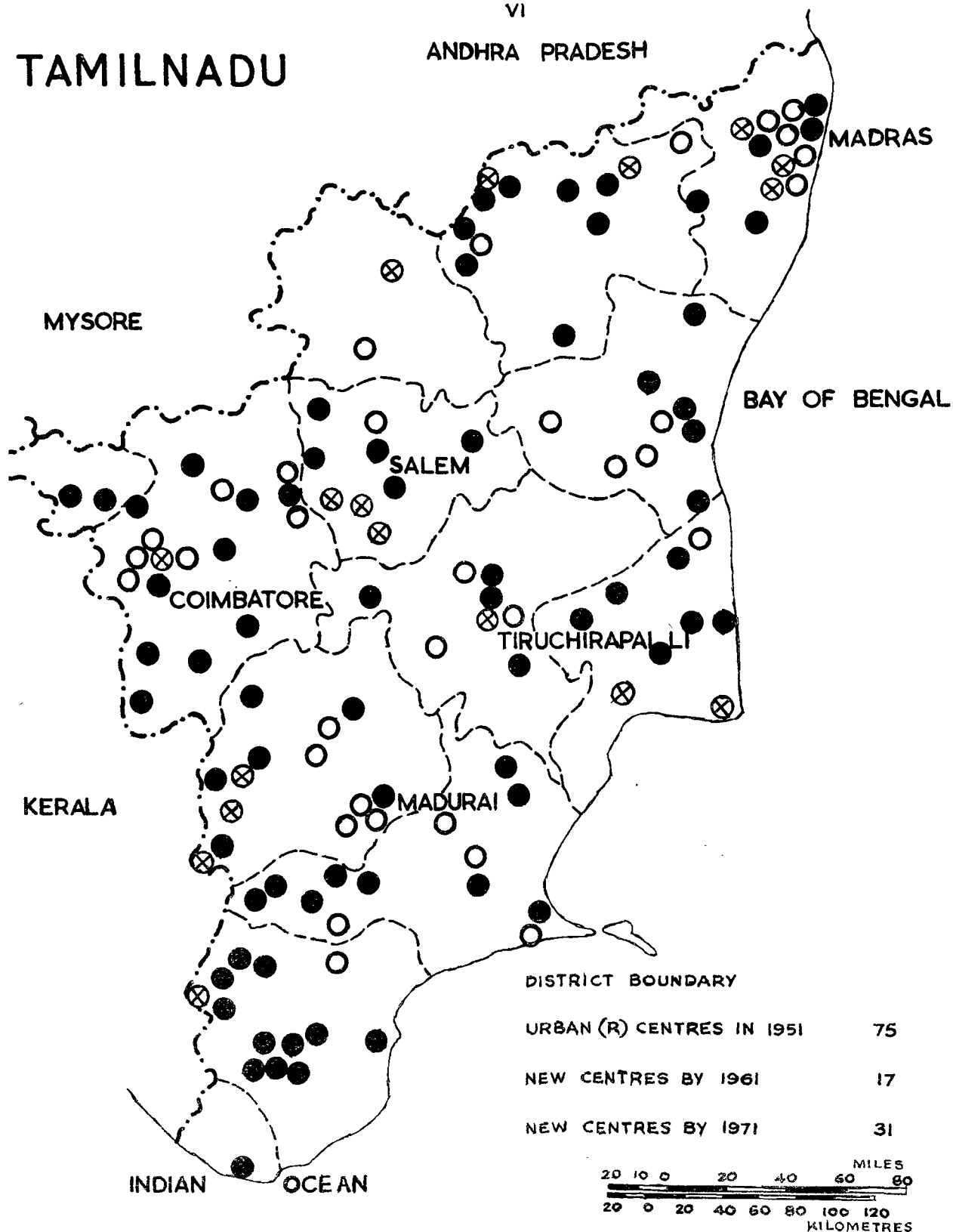
5.6.11. The development of these towns are to be phased (say in 5 year phasing) and the estimated cost of development is to be distributed among the phases. It is estimated that seed capital investments of Rs. 160 lakhs for each town Sengundram, Gummidipoondi will yield 433 lakhs total surplus each over the entire period of operation (20 years). Similarly in the case of Tiruvallur which is designed for 1.5 lakhs population, a seed capital investment of Rs. 240 lakhs will be required. This return will be more than sufficient to pay back the seed capital with interest.

5.6.12. Similar Ring towns and New Towns will be required for larger cities as Madurai, Coimbatore, Salem and Tiruchirappalli.

TAMILNADU

VI
ANDHRA PRADESH

1



CHRONOLOGICAL DISTRIBUTION OF URBAN (R) CENTRES 1951 - 1971

VII

TAMILNADU

ANDHRA PRADESH

2

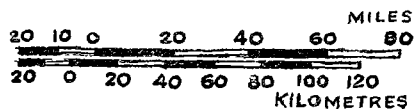
MYSORE

BAY OF BENGAL

KERALA

INDIAN OCEAN

AREAS WHICH DO NOT HAVE URBAN (R) CENTRES



PREDOMINANTLY NON-URBAN AREAS - 1971

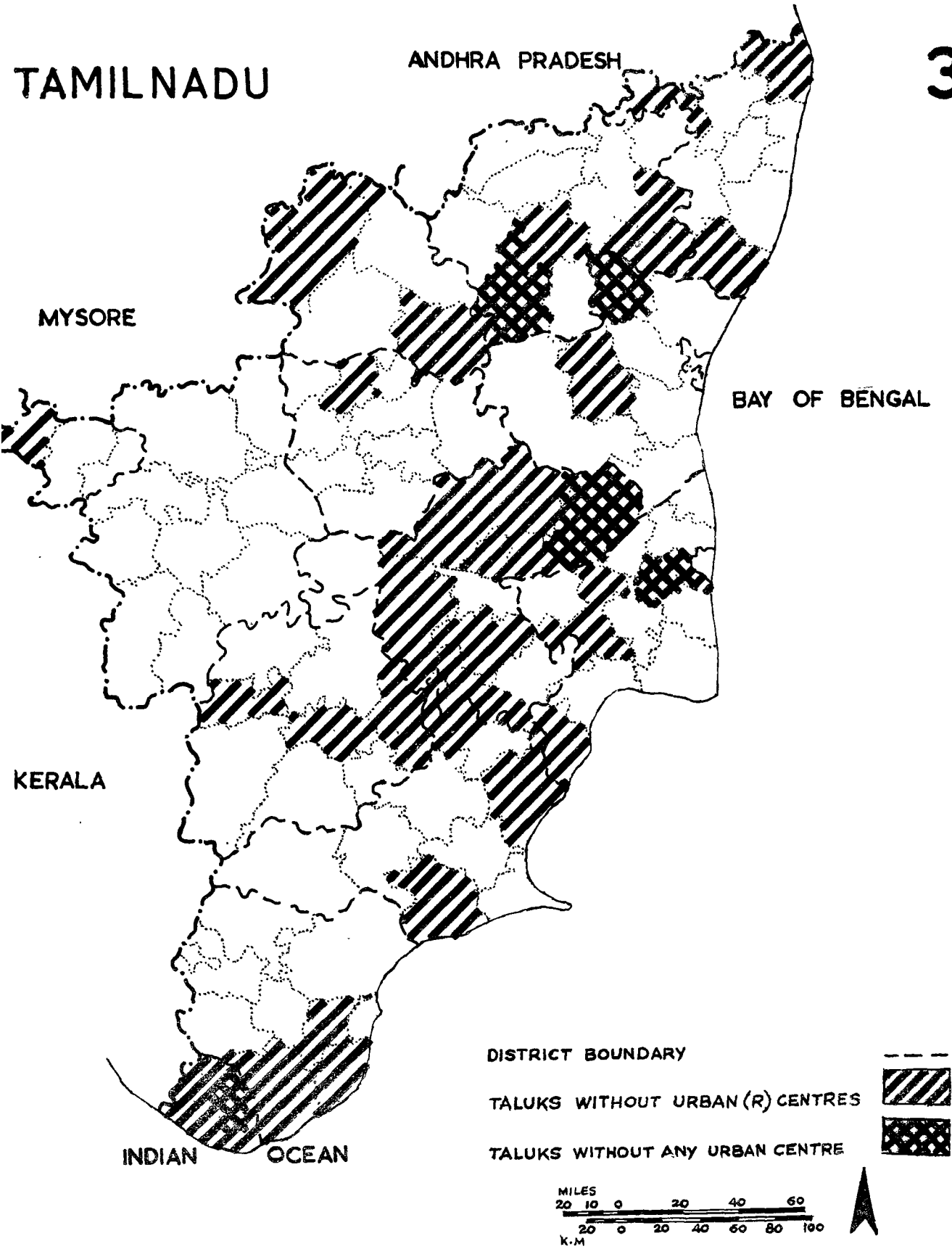
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P. Z. P., C. S. O., MADRAS. 5.

TAMILNADU

ANDHRA PRADESH

3

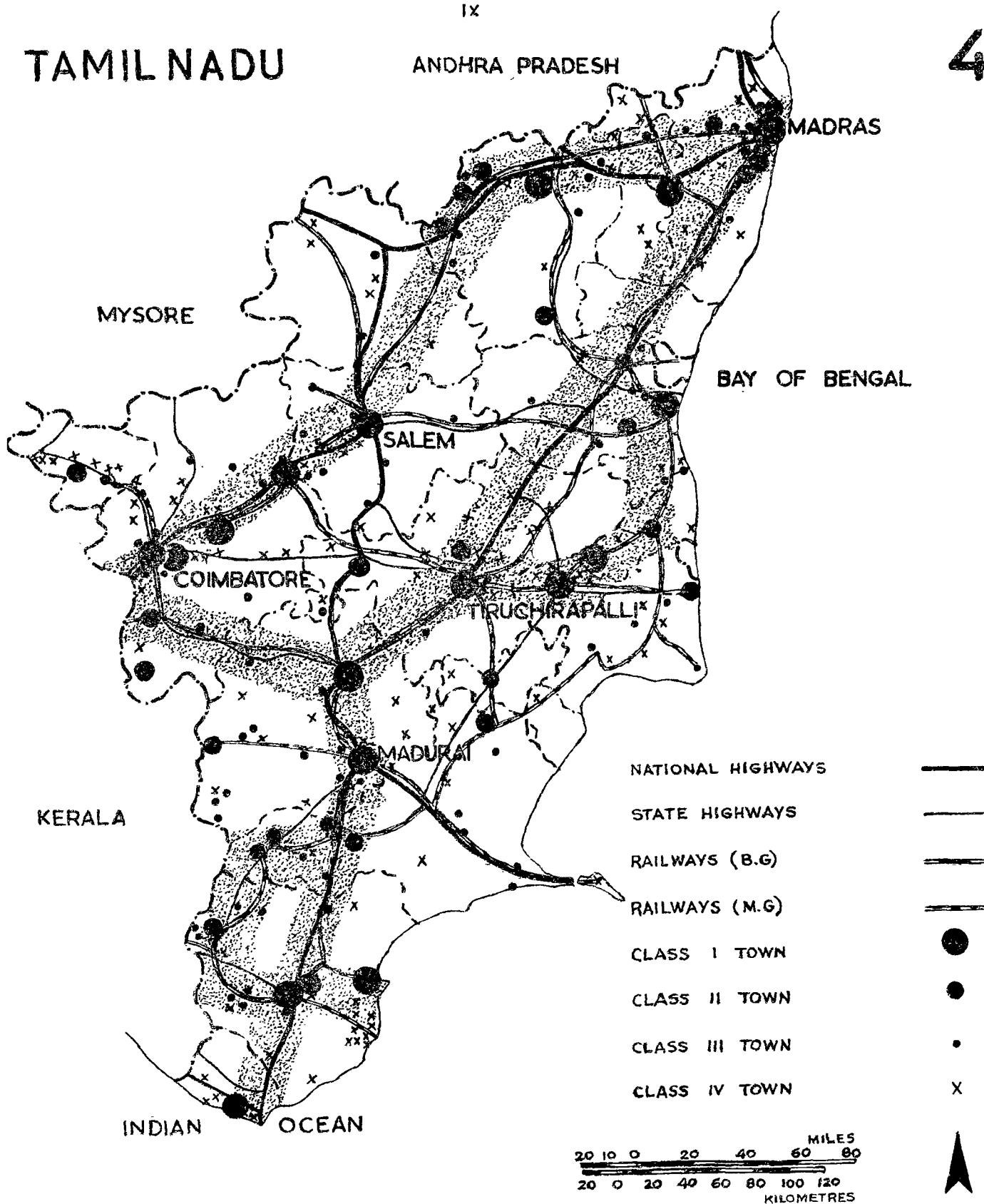


LEAST URBANISED TALUKS OF TAMILNADU - 1971

TAMIL NADU

ANDHRA PRADESH

4



MAIN TRANSPORTATION AND URBAN CORRIDORS

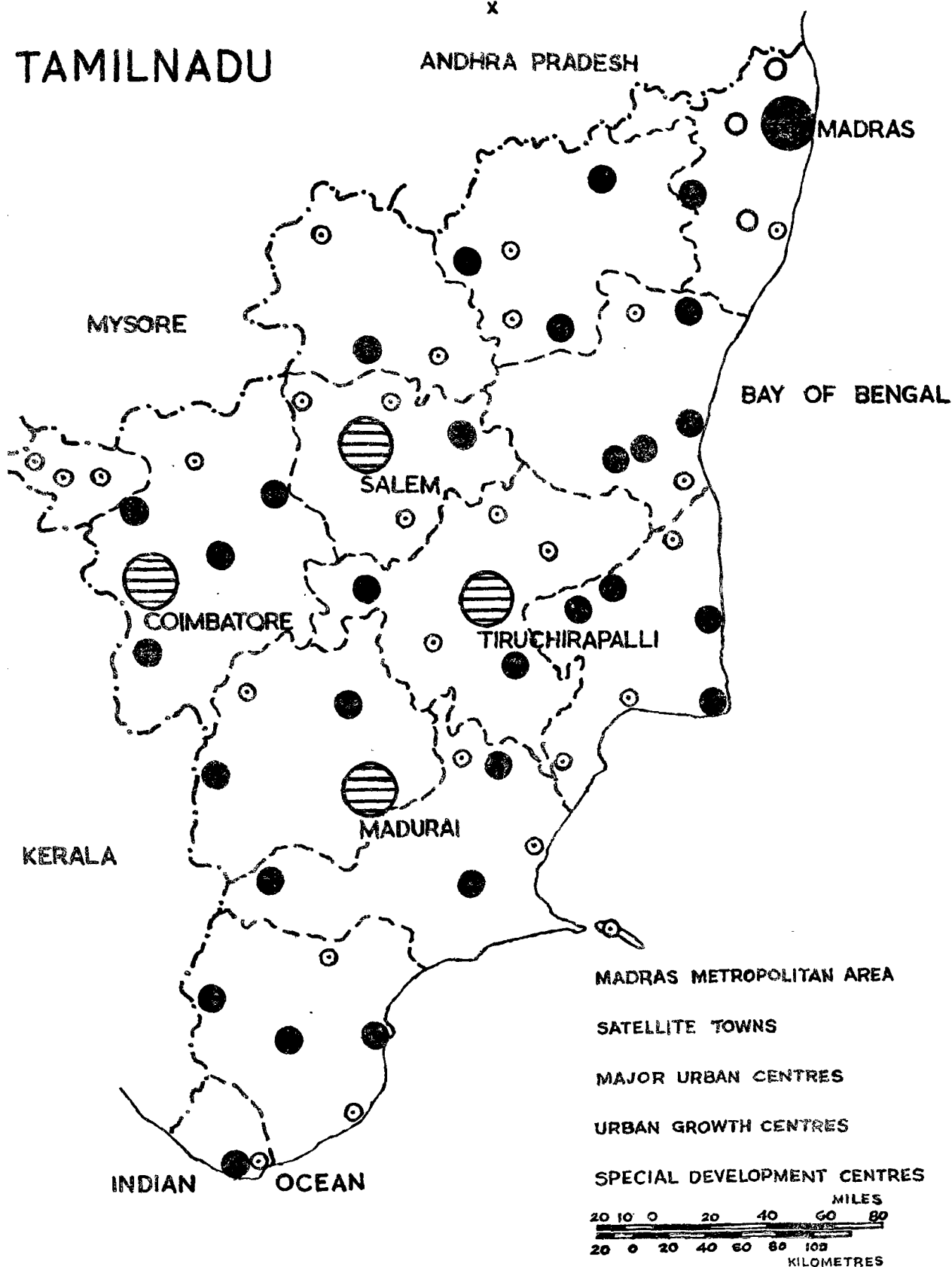
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P.Z.P., C.S.O., MADRAS. 5

TAMILNADU

ANDHRA PRADESH

5



URBAN CENTRES FOR PREFERENTIAL GROWTH

REG. No.6/5'73-1005.

REPRODUCED FROM THE INDENTOR'S ORIGINAL

P.Z.P., C.S.O; MADRAS.5

6. CHAPTER VI.

6.1. REGIONAL PLANNING

6.1.1. It may be observed that in India, so far, our planning and development efforts have been influenced by three elements, namely:—

- (1) Planning at a macro-level,
- (2) Schematic budgets, and
- (3) Special programmes to meet particular situations.

The concept of blocks for administration of the community development programmes still serve as valid reference points for development plans but their location and area does not appear to have been scientifically determined on the basis of their individual specific needs and spatial characteristics. The effort of Regional Planning in our country in a spatial context is most essential in view of ecological differences from area to area. This exercise implies a methodology involving the hierarchy of settlements and functions—the gaps to be filled in and social facilities to be provided in relation to population thresholds. It is high time that we develop technique of micro-level planning which would improve its operational efficiency at that level and, in the process, lead to greater articulation of the economy. Our planners have begun to realise the need for optimal location of investment with a view to narrow the cleavage between developed and backward areas. Thus, the spatial dimension is gradually gaining equal importance with the other known dimensions of development, planning, namely, activity sectors and time-horizon. Spatial planning of special facilities is of utmost importance to countries, as ours, engaged in the task of effecting socio-economic change.

6.1.2. All our national plans recognised the need for integrated area development. The first plan indicated the desire of planners to draw developmental programmes in terms of regions determined by physical, economic and administrative factors. The plan also mentions that, to a great extent development plans at the district level are essential, but they may not serve useful if they do not form part of well-coordinated regional plans. The approaches to many regional plans are varied, for example, the Damodar Valley Corporation carried out diagnostic surveys for various purposes, whereas the studies of techno-economic development have different bases. Such studies, however, do not answer the important question in Regional Planning, namely, the specific location of particular activity, social, economic. Problems of regional development are emphasised for first time in the Fourth Plan. In a majority of development programmes, the local, block, taluk, district and State levels of planning have spatial dimensions. They may be interlinked in some cases and distinct in others. In interlinked levels (e.g. in the provision of social facilities) the Regional Planning should be integrated with State Planning. The tasks of Regional Planning vary from country to country; for instance, in England it is observed that the basic task of regional planning are not so much concerned with the tasks of development as with the tasks of adjustment and reconciliation. The British (development) issues gather around two major themes, namely, “the use of land” and “the location of Employment and

Population". The Regional planning tasks in England are not solely related to development because the country is already well developed economically, with full employment and high standards of provision of social services. This is equally true of all highly developed countries. The tasks of regional planning in India are mainly related to the aspects of development, growth and balance rather than adjustment. Thus we see that the building of social infrastructure for the development of and investment on economic activities and creation of employment opportunities remain the major tasks in our country. This is generally true of all undeveloped countries. Our country is undergoing a period of transition from a predominantly agrarian economy to an industrial one. The general consequences of such a transition is a deterioration in the standards of social facilities due to the attendant process of rapid urbanisation. Therefore regional planning in our country should aim at creating a special organisational frame work capable of sustaining the strains of transition. The problems can be grouped under two categories, namely,—

1. Those related to existing imbalances ; and
2. those related to future development.

The imbalances are of two types, as functional imbalances and locational imbalances ; the removal of functional and locational imbalances, will prevent further deterioration in the standards of activities, social or economic. This balanced situation will provide a useful base for future development. The history of the region has an important role in the development of any region. It is observed that some regions or some areas within a region tend to develop at the cost of other region or other areas within the region. An important regional centre dominates the regions and tends to attract high quality resources, both natural and human, not only from rural areas but also from other towns of the region. The major financial, economic, administrative and cultural institutions get located in it. Contrary to this, the hinterland of such a centre tends to diminish in its importance relative to the central town due to its inability to make adjustment and its peripheral areas, dividing the region into modern and traditional sectors tend to resist the integration necessary for new planning programmes. Therefore it becomes essential to reduce as much as possible the degree of functional friction between highly developed and its relatively underdeveloped dependent area. Regional Planning assists in reducing this friction between highly developed and its relatively underdeveloped dependent area, by regulating development activities in an orderly manner. Location and development of intermediate growth centres of varying importance in between metro politan city and farm encircled villages is considered as an effective method for solving the imbalanced development. In this settlement pattern, the region's population and activities are organised in settlement of different characteristics and sizes thus forming a system of a web of socio-economic transactions and communications among them. The ultimate result of such planning will be balanced distribution of population and economic activity.

6.1.3. The Tamil Nadu Government realised that the problems caused by the steady growth of population, industrialisation and rapid urbanisation could be tackled only by an integrated Regional Plan where physical planning will fulfil the needs of economic development. The Government decided that the Directorate of Town Planning should undertake the formulation of development, plans at three tiers—Regional, Urban and local

levels. Considering the wider implications and needs of economic Planning the Town and Country Planning Bill, 1971 was drafted and passed by the two Houses of Legislature and the Act has secured the assent of the President of India. The Directorate of Town Planning is proceeding with the formulation of Regional Plans.

6.1.4. Regions can be broadly identified under any of the following methods :—

1. Contiguous areas with similar characteristics grouped together—such as Agro-Climatic or economically homogenous.
2. Areas around model development—such as prevalence of large urban or metropolitan centres with pronounced urban activity.
3. Contiguous areas grouped together for administrative convenience.

Based on the above criteria, the State has been delineated into eight regions. The Regional Planning concept is a new one and its objectives are better understood. But no set methodology has been evolved for its formulation. The methodology adopted by the Directorate of Town Planning in formulation of Regional Plans is given below under three main heads :—

- I. Regional studies ;
- II. Regional analysis and strategy ;
- III. Physical Development plan.

6.1.5. *Regional studies*.—are organised under the following main classifications : —

- (i) Population.
- (ii) Resources.
- (iii) Land utilisation.
- (iv) Industries.
- (v) Tertiary sector activities.
- (vi) Energy supplies.
- (vii) Transport and Communication.
- (viii) Regional economy.
- (ix) Services.
- (x) Developmental activity in the region.

6.1.6. REGIONAL ANALYSIS AND STRATEGY.

The analysis from the above studies forms the base for evolving a regional strategy and the strategy will specify the policies for—

1. Population and distribution of population among urban and rural sectors.
2. Spatial distribution of population and establishment of a hierarchy of settlements.
3. Increasing rate of economic growth and employment mobilisation of resources.
4. Land utilisation.
5. Communication.
6. Integrated water services.
7. Housing, Health, Education and other social services.

While evolving the strategy, a twenty to thirty years perspective may be kept in view and the various Government and developmental agencies should be discussed and a co-ordinated policy laid down. The general strategy for land utilisation, communication, water services housing, health and educational services will also be specified and these will further be, elaborated and translated into a physical plan.

6.1.7. FORMULATION OF PHYSICAL DEVELOPMENT PLAN FOR REGION.

For translating as far as possible the Regional strategy into action, a physical development plan is necessary ; this plan will facilitate action programmes inclusive of physical and financial targets.

• The contents of such a physical plan will be—

1. *The spatial pattern of distribution of settlements.*—All existing urban settlements with their present and future population, location of new towns and large scale expansion of existing towns and groups of villages with growth potentials will form part of this plan and areas requiring formulation of master plans or sub-regional plans will be identified therein.

2. *Land utilisation.*—The plan will indicate the future land use in the region under following methods—

A. Agricultural land—

(a) wet ; (b) dry and (c) special areas of intensive agricultural development.

B. Plantation.

C. Forests.

D. Mining and Quarrying.

E. Industry.

F. Recreation.

G. Large institutional uses.

3. *Communication net work.*—To facilitate efficient circulation and movement of men and materials, improvements to existing system and new links will be indicated.

4. *Essential and major services.*—Levels of services such as health, education, post, telephone and telegraph and fire and police stations proposed in different parts of the region will be indicated.

5. *Investments and programming.*—Projects for regional growth and economy will require high level investments both public and private. The infrastructure that will be needed for the growing population have to be adequately provided; the present deficiencies in amenities are also to be made good from out of public investments. The estimates and financial implications as also programming of the developments will be furnished. Fixing priorities is very important for enabling decisions on provision of infrastructures and initiating advance actions. A development programme must have its objective to achieve the optimum sequence of development in the light of both socio-economic and planning targets.

6.1.8. Following annexure—gives the eight delineated regions of the State.

6.1.8. EIGHT PLANNING REGIONS OF TAMIL NADU.

1. MADRAS-CHINGLEPUT REGION.

Consists of the highly urbanised Madras City Metropolitan Area, the whole Chingleput district, the taluks of Arkonam, Cheyyar, Wandiwash of North Arcot district and taluks of Gingee and Tindivanam of the South Arcot district.

2. VELLORE-DHARMAPURI REGION.

Consists of the Area covered by the North Arcot district excluding the taluks of Arkonam, Cheyyar and Wandiwash and the whole Dharmapuri district.

3. SALEM-CUDDALORE REGION.

Consists of the areas covered by the South Arcot district, excluding the taluks Gingee and Tindivanam and Chidambaram, the whole Salem district and the Perambalur and Udayarpalayam taluks of Tiruchirappalli district.

4. COIMBATORE-NILGIRIS REGION.

Consists of the whole Nilgiris district, the whole of Coimbatore district and Karur taluk of Tiruchirappalli district.

5. TIRUCHIRAPPALLI-THANJAVUR REGION.

Consists of the areas covered by Tiruchirappalli district (excluding the taluks Udayarpalayam, Perambalur, Karur, Alangudi and Thirumayam) the areas covered by Thanjavur district (excluding Aranthangi taluk) and the Chidambaram taluk of South Arcot.

6. MADURAI REGION.

Consists of the whole district of Madurai and the taluks of Srivilliputhur, Sattur, of Ramanathapuram district.

7. RAMANATHAPURAM REGION.

Consists of the areas of Ramanathapuram district (excluding the taluks of Srivilliputhur and Sattur), the taluks of Alangudi and Thirumayam of Tiruchirappalli district and Aranthangi taluk of Thanjavur district.

8. TIRUNELVELI-KANYAKUMARI REGION.

Consists of the whole district of Tirunelveli and the whole district of Kanyakumari.

6.2. TOURISM IN REGIONAL DEVELOPMENT.

6.2.1. Regional Development (both physical and economical) aims at balanced development of the region as a whole eliminating disparities and concentration of economic activities. Physical planning serves as an important media for implementing economic planning. Areas of tourist interest in regions should be planned and developed in an inte-

grated manner so as to provide wider sphere of tourist interest and also to facilitate tourist covering comfortably more number of areas within the shortest possible time. Such areas should be recognised as one of the significant resources for Regional Development. As Tourism is just gaining momentum in Tamil Nadu, the limited resources has to be channelised preferably in developing those areas of tourist interest which require minimum investment but capable of yielding maximum benefits. Sufficient safeguards should be exercised to see that the generation of economic activities in developing the region are so planned to prevent pollution of the environment, to protect and preserve the natural flora and fauna and also to avoid the defacing of the landscape. Objects and areas of historical and cultural interest must be restored and preserved as integral part of the conservation programme of the Regional Development.

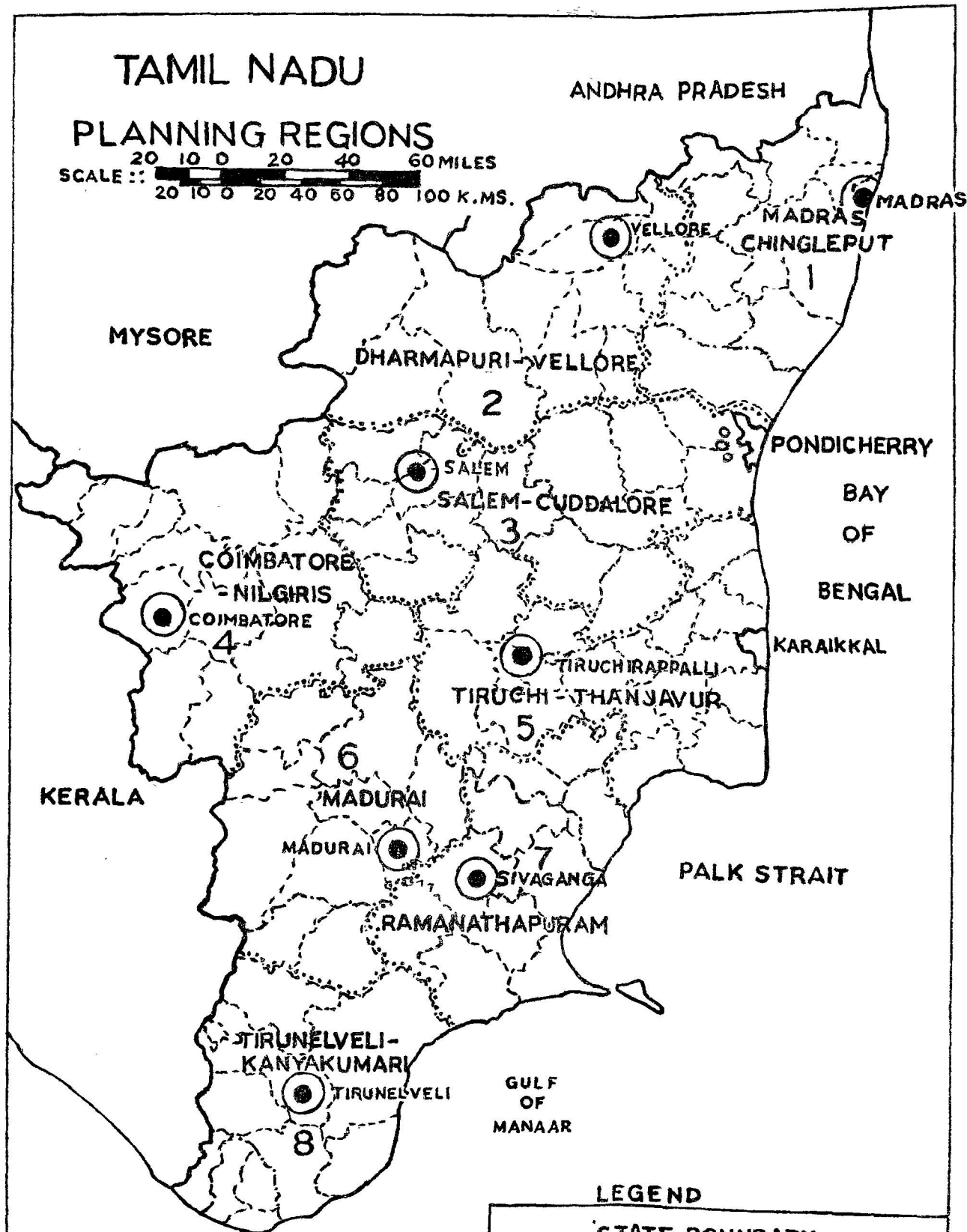
6.2.2. The State Town and Country Planning organisation should be entrusted with preparation of comprehensive plans for the development of Tourism on Regional basis with due consideration of Government policies for development of Tourism and also in consultation with the Tourist Department and Tourist Corporation. The Regional Planning Authorities under the Tamil Nadu Town and Country Planning Legislation, will prepare comprehensive development plans for the Tourist Destination Areas. The strategy for tourism development in a region must aim at the maximum diversification of its economy while the growth of tourism is used as a stimulant for other economic activities. Adequate legislation will have to be enacted to safe guard and conserve the areas of nature's scenic beauty, flora and fauna.

6.2.3. Plan for development of tourism based on above consideration must form an integral part of an overall plan for the balanced economic development of the Region.

TAMIL NADU

PLANNING REGIONS

SCALE :: 20 10 0 20 40 60 MILES
20 10 0 20 40 60 80 100 K.MS.



LEGEND

- STATE BOUNDARY
- - - DISTRICT BOUNDARY
- . - . - TALUK BOUNDARY
- REGIONAL BOUNDARY
- REGIONAL HEAD QUARTERS

SOURCE:

DIRECTORATE OF TOWNPLANNING,
GOVT. OF TAMIL NADU.

DRAWN AT THE
STATE PLANNING COMMISSION,
MADRAS-5.

7. CHAPTER VII.

7.1 TOWN PLANNING ADMINISTRATION.

7.1.1. It is interesting to trace the history of Planning Administration in Tamil Nadu during the past century. The initial step towards tackling the problem of insanitation of towns commenced with the nomination of the Royal Sanitary Commission by British Parliament in 1859 recommending the appointment of Sanitary Commissions with the object of gradual introduction of sanitary improvements. Accordingly sanitary Commissions were appointed in 1864, in the then three Presidencies of Madras, Bengal and Bombay for giving advice and assistance in all matters relating to public health and sanitation and also to advise on the sanitary improvements of native towns and prevention and mitigation of epidemic diseases. The sanitary Commission of Madras consisted of a President and four members, one of whom acted as Secretary, was functioning till 1886. There after the duties of the Commission were passed on to a Sanitary Commissioner who was in charge of health and sanitation of the Presidency. In 1890, a sanitary Board consisting of the Sanitary Commissioner and a Sanitary Engineer was set up for the purpose of planning or executing any particular sanitary work or works in the district. In 1896, the Board was reconstituted with the Chief Engineer, Public Works Department as President and the Surgeon General and a Member of the Civil Service as Members, the Sanitary Commissioner and the Sanitary Engineer being made the advisers of the Board in their respective professional capacities. Municipalities appointed Sanitary Inspectors to look after the roads, construction of houses, collection of revenues, and other sanitary matters. Subsequently as a result of the recommendations of the Public Service Commission and of the introduction of the Government of India Act, 1919, Sanitation and Public health became a transferred subject and the Sanitary Commissioner was replaced by the Director of Public Health.

7.1.2. Prior to 1884, the legal enactments providing for improvements to Municipal Towns and towns in rural areas were the Madras Local Funds Act, 1871 and the Madras Town Improvement Act, 1871. In 1884 these Acts were superseded by fresh Acts, namely the Madras Local Boards Act, 1884, the Madras District Municipalities Act, 1884 and the Madras City Municipal Act, 1884, under which the principles of Local self Government were first introduced in the Madras Presidency. These Acts were again replaced by another set of Acts in 1919 and 1920 namely the Madras Local Boards Act, 1920, the Madras District Municipalities Act, 1920, and the Madras City Municipal Act, 1919.

7.1.3. A wide spread movement in favour of better ideals of Civic life developed among the upper class of Indian society as result of spread of education and desire for higher standard of living, and safeguarding against the havoc caused by epidemics such as plague. The Government of India came forward, in 1908-1909, to assist Provincial Governments with special grants for promoting sanitation and for projects of isolated town extension and town improvements. The All-India Sanitary Conference held in 1911 in Bombay, and in 1912 in Madras served to focus and intensify for the first time the interest in Town Planning matters taken by officials, by local Authorities, as well as by the public generally. With desire to awaken special interest in the subject of Town Planning in relation to Civic administration and healthy conditions of life, the Government invited Professor Sir Patrick Geddes, a Town Planning expert of the United Kingdom, to visit the province and to advise

Government and Local Administration on Town Planning. In 1915, he visited many towns and delivered series of lectures on various concrete problems of Town planning and his reports were published by Government. Later on, in the next year, Government appointed Mr. H. V. Lanchester another Town Planning expert of the United Kingdom, as Town Planning Advisor to the Government for a short period of time. He too visited a number of places and delivered lectures and held classes in the Madras College of Engineering. His lectures and recommendations for the general development of the Madras city were published by Government. He laid stress on the need for a Madras Town Planning Act and indicated the lines on which such legislation might be framed. In 1912, the Government of India impressed upon the Government of Madras, the need for regulating and controlling the growth of their towns and sought their views on the legislation. Government of Madras, however, finally decided to have a Town Planning Bill for the Province and sent a draft Bill framed on the lines of the British Housing and Town Planning Act, 1909, only adopting the provisions relating to town-planning. The Bill was subsequently amended with reference to certain suggestions from the Government of India and final approval of Government of India was obtained in 1917. But, due to war and other causes the Bill was not finally passed and placed on the statue Book until 1920.

7. 1. 4. Town-Planning secured statutory recognition for the first time in the legislative history of the Province of Madras in 1920. (The Madras Town-Planning Act, 1920) and the local bodies were empowered to prepare and implement Town Planning Schemes relating to development of land in towns. This Act provided for appointment of a Director of Town-Planning for the Province. Town Planning being a highly technical and intricate matter, with its wide ramifications into all problems concerning the physical growth, development and improvement of our cities, towns and villages, could be dealt with only by the organisation of specialised departments of Town Planning, both at the Provincial centre and local areas. The principal and subordinate technical officers and staff should necessarily be men qualified and trained in Town-Planning. In 1921, Government appointed Mr. Reginald Dann, qualified technical expert recruited from England as Director of Town-Planning for rendering such advice and direction to the local authorities on planning and improvement of towns and villages. It was observed that there had been limited technical staff and the local authorities too suffered from finances to adopt progressive town planning policy, but in spite of the handicaps, certain progress had been made in the field of Planning. Mr. Reginald Dann, relinquished his office in March 1936 and was succeeded by Mr. R. D. N. Simham, the then Personal Assistant to the Director. In 1938 Government issued orders abolishing altogether the post of Director of Town-Planning and allotting his function to the Inspector of Municipal Councils and Local Boards as Ex-officio Director of Town Planning. This combined office is held by an officer belonging to the Indian Civil Service, the present Indian Administrative Service, with no technical qualification in Planning. During 1944-45, Government permitted the local authorities (Municipalities) to employ separate Town Planning staff.

7. 1. 5. Government in G.O. No. 3578, Public Health, dated 29th October 1947, appointed the Provincial Town Planning Enquiry Committee to make recommendations for improving town-planning activities in the State. The Committee (headed by the then Minister for Health, Thiru Karanth) had elaborately dealt with the subject and expressed its opinion

that the order of the Government abolishing the post of Technical Director further retarded the progress of Town-Planning in the Province. The recommendations of this Committee had not been implemented.

7.1.6. There had been expansion of the Department of Town-Planning during the Five-year Plan periods. Till 1956, there had been only two Gazetted Technical posts in the Department. From 1956 there has been overall increase in planning activity of the State and the establishment and staff position gradually expanded along with increased responsible of preparation of Master Plans, Regional Plans and Metropolitan Plans. At present there are 54 Gazetted Technical posts in the department. But, in spite of such increased responsibilities of work of a highly technical nature in the Department, the head of the department still continues to be a non-technical person from the Indian Administrative Service who combinedly acts as Director of Municipalities and Director of Town Planning. It is high time, the position is reviewed and a technical person fully qualified in Town-Planning is appointed as Director of Town Planning, reverting back to the original position of a technical State Head for Town-Planning. In these days of specialisation and technical advancement, it is highly essential that the technical department is manned by a technical person. It may be recommended to Government to appoint a technically qualified Town-Plannner as Director of Town-Planning.

7. 2. REGIONAL UNITS.

7. 2. 1. At present there are eight Regional units set up with their respective head quarters at (i) Madras, (ii) Vellore, (iii) Salem, (iv) Coimbatore, (v) Tiruchirappalli, (vi) Madurai, (vii) Sivaganga and (viii) Tirunelveli. Each region comprising of district and part or whole of adjoining districts differs from the Revenue Administrative district in the State. Since the Government have stressed the need for development planning at each district level for administrative convenience of co-ordinating development action guided by the eight Regional Plans, it would be better if Regional units of the Directorate of Town Planning are set up for each of the 11 districts (Chingleput, North Arcot, Salem, Dharmapuri, Coimbatore, Tiruchirappalli, South Arcot, Thanjavur, Madurai, Ramanathapuram, Tirunelveli) with the smaller districts of Kanyakumari attached to Tirunelveli and Nilgiris attached to Coimbatore. Madras will be under the direct charge of the Head Office, co-ordinating with Metropolitan Authority and Corporation. The Division of the State into 8 Regions based on homogeneous characteristics has assisted to make individual studies and prepare Regional Plans. Once the Regional Plans are prepared, they can be extracted each districtwise (administrative district) and each district regional unit as suggested above can concentrate upon the implementation of the plans effecting due co-ordination among the various departmental offices at the district level. This re-organised set up of 11 regional units will facilitate the Regional offices to concentrate upon the development of the district with much more attention and intimacy with other district offices of Government in the various sectors.

7. 2. 2. There are two Corporations and 94 Municipalities in the State. In all municipalities, except the recently constituted ones, there is separate Town-Planning wing functioning under the overall control of the respective Executive Officers. Most municipalities have Town-Planning Officers of various grades (I to III) as heads of the wing or section.

For effective and efficient functioning, it is necessary that all municipalities are equipped atleast with one Town-Planning Officer, one Building Inspector, one Draftsman and one Tracer on their technical establishment in the Town Planning wing. The larger the Municipality, the more number of staff will be required depending upon the status of the municipality, its extent, population, developing potential and density. All the persons holding post of Town Planning Officer should be specially qualified in Town Planning either at Post Graduate level or atleast in Post diploma level. Such a qualification should be prescribed as the minimum qualification for appointment to the post of Town Planning Officers. In Madurai Corporation, which has been recently upgraded to Corporation from Municipality, the Town Planning section is continued as a separate wing under a qualified Town Planning Officer; whereas in Madras Corporation, there is no such separate section but the Town Planning work is entrusted to the City Engineer. It is high time that a separate wing for Town Planning is set up under a fully qualified Town Planner in the Madras Corporation for attending to Town Planning works. The Town Planning Officer of the Corporation should be of the cadre of Joint Director of Town Planning in the State. He should be assisted by qualified Deputy and Assistant Planning Officers. They should function under the technical guidance of the Director of Town Planning.

7. 3. RESEARCH IN URBAN DEVELOPMENT.

7. 3. 1. Urban Planning has been gaining importance throughout the World on account of the rapidly increasing population and consequent urbanisation trends. Migration from Rural areas into Urban centres is a significant occurrence of the era encouraged by employment potential and industrialisation in cities and towns. Such inflow of population creates serious problems affecting safety and comforts of human race residing in cities. It results in straining the existing services such as water-supply, drainage, transport apart from lowering standards of sanitation, creation of slums in haphazard manner and over crowding. All these undesirable and unhealthy trends will continue to increase in future ; therefore it becomes a matter of vital and urging importance to control and regulate growth of urban centres with a view to minimise the evil effects and to ensure safe, healthy and comfortable living for the citizens.

7. 3.2. Science and Technology advancing, as it does today, more and more comforts are aimed at but at the same time gives room for pollution of atmosphere as in the case of modern transport and industry. These evil effects are also to be guarded against by systematic study, analysis and finding out remedial measures by constant research and equipping with up to date information and knowledge on the subject.

7. 3. 3. Planning is an ever-changing process and has to be kept up to date taking advantage of the various studies and developments, taking place not only in our country but also in the international field and advanced countries of the World. Standards in physical planning often undergo changes to suit the trends in development. Standards applicable to space, density, floor space index, height of structures and the like have to be constantly observed and studied for effecting and introducing their modified standards to keep up to the advancement in Technology and trends.

7. 3. 4. With this object in view a small research wing has been set up in the Directorate of Town Planning in Tamil Nadu and with the limited sanctioned staff it is functioning under one Deputy Director, as part of the Directorate. It is now being proposed in the Perspective Plan to strengthen this Research wing so as to enable undertaking proper surveys, studies, analysis and conclusions on various topics related to Urban Planning. This wing will examine the existing standards in physical planning and their adequacy or otherwise and suggest modifications wherever needed. It will be within the scope of this wing to conduct surveys and examine the cost input and output on Housing and Planning projects as well. Also type designs of buildings and structures for public purposes such as Community Halls, Bus terminals, Markets, Theatres, Auditoriums, can be worked out adopting methods of modern civic design to assist the public bodies.

7. 3. 5. As Town Planning embraces disciplines as Sociology, Economics, Geography, Architecture and Engineering, there is quite a need and good scope for research work undertaken by group of persons from various disciplines related to Planning.

7. 3. 6. The Research unit will have to examine the various standards now being followed in Town and Village Planning as to their adequacy or otherwise to the changing phase of society and advancement and suggest suitable modifications wherever needed.

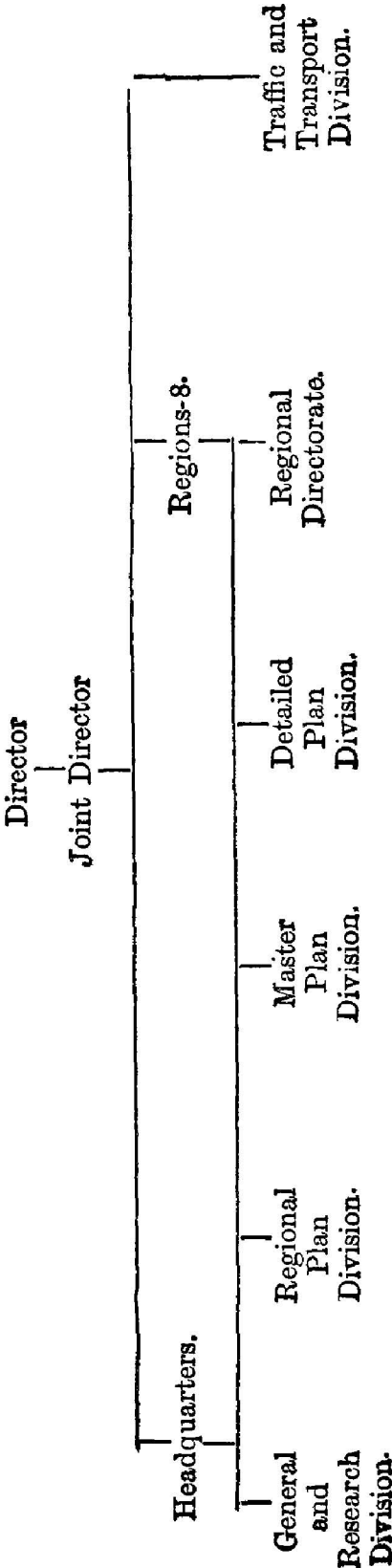
7. 3. 7. Also the question of prescribing different standards in respect of public amenities for urban and rural areas will have to be taken up for study.

7. 3. 8. Since villages with less than 5,000 population may not have adequate economy to go in for the same standards of amenities as a city or town with larger population and also such high specifications for amenities as in the case of larger towns may not be economical and fully utilised, comparatively lower standards for smaller villages will have to be evolved.

7. 3. 9. Hence a scheme has been included in the Perspective Plan to achieve the objective of gaining by Research studies; naturally such a project requires assistance by way of modern literature and books on the subject as also equipment and staff. The scheme provides for above requirements in a small scale to start with and it will be strengthened in due course.

7. 3. 10. A modest provision of Rs. 20 lakhs has been made for this Research Project in the Fifth Five-Year Plan and the provision is increased to Rs. 40 lakhs in the Sixth Five-Year Plan.

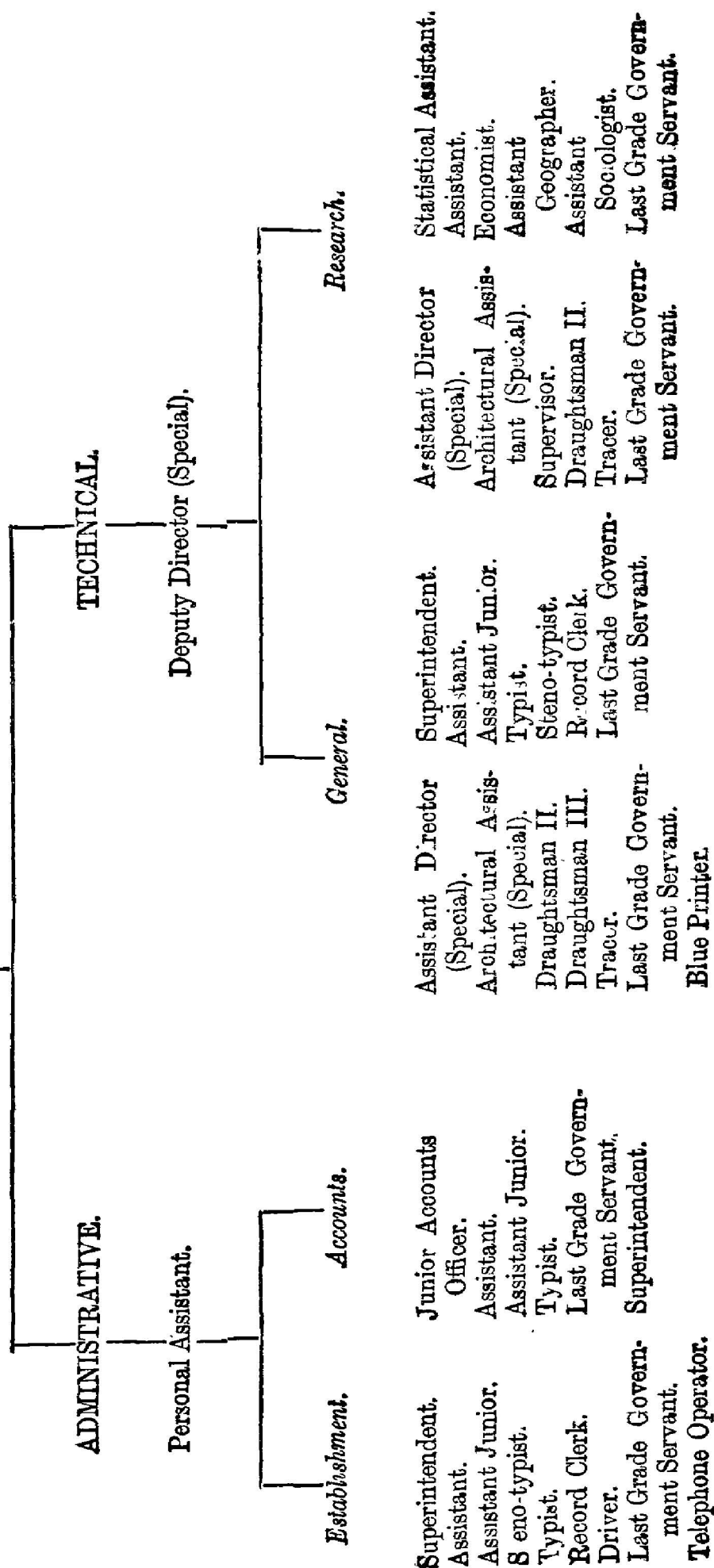
Existing Staff Pattern of the Directorate of Town Planning.

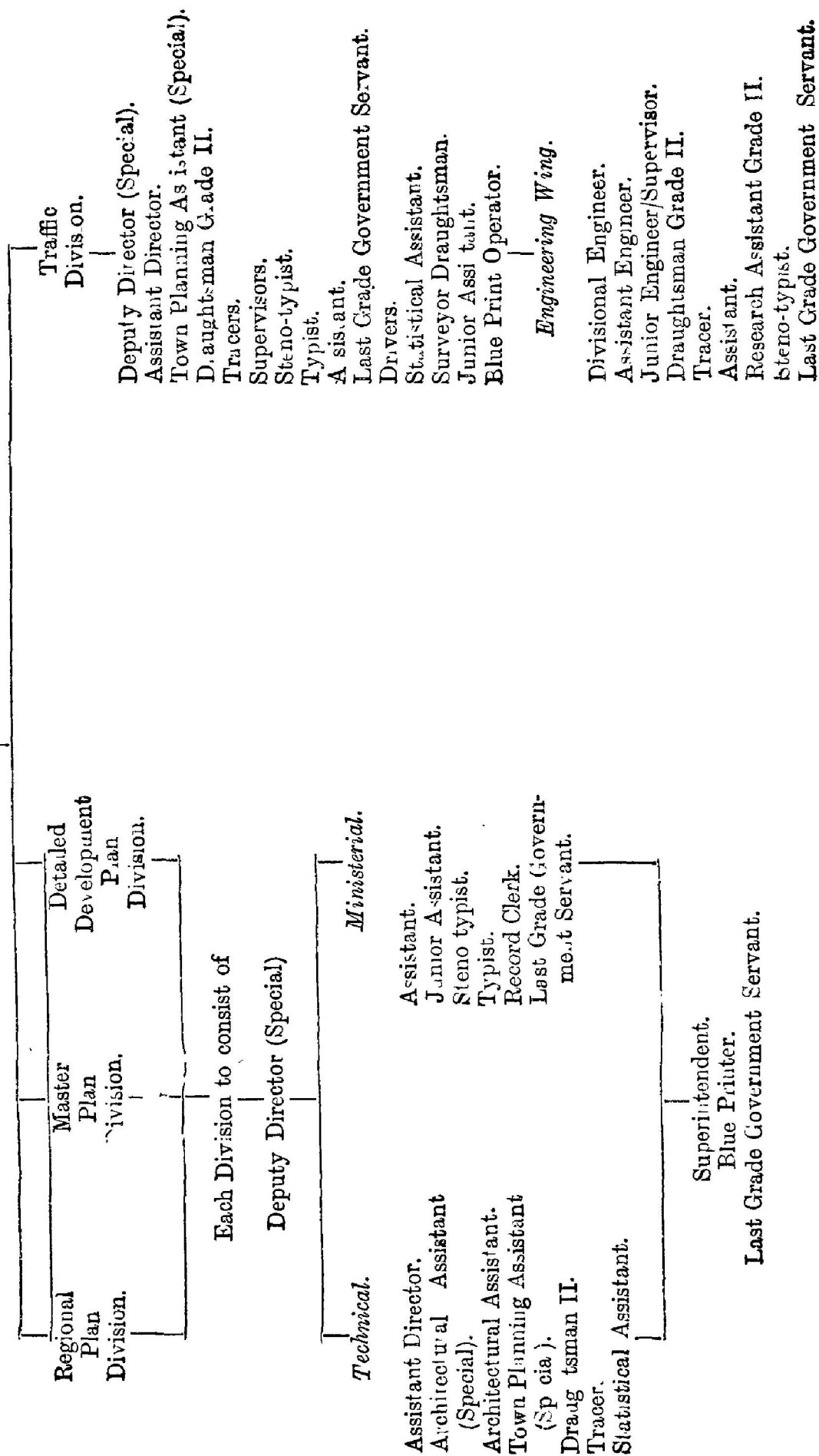


Existing Staff Pattern of the Directorate of Town Planning.

AT HEADQUARTERS OFFICE AT MADRAS.

GENERAL AND RESEARCH DIVISION.





Existing Pattern of Staff at Regional Offices.

Regional Offices-8.

Each Regional Office to Consist of

Deputy Director

Technical.

- Assistant Director.
- Architectural Assistant.
- Supervisors.
- Surveyor-Draughtsman.
- Surveyors.
- Draughtsman III.
- Tracer.
- Blue Printer.
- Fieldman.
- Last Grade Government Servant.

Ministerial.

- Superintendent.
- Accountant.
- Assistant.
- Assistant Junior.
- Steno-typist.
- Typist.
- Record Clerk.
- Driver.
- Last Grade Government Servant.

Pattern of staff at Coimbatore Traffic Division.

- Deputy Director.
- Assistant Director.
- Architectural Assistant (Special).
- Architectural Assistant.
- Draughtsman, Grade II.
- Surveyor Draughtsman.
- Tracers.
- Supervisors.
- Steno-typist.
- Typist.
- Assistant.
- Last Grade Government Servant.
- Drivers.
- Statistical Assistants.

8. CHAPTER VIII.

8. RECOMMENDATIONS.

8.1. TOWN-PLANNING AND URBAN DEVELOPMENT.

The various aspects connected with Urban Development have been dealt with in the previous chapters. It has been emphasised that a State urbanisation policy, urban, land policy and housing policy are essentials to achieve our goal of socio-economic development in the State. The following Plan projects are recommended for adoption as effective tools for achievement, of our objectives, namely provision of minimum needs of society creating employment opportunities, increasing rate of growth and rendering social justice.

8.1.1. PREPARATION AND IMPLEMENTATION OF DETAILED DEVELOPMENT PLANS IN URBAN AREAS—ASSISTANCE BY LOANS TO LOCAL PLANNING AUTHORITIES.

Under the existing Tamil Nadu Town-Planning Act, 1920, over 650 potential localities in urban areas (as Corporation, Municipalities and Panchayats) have been notified as Detailed Development Scheme areas and processing of these schemes are at various stages prior to final sanction by Government. Nearly 170 schemes have already been sanctioned by Government and are at various stages of execution. Most of the Local Authorities in the State feel handicapped for want of adequate finances to implement these schemes effectively and achieve the objectives of regulated growth of towns. Delay caused in implementing these plans results in haphazard development and congestion in towns defeating the very purpose of such plans.

The recommended project here aims at offering financial assistance to such Local Planning Authorities who deserve help in implementing the Plans. Loans from State finances are to be sanctioned to Local Planning Authorities on long term basis, repayable in annuities with interest. As the developments contemplated in the various plans contribute towards bettering the revenues of the Local Authority, the repayment of loans could be effected in instalments without strain.

An outlay of 1.50 crores is recommended for the period 1974–1984. This project will give employment for about 6,000 persons. (400/year in V Plan and 800/year in VI Plan.)

8.1.2. FORMATION AND IMPLEMENTATION OF MASTER PLANS FOR URBAN AREAS, INCLUDING SETTING UP OF LOCAL PLANNING AUTHORITIES.

Comprehensive Master Plans for all Municipal towns have to be formulated within the Perspective Plan period for facilitating orderly growth of towns and their environs by carefully arriving at patterns of landuse, communication, public services and amenities. So far about fifteen towns in the State have been covered with Master Plans and these are awaiting statutory notification under the new Tamil Nadu Town and Country Planning Act. At the rate of completing eight master plans annually for eight towns, all the municipalities and townships can be covered during the plan period. The new legislation on planning makes provision for constituting Local Planning Authorities for each urban area for taking up the responsibility of formulating and implementing these Master Plans.

This project makes provision for the expenditure on formulation and implementation of Master Plans and also on setting up of Local Planning Authorities. An overall outlay of Rs. 1.50 crores in the Perspective Plan is recommended for this project. This scheme will give employment for about 6,000 persons. (400/year in V Plan and 800/year in VI Plan.)

8.1.3. FORMULATION AND IMPLEMENTATION OF REGIONAL PLANS, INCLUDING SETTING UP OF REGIONAL PLANNING AUTHORITIES.

Simultaneously Regional Plans for the eight vulnerable regions into which the State has been divided are being formulated by the Directorate of Town Planning and all of them have reached an advanced stage and they will soon be completed. These plans prepared after careful and detailed surveys, analysis and conclusions are to serve as consulting and guiding documents for initiating development activities in a proper way in these regions both for public and private sectors so as to attain overall balanced economic growth in the State. The new Tamil Nadu Town Planning Act provides for notification and implementation of these Regional Plans and also for constituting Regional Planning Authorities for effective co-ordination of the activities of various agencies involved in the plans and speedy implementation.

An outlay of Rs. 1.50 crores in the respective plan is recommended for this project to meet the expenditure towards setting up of the Regional Planning Authorities and implementing important proposals of common regional interest. The project outlay is to be met from State finance. This scheme will employ about 6,000 persons in all.

8.1.4. FORMULATION AND IMPLEMENTATION OF PLANS FOR NEW TOWNS, SATELLITE TOWNS AND URBAN NODES INCLUDING SETTING UP OF NEW TOWN AUTHORITIES AND PLANNING AUTHORITIES.

New Towns, Ring Towns, Satellite Towns, Growth Centres and Urban Nodes are essential instruments in Urban Planning for positively decentralising existing crowded cities and diverting migration trends and achieving balanced distribution of population and economic activity. Development Plans for three new towns namely Thiruvallur, Sengundram and Gummidipoondi along the three main corridors diverging from Madras City have been prepared and are awaiting statutory notification. The New Town and Country Planning Act authorises notification, formulation and implementation of such plans by New Town Development Authorities constituted for the purpose. These three towns when developed will act as counter magnets for the City of Madras whose growth is to be controlled and regulated as per the Madras Metropolitan Plan (1971-1991). Similar new towns are also to be planned around other major cities of the State, namely, Madurai, Coimbatore, Salem and Tiruchrappalli. Similarly, chosen growth centres and urban nodes have to be developed. An initial outlay of Rs. 3.00 crores is recommended in the Perspective Plan for the project towards setting up Planning Authorities and implementation of plan proposals. The expenditure on the Project is to be met from State Funds. This scheme will employ about 3,000 persons in all.

8.1.5. SETTING UP OF TAMIL NADU STATE TOWN AND COUNTRY PLANNING BOARD AND STRENGTHENING OF THE DIRECTORATE OF TOWN-PLANNING.

The new Tamil Nadu Town and Country Planning Act contemplates setting up of a high power Town and Country Planning Board at State level to guide and advise various planning authorities in the State and to co-ordinate their activities. The Board consisting

An outlay of Rs. 15.00 crores has been provided for the project towards investment as initial seed capital towards purchase and development of lands for various uses in urban development. As urban development includes public and common amenities such as parks, playfields, etc., which are not of financially remunerative nature, this total outlay is recommended to be met from State finances on half grant and half loan basis. This scheme will provide employment for about 72,000 persons in all.

8.1.7. RESEARCH IN URBAN PLANNING, PUBLICITY AND PROMOTION OF PLANNING INCLUDING LIBRARY AND EQUIPMENT.

Planning is a changing process, adapting itself to changing trends of urbanisation and population distribution depending on advancement of technology. So, for successful planning, the planning organisations should keep intimate contact and up to date knowledge of planning activities in advanced and developing countries, evaluate the merits of their experiences with a view to utilise the beneficial techniques and strategies in our planning. Standards relating to space requirement, densities and other essential services will have to be reviewed periodically and revised wherever need be for successfully and effectively regulating developments in urban areas. Constant research work is necessary on all urban problems and solutions. Thus there is imperative need for a special research cell in the organisation of the Directorate of Town-Planning for attending to abovementioned aspects and also for collecting data, carrying out sample surveys, analysing and striking at conclusions in all important matters related to Urban Planning in the State. General public will have to be well informed of the development needs, planning standards, building and space regulations, etc., and have to be educated properly on economical use of materials and maintaining environment clean. Wide publicity of planning developments, public participations and achievements need be given to elicit public co-operation. Libraries and visual aids, seminars and lectures contribute substantially towards educating public on benefits of proper urban planning.

This project provides an outlay of Rs. 0.60 crore in the Perspective Plan towards setting up of a separate Research Cell in the Directorate of Town-Planning with necessary staff and equipments. The expenditure is to be met from State Funds. One hundred-ten persons are likely to get employment in the scheme.

8.1.8. TRAINING OF SPECIALISTS IN TOWN-PLANNING.

Town-Planning has, of late, been gaining much importance as a separate profession specialising in the field of physical planning—starting from Regional Planning and ending with individual site planning—specialised courses of study have been instituted all over the world for training Town-Planners. For the first time in India, a post-graduate diploma course was initiated at Delhi in 1956, under the Ministry of Education. There are at present two more teaching courses in Planning, one at Karagpur in West Bengal and another at Madras. The duration of the courses are two years. Special concentration on branches of City Planning, Housing, Transport and Landscape Architecture are available in Delhi school. The intakes of all these three institutions put together is below 50 per year, often less than 40. As development planning gains importance, and the relationship between physical planning and economic planning is realised more and more, the

demand for qualified specialists in Town-Planning has increased considerably. The profession of Planners has not yet gained stable footing in private sector as professions of Engineers or Doctors in Medicine to stand on their own legs; this fact stands in the way of many students opting to specialisation in Town-Planning. Hence it has become necessary to recruit persons possessing basic Engineering or Architectural qualifications in the Directorate of Town-Planning and then depute them for courses in Town-Planning in the available institutions in the country. To encourage private students to take to these courses, stipends or scholarships will have to be offered to deserving candidates.

Apart from the abovementioned three institutions offering special courses in Planning at post-graduate level, the State Government have introduced a post-diploma in Town and Country Planning Course in the Central Polytechnic at Madras. Engineering diploma holders are eligible for admission to this course. The course extends for one year, followed by a practical (apprenticeship) training in the department concerned with planning. For this course also eligible staff members from the Directorate of Town-Planning are deputed every year. There is provision for scholarships to private candidates too. There are also other short-term courses in allied subjects to planning for which also officers of the department may be deputed as and when found necessary.

This project makes provision for training about 200 Planners. The outlay of Rs. 0.25 crore in the plan will be met from State Finance.

8.1.9. COMPREHENSIVE TRAFFIC AND TRANSPORTATION STUDIES OF MAJOR CITIES. (INCLUDING EQUIPMENT).

The problem of Transport in major cities and towns in the State due to increase in population and urbanisation is becoming acute; the urgent need to successfully solve the problems needs no emphasis. The study undertaken by the Directorate of Town Planning (in co-ordination with Highways Department) on Transportation relating to Madras Metropolitan Areas has been completed and the report has been referred to the Railways who are conducting a feasibility study of the mass transportation proposals contained in the report. Similar studies have to be made in respect of other cities as Madurai, Coimbatore, Tiruchirappalli and Salem. Already the studies for Coimbatore city has been initiated by the Directorate of Town-Planning by setting up its transport wing at Coimbatore. There is also a skeleton staff located in Madras City to assist the Railway authority in their feasibility study and also as a follow up of the Plan preparation. This project makes provision for such Transportation studies and formulation of plans for the other major towns. An outlay of Rs. 1.50 crores has been included in the plan towards this project. The plan expenditure is to be met from State funds. About 150 persons will be employed under this project.

8.1.10. IMPLEMENTATION OF METROPOLITAN PLANS FOR MAJOR CITIES INCLUDING SETTING UP OF METROPOLITAN DEVELOPMENT AUTHORITIES.

The Madras Metropolitan Plan 1971-1991 has already been brought out and is awaiting notification under the new legislation. Already the State Government have taken up the constitution of a Metropolitan Planning Authority for implementing the Plan no

sooner the plan (covering an area of 450 sq. miles) is notified. This authority will facilitate co-ordination of all the development agencies involved in implementation of the Plan. Similar plans are under preparation for other major towns as Madurai, Coimbatore, Tiruchirappalli and Salem. Implementation of such plans involves large investments of finance. Government alone may not be able to finance the whole plan. Other sources of financial assistance have to be tapped. (Such as HUDCO, LIC and even international assistance through Union Government).

A provision of Rs. 2.75 crores as State Government's outlay has been included for this project in the perspective plan. Being initial expenditure for this new scheme involving high investment, this expenditure will be met from State finances. The project will give employment for about 8,800 persons on the whole.

8.1.11. REMUNERATIVE ENTERPRISES—(LOAN ASSISTANCE TO LOCAL BODIES).

There is vast scope for many municipalities in the State to execute capital works such as shops, markets, cinema halls, community halls and bus stands which can yield good returns to revenues of such Municipal Councils; but most of them do not have the surplus finance for investment on such capital works. To enable such municipalities and local bodies to implement such remunerative programmes, this project paves way by providing an outlay of Rs. 1.80 crores in the Plan. This amount will be met by the State finances as loans to local bodies recoverable in easy instalments. Such remunerative schemes, on implementation, enhance the annual revenues of the concerned local bodies. The project is likely to give employment for 6,500 persons on the whole.

Centrally sponsored projects.

Under Town-Planning and Urban development the following two projects are recommended for being treated as centrally sponsored projects.

8.1.12. PILOT RESEARCH PROJECT IN GROWTH CENTRES.

This project is a continuation of the existing Centrally Sponsored Pilot Research Project in Growth centres (taken on all India basis) at Namakkal in Salem district of Tamil Nadu. This project makes a study of the growth centre potentials of the Namakkal taluk. Similar studies for pilot projects in backward areas as in Ramanathapuram and Dharmapuri districts are proposed. An outlay of Rs. 0.06 crore is included under this project in the Fifth Five-Year Plan. The entire expenditure is proposed to be met from Central Government (as grant). This project will employ about 20 persons.

8.1.13. IMPLEMENTATION OF METROPOLITAN PLANS, SATELLITE AND NEW TOWN PLANS.

As investments on Metropolitan Plan, Satellite and new towns are of high order, all possible financial assistance has to be utilised for implementation of such plans. The Madras Metropolitan Plan, which is ready for notification is estimated to cost Rs. 900 crores in a twenty years period. This estimated cost includes Land Development, Housing, Water Supply, Drainage, Transport, Education and Medical facilities. Under Urban Development, only Land Development and Housing requirements are considered, as the rest are being considered by the respective Task Forces in the State Planning Commission.

This project makes provision for a total outlay (under central sector) of Rs. 50-00 crores. As Madras City has to be viewed as an interstate city contributing to the country's economic and social activities, it is recommended that the Central Government may consider this outlay as grant towards the Fourth Metropolitan City in the country. This project will generate employment for about 4 lakhs of people.

INSTITUTIONAL, CO-OPERATIVE AND PRIVATE SECTOR PROJECTS.

8-1-14. *Implementation of Satellite Town Plans and New Town Plans.*

New Town development requires large investments of money ; Government assistance alone will not be sufficient. Hence all possible sources of finance have to be tapped. An outlay of Rs. 30-00 crores is shown under this project for obtaining institutional finance on loan basis. HUDCO, LIC., as also co-operative institutions will have to be approached for this assistance. About 1,92,000 persons are likely to be employed under this scheme. The capital resources amount will be utilised as seed capital for reinvestment on revolving principles.

8-2. URBAN HOUSING.

8-2-1. SUBSIDISED INDUSTRIAL HOUSING SCHEME.

In Urbanisation, industry plays an important role. If national production is to increase, the workers and labour engaged in manufactures should be well cared for in the society and Government have a responsibility in the welfare of this class of people ; Housing accommodation is an essential need of many a working population ; their economic status does not permit them to invest capital for building houses of their own nor can they afford to pay the high rents prevalent in city houses. Under these circumstances most of them are forced to squat on vacant sites at low lying areas irrespective of environmental and sanitary conditions in temporary huts. Such slums not only affect the healthy life of the dwellers but also serve as cancer to the society surrounding them. To prevent this kind of unhygienic living, the solution lies in building houses by the industrialist or the management of the industrial organisation and allotting them to workers on subsidised rents. Not all managements easily volunteer to build such houses ; as an incentive for the managements to take up to this housing programmes, Government have a scheme of offering 25 per cent of ceiling cost of buildings as subsidy or grant and also 50 per cent cost as loan, the balance 25 per cent being met by the management itself. This project provides for an outlay of Rs. 7-00 crores towards the housing accommodation for industrial workers. About 14,000 houses will be constructed and this project will create employment for 35,000 man-years or 3,500 persons per year on an average during the V and VI plan periods.

8-2-2. LOW INCOME GROUP HOUSING SCHEME.

Majority of the State population belong to low income class with their annual income falling within the range of Rs. 3,000 to 7,200 ; they belong to the less privileged class and they can ill afford to invest fully on a housing of their own without financial assistance from either Government or Co-operative or similar financial institutions. Housing

accommodation is one of the essential social facilities ; as such this category of population should be assisted by State Government to the extent possible for owning houses of their own.

This project aims at relieving the housing shortage by making provision for a total outlay of Rs. 29.30 crores (Rs. 9.30 crores in V Plan and 20.00 crores in the VI Plan). A total of 14,650 houses will be available by 1984. Under this project, employment opportunities will be created for 1,46,500 (man-year) or on an average 14,650 persons per year.

8.2.3. MIDDLE INCOME GROUP HOUSING SCHEME.

The class of people with their annual income range between Rs. 7,200 to 18,000 are to be benefited by this project. The project provides for an outlay of Rs. 40.00 crores (Rs. 10.00 crores in the V plan and Rs. 30.00 crores in the VI plan). A total of 12,400 houses will be available by 1984. Employment opportunities under this project will be 2,00,000 man-year or on an average 10,000 persons per year during V plan and 30,000 persons per year during VI plan.

8.2.4. LAND ACQUISITION AND DEVELOPMENT SCHEME.

Land is the basic requirement for housing ; rapid urbanisation and increase in urban population, has been chief causes for housing shortage ; Land costs in urban areas are increasing enormously. As prevention against speculation in prices and making available land for housing development, vast stretches of undeveloped land have to be purchased in advance to successfully implement housing projects. Housing projects other than slum clearance could be on self supporting schemes. Initial, seed capital amount secured from State finance can be invested on acquiring bulk land and developing them into house-sites, of varying sizes, providing essential amenities as road, water-supply, drainage and lighting. Once the lands are developed they can be sold to public individuals or even institutions as co-operative societies and associations on reasonable cost ; the amount realised by sale can again be invested on further purchase and development, on a revolving principle. When once house plots are available, the respective owners can easily avail the financial assistances available from various sources and construct their houses.

This project envisages a total outlay of Rs. 53.20 crores (Rs. 23.20 crores in the V Plan and Rs. 30.00 crores in the VI Plan) towards acquisition and development of land for housing purposes.

The average cost of one acre of undeveloped land in urban areas is assumed Rs. 10,000 and the development cost (of equipping the land with road, water, drain and light) Rs. 40,000 per acre. The total cost of developed land of one acre works to Rs. 50,000. As almost one-third of the land, i.e., 6 grounds will be used up by common amenities, the balance in the form of house plots for sale price of one ground plot may be fixed as Rs. 4,580 which is quite reasonable. This 53.20 crores on investment as seed capital distributed at Rs. 4.64 crores annually in the V Plan and at Rs. 6 crores annually in the VI Plan will generate Rs. 39.59 by 1979 and another Rs. 96.87 by 1984. Thus the total amount available for purchase and development will be nearly 136 crores. About two and half lakhs of house plots will be made available during the plan period. Also the project will open out employment opportunities for about the one lakh persons per year (on an average).

8.2.5. TAMIL NADU GOVERNMENT SERVANTS' RENTAL HOUSING SCHEME.

This Government financed scheme aims at provision of rental housing for its officers and staff, extending concessions in rents. The project includes an outlay of Rs. 13.00 crores in the Plan to be met from State funds. Totalling about 65,000 persons will get employment under this project. In all about 5,200 houses will be built.

8.2.6. SLUM CLEARANCE AND IMPROVEMENT SCHEME.

This project is most needed and important one, intended to serve the large population of unprivileged class of economically backward society in the State. An outlay of Rs. 72.50 crores have been included in this project. About 95,000 houses will be constructed during the plan period under this project and about 362,500 persons will be employed during the course of the Plan.

8.2.7. CENTRALLY SPONSORED SCHEMES.

Setting up Manufacturing plants for Building materials (As bricks, prefabrication, etc.).

The five categories of housing projects referred to above in the State Sector Perspective Plan can be implemented successfully only if the required quantity and quality of building materials are made available in specified periods keeping in with the targets fixed. When demand increases, naturally the price of materials are also likely to have a tendency to go up. To counter act this trend, building materials should be produced in mass scale and made easily available for use. The conservative methods of construction may not fit in with the rapidness with which these projects are to be implemented. Modern methods of construction on mass scale by changing over to prefabrication have to be followed to achieve better results.

With this object in view, a project for setting up manufacturing plants for large scale production of building materials as bricks, doors, windows, and other prefabrications is recommended in the Perspective Plan for being included in the Central sector. An outlay of Rs. 8 crores is recommended, to be met as loan from Union Government.

INSTITUTIONAL, CO-OPERATIVE AND PRIVATE SECTORS.

8.2.8. *Subsidised Industrial Housing.*

As mentioned previously, the subsidised Industrial Housing Scheme stipulates that 25 per cent of the ceiling cost of house has to be met by the management of the Industry concerned, the balance being met by Government loans and subsidy as per the scheme. An outlay of Rs. 2.42 crores has been included in the Plan under Private and Co-operative sectors.

8.2.9. LOW INCOME GROUP HOUSING (A SELF SUPPORTING SCHEME).

The financial assistances given by Government has to be supplemented to a large extent by institutional finances by way of loans to housing agencies. Life Insurance Corporation of India., Housing and Urban Development Corporation of India, Banks and Private Organisations, Co-operative Societies have substantial role to play in such housing schemes by way of long-term loan assistances. There is good scope for utilising these loans as seed capital investment for such schemes and generation of further revolving funds.

The project provides for an outlay of Rs. 75 crores in the Plan. About 50,000 houses will be added to house stock by 1984. This will give scope for employment of 3 lakhs persons during the plan period.

8.2.10. MIDDLE INCOME GROUP. HOUSING : (A SELF SUPPORTING SCHEME).

With increasing growth of economy, the standard of housing will go up and also the income slab of people will improve, thus creating need for more higher income group housing. Loan assistance for institutions similar to those mentioned for Low Income Group Housing will have to be resorted to. Seed capital investment will have to be revolved under this project too. Rs. 83 crores have been shown as outlay in the project. About 20,000 houses will be added to the housing stock by 1984. The project also creates employment scope for about 3.3 lakhs persons.

8.2.11. OTHER TYPES OF HOUSES.

People of annual income exceeding Rs. 18,000 are not eligible for Government aid, as in the case of either Low Income or Middle Income Group housing. Hence they are to depend on Co-operative loans and bank loans for supplementing their own funds and investments on house construction. This project is intended to cater to this higher income group. The estimated outlay for the project in the Plan period is Rs. 9.58 crores and this is to be met from institutional finances outside the Government resources. About 4,700 persons will be employed per year in this project. By the end of plan period, i.e., 1984 about 1,900 houses are expected to be built.

LAND DEVELOPMENT FOR HOUSING.

REVOLVING FUND—CYCLE OF OPERATION.

Capital Outlay in V Plan—Rs. 23.20 Crores. Seed capital outlay in VI Plan—Rs. 30.00 Crores.

	Total														Total. VI Grand
	Year							Year							
	V							VI							
	1974-75.	1975-76.	1976-77.	1977-78.	1978-79.	1979-80.	1980-81.	1981-82.	1982-83.	1983-84.	Plan.	Total.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)		
(RS. IN CRORES.)															
1. Provision for Land acquisition and development.	4.64	4.64	4.64	4.64	4.64	23.20	6.00	6.00	6.00	6.00	6.00	30.00	53.20		
2. Returns from Sale proceeds available.	..	1.70	1.70	1.70	..	..	..	..	..	..	..	..	..		
	..	..	2.32	2.32	2.33	..	..	..	..	..	..	..	..		
	..	..	..	2.62	2.62	..	2.63	..	..	..	..	..	..		
	..	..	..	..	3.58	..	3.58	3.59	..	..	..	..	..		
	..	..	..	..	..	..	4.27	4.28	4.28	..	..	..	..		
	..	..	..	..	..	..	..	5.49	5.49	5.49	..	..	..		
	..	..	..	..	..	..	..	..	6.54	6.55	6.55	..	..		
	..	..	..	..	..	..	..	..	..	6.89	6.89	..	..		
	..	..	..	..	..	..	..	..	..	..	7.85	..	..		
3. Total resources available	4.64	6.34	8.66	11.23	13.17	..	16.48	19.36	22.31	24.93	27.29	..	..		
4. Towards repayment of land	..	..	—1.50	—1.50	—1.50	..	—1.50	—1.50	—3.50	—3.50	—3.50	..	..		
5. Resources available for investment.	4.64	6.34	7.16	9.78	11.67	39.59	14.98	17.86	18.81	21.43	23.79	96.87	136.64		

*Town Planning and Urban Development.***8.3. STAFF PATTERN FOR PROJECTS.**

8.3.1. Project 1.—Preparation and Implementation of detailed Development Plans in Urban Areas—Assistance by loans to Local Planning Authorities.

Outlay—Fifth Plan—Rs. 0.50 Crore ; Sixth Plan Rs. 1.00 crore.

Allocation for staff expenditure. Fifth Plan Rs. 0.06 crore.

Sixth Plan Rs. 0.15 crore.

Fifth Plan—Staff.

Ten units in Local Bodies—each unit comprising of—

Town Planning Supervisor	1
Draftsman Grade II	1
Tracer	1
Staff salary and allowances	Rs. 53,000 per unit for 5 years.
Contingent expenditure	Rs. 7,000 per unit for 5 years.
Total per unit	Rs. 60,000

For ten units—Rs. 6,00,000 or 0.06 Crore.

Sixth Plan—Staff.

Twenty five units—Total at 0.06 Crore per unit—Rs. 0.15 crore.

8.3.2. Project 2: Formulation and implementation of Master Plans for Urban Areas, including setting up of Local Planning Authorities.

Outlay—Fifth Plan—Rs. 0.50 Crore ; Sixth Plan Rs. 1.00 crore.

Allocation for staff expenditure—Fifth Plan Rs. 0.15 crore.

Sixth Plan Rs. 0.30 crore.

Fifth Plan—Staff.

Five Units—Local Planning Authorities ; each unit comprising of—

Junior Town Planner	1
Town Planning Assistant	1
Draftsman Grade II	1
Surveyor	1
Tracer	1
Ministerial Assistant	1
Ministerial Junior Assistant	1
Typist	1
Record Clerk	1
Last Grade Government Servant	3
Staff salary and allowances	Rs. 2,00,000 per unit for 5 years.
Contingent expenditure	Rs. 1,00,000 per unit for 5 years.
Total expenditure per unit	Rs. 3,00,000
For 5 units ; Total expenditure	Rs. 15,00,000 or Rs. 0.15 Crore.

Sixth Plan—Staff.

Ten units Local Planning Authorities at Rs. 0.03 Crore per unit Rs. 0.30 Crore.

8.3.3. *Project 3: Formulation and Implementation of Regional Plans, including setting up of Regional Planning Authorities.*

Outlay—Fifth Plan Rs. 0.50 Crore.

Sixth Plan Rs. 1.00 Crore.

Allocation for staff expenditure ; Fifth Plan Rs. 0.40 Crore. Sixth Plan Rs. 0.60 Crore.

Fifth Plan—Staff.

Eight Regional Planning Authorities, each unit comprising of—

Town Planner	1
Junior Town Planner	1
Town Planning Assistant	1
Supervisor	1
Draftsman Grade III	2
Tracer	2
Blue Printer	1
Superintendent	1
Assistant	2
Junior Assistant	2
Stenographer	1
Typist	1
Driver	1
Last Grade Government Servant	5
Staff salary and allowance	Rs. 4,45,000 per unit for 5 years.
Contingent expenditure	Rs. 55,000 per unit for 5 years.
Total expenditure per unit	Rs. 5,00,000
Expenditure for 8 units	Rs. 40,00,000 or Rs. 0.40 Crores.

Sixth Plan—Staff.

Strengthening 8 units, total cost Rs. 0.60 Crore by Additional staff

Junior Planner	1
Planning Assistant	1
Supervisor	1
Draftsman	2
Tracer	2
Superintendent	1
Assistant	2
Junior Assistant	2
Typist	1
Record Clerk	1
L.G.G.S.	2
Driver	1

8.3.4. *Project 4* : Formulation and Implementation of Plans for New Towns, Satellite Towns, and Urban nodes, including setting up of New Town Development Authorities and Planning Authorities.

Outlay—Fifth Plan Rs. 1.00 Crore. Sixth Plan Rs. 2.00 Crores.

Allocation for staff expenditure —Fifth Plan Rs. 0.32 Crore. Sixth Plan Rs. 0.80 Crore.

Fifth Plan—Staff—

Three units of New Town-Authority, each comprising of—

Town Planner	..	..	..	..	1
Junior Town Planner	..	..	..	..	2
Draftsman Grade III	..	..	..	..	4
Surveyor	..	..	..	..	2
Tracer	..	..	..	..	4
Blue Printer	..	..	..	..	1
Superintendent	..	..	..	..	2
Accountant	..	..	..	..	2
Assistant	..	..	..	..	4
Junior Assistant	..	..	..	..	4
Record Clerk	..	..	..	..	2
Stenographer	..	..	..	..	2
Typist	..	..	..	..	2
Driver	..	..	..	..	2
Last Grade Government Servant	..	..	..	..	9
Staff salary and allowances	..	Rs.	8,48,600	per unit for five years.	
Contingent expenditure	..	Rs.	2,17,400	per unit for five years.	
Total expenditure per unit	..	Rs.	10,66,000		
For three units expenditure	..	Rs.	31,98,000 or 32,00,000 or Rs. 0.32 crore.		

Sixth Plan Staff—

Seven units at 11.4 lakhs per unit—Rs. 79.8 lakhs or Rs. 0.80 crore.

8.3.5. Project 5 : Setting up of Tamil Nadu State Town and Country Planning Board and strengthening the Directorate of Town Planning.

Outlay—Fifth Plan **Rs. 0.20 crore ; Sixth Plan Rs. 0.40 crore.**

Allocation of expenditure for staff in Fifth Plan Rs. 0.20 crore. (Rs. 0.05 crore for State Town and Country Planning Board and Rs. 0.15 crore for strengthening the Directorate of Town Planning.)

Allocation of expenditure for staff in Sixth Plan Rs. 0.40 crore. (Rs. 0.10 crore for State Town and Country Planning Board and Rs. 0.30 crore for strengthening the Directorate of Town Planning.)

Staff pattern for the Tamil Nadu Town and Country Planning Board in Fifth Plan.

Deputy Secretary in the scale of Joint Director of Town Planning.	1
Assistant Secretary in the scale of Assistant Director of Town Planning.	1
Superintendent	1
Accountant	1
Assistants	2
Junior Assistants	2
Stenographer	2
Typist	1
Record Clerk	1
Driver	1
Last Grade Government Servants	5
Staff salary and allowances	Rs. 3,94,200 for five years.
Contingent expenditure	Rs. 1,05,800 for five years.
Total expenditure	Rs. 5,00,000 or Rs. 0.05 crore.

Sixth Plan—

Doubling the staff to catch up the tempo of planning activity in the state will be necessary in which case the total outlay for the five years will work out to Rs. 0.10 crore.

STRENGTHENING THE STAFF IN THE DIRECTORATE OF TOWN PLANNING.

(FIFTH PLAN—RS. 0.15 CRORE).

<i>Designation.</i>	<i>Staff existing.</i>	<i>Staff proposed.</i>	<i>Additions.</i>	<i>Surplus.</i>
(1)	(2)	(3)	(4)	(5)
Joint Director	1	3	2	..
Deputy Director	12	14	2	..
Assistant Director	32	41	9	..
Architectural or Planning Assistant	22	29	7	..
Draftsman; Grade II	12	27	15	..
Draftsman; Grade III	41	30	..	11
Supervisor	34	30	..	4
Surveyor Draftsman	32	33	1	..
Surveyor	96	66	..	30
Tracers	54	45	..	9
Fieldman	72	33	..	39
Low Grade Government Servant	68	107	39	..
Blue Printer	10	14	4	..
Personal Assistant (Gazetted)	1	1	..	..
Junior Personal Assistant	1	1	..	..
Superintendent	11	17	6	..
Assistant	36	43	7	..
Junior Assistant	24	31	7	..
Stenographer	14	18	4	..
Typists	14	17	3	..
Record Clerk	13	16	3	..
Driver (Vehicle)	15	16	1	..
Accounts Officer	1	1	..	..
Accountant	1	1	..	..
Statistical Assistant	3	7	4	..
Assistant Geographer	1	1	..	..
Assistant Economist	1	1	..	..
Assistant Sociologist	1	1	..	..
Telephone Operator	1	1	..	..

The expenditure towards the above additional staff by way of salary and allowances works out to Rs. 12.5 lakhs for the five years. Contingent expenditure Rs. 2.5 lakhs for the five years; thus the total expenditure amounts to Rs. 15 lakhs or Rs. 0.15 crore.

(i) Expenditure on Staff of Tamil Nadu Town and Country Planning Board. Rs. 0.05 crore.

(ii) Staff additions in reorganising the department. Rs. 0.15 crore.

Total .. Rs. 0.20 crore.

The reorganised set up of the Directorate of Town Planning will be as follows :—

Directorate of Town Planning.

<i>Designation.</i>	<i>Circle I (General, Metropo- litan and Research).</i>	<i>Circle II (Regional, New Town and Master Plan).</i>	<i>Circle III (Detailed Town Planning and Urban node).</i>	<i>Administration.</i>	<i>Regional offices.</i>	<i>Total.</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Joint Director	1	1	1	..	..	3
Deputy Director	1	1	1	..	11	14
Assistant Director	3	2	3	..	33	41
Planning or Architectural Assistant. .	3	2	2	..	22	29
Draftsman, Grade II	4	2	2	..	22	30
Draftsman, Grade III	4	2	2	..	22	30
Supervisor	6	3	3	..	22	34
Surveyor Draughtsman	..	..	..	..	33	33
Surveyors	..	..	..	..	66	66
Tracer	6	3	3	..	33	45
Fieldman	..	..	..	..	33	33
Last Grade Servants	9	8	8	5	77	107
Blue Printer	1	1	1	..	11	14
Statistical Assistants	1	1	1	..	..	3
Assistant Geographer	1	..	..	..	..	1
Assistant Economist	1	..	..	..	..	1
Assistant Sociologist	1	..	..	..	..	1
Personal Assistant (Gazetted)	..	..	..	1	..	1
Junior Personal Assistant	..	..	..	1	..	1
Accounts Officer	..	..	..	1	..	1
Accountant	..	..	..	1	..	1
Superintendent	2	1	1	2	11	17
Assistant	4	2	2	3	33	44
Junior Assistant	4	2	2	2	22	32
Stenographer	2	2	2	1	11	18
Typist	2	1	1	2	11	17
Record Clerk	2	1	1	1	11	16
Driver	2	1	1	1	11	16

Sixth Plan.—Doubling the additional staff referred to above for the Directorate will be necessary to maintain the tempo in Planning activity of the State—which will cost Rs. 0.30 crore.

Total outlay on the project in sixth plan will be Rs. 0.10 + 0.30 or Rs. 0.40 crore.

8.3.6. *Project 6.*—Relates to Land Acquisition and development by Planning Authorities.

8.3.7. *Project 7.*—Research in Urban Planning, Publicity and promotion of Planning (including library and equipment).

Outlay—Fifth Plan Rs. 0.20 crore ; Sixth Plan Rs. 0.40 crore. Allocation of expenditure for staff and equipment in Fifth Plan Rs. 0.20 crore ; Sixth Plan Rs. 0.40 crore.

Staff pattern in Fifth plan.

Deputy Director	1	Photographer	1
Assistant Director	3	Artist	1
Planning Assistant	2	Blue Printer	1
Supervisors	2	Foreman	1
Draftsman, Grade II	2	Printer	1
Draftsman, Grade III	2	Compositor	1
Tracers	3	Book binder	1
Research Officer	4	Model maker	1
Survey-draftsman	12	Driver	3
Propaganda Officer	1	Superintendent	1
Librarian	1	Assistant	3
Storekeeper	1	Junior Assistant	3
Accountant	1	Record Clerk	2
Projector/film operator	1	Last grade Government Servant.	12
Cleaner	1		

RS.

Staff salary and allowances (for 5 years)	12,00,000
Library, books, Journals, equipment	2,00,000
Office contingent expenditure as Travelling Allowances and furniture ..	2,00,000
Equipment and Machinery as film Projectors, Slides, Films, Printing duplicator, Drawing equipment, Camera, etc.	2,00,000
Vehicles, Propaganda and projector vans, Seminars and Exhibits	2,00,000

Total .. 20,00,000
or Rs. 0.20 crore.

Sixth Plan.—Doubling the staff and enlarging Library and equipment facilities, exhibitions, seminars in all main urban centres will be necessary. Hence the outlay during VI Plan will be Rs. 0.40 crore.

8.3.8. *Project 8.*—Training of Specialists in Town Planning. Outlay in Fifth Plan Rs. 0.10 crore Sixth Plan Rs. 0.15 crore.

(85 candidates are to be trained in Fifth Plan and 120 candidates in Sixth Plan.)

Cost of deputation for Post Graduate and Post diploma courses in Town Planning and allied subjects, stipend for short term refresher courses in V Plan Rs. 0.10 crore and in VI Plan Rs. 0.15 crore.

8.3.9. Project : 9. Comprehensive Traffic and Transport studies of major cities (including equipment).

Outlay in Fifth Plan Rs. 0.50 crore ;

Outlay in Sixth Plan Rs. 1.5 crores.

Staff pattern in Fifth plan.

<i>Head Quarters.</i>					<i>Traffic cell at Madras.</i>
Joint Director	..	..	..	..	1
Deputy Director	..	..	..	..	1
Assistant Director	..	..	..	..	2
Statistical Officer	..	..	..	..	1
Research Assistant	..	..	..	..	2
Planning Assistant	..	..	..	..	2
Supervisor	..	..	..	..	2
Draftsman, Grade II	..	..	..	..	5
Surveyor D/M	..	..	..	..	10
Tracers	..	..	..	..	4
Driver	..	..	..	..	1
Blue Printer	..	..	..	..	1
Superintendent	..	..	..	..	1
Assistants	..	..	..	..	2
Junior Assistant	..	..	..	..	1
Stenographer	..	..	..	..	2
Typist	..	..	..	..	1
Record Clerk	..	..	..	..	1
Last Grade Government Servants	..	..	..	..	8
Divisional Engineer	..	..	..	..	1
Assistant Engineer	..	..	..	..	1
Junior Engineer/Supervisor	..	..	..	..	2
					RS.
Total salary and allowances for above staff for 5 years.					11,33,000
Contingent expenses on equipment, T.A., etc.					3,67,000
					15,00,000
					or
					0.15 crore.

TRAFFIC TRANSPORT STUDY UNITS (OUTSIDE MADRAS) AT URBAN AREAS.

Three units, each unit comprising of—

Deputy Director	1
Assistant Director	3
Planning Assistant	2
Supervisor	4
Surveyor Draftsman	20
Draftsman—Grade II	5
Tracer	5
Statistical Assistant	2
Assistant.. .. .	1
Junior Assistant	1
Blue Printers	1
Stenographer	1
Typist	2
Driver	2
Last Grade Servants	5

The expenditure towards salary and allowances of staff works out to. Rs. 7, 53,600 for 5 years or Rs 7.54 lakhs.

Contingent expenditure as T.As., office furniture, etc. .. Rs. 2.46 lakhs.

Total .. Rs. 10.00 lakhs per unit.

Total cost for three such units works to Rs. 30 lakhs or 0.30 crore.

Provision for Special equipment and computer charges—Rs. 5 lakhs or 0.05 crore.

ABSTRACT.

(RUPEES IN CRORE.)

Expenditure on Headquarter cell ..	0.15
Expenditure on 3 study units in urban centres.	0.30
Special equipment and Computer charges.	0.05
Total ..	0.50

Sixth Plan.—Additional units will have to be set up in other major urban centres for conducting studies and preparing comprehensive Traffic and Transportation plans, and also strengthening the Headquarters cell and opening out Computer centre with necessary equipment will cost Rs. 1.00 crore.

8.3.10. *Project-10.*—Implementation of Metropolitan Plans for major cities including setting up of Metropolitan Development Authorities.

Outlay in Fifth Plan—Rs. 0.75 crore.

Sixth Plan—Rs. 2.00 crores.

Allocation of Staff expenditure in Fifth Plan Rs. 0.30 crore.

Sixth Plan Rs. 0.60 crore.

Fifth Plan.—Two units each comprising of the following staff are to be set up during the Fifth Plan period.

Secretary (in the cadre of Joint Director of Town-Planning).	1
Town Planner,	1
Non-technical Personal Assistant	1
Junior Town Planner	2
Town Planning Assistant	3
Draftsman—Grade II	4
Surveyor-Draughtsman	6
Tracer	6
Blue Printer	1
Statistical Assistant	1
Supervisor	4
Surveyors	8
Superintendents	2
Accountant	1
Assistant	4
Junior Assistant	4
Stenographer	2
Typist	2
Driver	2
Record Clerk	2
Last Grade Government Servants	12

(RS. IN LAKHS.)

Total expenditure by way of salary and allowances for above staff per one unit for 5 years.	13.03
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Contingent expenditure for 5 years per one unit	1.97
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Total staff expenditure per unit for 5 years (Fifth Plan) ..	15.00
	or 0.15 crore.

For two units, the expenditure is Rs. 0.30 crore.

Sixth Plan.—

Four units of above pattern of staff will be set up. At Rs. 0.15 crore per unit for 5 years, four units for 5 years will cost Rs. 0.60 crore.

**PROGRAMMES OF THE FIFTH AND SIXTH-FIVE YEAR
PLANS (STATE SCHEMES).**

TOWN-PLANNING AND URBAN DEVELOPMENT.

<i>Name of the scheme.</i>	<i>Outlay for Perspective Plan, 1974-84.</i>	<i>Outlay in</i>		<i>Remarks.</i>
		<i>Fifth Plan.</i>	<i>Sixth Plan.</i>	
(1)	(2)	(3)	(4)	(5)
	(RUPEES IN CRORES.)			
1 Preparation and implementation of detailed development plans in urban areas—Assistance by loans to Local Planning Authorities.	1.50	0.50	1.00	..
2 Formulation and implementation of Master Plans for urban areas including setting up of Local Planning Authorities.	1.50	0.50	1.00	..
3 Formulation and implementation of Regional plans including setting up of Regional Planning Authorities.	1.50	0.50	1.00	..
4 Formulation and implementation of plans for New Towns, Satellite Towns and Urban Nodes including setting up of New Town Authorities and Planning Authorities.	3.00	1.00	2.00	..
5 Setting up of Tamil Nadu State Town and Country Planning Board and strengthening the Directorate of Town-Planning.	0.60	0.20	0.40	..
6 Urban Development including acquisition of land—(A self financing scheme).	15.00	5.00	10.00	..
7 Research in Urban Planning publicity and promotion of Planning including library and equipment.	0.60	0.20	0.40	..
8 Training of Specialists in Town-Planning.	0.25	0.10	0.15	..
9 Comprehensive Traffic and Transportation studies of major cities (including equipment).	1.50	0.50	1.00	..
10 Implementation of Metropolitan plans for major cities including setting up of Metropolitan Development Authorities. . .	2.75	0.75	2.00	..
11 Remunerative enterprises—Loan assistance to Local Bodies. . .	1.80	0.75	1.05	..
Total . .	30.00	10.00	20.00	

**PROGRAMMES OF THE FIFTH AND SIXTH FIVE-YEAR PLANS
(STATE SCHEMES).**

URBAN HOUSING.

<i>Name of the scheme.</i>	<i>Outlay for Perspective Plan, 1974-84.</i>	<i>Outlay in</i>		<i>Remarks.</i>
		<i>V Plan</i>	<i>VI Plan.</i>	
(1)	(2)	(3)	(4)	(5)
(RS. IN CRORES.)				
1 Subsidised Industrial Housing Scheme—				
(a) Public Sector	7.00	2.00	5.00	..
(b) Co-operative Sector .. }				
2 Low Income Group Housing Scheme—				
(a) Tamil Nadu Housing Board. }	29.30	9.30	20.00	..
(b) Co-operative Sector .. }				
3 Middle Income Group Housing Scheme—				
(a) Tamil Nadu Housing Board. }	40.00	10.00	30.00	..
(b) Co-operative Sector .. }				
4 Land Acquisition and Development Scheme (Housing Plots) a Self-financing Scheme.	53.20	20.00 (Seed Capital) 3.20	30.00	..
5 Tamil Nadu Government Servants' Rental Housing Scheme.	13.00	3.00	10.00	..
6 Slum Clearance Improvement Scheme—				
(a) Tamil Nadu Slum Clearance Board. }	72.50	22.50	50.00	..
(b) Tamil Nadu Housing Board. }				
Total ..	215.00	70.00	145.00	

PROJECTS FOR TOWN PLANNING AND URBAN DEVELOPMENT (STATE SECTOR).

8.4.1. PROJECT 1.

Preparation and implementation of detailed development plans in urban areas—
Assistance by loans to Local Planning Authorities :—

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1972-74	..	..	..	..	0.10
1974-79	..	..	..	..	0.50
1979-84	..	..	..	..	1.00
					1.50

This project is intended to assist Local Planning Authorities financially from State funds by way of loans towards preparation and implementation of Detailed Development Plans. The loan amount with interest is recoverable in long-term, annual instalments.

8.4.2. PROJECT 2.

Formulation and implementation of Master Plans for Urban Areas, including setting up of Local Planning Authorities.

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1974-79	..	..	..	..	0.50
1979-84	..	..	..	..	1.00
Total					1.50

The New Tamil Nadu Town and Country Planning Legislation makes provision for constituting Local Planning Authorities to prepare and implement Master Plans for urban areas (towns and environs). This project provides for expenditure from State funds on full grant basis, towards setting up of Local Planning Authorities with required minimum staff and also towards preparation and execution of Master Plans.

8.4.3. PROJECT 3.

Formulation and implementation of Regional Plans, including setting up of Regional Planning Authorities.

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1974-79	..	..	..	..	0.50
1979-84	..	..	..	..	1.00
Total					1.50

Under the New Tamil Nadu Town and Country Planning Legislation Regional Planning Authorities have to be constituted for the various regions of the State for effectively co-ordinating and guiding development activities of the regions in accordance with the respective regional plans and also implementing major proposals of regional importance in the Plan. This project provides for the expenditure, to be met as full grant from State funds, towards establishing Regional Planning Authorities and also towards execution of programmes of regional importance.

8.4.4. PROJECT 4.

Formulation and implementation of Plans for New Towns, Satellite Towns and Urban nodes, including setting up of New Town Development Authorities and Planning Authorities.

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1974-79	..	..	..	..	1.00
1979-84	..	..	..	..	2.00
Total ..					3.00

Urban nodes, Satellite towns and new towns are intended to assist in balanced distribution of urban population and economic development and discourage concentrations on existing and developed cities. Provision is made in this projects for preparation and implementation of such new growth centres and also for constituting Development and Planning Authorities. As the amount indicated here is to serve as initial expenditure for commencing major and most importance schemes, the full amount will be met by State Government on full grant basis.

8.4.5. PROJECT 5.

Setting up of Tamil Nadu State Town and Country Planning Board and strengthening the Directorate of Town Planning.

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1974-79	..	..	..	..	0.20
1979-84	..	..	..	..	0.40
Total ..					0.60

The New Tamil Nadu Town and Country Planning Legislation makes provision for constitution of a Town and Country Planning Board at State level for guiding and supervising the overall Planning activities in the State. With the coming into effect of the new legislation, the town planning activities at different levels will simultaneously increase with high tempo and to cope up with this tempo of development activity, the machinery at the Directorate level has to be equipped with adequate staff. This project provides for the expenditure, from State funds on full grant basis towards the constitution of the State Board and strengthening the Directorate.

8.4.6. PROJECT: 6.

Urban Development including acquisition of land—(a self financing scheme).

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1974-79	..	..	..	..	5.00
1979-84	..	..	..	..	10.00
Total					15.00

This project makes provision for purchase and development of Urban land for planning use. Land forms the vital base for all development activities in the planning field. The outlay indicated here can serve as seed capital for purchase and development; the developed land can be sold for the different uses in development Plans, and the money got by sale can be ploughed back on further investment on land on revolving principle. Since in Urban Development, portions of acquired land will be utilised for public (non-remunerative uses) the outlay is to be met from State funds on half grant and half loan basis at this commencement stage of the new project.

8.4.7. PROJECT 7.

Research in Urban Planning, Publicity and Promotion of Planning (including library and equipment).

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1974-79	..	..	..	..	0.20
1979-84	..	..	..	..	0.40
Total					0.60

Under the project a separate Research Cell is proposed to be set up in the Directorate of Town-Planning for exclusive concentration on Research studies and attending to publicity on planning principles and standards and educating public on planning policies. As the outlay is on staff, establishment and equipment, the full amount will be met from State funds on full grant basis.

8.4.8. PROJECT 8.

Training of specialists in Town-Planning.

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1972-74	..	..	..	..	0.02
1974-79	..	..	..	..	0.10
1979-84	..	..	..	..	0.15
Total					0.25

This project intends to render financial assistance by way of scholarships and deputations from Directorate of Town-Planning to eligible candidates for specialised higher studies in Town-Planning both at Post-graduate and Post-diploma levels to get over the dearth of qualified personnel in the field. The outlay in full will be met from State funds on full grant basis.

8.4.9. PROJECT 9.

Comprehensive Traffic and Transportation studies of major cities (including equipment).

<i>Year.</i>				<i>Outlay.</i>
				(RS. IN CRORES.)
1972-74	..	..	..	0.16
1974-79	..	..	..	0.50
1979-84	..	..	..	1.00
Total ..				1.50

Transportation studies for Metropolitan Madras City has been completed; similar studies for city of Coimbatore has been undertaken. The study has to be extended to other major cities as Madurai, Tiruchirappalli, Salem, Thanjavur and Tirunelveli. This project provides for such studies being undertaken by the Directorate of Town-Planning. The outlay will be met from State funds on grant basis.

8.4.10. PROJECT 10.

Implementation of Metropolitan Plans for major cities including setting up of Metropolitan Development Authorities.

<i>Year.</i>				<i>Outlay.</i>
				(RS. IN CRORES.)
1974-79	..	..	..	0.75
1979-84	..	..	..	2.00
Total ..				2.75

The growth of Metropolitan cities have to be properly regulated and controlled to prevent haphazard development, congestion and various other evils. Madras Metropolitan Plan has already been prepared and is to be implemented. For co-ordinating development activities within the metropolitan area and to implement the plan effectively, a separate Development authority has to be constituted. Similar action with regard to other metropolitan cities as Coimbatore, Madurai, Tiruchirappalli, Thanjavur, Tirunelveli, has to be pursued. This project makes provision for such items. The initial outlay will be met from State funds on grant basis.

8.4.11. PROJECT 11.

Remunerative enterprises—Loan assistance to Local Bodies.

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1972—1974	..	..	..	..	0.42
1974—1979	..	..	..	..	0.75
1979—1984	..	..	..	..	1.05
Total					1.80

Most of the Local Bodies, Municipalities in the State suffer from lack of finance for investing on public amenities of remunerative nature such as shops, markets, bus terminals, community halls and auditoriums. This project provides for loan assistance to Local Bodies from State funds recoverable in instalments.

(CENTRAL SECTOR.)

8.4.12. PROJECT 12.

Pilot Research Project in Growth Centres.

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1972—1974	..	..	..	..	0.02
1974—1979	..	..	..	..	0.06
Total					0.06

Provision is made in this project to extend the Research project to backward districts of Dharmapuri and Ramanathapuram. This is proposed as Centrally Sponsored Scheme and the whole outlay is to be met by the Union Government.

8.4.13. PROJECT 13.

Implementation of Metropolitan Plans, Satellite and New Town Plans.

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1974—1979	..	..	..	..	25.00
1979—1984	..	..	..	..	25.00
Total					50.00

Development programmes related to Metropolitan plans, Satellite towns and new towns require large investment of money. Even though major resources for financial assistance from different institutions as Life Insurance Corporation of India, Housing and Urban Development Corporation (HUDCO) are to be sought for, the Central Government may have to assist the State substantially with both grant and loan for development of metropolitan cities.

This project provides for such an expenditure (towards land acquisition and development). The outlay is proposed (Centrally sponsored) to be met from Union finance.

(CO-OPERATIVE AND AUTONOMOUS INSTITUTIONAL SECTORS.)

8.4.14. PROJECT 14.

Implementing Satellite Town Plans and New Town Plans.

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1974—1979	..	..	..	..	10.00
1979—1984	..	..	..	..	20.00
Total					30.00

Implementation of Satellite and New Towns require large financial investment and all possible reserves will have to be tapped. This project provides for development of such towns with financial assistance from autonomous institutions as Life Insurance Corporation and HUDCO.

PROJECTS FOR URBAN HOUSING.

(STATE SECTOR.)

8.5.1. PROJECT 1.

Subsidised Industrial Housing Scheme.—

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1972—1974	..	..	..	..	0.27
1974—1979	..	..	..	..	2.00
1979—1984	..	..	..	..	5.00
Total					7.00

This project intends to effect housing accommodations for working class (employed in Industry) by Government advancing finance to the extent of 75 per cent (25 per cent grant and 50 per cent loan) of ceiling cost of construction and leaving the rest 25 per cent to private industries. In the case of Government undertaking the scheme for its industrial labour, the 25 per cent industrialist's investment is also met as grant by Government. The outlay is to be met on half grant and half loan basis from State funds.

8.5.2. PROJECT 2.

Low Income Group Housing Scheme—

Year.				Outlay.
				(RS. IN CRORES.)
1972—1974	..	..	..	1.26
1974—1979	..	..	..	9.30
1979—1984	..	..	..	20.00
				29.30

This project aims at construction of houses and flats for the underprivileged persons falling within the monthly income scale of Rs. 251 to 600. This is a self supporting scheme ; the outlay is to be of State loan to housing agencies as the Tamil Nadu Housing Board and Co-operative Institutions.

8.5.3. PROJECT 3.

Middle Income Group Housing Scheme—

Year.				Outlay.
				(RS. IN CRORES.)
1972—1974	..	..	..	0.53
1974—1979	..	..	..	10.00
1979—1984	..	..	..	30.00
				40.00

This project is to cater for persons of monthly income range Rs. 601 to 1,500. The outlay is proposed as loan to housing agencies as the Tamil Nadu Housing Board and Co-operative Institutions as this is a self-supporting scheme.

8.5.4. PROJECT 4.

Land Acquisition and Development Scheme (Housing plots)—a self-supporting scheme—

Year.				Outlay.
				(RS. IN CRORES.)
1972—1974	..	..	..	0.53
1974—1979	..	..	..	23.20
1979—1984	..	..	..	30.00
				53.20

Bulk acquisition of undeveloped land, developing them into suitable house-sites with all essential facilities for sale to public is the aim of this project. This is a self-supporting scheme and hence the outlay will be met from State funds on loan basis. The loan amount will be revolved by ploughing back the money realised from sale of plots.

8.5.5. PROJECT 5.

Tamil Nadu Government Servants' Rental Housing Scheme—

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1972—1974	..	..	..	..	2.10
1974—1979	..	..	..	..	3.00
1979—1984	..	..	..	..	10.00
					13.00

This project refers to Government investment on construction of houses for its own Officers and Staff, to be let out on concessional rent. The houses will be constructed by Tamil Nadu Housing Board on behalf of Government and the property will remain as Government asset. The outlay will be met from State funds.

8.5.6. PROJECT 6.

Slum Clearance/Improvement Scheme—

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1972—1974	..	..	..	..	8.40
1974—1979	..	..	..	..	22.50
1979—1984	..	..	..	..	50.00
Total	..	..	..	..	72.50

This project is the most important housing scheme meant to rehabilitate the existing slum dwellers (who form the economically weakest society) in built up houses/flats equipped with essential amenities. The outlay is proposed to be met from State finances on two-third grant and one third loan basis.

(CENTRAL SECTOR.)

8.5.7. PROJECT 7.

Setting up manufacturing plants for building materials (as bricks, prefabrication, etc.)—

<i>Year.</i>					<i>Outlay.</i>
					(RS. IN CRORES.)
1974—1979	..	..	..	..	4.00
1979—1984	..	..	..	..	4.00
					8.00

The house building programmes envisaged in the perspective plan will raise large demand for building materials and prefabrication materials. To meet this demand, necessarily material manufacturing plants will have to be installed. For this purpose, this project is included as a Centrally sponsored scheme. The outlay is proposed to be met by way of loan from Union Government.

8.5.8. PROJECT 8.—CO-OPERATIVE AND AUTONOMOUS INSTITUTIONAL SECTORS.

Subsidised Industrial Housing.

<i>Year.</i>				<i>Outlay.</i>
				(RS. IN CRORES.)
1974—1979	..	..	..	0.75
1979—1984	..	..	..	1.67
Total	..	..	..	2.42

This project provides for private industrialists share, taking into consideration the minimum 25 per cent compulsory share in subsidised Industrial Housing Scheme.

8.5.9. PROJECT 9.

Low Income Group Housing.

<i>Year.</i>				<i>Outlay.</i>
				(RS. IN CRORES.)
1974—1979	..	..	..	30.00
1979—1984	..	..	..	45.00
Total	..	..	..	75.00

Other sectors than Government have also to play a prominent roll in housing the masses falling in the low income category. Institutional finances from HUDCO, Life Insurance Corporation, Banks and private organised institutions and co-operative societies have to be mobilised. This project takes into consideration these loan assistances for housing activity.

8.5.10. PROJECT 10.

Middle Income Group Housing.

<i>Year.</i>				<i>Outlay.</i>
				(RS. IN CRORES.)
1974—1979	..	..	..	35.00
1979—1984	..	..	..	48.00
Total	..	..	..	83.00

This project takes into consideration the possible loan assistances from Financial institutions as HUDCO, Life Insurance Corporation, Banks and organised private institutions and co-operative societies and estimated the outlay to be met from such resources for housing the middle income group of people.

8.5.11. PROJECT 11.

Other types of houses.

<i>Year.</i>				<i>Outlay.</i>
				(RS. IN CRORES.)
1974—1979	..	..	..	4.25
1979—1984	..	..	..	5.33
Total				9.58

People of income exceeding the middle income group do not get Government aid in the matter of financing house constructions. They utilise co-operative and bank facilities for supplementing their own investment in construction of houses. This project takes care of such housing and the outlay will be met from institutional finances outside Government.