

Auroville Universal Township

Master plan
(Perspective: 2025)



AUROVILLE FOUNDATION

TOWN & COUNTRY
PLANNING
ORGANISATION
GOVERNMENT OF INDIA
MINISTRY OF URBAN
DEVELOPMENT
& POVERTY ALLEVIATION





**THE AUROVILLE UNIVERSAL TOWNSHIP
MASTER PLAN**
(Perspective: 2025)

Auroville Foundation
Town & Country Planning Organisation
Government of India

This Master Plan is approved by the Ministry of Human Resource Development
via its letter No. F. 27-3/2000-UU, dated 12th April, 2001



DR MURLI MANOHAR JOSHI



MESSAGE

मानव संसाधन विकास मंत्री
भारत
नई दिल्ली - ११० ००१
MINISTER OF
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The significance of Auroville can be understood properly only when we fathom into the very heart of the crisis through which humanity is passing today. As Sri Aurobindo points out, the crisis of today is evolutionary in character and can be resolved only if humanity turns upward towards the next step of evolution and realises universal fraternity.

Ancient India had spoken of the ideal of the whole world as One Family, - *vasudhaiva kutumbakam*. It is, therefore, heartening that this ancient ideal has been given an experimental field in Auroville, which the Mother founded on 28th February, 1968, in the light of Sri Aurobindo's vision of human unity.

Auroville is an alternative to the conflicting strategies that aim at mere freedom that hurts the values of equality and equity or at mere equality that tends to fetter the freedom of the spirit. In this context, Auroville stands out as a promise that liberty, equality and fraternity can meet together in a large synthesis.

It is gratifying that the Master Plan has not only been designed by the residents of Auroville and approved by the Governing Board, but the Town and Country Planning Office of the Union Ministry of Urban Development has also extended valuable collaboration and thus enhanced the excellence of this Plan.

UNESCO has adopted several Resolutions to recommend Auroville to the Member States for their support and the Government of India has also been extending support and assistance, not only through the Auroville Foundation Act, but also through activities of encouragement and recognition.

This Master Plan will serve as a further instrument through which Governmental and Non-Governmental help can be enhanced.

In welcoming this Master Plan, I wish to invite increasing and meaningful support for Auroville Universal Township.

[MURLI MANOHAR JOSHI]

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FOREWORD

The Auroville Universal Township envisaged by the Mother is one of the unique examples of manifestation of human unity in diversity. The township founded on a barren plateau devoid of any blade of grass in 1968 has become a green area shaded with a variety of trees and plants. The architectural designs, appropriate building technologies, conservation approach, rainwater harvesting, re-use and recycling of water resources, solid waste management, land re-generation, community participation are some of the areas where innovative models and techniques have been developed and adapted in the township.

As per Charter, Auroville belongs to the humanity as a whole and the one who is to live in Auroville must be willing servitor of Divine Consciousness. It is in this background the growth of Auroville needs to be seen. The township designed for an ultimate population of 50000 in an area of 2000 ha. would be a viable functional entity. Although the character and set up of the township may not be the same as that of any other town of similar size, functionally it requires to be a self contained township. The Master Plan of the township has, therefore, rightly envisaged development of economic zone alongwith residential, cultural

and institutional areas. The provision of green belt around the built up portion of the township would be an important environmental safeguard. Auroville is a different township from development management point of view and the Master Plan exercise has rightly recognised its uniqueness.

I am sure, Master Plan would channelise the future growth and development of Auroville as per the envisioned charter. Its development may provide a good model for emulation in other towns and cities as well. Contributions made by the Resident Assembly and the various other Aurovilian Working Groups in formulation of the Master Plan are praiseworthy symbolising active involvement of community groups in Master Plan exercise. I compliment Town and Country Planning Organisation of this Ministry and Auroville Foundation for drawing the Auroville Master Plan of international significance.

JAGMOHAN

Minister for Urban Development
and Poverty Alleviation,
Government of India

Dated : 25 Jan., 2001

PREFACE

Sri Aurobindo and the Mother have diagnosed the contemporary crisis of humanity as an evolutionary crisis which can be resolved only if the consciousness of universal fraternity can manifest and bring about actualisation of human unity. In order to aid this difficult objective, the Mother founded Auroville on 28th February 1968 as a Universal Township, 150 kms. south of Chennai in south India and gave it a Charter. This Charter declares that Auroville belongs to humanity as a whole and that to live in Auroville one must be a willing servitor of Divine Consciousness. It further declares that Auroville will be the place of unending education and constant progress, a bridge between the past and the future, and that it will be the site of material and spiritual researches for a living embodiment of an actual human unity.

The Mother envisaged the Auroville township of an ultimate population of 50,000, with Matrimandir as its centre and soul. Since its inception, the township has been growing steadily and today it has about 1,500 residents representing 35 nationalities.

The Auroville Foundation Act, 1988, enacted by the Government of India, is one of the important milestones in the

development of Auroville. It provides a statutory support for preparation of Master Plan of Auroville to ensure orderly and planned development of Auroville. The Auroville township is designed to be in an area of 2000 ha. in a circular form of which about 850 ha. have already been acquired by the Auroville Foundation. The Master Plan envisages systematic development of the Township and prevention of any non-conforming developments in the area.

The Master Plan based on the original concept given by the Mother envisages intertwining of four major functional zones, namely, Residential, Cultural, International, and Industrial, — around a Peace Area in the centre. About 25% of the township would be built up portion, surrounded by a green belt based on the concept of eco-friendly and sustainable development.

Innovative models and techniques in the field of afforestation, land development, water conservation, rainwater harvesting, building technology, community participation, energy saving, etc; incorporated in the Master Plan would be integral to the township development and management. Integrated urban and rural development strategies have also been envisaged.

Auroville is a unique township, the fundamental thrust of which

is centred on research, which is comprehensive and which transcends all creeds, all politics, and all narrowing ideologies. It encompasses the areas of the East and the West and human unity, of science and spirituality, of arts, crafts and technologies, and of all that pertains to the evolution of humanity through a process of evolutionary mutation leading up to the development of a new humanity or superhumanity. It can be described as a Centre of Advanced Research.

I appreciate the contributions made by the Residents Assembly of Auroville and its various groups. I would like to place on record my sincere thanks to the Planning Team of the Auroville Foundation, Mr. Roger Anger, Chief Architect of Auroville, and a number of individuals who have worked day and night to bring the Master Plan (Perspective: 2025) into its final form. I am particularly thankful to Shri G. Dattatri, Urban Advisor, who has inspired our Planning Team and devoted a good deal of his precious time by visiting Auroville frequently and working on this Master Plan (Perspective: 2025). My special thanks are to Shri D.S. Meshram, Chief Planner, Town and Country Planning Organisation, Government of India, and his colleagues, Shri J.B. Kshirsagar and Shri M.L.Chotani for their advice and collaboration in formulating this Master Plan (Perspective: 2025).

It would be relevant at this stage to record with great satisfaction that in our endeavours to develop the township and particularly in promoting and in establishing foundation for sustainable development, we have received great support from the Governmental and Non-governmental Organisations, besides national and international agencies. It is also noteworthy that UNESCO has passed five Resolutions at its General Conferences to express its support to the establishment and promotion of Auroville. I would also like to record with gratefulness the constant goodwill, encouragement and involvement of the Government of India, as also of the Governments of Tamil Nadu and Pondicherry.

I am happy that this Master Plan (Perspective : 2025) has been prepared jointly by the Auroville Foundation and the Town and Country Planning Organisation of the Union Ministry of Urban Development and Poverty Alleviation.

KIREET JOSHI
Chairman
Auroville Foundation



Part One
● Existing Scenario



1.1 PREAMBLE

1.1.1 A Master Plan prepared for urban areas serves as an important instrument to guide the process of urban development. Over the years it has emerged as an important approach to urban planning in the country. The concept of the Master Plan has no doubt made a discernible impact in regulating and channelising the development and growth of cities and towns. However, the issue of the Master Plan and its efficacy has been discussed in a National Workshop organised by the Ministry of Urban Development and Poverty Alleviation, which suggested a dynamic, transparent and effective approach to improve the efficacy of the Master Plan. Accordingly, the Ministry of Urban Development and Poverty Alleviation, Govt. of India, entrusted a study to the Institute of Town Planners, India, on Urban Development Plan Formulation and Implementation (UDPFI) Guidelines. These guidelines have recommended a planning system consisting of a set of four interrelated plans with the Perspective Plan at its apex and Plans of Projects at the base, with the Development Plan and the Annual Plan facilitating the implementation of the Urban Perspective Plan. In line with these guidelines, this Master Plan (Perspective: 2025) of Auroville has been conceived.

1.1.2 The Master Plan (Perspective: 2025) provides a policy framework which will serve as a guide in the preparation of five year Development Plans and Annual Plans for implementation of the proposals. It is presented in three parts. Part One describes the existing scenario and lays down the imperatives for development. Part Two lays down principles and directions



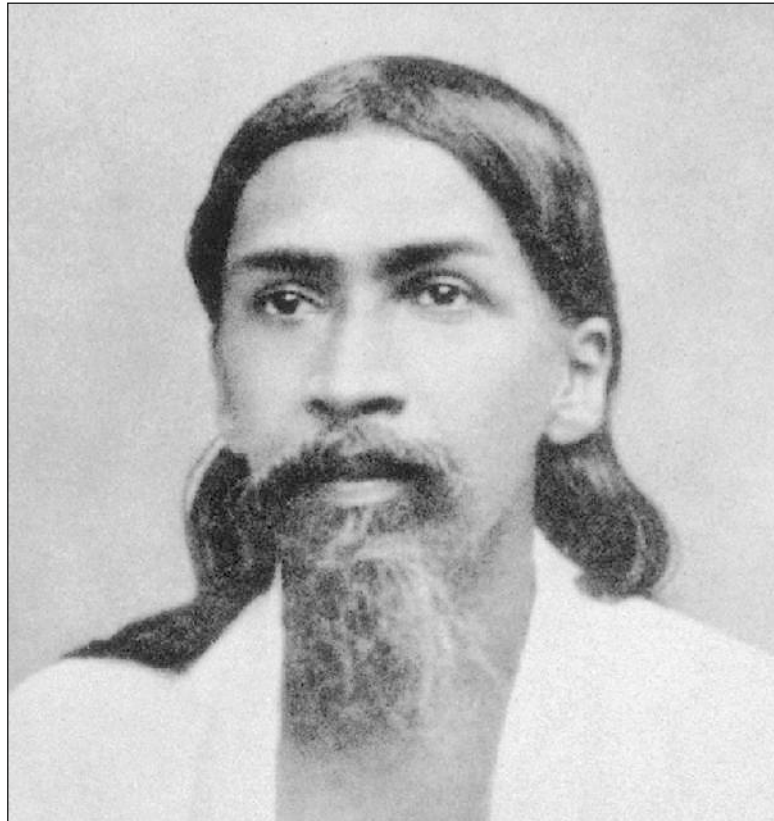
The Mother

for long-term growth and gives Development Proposals to make Auroville the most eco-friendly city. It lays down broad policies in terms of land utilisation, residential densities and qualitative and quantitative aspects of infrastructure development. Part Three gives the development promotion regulations and the procedure to be adopted for development.

1.2 ORIGIN OF THE TOWNSHIP: THE VISION

1.2.1 In 1954 the Mother had envisioned that "There should be somewhere upon earth a place that no nation could claim as its sole property, a place where all human beings of

goodwill, sincere in their aspiration, could live freely as citizens of the world, obeying one single authority, that of the supreme Truth; a place of peace, concord, harmony, where all the fighting instincts of man would be used exclusively to conquer the causes of his suffering and misery, to surmount his weakness and ignorance, to triumph over his limitations and

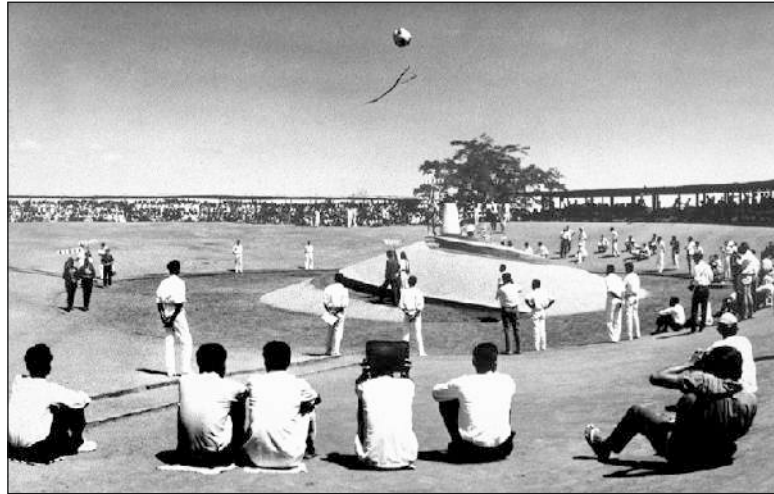


Sri Aurobindo

incapacities; a place where the needs of the spirit and the care for progress would get precedence over the satisfaction of desires and passions, the seeking for pleasures and material enjoyments.

1.2.2 In this place, children would be able to grow and develop integrally without losing contact with their soul. Education would be given, not with a view to passing examinations and getting certificates and posts, but for enriching the existing faculties and bringing forth new ones. In this place, titles and positions would be supplanted by opportunities to serve and organize. The needs of the body will be provided for equally in the case of each and everyone. In general, intellectual, moral and spiritual superiority will find expression not in the enhancement of the pleasures and powers of life but in the increase of duties and responsibilities.

1.2.3 Artistic beauty in all forms, painting, sculpture, music, literature, will be available equally to all, the opportunity to share in the joys they bring being limited solely by each one's capacities and not by social or financial position. In this ideal place money would be no more the sovereign lord. Individual merit will have a greater importance than the value of material wealth and social position. Work would not be there as the means of gaining one's livelihood, it would be the means whereby to express oneself, develop one's capacities and possibilities, while doing at the same time service to the whole group, which on its side would provide for each one's subsistence and for the field of his work. In brief, it would be a place where the relations among human beings, usually based



Auroville's Inauguration

almost exclusively upon competition and strife, would be replaced by relations of emulation for doing better, for collaboration, relations of real brotherhood".

1.2.4 It was in the mid 1960s, however, that the City was concretised when the Mother said, "India is the representation of all human difficulties on earth and it is in India that there will be cure, and it is for that I had to create Auroville" because "from the spiritual point of view, India is the foremost country in the world. Her mission is to set the example of spirituality. Sri Aurobindo came on earth to teach this to the world".

1.2.5 Based on the work and inspiration of Sri Aurobindo and the Mother, Auroville is intended as a site for the manifestation of human unity in diversity. As such, it offers

itself as a testing ground and laboratory for the next step in human evolution. Auroville took root when the Mother identified the Banyan tree to be the physical centre of the City. The site is bounded by the sea to the east, the Kaluveli tank to the north, the Tindivanam Road to the west and Pondicherry to the south.

1.2.6 The Universal Township of Auroville was inaugurated on 28th February 1968 in the presence of 5000 people. Representatives of 124 countries and all the Indian states placed a handful of earth from their homelands in a marble-clad urn near the site of the Matrimandir at the centre of Auroville. This symbolised the creation of the city dedicated to human unity and international understanding. The Mother announced the Auroville Charter.

1.2.7 AUROVILLE CHARTER

1. Auroville belongs to nobody in particular. Auroville belongs to humanity as a whole. But to live in Auroville, one must be a willing servitor of the Divine Consciousness.
2. Auroville will be the place of an unending education, of constant progress, and a youth that never ages.
3. Auroville wants to be the bridge between the past and the future. Taking advantage of all discoveries from without and from within, Auroville will boldly spring towards future realisations.
4. Auroville will be a site of material and spiritual researches for a living embodiment of an actual Human Unity.

1.2.8 The Mother envisaged to develop Auroville as a township for 50,000 inhabitants with a circular form, covering an area of about 20 sq. km. Auroville received the unanimous endorsement of the General Conference of UNESCO in 1966, 1968, 1970 and 1983. It is now administered under the Auroville Foundation Act (Government of India Act no. 54, dated 29 Sept. 1988) which provides for the preparation of a Master Plan.

1.2.9 The Act also provides for the acquisition and transfer of the undertakings of Auroville and to vest such undertakings in a foundation established for the purpose with a view to making long-term arrangements for better management and further development of Auroville in accordance with its original Charter and for matters connected therewith or incidental thereto.

1.2.10 The relevance of Auroville to the country as a whole is to use all the researches carried out here diligently and with commitment, individually and collectively, in order to raise the overall quality of life. While conceiving the town, the Mother also evolved a form for the township; subdivided into four principal zones namely the Residential Zone, International Zone, Industrial Zone and Cultural Zone. The original sketch drawn by the Mother in her own hand is the basis for further development of the Auroville township.

1.3 LOCATION AND REGIONAL SETTING

1.3.1 Auroville is located 160 km south of Chennai on the



Auroville 30 years ago

east coast of India, just 6 km north of Pondicherry. Initially the site was a barren plateau traversed by dry canyons and gullied land with hardly any vegetation as depicted in the photograph. As may be seen in **Drawing 1**, Auroville Township is located along the East Coast highway which provides easy accessibility both from Chennai and Pondicherry. The regional setting of Auroville township indicated in **Drawing 2** reveals that

although it is part of Villupuram district of Tamil Nadu, functionally it is closely connected to Pondicherry.

1.3.2 As mentioned earlier, the township boundary is in the form of a circle of 2.5 km radius encompassing 20 sq. km. Most of the area lies in Villupuram district and comprises the panchayats of Irumbai and Bommapalayam. Small areas of this land are in Kottakuppam, Rayapudupakkam, Mathur Panchayats and Alankuppam, within the Union Territory of Pondicherry. The land is generally of poor quality for agriculture and the entire area was identified as a backward area.

1.3.3 The village settlements of Edayanchavadi, Irumbai, Kottakarai, Rayapudupakkam, Pettai and Alankuppam fall in the designated area of the township. The present population of these village settlements is about 8,000 persons. The village settlements of Kuilapalayam, Acharampattu and Oddampalayam are just on the periphery of the township and their population is about 3,000 persons.

1.3.4 Pondicherry city, with a population of about 4 lakh (1991), is the largest urban centre at a distance of 6 km to its south while Tindivanam, the headquarter of Tindivanam taluk with a population of over 60,000, is about 25 km to the north-west. Cuddalore town, further south of Pondicherry, is another important urban centre with a population of about 1.5 lakh. To the north of Auroville, at a distance of about 10 km, lies the Kaliveli tank, a unique environmental resource in the region. To the south is another major water body, the Ustery tank, an important source for irrigation. There are about 40 villages

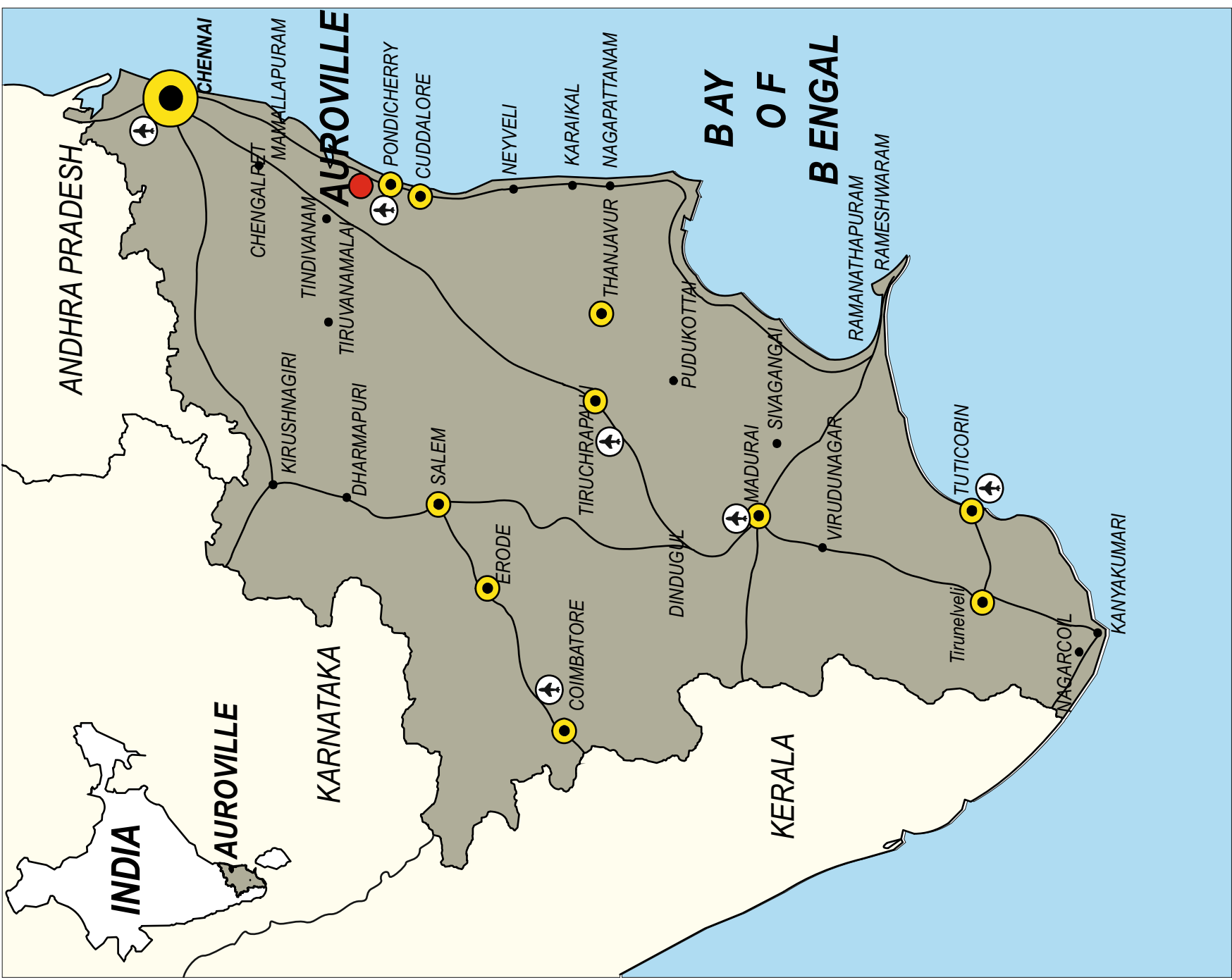
within the triangular area bounded by Pondicherry city, Tindivanam town and Marakkanam with an entirely rural population of about 3 lakh. Thus, Auroville's development is closely linked with the development of the surrounding region. The development models evolved in Auroville township, be it plantation, regeneration of land, water harvesting, building technology, etc., are benefitting the entire region.

1.4 CLIMATE AND PHYSICAL CHARACTERISTICS

1.4.1. Auroville has a tropical climate. The dry season usually lasts seven months, from January to July. May and June are the hottest months with occasional showers. The main rainy season is from October to January. The average rainfall is 1,230 mm. a year. The prevailing wind blows from the southeast.

1.4.2. The central part of the designated Auroville township area is more than 50 m above mean sea level. The site slopes down from the centre to the periphery. The uncontrolled runoff appears to have been the main cause for the erosion of adjoining land. The deeper canyons are located mainly in the east and south of the designated area. There are a few water bodies or 'eris' in and around the township, of which Irumbai eri is the largest one.

1.4.3. The geological structure of the area as indicated in **Drawing 3**, reveals that the topsoil is hard laterite on a bed of clay of varying depths. The soil is not suitable for productive agriculture with traditional methods. This was also assessed by



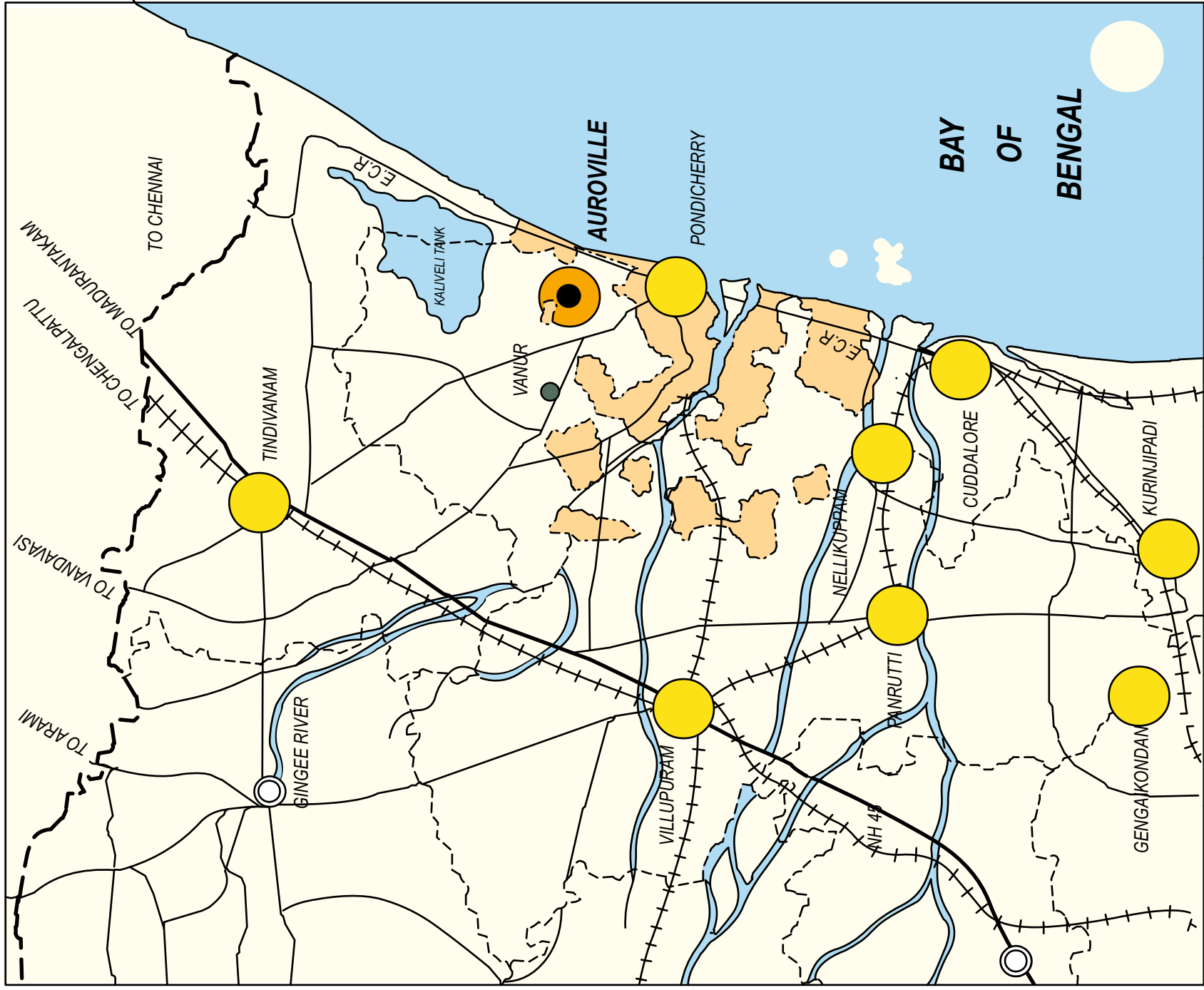
AUROVILLE IN TAMIL NADU

AUROVILLE UNIVERSAL TOWNSHIP MASTER PLAN

DRG 1



NORTH



● TALUK HEADQUARTERS
 --- PONDICHERRY STATE
 --- DISTRICT BOUNDARY
 ++ TALUK BOUNDARY
 ++ RAILWAY LINE METER GAUGE

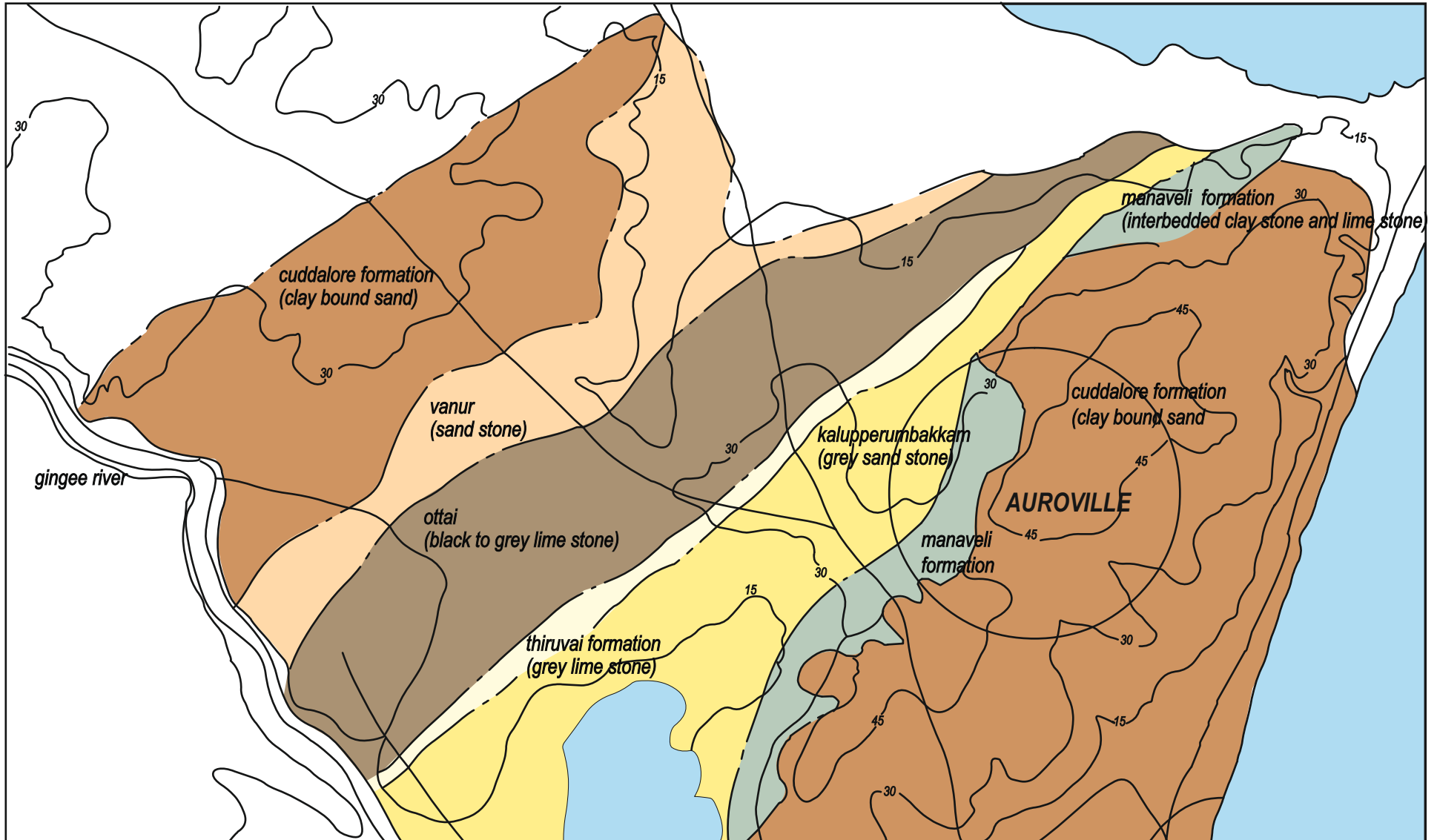
AUROVILLE IN VILLUPURAM DISTRICT

AUROVILLE UNIVERSAL TOWNSHIP MASTER PLAN

DRG 2



NORTH



GEOLOGY - AUROVILLE AND ENVIRONS

AUROVILLE UNIVERSAL TOWNSHIP MASTER PLAN

DRG 3



NORTH

the District Officer in 1976, who concluded that "the entire area is exposed to wind and water. If this is allowed to continue, then agriculture will be impossible..." The area also falls in the cyclonic belt.

1.4.4. Legend has it that the Kaluveli Siddhar, who had been offended by the chieftain and people of the area, cursed this area to become barren. After he was appeased, the Siddhar mitigated the curse and prophesied that this region would become green and prosper some time in the future with joint efforts by the people coming from all over the world.

1.4.5. The topography and climatic characteristics offered both constraints and opportunities for the development of a town like Auroville with its envisioned ideals. The constraints, in the form of gullied, windswept barren lands generally considered unsuitable for urban development, have been used as opportunities for evolving the form of the township. The slopes radiating from the centre to the periphery provided a suitable location for Matrimandir as the centre of the township and also the soul of Auroville. The geomorphology of the area also helped in conserving and optimally utilising the rainfall run-off to convert this inhospitable site into a hospitable environment for the development of a human settlement in harmony with nature.

1.5 EXISTING LAND USE

1.5.1. Since the inception of the township, the land use cover

Land Use	Extent (ha)	Percentage
A. Developed Area		
1. Residential	95	40.9
a) Village settlements	20	
b) Auroville communities	75	
2. Commercial	19	8.2
3. Manufacturing & Economic activities	10	4.3
4. Public & Semi-Public uses including peace area, gardens and area under administration / institution.	65	28.0
5. Roads / streets	30	13.0
6. Recreational (playgrounds)	13	5.6
Sub-total	232	100.0
B. Unbuilt Area		
1. Regenerated land	598	34.5
2. Agriculture		
a) Agricultural & related research	50	2.9
b) Farming	940	54.3
3. Water bodies	45	2.6
4. Canyon, waste and other lands	98	5.7
Sub-total	1731	100.0
Grand Total	1963	

has changed considerably. From a barren and marginal land in 1968, today it has become a developed and productive land, entirely through the efforts of Aurovilians. Out of 20 sq. km of the designated area of the township, about 12% is presently developed for urban uses and the rest is under agriculture, plantation and other non-urban uses. The land use pattern given in **Table I** and shown in **Drawing 4**, illustrates that in the



Check dam building

developed area about 40% is Residential. The next important land use in the township is public and semi-public and accounts for about 28% of the developed area. Commercial, manufacturing and other economic activities constitute about 12%. About 13% is under roads and streets serving both urban and non-urban uses.

1.5.2. After Auroville came into being, the early residents with their hard work in collaboration with villagers built check dams across canyons, put up a large number of bunds to check soil erosion, and planted and reared trees in large numbers. Over two million trees were planted during the last 32 years. A good part of this work was carried out with support from Government of India projects such as Waste Land

Regeneration, Watershed Management and Reforestation projects. All this contributed in regenerating the barren land into a productive and developable site for urban and green uses.

A. DEVELOPED AREA

1.5.3 The Residential Area comprises both village settlements and Auroville community settlements.

a) Village settlements: There are six village settlements within the Auroville township area, with houses mostly made of mud and thatch. Several of these have recently been upgraded or converted by the inhabitants into semi-pucca and pucca structures. As in any traditional small village settlement, other economic uses are mixed with residential usage either in

Village settlement





Grace community

the same structure or in independent small structures.

b) Auroville Communities: At present there are 95 Auroville residential communities. These communities range from 3 to 80 residential units. Apart from these, there are a few houses in smaller clusters. The residential units consist of individual dwellings as well as apartments; the latter are becoming more common. There are a few communities just outside the designated area of the township, which came up in the early years of Auroville's development, occupying about 100 ha.

1.5.4 The Commercial area in the Township includes retail services providing for food and other items of daily necessity, community eating places, guest houses, and the Visitors Information Centre with its exhibition space and sales section of products made in Auroville.

1.5.5 The Manufacturing use includes about 100 large and

small manufacturing and processing units, the products of which are marketed locally as well as internationally. The extent of land occupied by such units ranges from small plots of 50-75 sq. m. to 5 ha.

1.5.6 Public and Semi-Public uses include amenities such as schools, health facilities, services and utilities. The Peace area, forming part of the public and semi-public uses, is the most special area in Auroville. It is the centre of Auroville, which contains the Matrimandir - the soul of Auroville, the Urn and the Amphitheatre consecrated at the foundation ceremony, the central Banyan tree, the lake and the well laid-out gardens around the Matrimandir.

The Kulilpalayam - Certitude Road





Forest

1.5.7 Administrative and Institutional uses include mainly the administrative centre housed in the Indian National Pavilion (Bharat Nivas) and the Auroville Foundation offices.

1.5.8 Recreational uses at present are mainly in the form of a few playgrounds located close to residential communities, such as the Centre Field and Certitude play area.

1.5.9. Roads provide access to Auroville from the East Coast Road and the Pondicherry-Tindivanam road. However, within the township there are temporary gravel and mud roads providing access to various facilities/settlements in Auroville, some of which will be replaced once the planned roads are built.

B. UNBUILT AREA

1.5.10 Regenerated areas: From the beginning, Aurovilians have been engaged in land regeneration activities and the creation of a hospitable and sustainable habitat. The trees planted have modified the stark landscape and have begun to fulfil the prophecy of Kaluveli Siddhar mentioned earlier. The plantations not only have improved the environment but have also restored the land for productive agriculture by preventing soil erosion. Plantations include both indigenous as well as exotic species. In some of these areas, nearly extinct indigenous tree species such as those found in and around temples have been re-established.

1.5.11 Agriculture and Related uses include lands used by Aurovilians either for food production (including vegetables and

Rice field



fruits) needed by residents, or for research in improving farm practices and diversifying cropping patterns. The Auro-Orchard and Pitchandikulam medicinal herbal stations are some typical examples. In most of the cases both production and research are carried out together. Most of these are based on organic farming practices.

1.5.12 Farming includes lands generally used by the villagers for growing paddy, casuarina or other crops including cashew.

1.5.13 Water bodies :There are five 'eris' in the area of which two are large in size, namely the Irumbai eri and the Alankuppam eri. These are seasonal water bodies which help irrigate small extents of land particularly after the rainy season.

1.5.14 Canyons and other Waste Lands: The canyons are a unique feature in the landscape of Auroville and its surroundings. These deep gullies have been formed due to erosion. Some of them are 2.5 km long, 20-30 m. wide and 2-5 m. deep. The large ones are outside the designated township area in the east and south. These problem areas could be converted into opportunities for water management, land regeneration, farming and supplying drinking water needs. Besides, there are some patches of poramboke and other lands classified as waste.

1.5.15 Considering the emerging land use structure, the entire Auroville township is sensitive from environmental and ecological points of view. The areas under check dams, regenerated lands, and plantation are some of the important



Irumbai tank

Table 2: Nationalities constituting Auroville population – 1999

Nationality	No	Nationality	No	Nationality	No
Indian	507	Argentinean	10	French/Spanish	3
French	272	Brazilian	10	French/Swiss	3
German	230	Austrian	9	French/German	2
Italian	73	Tibetan	5	German/Indian	2
Dutch	65	Hungarian	4	Italian/Spanish	2
American	55	Sri Lankan	3	American/Irish	1
Swiss	44	Colombian	2	Argentinean/Italian	1
British	36	Estonian	2	Australian/French	1
Spanish	35	Korean	2	Australian/German	1
Belgian	26	New Zealander	2	British/Indian	1
Russian	26	Slovene	2	French/Irish	1
Australian	23	Belo Russian	1	French/Ukrainian	1
Canadian	19	Irish	1		
Ukrainian	18	Japanese	1		
Swedish	16	Moroccan	1		

Note: There is an increase of about 12% over the previous year.

environmental resources for developing the township in a sustainable manner. It points to the necessity of orderly and planned development of human habitation embedded in a regenerated natural environment.

1.6 DEMOGRAPHIC CHARACTERISTICS

1.6.1 By the very concept of the town as a Universal Township focused on spiritual and material researches and development, only those who aspire to be 'willing servitors of the Divine Consciousness', are attracted to become its citizens.



Therefore, the normal demographic process of growth does not apply to Auroville. It is in this background that the demographic characteristics of the township need to be seen.

1.6.2 The present population of Auroville consists of:

- Resident Aurovilians.
- Researchers and students, who come for short duration to learn and contribute to the efforts of development.
- Day-workers from neighbouring villages working in Auroville's economic and service activities.
- Short-term, including casual visitors coming to see the experience of Auroville's work in diverse fields.

Note: The population listed under the last two categories falls

under the category of “floating population” in the township.

1.6.3 The population of Auroville consisting of resident Aurovilians has increased from 320 in 1972 to 676 in 1980; presently it is 1519, showing a five-fold increase during the last thirty years.

1.6.4 Resident Aurovilians: There are at present 1519 Aurovilians from various nationalities, including a substantial number of Indians. Table 2 indicates the nationalities constituting the Auroville population. The population growth till now has been rather slow. However, it may be observed that since a critical mass has already been formed and the development activities are picking up, Auroville will attract a large number of people from various countries in the years to come. In this context, it may also be mentioned that a number of international centres have been set up in different countries, and it is proposed to set up similar centres in the different states of India. These centres will disseminate information about Auroville, thereby raising awareness and attracting resource persons in larger numbers for the expansion of the present activities of Auroville.

Table 3: Day-workers

Category	Male	%	Female	%	Total	%
Manufacturing	1550	59.6	1375	57.3	2925	58.5
Services	1050	40.4	1025	42.7	2075	41.5
Total	2600	100	2400	100	5000	100

1.6.5 Students and Researchers: Nearly 100 students and researchers are in Auroville at any given point of time. As Auroville grows, the number of students and researchers will also grow. These students come from all over the world and are committed youth, who want to learn and use their knowledge in various fields in which they are interested. Their interest ranges from art and architecture to various other disciplines and their application to sustainable development. The estimated number of researchers is 1,200 annually.

1.6.6 Day-workers: Auroville provides work opportunities to about 5,000 persons residing in its neighbourhood in both manufacturing units and services. These workers have their own houses in the surrounding villages and as such return in the evening to their homes. The break up of day-workers engaged in manufacturing and services is given in Table 3. Nearly 48% of the day-workers in manufacturing and services are female workers, indicating a higher participation ratio of women in the workforce.

Table 4: Age composition of Aurovilians - 2000

Age group	No. of persons	%
0-14	298	19.62
15-19	99	6.52
20-24	91	5.99
25-29	131	8.62
30-39	278	18.30
40-49	308	20.28
50-59	228	15.01
60 +	86	5.66

Main Sector	No of Units	Aurovilians	Day-workers
Manufacturing	35	200	2925
Services	120	520	1775
Rural & agricultural related	10	130	300

1.6.7 Casual Visitors: Matrimandir is the main attraction to visitors from outside and, on an average, 1,000 persons visit it every day. Sundays and holidays are special days when the number of visitors go up to 2,000 persons. Basic facilities such as parking of vehicles and information centres are available for their use. Apart from such visitors, students and professionals come to Auroville to learn about its activities, and attend workshops and seminars. The number of visitors for such purposes on an average varies from 50 to 75 persons at any given point of time and this is bound to increase in the future. Guesthouse facilities are available for the visitors. The number of casual visitors is estimated at 2.5 lakh/year.

1.6.8 The age and sex composition of the Resident Aurovilian population indicates that about 70% of the resident population is in the active age group. About 20% of population is comprised of school going children. Although 6% of the resident population is above 60 years of age, they are also considered to be active workers in their respective fields. The ratio of women to men is 881 to 1,000, but varies from time to time. Table 4 indicates the age composition of Aurovilians.

1.6.9 In the absence of specific data on occupational structure

it may not be possible to indicate the detailed employment pattern in the township. However, the majority of the resident population is engaged in farming, services, professional skills and entrepreneurial activities as given in Table 5.

1.7 ECONOMY OF THE TOWNSHIP

1.7.1 The current economy of the Auroville township is mainly based on manufacturing units and services. Although employment in commercial and transport sectors is marginal, it is steadily growing. However, agriculture which includes allied land regeneration efforts, is an important sector of the Auroville economy.

Auromode



Table 6 : Research and Training Institutions and their Activities

Project / Institutions	Sector / Activities
1. Annadana	South Asian network, protection of genetic resources in India and South Asia
2. Aureka	Research and manufacturing of windmills and metal products.
3. Auroville Archives	Collection and storage of archival material related to Auroville
4. Auroville's Future	Integrated urban planning and city networking
5. Centre for Development for Physical Education	Physical education for youth of Auroville and surrounding villagers and village oriented programmes.
6. Centre for Scientific Research	
CSR–Main	Training centre for environmental protection through refrigerant management and renewable energy solutions.
CSR–Biogas	Research, development and manufacturing of biogas technology.
CSR–Water and Sanitation	Low maintenance waste water treatment systems. Root zone treatment plants.
AVBC–Ferrocement	Research and training in ferrocement technology
AVBC–Earth Construction	Research and training in earth construction and manufacturing of AURAM equipment
AVBC–Architecture	Innovative design and construction of buildings.
Cynergy	Team building, project formulation and training in bio-regional activities. Developing multimedia software packages.
7. Centre of Indian Studies and Research in Indian Culture	Library and resource centre on Indian culture
8. Hall of Culture	Indian arts and cultural activities
9. Harvest	Promotion of water harvesting, aquaculture, organic agriculture and environmental education, ground water studies and environmental monitoring.
10. Kalamitra	Cultural programme for artists, promotion of dance, exhibitions, concerts and theatre, both Indian and Western.
11. Palmyra	Reclamation of waste and degraded lands, tank rehabilitation and soil conservation, afforestation, documentation and training.
12. Pitchandikulam Bio-Resource Centre	Medicinal herbs and plants, tree nurseries.
13. Sri Aurobindo International Institute of Educational Research (SAIER)	Research in integral education, covering philosophical, educational and psychological dimensions. As part of the research it encourages creation and publication of new learning and teaching materials.



Earth block construction

1.7.2 Currently there are more than 100 small and medium manufacturing units operating in Auroville. The products manufactured include such modern equipment as computer software, electronic and engineering products, equipment used in alternate and appropriate technologies such as windmills, solar lanterns and heaters, and biogas systems. Cottage type industries producing a wide range of products such as garments, candle and incense products, printing, food processing, etc. also exist in Auroville. The overall turnover of all these units was about Rs. 25.50 crores in 1999- 2000.

1.7.3 The service sector includes construction and architectural services, research and training in various sectors related to efficient resource management and sustainable

Table 7: Housing Characteristics

Housing Construction Material	Area of Unit (sqm)			Total
	30-70	80-150	160 and above	
Local material	111	59	31	201
Ferro-cement	122	165	69	356
Tiles	56	70	20	146
Concrete	11	27	26	64
All types	300	321	146	767

development, such as renewable energy and appropriate building materials.

1.7.4 People in the agriculture sector are engaged in food production, mainly fruits and vegetables, dairy products, and related research and training and activities like organic farming, soil conservation and water management.

1.7.5 Economic activities in Auroville are a mix of production, research and training encompassing both traditional and higher levels of learning in technological, social and ecological fields. The important research and training activities undertaken in Auroville are depicted in Table 6.

1.8 HOUSING

1.8.1 The present housing in Auroville consists of individual dwellings, community housing, apartments and youth hostels.

Community housing provides for individual and family living spaces with common kitchen and other collective facilities. The average household size is around 2 persons but in reality there are many single person households. At present there are 767 dwelling units of various sizes. Types of houses based on construction materials indicate that the majority of the houses have used local materials as well as innovative building materials such as ferrocement roofs and panels made locally. The housing characteristics are shown in **Table 7**.

1.8.2 Since Auroville is experimenting with appropriate construction elements, wall materials vary widely from adobe, stabilised earth blocks and rammed earth to fired bricks. Auroville has even experimented with the 'fire bricks house' technique, where the entire structure is built in earth and fired like a kiln, producing an innovatively constructed house. The architecture here reflects the practice of innovative design and alternative building materials. The experiments made in building technology in Auroville will have far-reaching implications in terms of design and materials, of reduction in energy consumption, and adoption of eco-friendly practices.

1.9 PHYSICAL AND SOCIAL INFRASTRUCTURE

1.9.1 Road Network: Auroville's road network consists of access roads, which are tarred but narrow and not well maintained and connect the East Coast Road and Tindivanam-Pondicherry road with village settlements, internal gravel roads, footpaths and cycle tracks. Most of the internal roads are of a



Waste water treatment plant

temporary nature giving access to residential communities and public facilities. The gravel roads are about 10 m. wide. The total length of roads within the designated township area is 23.7 km. The principal access roads and internal linkages indicated in the Existing Land Use Map (**Drawing 4**) show that the area is well served with a road network. The existing road pattern is comprised of one circular road around the centre of the township and another semi-circular road passing along the periphery (outer circle) of the designated area of the township. Both the inner and the outer circular roads are connected by radial roads. The surface of the internal access as well as circular road has intentionally been kept as gravel to allow percolation of rainwater for re-charging the aquifers. Conceptually these are maintained as pedestrian roads, but slow moving traffic



consisting of cycles and scooters is slowly and steadily increasing. With the increase of tourists and visitors to the Matrimandir area, the motorised traffic consisting of cars and buses also increased, particularly on holidays and weekends. Apart from missing links in the outer circular road in the eastern part of the township, the road network in the township is devoid of street furniture, signage and indicators. Geometrics of the major linkages to the township both from the East Coast road and the Tindivanam-Pondicherry road, as well as of the internal roads, access and approaches need to be improved.

1.9.2 Water Supply: The entire water supply both for drinking and irrigation is dependent on underground sources. A number of deep wells have been commissioned over the last 30 years and today there are over 130 wells, of which 60 wells give a significant output. They can together provide an average water supply of 3800 cu.m. per day, amounting to 1.4 million cu.m. annually. Auroville is however located in a district where the ground water situation can be described as 'critical' since nearly 90% of the recharge potential is utilised. It therefore becomes important not only to increase the recharge rate but also conserve and recycle water. Taking note of this situation, Auroville is engaged in extensive water management research and application.

1.9.3 The drinking water usage of about 4.5 million litres/day for domestic, industrial and gardening purposes is considered excessive and measures are being taken to bring it down to reasonable urban standards. The distribution system consists of decentralised pumping units and storage reservoirs, numbering

about 60. Of the latter, one large overhead reservoir has a capacity of 1.5 lakh litres and 8 medium-size low-level tanks range in capacity from 10,000 litres to 40,000 litres. The present pumping capacity is adequate to meet the requirements of the future population. However, proper water conservation is essential to economise on energy and water consumption. At present the rainwater runoff from roads and paved areas is diverted to the canyons, where a system of check dams helps in storage and recharge of ground water.

1.9.4 Sewerage and Sanitation: All residential units have their own system for sewage disposal. There are about 20 community-level treatment facilities (for residential as well as industrial and commercial units) consisting of septic tanks, Imhoff tanks, baffle reactors, and root zone and lagooning systems. The latter, numbering 22, are of experimental nature, and a study has been taken up to test their efficacy in delivering waste water that will not pollute the ground water.

1.9.5 Solid waste disposal is managed by the Eco Service, which was started in 1995. It is estimated that about 3500 kg of wastes are generated per week. About 2000 kg. of this quantity is organic and generally composted at the site itself. About 1000 kg. is recycled and the balance of 500 kg is incinerated in the Health Centre at 800 °C. The non-recyclable wastes of 400 to 500 kg, like rubber items, thermocole, fibreglass and PET, and storage batteries are stored in a temporary storage facility until an acceptable disposal solution is found. This waste disposal management has been made possible by the introduction of segregation of wastes at the source.

1.9.6 Power: Auroville consumes about 1.75 million kilowatts of power/year from two TNEB feeder stations, one in Kalapet and the other one at Thiruchitrambalam. The total connected load is 3.17 megawatts, of which 1.5 megawatts are domestic and the rest is for industrial and commercial purposes.

1.9.7 About 150 houses use solar PV electricity and heaters for their energy requirements. In addition, there are about 140 solar water-pumping systems and 30 wind-driven pumps. The power distribution of around 600 consumer connections is carried through a system of 28 distribution transformers and 30 km of underground cables.

1.9.8 Telephones and Communication: The Township is served by a telephone exchange with a capacity of 1000 lines, which is fully utilised. There is also a small post office located in Bharat Nivas which exclusively serves Auroville. AuroNet, Auroville's email and electronic bulletin board network, both within Auroville and with the outside world, has currently about 750 subscribers. The township has its own internal messenger service and the weekly Auroville News provides information about the happenings in Auroville to all the residents.

1.9.9 Auroville publishes for internal as well as external circulation two regular newsletters in English, and one in Tamil. English-language newsletters are the monthly 'Auroville Today' and the quarterly 'Auroville Outreach' , and 'Kaliveli Nilam' is in Tamil. Auroville is equipped to handle its information and outreach

through well-established printing and multimedia resource units.

1.9.10 Cremation and Burial Ground: At present, there is one burial ground within Auroville, which is used by villagers. There is no regular burial or cremation facility for the Aurovilians as such, but a site for this purpose has been chosen near Adventure community in the southern part of the Green Belt.

1.9.11 Education: Auroville educational research endeavours to nurture the child's potential to its highest possible level, and is based on a child-centred approach. At present, there are two crèches, one kindergarten, two primary schools (Transition and Deepanam), and three high schools (Last School, Centre for Further Learning and After School) for children residing in Auroville. All these educational facilities are located within walking distances and are well-dispersed in the

New Creation School



township. New high school facilities are presently under construction. There are also four schools (New Creation, Isaiambalam, Arul Vazhi and Ilaignarkal) specifically serving the surrounding villages.

1.9.12 About 700 children from 13 surrounding villages and from Auroville are studying in these institutions. The schools use innovative learning and teaching methods and also provide playground and sports facilities appropriate to the age level. The Sri Aurobindo International Institute for Educational Research (SAIIER), an organisation established in 1984, co-ordinates the multi-faceted educational and cultural activities in Auroville.

1.9.13 Health: The Auroville Health Centre, recognised as a mini health centre by the Tamil Nadu State Government, is equipped with basic medical facilities. It serves the Auroville community as well as about 200 patients daily from the villages, and has six sub-centres, located in Edayanchavadi, Putthurai, Kottakarai, Matthur, Rayapudupakkam and Morattandi.

1.9.14 For emergencies and complicated cases, patients are referred to the health facilities in Pondicherry, which is just 6 km away. Auroville also experiments with and promotes various alternative healing methods and natural therapies.

1.9.15 Tourist Infrastructure: The infrastructure within Auroville for visitors and tourists consists of information centres, guest houses, and the Visitors Centre which has an information service, a boutique and a restaurant. The guest houses can accommodate



Pony farm activities for children

altogether about 400 persons in a simple, clean and green environment at a moderate price. Dormitory accommodation for youth and young researchers is also provided. Parking facilities can provide space for 20 buses at any time.

1.9.16 Recreation: Auroville provides for children and youth of Auroville and the residents of the surrounding villages a broad array of sports and physical education activities, and aims to maximize these opportunities in the region. The township has presently four play fields for various outdoor sports, such as tennis, football, volleyball and badminton, and a gymnasium and indoor sports facilities. It organises on a regular basis team games and athletic meets, and competitions in basketball, volleyball, football, table tennis and cricket. Many of the participants for these competitions come from the surrounding

villages. Although the Auroville township area is away from the coast line, it has developed beach facilities at 'Repos', near Chinnamudaliarchavadi village.

1.9.17 Socio-Cultural Facilities: Auroville has become a hive for socio-cultural activities serving both Auroville residents and their neighbours. The most important facilities include the Sri Aurobindo Auditorium at Bharat Nivas with a sitting capacity of 840 persons. Workshops and recitals of both traditional and modern dance, drama and music are regularly held. Several groups are active in providing cultural events based on community and environmental awareness programmes.

1.9.18 Spiritual Centre: The Matrimandir, the spiritual as well

Matrimandir



as the physical centre of Auroville, is in the Mother's words, "the symbol of the Divine's answer to man's aspiration for perfection, union with the Divine manifesting in a progressive human unity". The Matrimandir is a place of silence and concentration.

1.9.19 The major areas of work on the structure are under completion and attention is being given to the development of the surrounding gardens. The Matrimandir together with its gardens extends over an area of 28 ha. The growth of the Matrimandir and its movement towards a perfect completeness reflects and signals the growth and increasing perfection of Auroville as a whole.



1.9.20 Village Outreach: Auroville's development is inextricably intertwined with the surrounding villages, which were classified in 1984 as part of a "most backward area in need of development" by the Tamil Nadu Government. There are 13 villages in the immediate area of Auroville, comprising about 40,000 people, and there are altogether 40 villages in the bioregional area. About 350 people from the surrounding villages have joined Auroville. Almost 5,000 local people are employed by Auroville, from sweepers to engineers; most of them have been trained in Auroville to improve their qualifications and skills. Auroville provides for the young of the rural area a real and viable alternative to the migration to the cities and urban centres, which is so often the only option for those seeking self-improvement and employment.

- More than 500 children from neighbouring villages attend Auroville schools; another 900 attend Auroville classes in their village schools.
- More than 20,000 people from the neighbouring villages receive health care from Auroville every year.

1.9.21 Village development has been a major activity of Auroville since its inception. Over the past 13 years, the Auroville village development groups (AVAG, Health Centre, Pitchandikulam, Harvest, Palmyra) have been engaged in a development programme for the neighboring villagers. With funding from a number of national and international organizations, this program aims at:

- Improving the health situation through education,

preventive care and treatment;

- Empowering women;
- Encouraging in each village the growth of community spirit by ensuring people's participation in developmental programs;
- Raising the standard of living of the local population through vocational training and self-employment;
- Involving the villagers in a co-operative effort of wasteland reclamation, watershed management and environmental regeneration;
- Providing education for the village children.

1.9.22 At present, there are five major educational programs for village children such as New Creation (with boarding facilities), Ilaignarkal, Isai Ambalam, Life Education Center and Arul Vazhi, a program that sends animators to the village schools for regular classes and special activities.

1.10 ADMINISTRATIVE SET-UP

1.10.1 The Auroville Foundation Act, 1988, enacted by the Government of India, provides for the establishment of the Auroville Foundation with a view to making long-term arrangements for the better management and further development of Auroville in accordance with its original Charter and for matters connected therewith or incidental thereto. The Auroville Foundation comprises the following three authorities:



Meeting with the Chairman of the Governing Board

- The Governing Board
- The Residents Assembly
- The International Advisory Council

1.10.2 The Foundation's functions also include monitoring and review of Auroville activities, preparation of a Master Plan for Auroville in consultation with the Residents Assembly, ensuring the development of Auroville as so planned and co-ordinating the raising of funds for Auroville as well as the disbursement thereof for achieving the ideals of Auroville.

1.10.3 The Governing Board, consisting of eminent and senior persons, including nominees of the Central Government, have the overall responsibility for the proper



Community meeting at Sawchu

management and development of Auroville. The Chairman and Secretary of the Governing Board are appointed by the Government of India. The Governing Board is responsible for promoting the ideals of Auroville and for co-ordinating the activities and services of Auroville in consultation with the Residents Assembly for the purpose of cohesion and integration of Auroville. It also reviews the basic policies and programmes of Auroville and gives necessary directions for the future development of Auroville. It also gives its consent to the programme of Auroville drawn up by the Residents Assembly.

1.10.4 The Residents Assembly, comprising all the residents of Auroville over the age of 18, organizes the various activities of Auroville and decides upon the terms of their membership. The Residents Assembly selects a Working Committee from its

own members to represent itself with the Governing Board and the Secretary to the Foundation. The Residents Assembly is also required to formulate the Master Plan of Auroville for the approval of the Governing Board.

1.10.5 The International Advisory Council is a body with eminent persons both from India and abroad who act as advisors to the Governing Board and the Residents' Assembly. The present membership of the Governing Board and the International Advisory Council may be seen in Appendix I.

1.10.6 The Role of the Community: As far as the preparation of the Master Plan is concerned, the Residents' Assembly has a very important role to play. According to section 17 (e) of the Auroville Foundation Act, the Governing Board is, in consultation with the Residents Assembly, responsible for the formulation and implementation of the Master Plan.

1.10.7 There are two important councils, namely the Executive Council and the Development Council. A number of groups have been constituted to manage specific aspects of Auroville's complex organisation, such as Entry Group, Economy Group, Funds and Assets Management Committee, Land and Estate Management, Project Co-ordination Group, etc. Appendix II indicates the responsibilities of the different working groups in Auroville. The Development Council oversees the planning and monitoring aspects of Auroville's physical development, while the Project Co-ordination Group assists working groups and project agencies in the formulation and funding of projects.

1.10.8 There is thus a considerable amount of autonomy in the preparation and implementation of projects which has been very helpful in motivating Aurovillians to participate in all developmental activities of the township. It has yet to achieve full co-ordination in order to meet the central objective of Auroville's development as envisioned by the Mother. However, in order to plan and implement the Master Plan (Perspective: 2025) effectively, a separate outfit as part of the Foundation set-up would be necessary.

1.10.9 Service Agencies: Auroville has at present a number of service units which look after water supply, power and communication, roads and waste management. They are Auroville Water Service, Auroville Electrical Service, Auroville Telephone Service, Auroville Road Service and Auroville Eco-Service. These services are maintained through service charges from users and contributions from Auroville's Central Maintenance Fund.

1.10.10 There is one Auroville centralised purchasing and distribution service known as "Pour Tous" (For All). It operates like a departmental store for daily necessities. There is no cash transactions, the entire system works on credit through maintenance of individual accounts. Pour Tous building/facilities presently located just on the periphery of the township is proposed to be relocated in the Crown area and it will have a number of outlets in the township.

1.10.11 With regard to the law and order situation, although there is no specific police station in the township, police liaison services are available to meet any emergency situation. In this

context, it would be pertinent to mention that the Mother had a vision for Auroville: "No army, no police, they are replaced by a battalion of guards consisting of athletes and gymnasts". Accordingly, an Auroville Guard consisting of young volunteers are available to provide this service.

1.11 FUNDING OF TOWNSHIP ACTIVITIES

1.11.1 The activities of Auroville are financed through contributions from residents, grants and donations from India and abroad, income generated by Auroville units and Government of India grants. These activities are co-ordinated through various working groups.

Financial Service



1.11.2 Auroville Fund is the official receiving, disbursing and accounting channel through which Indian and foreign donations for various projects reach units and projects in Auroville. The expenditure on account of the Auroville Foundation Secretariat is met by the Department of Education, Ministry of Human Resources Development, Government of India, by way of annual grants. Income and expenditure statement for the year 1998-1999 given in Appendix III gives an idea of general sources of revenue and major items of expenditure.

1.11.3 In the past ten years, Auroville generated Rs. 150 crores for its activities of which Rs. 100 crores were generated internally. The balance of Rs. 50 crores, was raised through donations from abroad (46%), donations from agencies and individuals within India (38%) and grants from the Government of India (16%).

1.11.4 The Financial Service was started in the seventies as an attempt to do away with cash transactions in Auroville by keeping accounts of the cash holdings of Aurovilians. Since then, nearly all transactions between units and Aurovilians have been done through transfers using these accounts.

1.11.5 The Central Fund was started in 1989 as a system to provide collective support to Auroville's services and other responsibilities and to provide maintenance allowances to the Aurovilians who do not have private resources. The Central Fund is financed through the income generated from commercial units, which contribute varying percentages of their profits; contributions from guests; projects; interest on

deposits with the Auroville Fund by individuals; and donations by individual Aurovilians. Apart from this, each unit pays Rs 1,000 a month for each Aurovillian working for that unit. Since July 1995, the Central Fund has successfully increased its income on deposits, by asking Aurovilians to transfer the amounts they had in low interest-generating bank accounts to their Financial Service accounts, and to forgo interest on these accounts. This has resulted at present in a total capital of over 4 crores. The interest of this capital is now mainly used to finance the monthly budgets of the Central Fund.

1.11.6 The Central Fund distributes its income of approx. Rs. 35 lakh per month to more than 40 activities and services. The Central Fund accounts are published each month in the Auroville News. The Economy Group is responsible for administering this Fund. Over the past two years there has been a marked shift in emphasis from the services to the individual. The Central Fund budget specifically for the maintenance of Aurovilians receives a great deal of attention. As of today, the allocations for the basic subsistence of about 370 Aurovilians and their families is under intense observation to secure a strong base for the well being of each one. In August 1999, the Auroville Maintenance Fund / Financial Service introduced a new software which provides for the possibility for each Aurovillian to have both a cash and a kind account. This is meant to be a tool to help Auroville to move into an internal economy where there is no exchange of money. It is hoped that the needs of Aurovilians who are now covered either by themselves, by projects or by the commercial units for

whom they work, will progressively be covered in a different way through the combined resources of the community.

1.12 LAND OWNERSHIP

1.12.1 The designated area of Auroville covers 19.63 sq. km i.e. 1963 ha. For proper and orderly development of Auroville as per the Master Plan, it would be necessary to have full control by the Auroville Foundation over the activities within the above mentioned area. For this purpose, Auroville has been in process of securing the lands required for development from the beginning. All the lands so far secured have been acquired by negotiated purchase from the owners. As on 1st August 2000, Auroville owns 778 ha. of land in the designated township area, as indicated in table 8:

	Government lands	Owned by Auroville	Private ownership	Total
City Area	26	383	82	491
Green Belt	56	395	865	1316
TOTAL	82	778	947	1807*

*The balance of 156 ha. is covered under existing village settlements, water bodies and roads.

1.12.2 Distribution of land ownership indicated in Drawing 5 clearly shows that about 83% of the land within the City Area is under the control of the Auroville Foundation while the remaining 17% needs to be acquired. In respect of the Green

Belt, however, 70% of the land is under private ownership and needs to be secured for planned and orderly development.

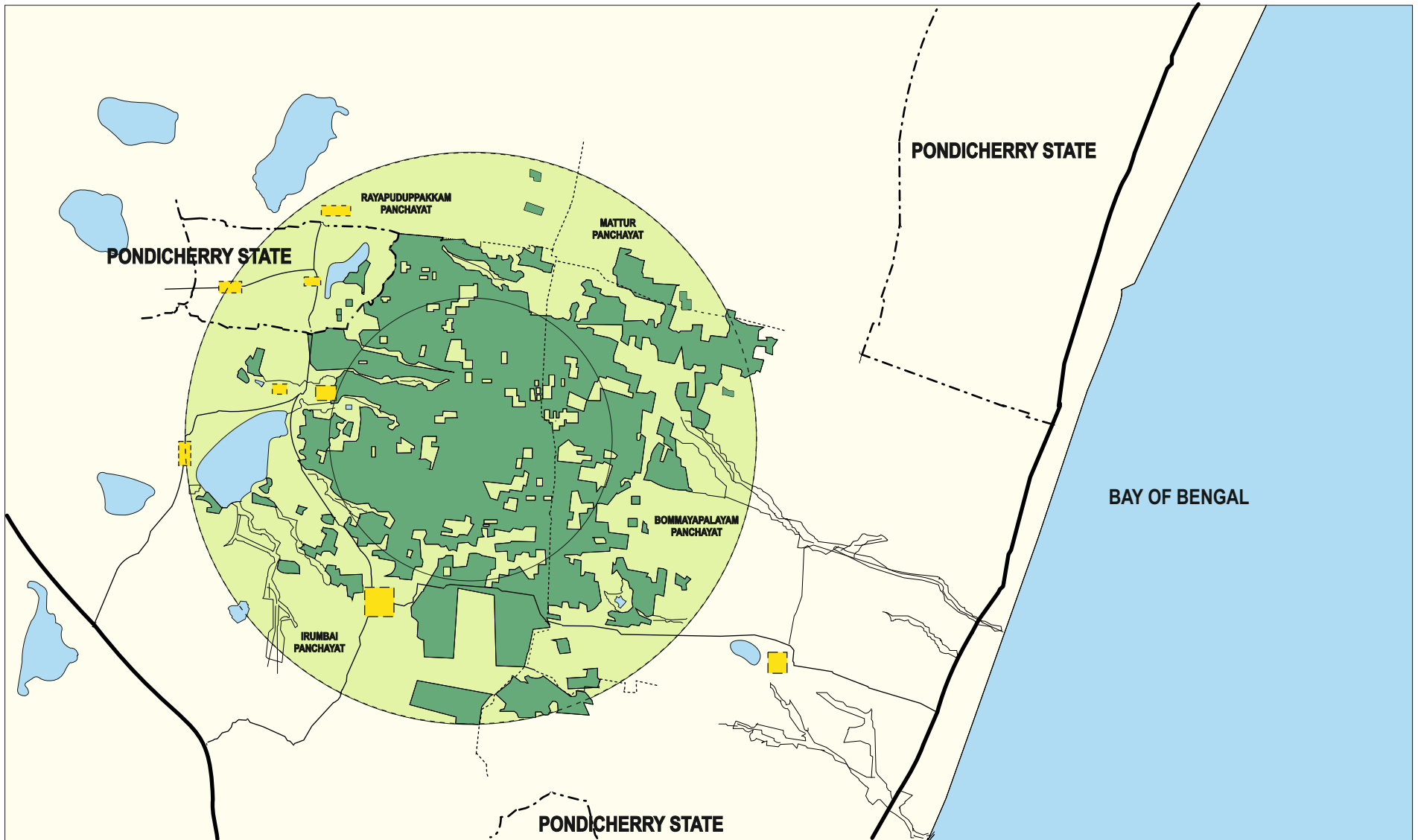
1.12.3 The present policy for the development of the land has been clearly laid down in terms of open spaces to be provided and environmental parameters to be adhered to. The Development Council, taking note of the above parameters and the essentiality of the project for the development of Auroville, scrutinises all such projects.

1.13 IMPERATIVES FOR THE DEVELOPMENT OF AUROVILLE

1.13.1 One of the principal requirements for the growth of Auroville is the provision of housing. Because of lack of

Land around the Matrimandir





- | | | | |
|----------------------|-------------------------|--------------------------------------|-------------------------|
| State Boundary | Auroville Township Area | Auroville City Limit (Urban Complex) | Highway |
| Existing Access Road | Water Body | Village Settlement | Land Owned by Auroville |

AUROVILLE: LAND OWNERSHIP - 2000

AUROVILLE UNIVERSAL TOWNSHIP MASTER PLAN

DRG 5



NORTH



Building a new house

adequate housing it has not been possible to encourage new residents to settle. The provision of adequate housing is tied up with funds for development. Another important factor is that there are still significant patches of land within the city area, which are not secured by Auroville and are essentially needed to plan and implement cost-effective infrastructure facilities, such as roads, sewerage, water supply, power and communication.

1.13.2 The Green Belt surrounding the City Area, covering about 1,440 ha., is an integral part of Auroville's development and its proper use is crucial to fully achieve the objectives of

Auroville. Many of the material researches that are necessary to promote sustainable development both within the designated area and outside necessarily have to be carried out in the Green Belt, which should be secured against speculative urban development. The Green Belt has to be maintained predominantly as an area of agricultural and forest type of uses, so that it is not only integrated with the existing village settlements, but also with environmental activities that promote water harvesting, aquifer recharge, bio-diversity conservation and recreation.

1.13.3 It is therefore imperative that the Green Belt should be secured against all types of development not in line with the goals of Auroville's development. Auroville can therefore only be realised to its full potential through intense resource mobilisation and the proper implementation of the Master Plan (Perspective: 2025).

2. **Part Two**

Development Proposals

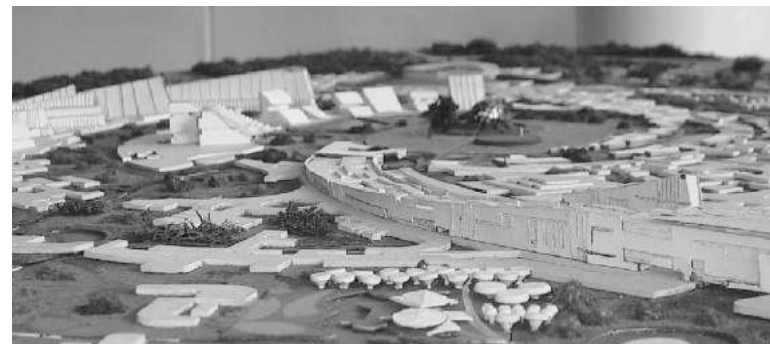


2.1 AUROVILLE ASSIGNED POPULATION

2.1.1 The Auroville township has been conceived for an ultimate population of 50,000 people, who will come and stay here to accomplish the special task of carrying out spiritual as well as material researches, which will have wider applications not only in India but the world over. Today Auroville has such a work force of over 1,000 persons, who have assiduously built up its base and infrastructure, which may now attract more such dedicated people. A systematic further development of infrastructure will attract a working population to Auroville from all over the world, and the number of people living in Auroville is projected to be in the range of 15,000 by the year 2010. It is estimated that the target of 50,000 Aurovilians will be reached around 2025.

2.1.2 The estimated numbers of persons in different age groups and the size of households is given in **table 9**:

Age group	Year 2010			Year 2025
	Total	Men	Women	Total
0-19	4000	2000	2000	17000
20-59	10000	6000	4000	28000
60+	1000	4000	600	5000
All age groups	15000	8400	6600	50000



2.1.3 Working Population: The working population will be in the age group from 20 to 59, i.e. 10,000 persons in 2010. These persons will be directly engaged in the production of goods and services for Auroville or in applied research activities that will have wide-spread benefit. Estimated break up of workers in various sectors is given in **table 10**:

Sector	Estimated no.	%
Primary Farming, forest development, animal husbandry, wildlife, fisheries and such activities.	1000	10
Secondary Manufacturing including medium- sized clean industries, cottage & household industries & artisans both for local consumption and export.	6000	60
Tertiary Trade, transport, construction and services	3000	30
Total	10000	100

2.2 THE NEED FOR A MASTER PLAN

2.2.1 The activities in Auroville have so far been carried out on the basis of a broad planning framework and the concept plan prepared by Mr. Roger Anger, Chief Architect and Planner of the city, which received the blessings of the Mother. However, the need for a Master Plan arose due to the following factors:

The requirement of the Auroville Foundation Act

The Auroville Foundation Act, which was enacted by the Parliament in 1988, has a provision to prepare a Master Plan for Auroville to guide its future growth. The relevant sections of the Auroville Foundation Act are reproduced below:

17. The powers and functions of the Governing Board shall be:
 - (e) to prepare a master plan of Auroville in consultation with the Residents' Assembly and to ensure development of Auroville as so planned;
19. (1) The Residents' Assembly shall perform such functions as are required by this Act and shall advise the Governing Board in respect of all activities relating to the residents of Auroville.
 - (2) In particular, and without prejudice to the foregoing powers, the Residents' Assembly may-
 - (c) formulate the master plan of Auroville and make necessary recommendations for the recognition of organisations engaged in activities relatable to Auroville for the approval of the Governing Board;

2.2.2 Time is now ripe to systematically develop the township, since Auroville has secured about 850 ha. of land out of about 2000 ha. of designated area. Auroville has been progressively securing the lands required for its development. More than 70 % of the land required for building development as well as for infrastructure in the City Area has already been secured. Systematic development and expansion of activities and population are therefore now possible. The Master Plan (Perspective: 2025) will facilitate such development.

2.2.3 To protect all the lands secured for the township and to prevent non-conforming developments, it would be necessary to have a blueprint for its future development. Auroville has yet to secure over 70 % of the land coming under the green belt area. Auroville's greening activities attract speculative elements which threaten the harmonious use of land. As such it is necessary to acquire all the remaining lands. In order to properly plan the land uses of both Auroville-owned as well as privately owned lands, drawing up a Master Plan has become essential and urgent.

2.3 GOALS AND OBJECTIVES OF THE MASTER PLAN (PERSPECTIVE: 2025)

2.3.1 The broad objective of the Master Plan (Perspective: 2025), as indicated in the Auroville Foundation Act, is to ensure development of Auroville in a planned manner. In order to meet the requirements of the Act and to realise the vision of

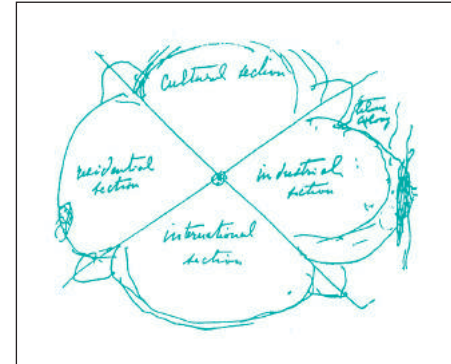
the township, the specific objectives of the Master Plan (Perspective: 2025) are:

- Laying down broad policies and directions for growth in the principal zones.
- Determining the hierarchy of roads and access ways.
- Establishing the zoning of land use on all lands falling within a 20 sq. km. area of the Township.
- Determining the standards for common facilities for education, health & social needs of the resident population.
- Identifying the social and physical infrastructure requirements of the township.
- Identifying the need for conservation of historic, ecologically sensitive and aesthetically important areas.
- Developing a mechanism for sustainable developments that harmonise both the needs of the environment and of development, as well as guidelines for such developments.
- Identifying the requirement of investments.
- Suggesting policies for integrating the neighbouring villages in the Master Plan so they may take advantage of and benefit from their proximity to Auroville for their economic betterment.

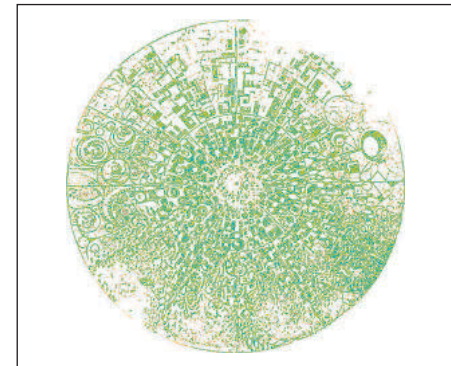
2.4 CONCEPT AND APPROACH

2.4.1 The Mother in her 1965 sketch of Auroville laid down the basic concept for the town. This sketch delineated all the important areas of activity that will fulfil the vision of making it a

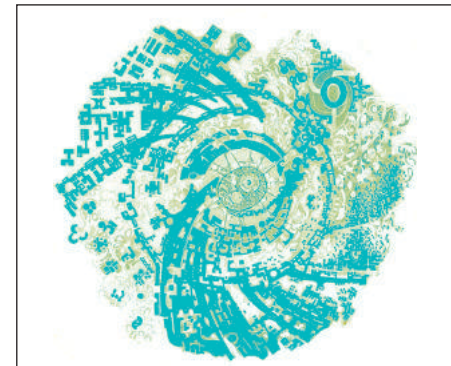
The
Mother's
sketch
1965



Nebula
1966



Galaxy
1968





Model of the Auroville galaxy

Universal Township. This concept is as practical as it is visionary. The way in which this concept lends itself to international, national and local thinking is extraordinary. It is as modern today as it was innovative when it was expounded some thirty years ago. (Refer sketches) The concept envisions close interaction between Auroville and its surroundings to create a holistic model of development in which urban and rural settlements will complement each other and are not seen as separate. This concept is now being widely recommended to move towards balanced sustainable development.

2.4.2 The activities of the Cultural Zone represent unending education; the International Zone shows acceptance of Auroville's universality; the Industrial Zone emphasises the importance of a strong economic base; the Residential Zone gives the realisation of human oneness; and the Green Belt manifests environmental, economic, spiritual as well as material sustainability. The Green Belt activities help to meet the internal requirements of the town as well as the external requirements of the region. All these activities emanate from the central theme of Auroville: to live and work for an actual human unitythe underlying message of all religions and philosophies. The Divine Presence is signified in the Peace Area by the Matrimandir, the timeless Banyan Tree and the Amphitheatre containing the soils from all parts of India as well as from all over the world.

2.4.3 Auroville, from its very inception, has embarked upon several innovations assisting human development. The Master Plan of Auroville would break new grounds in settlement planning which can help other cities in India and other

countries experiencing high urbanisation trends. It would demonstrate how 'urban' and 'rural' areas can complementarily develop in an integral and holistic way for their mutual benefit and well-being. Till recently, urban growth was considered undesirable and all policies emphasized preventing migration from rural areas. However, these policies have not succeeded and urban areas are growing rapidly and becoming more and more degraded. Presently, both national and international opinions are in favour of urbanisation, as they have become engines of development, and emphasise policies that promote urbanisation. Taken too far, these policies may also become untenable, because of the heavy toll urban areas impose on limited natural resources and their unbridled growth is liable to disrupt the food security of the entire nation. This is why planners today are talking of establishing strong rural-urban linkages.

2.4.4. Talking about planning for agriculture and rural development, the Deputy Chairman of the Union Planning Commission said: "Our population has just crossed the one billion mark, and experts have projected that we would be overtaking China by 2035 as the world's most populous country. To feed this growing population, an additional 5-6 million tonnes of foodgrains will need to be produced annually. In addition, we have to recognise that balanced nutrition, which is essential for the health of our people, demands the consumption of a wide array of food stuffs. These too must be provided without compromising on the provision of the basic calorie requirements. All this will have to be done in a context which is less favourable than it used

to be. To begin with, we need to recognise that the scope for expansion of the area available for cultivation is limited. In fact there is a possibility that cultivable area may shrink somewhat. Environmental considerations, which are just as important for the well-being of our people, demand that the area under forest cover be increased from the dangerously low levels that it has reached. Demands of urbanisation and industry too will eat into our cultivable land, though we should keep this to the minimum. These are imperatives that we cannot ignore."^{*}

2.4.5 Auroville's development approach, while taking cognisance of the above philosophy, goes much further. The approach of the Master Plan is to establish that economic and human intellectual resources, which normally gravitate to urban areas, can be effectively used to plan development more evenly and to create an equitable and economically sound society. However, it is common knowledge that expanding urban areas encroach not only on valuable agricultural land but surround village settlements in such a way that they become islands of poverty and scarce infrastructure in a neighbourhood which is well served with better quality of infrastructure.

2.4.6 It is Auroville's concept, therefore, to build a City that will economise on land needs by introducing development approaches with an optimum mix of densities but not sacrificing the appealing urban forms or required amenities. The surrounding Green Belt will be a fertile zone for applied research in the sectors of food production, forestry, soil

conservation, water management, waste management, village development and other areas essential for sustainable development. The resulting innovative methods can be applied/extended in both rural and urban areas everywhere, particularly in India where the urban-rural divide is continually increasing.

* "Planning for Agriculture: Challenges and Opportunities",
K.C. Pant, Yojana, Vol 44, no 9, Sept. 2000

2.5 PROPOSED LAND USE PLAN

2.5.1 Keeping in view the basic ideals of the township and the innovative approaches being developed in Auroville, the land-use structure is based on the following premise:

- The built-up area, consisting of buildings and developments for residential, cultural, manufacturing, commercial and utility uses, international pavilions and open spaces, would evolve around the Matrimandir with its gardens in the centre of the township.
- The largely unbuilt part consisting of agricultural uses, regenerated forests, tanks, water bodies, channels and a number of green activities linked to the promotion of sustainable development, would encircle the built-up area and also act as interface between the City and its bio-region.



Vikas community, in the residential zone

2.5.2 The vision behind Auroville's planning and development right from its conception to the present day is that there will be an intense and close interrelationship between the City Area and the outside rural area, including the Green Belt, which will be of a synergical nature. Each would complement the other, and support the activities in the 'urban' and 'rural' sectors, thus reducing the urban and rural divide that has crept into urban planning so far, and encouraging a rural - urban continuum.

2.5.3 Land Use in the City Area: In view of the concept discussed earlier, the City Area is proposed to have the Peace Area with the Matrimandir, the Banyan Tree, the Lake, the Amphitheatre and the Gardens in the centre and the following use zones around it:

- Residential Zone
- International Zone
- Industrial Zone
- Cultural Zone

2.5.4 There is another special use zone, which traverses all the four zones in a concentric fashion with a width of about 75 meters, consisting of a circular road with buildings facing it. This is termed as the 'Crown Area'. This Crown area will provide most of the service facilities required to support the activities in the four zones mentioned above. The developments in the Crown area will naturally be somewhat different, depending upon its proximity or interface with each zone. For the purposes of zoning regulations, the crown area is considered

Peace Area

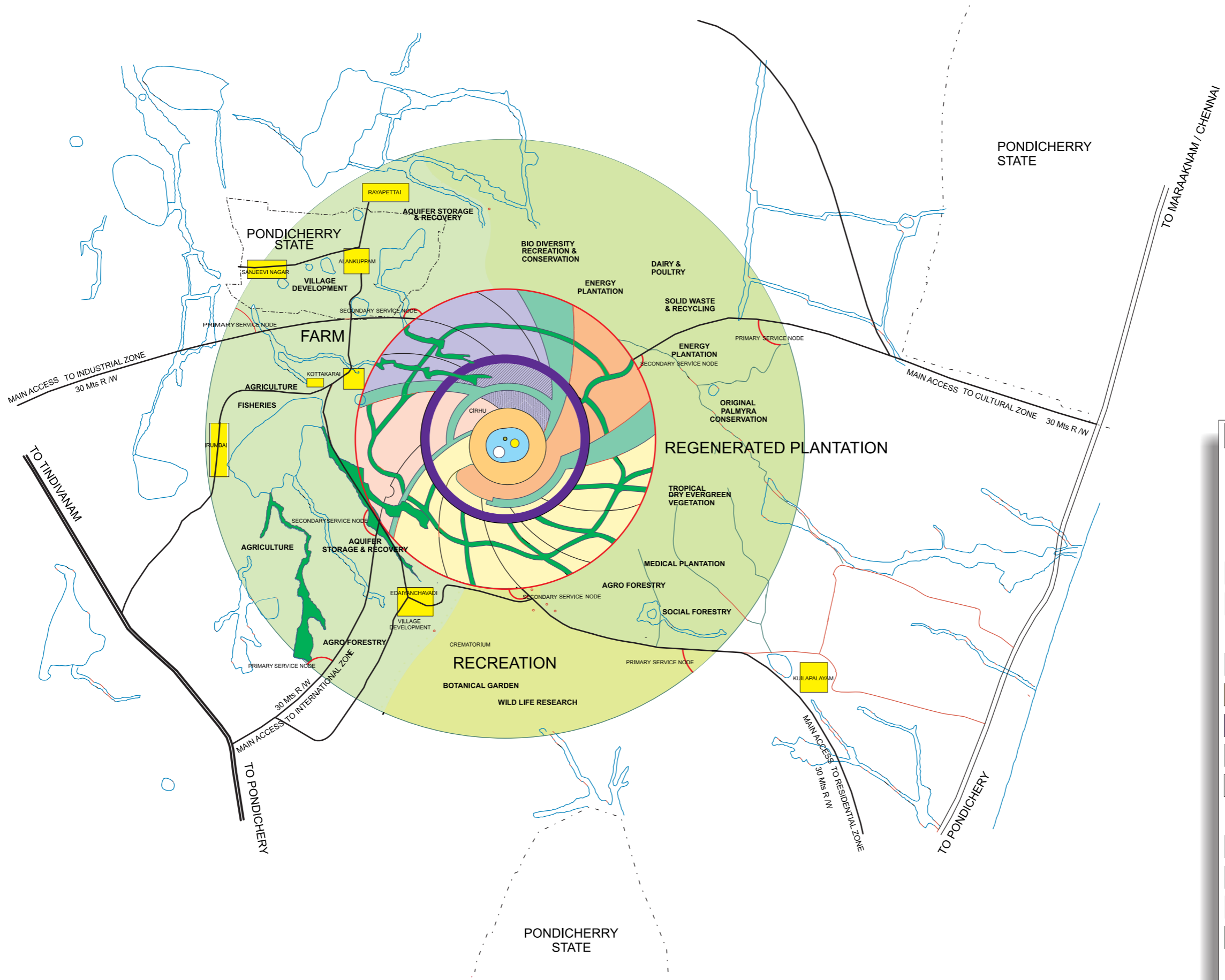


as a separate zone under each of the four zones.

2.5.5 The basic principles/parameters adopted in land use planning are given in **Table I I**.

2.5.7 It would be seen from the proposed land-use structure that public and semi-public uses constitute a large percentage of the total area, because Auroville, having been conceived and designed as a Universal Township, will provide a number of international pavilions, cultural and educational centres of a high order. Under Transport & communication, roads, cycle tracks and footpaths are included. The above table excludes the urban uses in the Green Belt which extend to 156 ha, including roads.

2.5.8 Land Use in the Green Belt Zone: The unbuilt area in



LEGEND	
	CITY AREA LIMITS
	NATIONAL HIGHWAY
	STATE HIGHWAY
	APPROACH ROADS
	VOCATIONAL TRAINING CENTRE
	ADMISIDTRATION
	PEACE AREA
	CROWN
	RADIAL ROADS
	PARKS & GARDENS
	CULTURAL ZONE
	RESIDENTIAL ZONE
	INDUSTRIAL ZONE
	INTERNATIONAL ZONE
	PARKS & GARDENS
	GREEN CORRIDORS
	EXISTING VILLAGES
	GREEN BELT AREAS

AUROVILLE : PROPOSED LAND USE
 AUROVILLE UNIVERSAL TOWNSHIP MASTER PLAN

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 NORTH

Table 11: Principal Planning Policies

Sector of Development	Planning Policies/Parameters
1. Residential	Maximum living space per person: 30 sqm Range of densities and interesting architectural forms 50% unpaved area as permeable space Collective and community use Eco friendly practices in water and energy management Pedestrian and cycle ways Harmonious landscaping and tree planting
2. Industrial	Clean, non-polluting industries Small and medium scale Expand local employment Vocational training for youth Encourage local entrepreneurship Good working environment for workers Efficient management practices
3. Education and Culture	International studies on Humanity Indian / East-West Culture Synthesis of knowledge Arts, craft and technology
4. International	International pavilions for cross country exchange Science and technology Culture, philosophy and humanities
5. Building Development	Innovative, low energy consumption, cost-effective technology, eco-friendly, barrier-free architecture, indigenous materials
6. Water	Water harvesting Watershed management Waste water recycling Aquifer storage and recovery Preventing saline intrusion Water conservation

Table 11: Principal Planning Policies

Sector of Development	Planning Policies/Parameters
7. Energy	Use of solar, wind and biomass energy Better demand and supply side management
8. Solid waste	Segregation at source Composting and recycling Special disposal of hazardous and biomedical waste Attaining zero garbage situation
9. Traffic and Transport	Exclusive pedestrian and cycle paths Encouraging non-polluting traffic Service nodes for interface with villages Designing non-polluting vehicles
10. Health	Synthesis of a wide range of medical knowledge Emphasis on indigenous systems Good healing practices
11. Green Belt	Healthy productive employment Field laboratory for best practices in eco-friendly techniques Environmental sustainability Food security Developing urban-rural linkages
12. Bio region	People's participation in sustainable development Improving sanitation and water supply Improving housing through cost-effective techniques Innovative research programmes Better agriculture practices

2.5.6 The proposed land uses zone wise are detailed out in **Table 12** and depicted in the **Drawing 6** of the Proposed Land Use. The proposed land use in the green belt is indicated in **Table 13** and the re-grouping of the land uses as per the general land use classification is given in **Table 14**.

Table 12: Proposed Land Use Zones – 2025

(City Area / Developed Area)

Use Zone	Area in ha.	%	Principal Uses
Peace Area	28	5.7	Matrimandir, Lake, Gardens
1. Residential Zone	173	35.2	
	160	32.6	Residential houses, apartments in five sectors at different densities, and basic community facilities.
Crown	13	2.6	Shopping, utilities, communication, recreation and community facilities of higher order, supporting residential use.
2. International Zone	68	13.9	
Pavilions	63.5	12.9	National and international pavilions, conference and exhibition halls.
Crown	4.5	1	Utilities, communication, shops and other common facilities related to the main activity in the International Zone, including housing and staff quarters.
3. Industrial Zone	126	25.7	
Economic	94.5	19.3	Non-polluting manufacturing units, including cottage industries.
Crown	8.5	1.7	Hostels, dormitories, guesthouses and supporting facilities for the main activity in the zone.
Administration	7	1.4	Town Hall, City Administration offices and housing.
Vocational Training	16	3.3	Vocational training centres, research institutions including laboratories.

Table 12: Proposed Land Use Zones – 2025

(City Area / Developed Area)

Use Zone	Area in ha.	%	Principal Uses
4. Cultural Zone	96	19.5	
Major cultural	91	18.5	Educational Institutions, University, sports centres and staff quarters.
Crown	5	1	Shopping, utility, communication and recreation centres and related facilities supporting cultural activities in the zone, including housing.
Total	491	100	

Table 13 : Proposed Land Use in the Green Belt - 2025

	Area in Ha	%	Principal uses
Built (*) (Existing settlements to be retained)	156	10.5	Auroville Communities and Village Residential Areas, Service Nodes and utilities and main access roads.
Unbuilt	1316	89.5	Farming and Forest type uses and recreation, bird & wild life.
Total	1472	100	

Note(*): The existing settlements in the proposed Green Belt are subsidiary to agriculture, forestry, plantation, land development and as such they are proposed to be retained in the future development of Auroville township. However, there would not be any substantive extensions in these settlements not related to principal use. Similarly, the existing village settlements are also part of the built up area and would require to be retained.

Table 14: Detailed Land Use in City Area – 2025

Use	Extent in Ha	%	Remarks
1. Residential	121	24.64	Residential Zone 80% Other zones 20%
2. Commercial	20	4.1	Mostly in Crown Area connecting the zones
3. Industrial	56	11.4	Industrial Zone/Manufacturing units
4. Public & Semi-public	159	32.38	
a. Matrimandir	28	5.7	Peace Area
b. Pavilions	38	7.73	International Zone
c. Educational & Cultural	73	14.86	Cultural and Residential
d. Administration, utilities & other uses	20	4.07	Industrial and other zones
5. Open space & recreation	46	9.36	To be provided in all zones
6. Transport & communication	89	18.12	To serve all zones
Total	491	100	

the Green Belt Zone will have three broad categories of land use, viz. Agriculture and Farming, Forest and Land Regeneration and Recreational areas. Their development is designed to promote bio-diversity, environmental restoration, land regeneration, water management, and technology transfer of the above activities for wider application. This will make the Green Belt not only an asset to Auroville and the surrounding villages, but also a National Resource Centre (NRC) for sustainable development.

(a) Agriculture and Farming

The western part of the Green Belt, consisting of eris, natural drainage channels and village settlements, is reserved for intensive agricultural development. They cover approximately 500 ha. At present these lands are vacant or marginally used. They will be utilised to set up prototype farms for raising appropriate crop varieties that can be efficiently produced in differing geographic conditions in Tamil Nadu, in order to replicate them for the benefit of farmers in these areas. The geographic regions will correspond to the five-fold traditional regional classification in Tamil Nadu of Kurinji, Mullai, Marudam, Neithal and Palai.

Auroville's ongoing work in water management, soil conservation, organic farming and seed collection, which is being carried out in collaboration with state, national and international research institutions and agencies, will promote food security and optimise the agro-economic potential both locally and nationally.

(b) Regenerated land and plantations

The eastern part of the Green Belt, which has already been developed with dense plantations of trees, acts as a barrier against cyclone-strong winds coming from the coast, which were until recently the main cause for soil erosion, gully formation and degradation of land.

These lands occupy about 560 ha. They will be utilised to strengthen the ongoing work of land regeneration, to re-establish indigenous forest vegetation, to propagate biodiversity through gene pools and seed banks, and to institute zero-runoff parameters and practices. This part of the Green Belt will also serve the Auroville township by carrying out waste water treatment and recycling, solid waste management and experiments for producing alternate energy through the use of biomass and wastes. In this regard Auroville is already collaborating with state and central government agencies.

© Recreation

Another purpose of the Green Belt is to provide open-air recreational facilities for the inhabitants. An extent of 256 ha. has been designated for this purpose, which will also include a botanical garden and agro and social forestry for the benefit of neighbouring villages. Within this zone, a modern burial and cremation site is also proposed.

2.5.9 The summary of uses in the green belt along with implementing partners is given in **table 15**.

2.6 PHYSICAL AND SOCIAL INFRASTRUCTURE



Planting trees in the green belt

Table 15: Summary of Uses in the Green Belt

Main Uses	Implementing partners *
<p>1. Agriculture and Farming Water management Aquifer storage and recovery Soil conservation Farming including organic farming Climatic promotion Fisheries Village development & service nodes Agro- & social forestry</p>	<p>Auroville groups: Auroville Farm Group Auroville Green Work Resource Centre (AGRC) Water Harvest, Palmyra Auroville Village Action Group (AVAG) Land Use Coordination</p> <p>Collaborating Partners: Tamil Nadu State Council for Science and Technology Govt. of India Development Research Corporation National Wasteland Development Board AME (The Netherlands), DANIDA (Denmark) GIFRID (German-Israeli Govt. Collaboration) Stichting De Zaaier (The Netherlands) DFID (UK), South East Asia Seed Bank</p>
<p>2. Forest and Land Regeneration Indigenous forests Sacred groves Biodiversity park Medicinal plants Dairy, orchards Zero runoff practices Waste water recycling Solid waste recycling Alternative energy Energy plantation Vegetables, flowers Building & road material & transport technology Village service node Technology transfer and dissemination</p>	<p>Auroville groups: Auroville Green Work Resource Centre Palmyra, Pitchandikulam Bioresource Centre Shakti, Water Harvest Auroville Centre for Scientific Research (CSR) Auroville Building Centre, Land Use Coordination</p> <p>Collaborating partners: State Council of Science and Technology State Dept. of Environment, Forest & Rural Development Ministry of Environment & Forest National Wasteland Development Board Rajiv Gandhi Drinking Water Mission HUDCO, NBO, BMTPC, MNES, Andaman Ecological Team, UNCHS, European Commission, SWISSAID, GTZ, GATE, KFW, BORDA (Germany), German Agro-Action, Commonwealth Human Ecology Council (CHEC), INERP Association Scientifique (France) Threshold Foundation (US), Stichting de Zaaier (The Netherlands), Canada Fund, ICEF (Indian- Canadian Environment Facility)</p>

Table 15: Summary of Uses in the Green Belt

Main Uses	Implementing partners *
3 Recreation Botanical gardens Poultry farm Burial and cremation site Village service node	Auroville groups: AGRC, AVAG, Land Use Coordination Collaborating partners: State and Gol Departments of Environment, Rural Development.

* Indicates principal partners who are at present involved in such activities. It is anticipated that there will be additional collaborating partners as Auroville's activities increase.



A. Physical Infrastructure

Road network: The road network, consisting of four types of roads, is planned to meet the future requirements of traffic and functioning of the Township. The proposed road network is shown in the proposed land use plan as well as in **Drawing 7** on the hierarchy of roads. Road sections are shown in **Drawing 8**. The four types of roads and access ways in order of hierarchy are as follows:

Access Roads to Auroville: Four principal accesses are proposed. Two accesses are from the Tindivanam-Pondicherry Road, connecting the Industrial Zone and the International Zone. The other two accesses are from the East Coast Road (ECR), which would link the Residential Zone and the Cultural Zone. Thus each zone will have an independent access from state/national highways. These roads will provide links to the outer ring road of the City.

There would be bypass links where the existing narrow roads pass through village settlements. The right of way of these roads is suggested to be 30 m.

City Ring Roads: Two ring roads are proposed within the City area, one circumscribing the four main use zones and the other adjoining the utility zone which is designated as the Crown road. The right of way of these roads is also suggested to be 30 m. These two ring roads will help in distributing the traffic to the different zones.

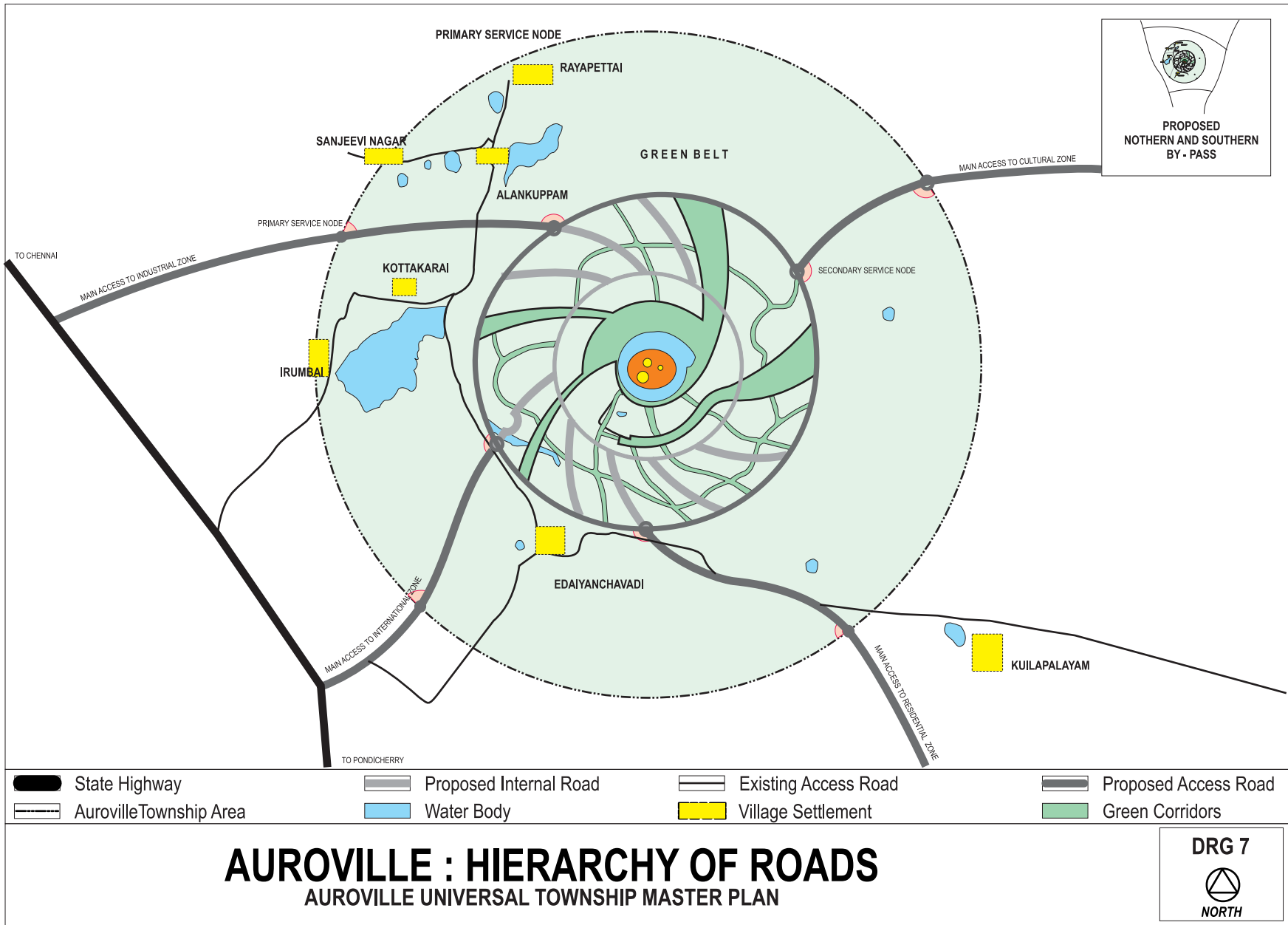
The entire City area has been envisaged as a "non-polluting vehicular zone". Accordingly, the ring road circumscribing the City Area will be used by progressively non-polluting vehicles.

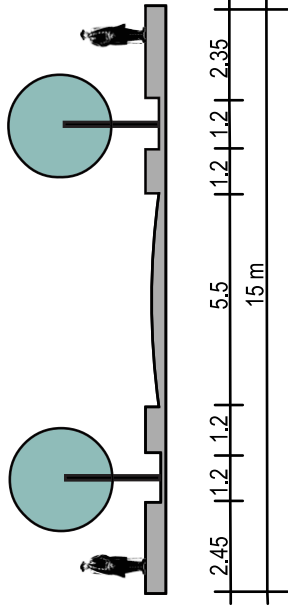
Internal Distribution Roads: The internal distribution roads consist of vehicular roads as well as pedestrian and cycle paths. The rights of way of vehicular roads would vary between 18-24 mt. depending upon their functions.

Pedestrian and cycle paths will be integrated with open spaces and green corridors. A minimum of 3 m width would be reserved for pedestrian and cycle movement.

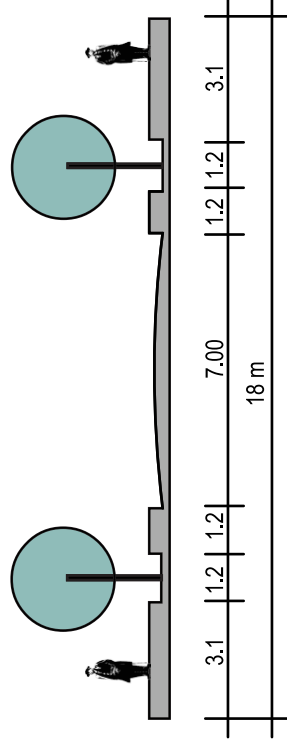
Service Nodes: Two kinds of service nodes are proposed. These service nodes are provided in the Green Belt were proposed at the intersection of the four main access roads linking the township and the City area. The first one would be called Primary Node and the latter one, the Secondary Service Node, as indicated in the schematic layout of Service Nodes. These service nodes will provide adequate parking and transshipment space for changing over to 'non-polluting' mode before entering the City. These service nodes will also offer other facilities for providing a convenient interface with neighbouring village settlements.

2.6.1 In addition to the main categories of roads discussed above, two bypass roads are also suggested, one in the north and another in the south of the township to facilitate diversion of traffic not bound for Auroville. The planning and

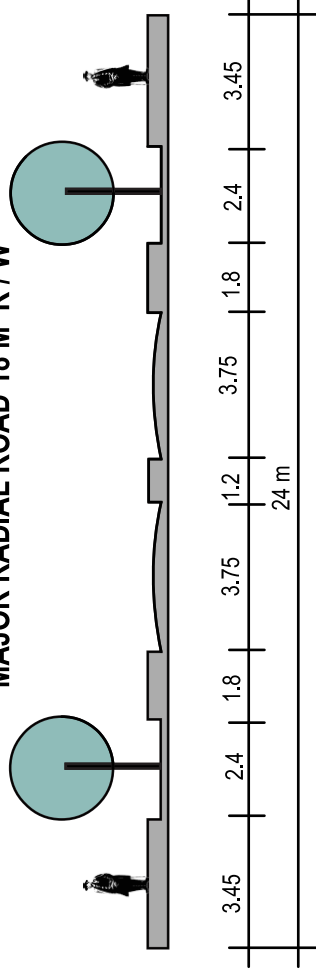




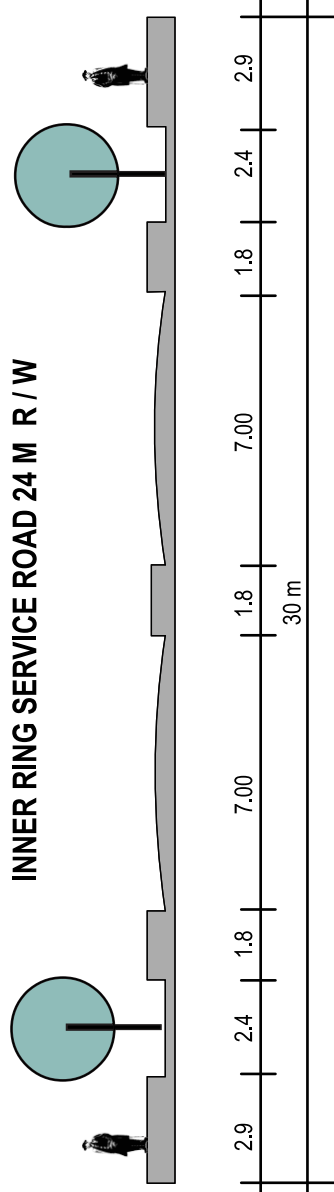
OTHER ROADS 15 M R / W



MAJOR RADIAL ROAD 18 M R / W



INNER RING SERVICE ROAD 24 M R / W



TOWNSHIP ACCESS AND RING ROAD 30 M R / W

ROAD SECTIONS
 AUROVILLE UNIVERSAL TOWNSHIP MASTER PLAN

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construction of these roads as well as the main access roads up to the service nodes need to be taken up by the concerned departments of the State Government for providing efficient linkages to the township.

2.6.2 Water Supply: The Auroville region gets an average rainfall of around 120 cm/annum (as observed during the years 1972-83), as per the following distribution given in **Table 16**:

2.6.3 In spite of such a good amount of rainfall, the water situation

Period	Precipitation in cm
S.W. monsoon (June-Sept)	41.5
N.W. monsoon (Oct-Dec)	75.9
Winter (Jan-Feb)	1
Hot weather (March-May)	4.5
Total	122.9

in the region is not satisfactory because of excessive runoff, limited surface storage and inadequate knowledge of aquifer storage areas. Evaporation losses are also considerable due to high average temperatures in the area which go up to 38.8oC in June. Hydro-geological studies made so far revealed that there is adequate potential for groundwater supply of good-quality potable water as

long as there is no saline intrusion due to over-extraction. These studies also revealed that water could be tapped both from open wells (3 to 12 m. below ground level) and tube wells. The estimated total yield from rainwater is 25.48 million cu.m. The runoff itself when harvested is estimated between 7.70 million cu.m and 2.84 million cu.m giving an average of 5.28 million cu.m.

2.6.4 The demand for drinking water for Auroville will depend on population and level of supply. Estimates of the water supply needs for Auroville under varying per capita standards for a population of 15,000 in the first phase and 50,000 in the ultimate phase is given in **Table 17**:

* No Underground Sewerage

Population	At litres per capita per day		
	70*	100@	200#
15,000	1.05 mld	1.5 mld	3.0 mld
1st Phase			
Annual need	0.383 mcum	0.547 mcum	1.094 mcum
50,000 (ultimate)	3.5 mld	5.0 mld	10 mld
Annual Need	1.278 mcum	1.825 mcum	3.650 mcum

@ Partial Underground Sewerage

Includes supply for gardens and industries.

2.6.5 The annual requirement will range from 0.383 million

cu.m to 3.650 million cu.m.. It is therefore clear that the per capita requirement should be established in such a way that the extraction is within safe limits of availability, taking into consideration that the rainfall will not be uniform in all years, and the possibilities of over-extraction and some extraction for irrigation purposes. Taking note of the fact that Auroville envisages development of less water consuming industries, national and international pavilions and cultural facilities of high order which occupy nearly 25% the developed area, it is therefore proposed to adopt the standard of 200 lpcd to meet the total requirements of the township. The component for residential supply will be only 135 lpcd. The annual water requirements for a population of 15,000 would therefore be about 3 million litre per day or 1.1 million cu.m. per year. Auroville's work in water management so far has been characterised by principles of zero runoff, conservation, and recycling and re-use of waste water. This work will be intensified so that additional requirements would be largely met through the recycling of waste water. Auroville will thus be able to meet all its water requirements comfortably, both in the first phase and the ultimate phase.

2.6.6 Water Supply Distribution: A predominantly decentralised system of extraction and distribution eminently fits the land use plan proposed for Auroville. Each of the principal zones will be supplied from local tube wells located in the particular zone itself or in the Green Belt adjoining the zone. The distribution system will also be localised for each zone. This will not only reduce the costs of laying long lengths of high diameter pipes, but also assist in recycling waste water for garden and other non-drinking uses close to the zone itself.

2.6.7 Sewerage and sanitation: Auroville has been

experimenting with septic tanks, Imhoff tanks (both individual and at community level), leach pits and root-zone treatment of sewage for compact communities. The use of such facilities will continue in the Cultural and International Zones as well as in the Green Belt developments. Separate, partially centralised systems of collection and treatment will be considered only for the Industrial and Residential Zones to avoid contamination of groundwater.

2.6.8 The approach to sanitation will be through the use of a variety of night soil disposal methods, which include toilets/latrines of various designs and disposal methods. These will include FOLs connected to individual or community treatment facilities. Extreme care will be taken to see that these systems do not pollute the underground water resources on which Auroville and its neighbourhood depend.

2.6.9 Drainage: A storm water drainage system will be provided to fully support the "zero runoff" concept. Already many check dams across the canyons and earthen dams along and across roads divert the runoff into the ground below. In addition, Auroville is exploring rooftop water harvesting, as well as a proposal for a major water management project which involves collecting the excess runoff within the Green Belt and pumping it out to a central lake that is to be created. The infiltration from the lake would regularly recharge the aquifers and prevent saline intrusion into the aquifers due to over-extraction that may occur outside Auroville. The western part of the Green Belt, extending from Alankuppam village to Irumbai village, is a good aquifer recharge and storage area,

which can be used for water recovery when needed. These proposals will have greater relevance for the ultimate phase, but studies have already been commenced to explore them.

2.6.10 Solid Waste Management: Solid waste management in Auroville presently consists of sorting at source, efficient collection and recycling of both organic and non-organic wastes. Incinerable wastes are burnt at 800°C in a two-chambered LPG-fuelled incinerator at the Auroville Health Centre. Some of the non-recyclable wastes like batteries, rubber items, thermocole, film, glass and PET are stored in a special storage facility until a market or acceptable environment-friendly disposal solution is found.

2.6.11 The first-phase developments are anticipated to generate about 7 to 12 tons of waste based on a per capita generation of 0.5 to 0.75 kg. This would include garden wastes within the City Area, but excludes wastes from the Green Belt. The waste generated in the Green Belt would be utilised either as biomass fuel for producing electricity, or for conversion into soil nutrients and enrichers. The strategy and approach to solid waste management will include:

- Finding practical and ecological packing alternatives to reduce non-degradable wastes.
- Sorting wastes at source into 5 or 6 streams - paper, plastic, metal, glass, organic, batteries, etc.
- Converting recyclable wastes into useful products. This would include conversion of compostable material to soil enrichers.

- Using building debris as road / building material.
- Using incinerable wastes to generate electricity.
- Scientific and safe disposal of bio-medical and hazardous wastes.

2.6.12 Auroville with its past experience will initiate and promote the "zero-garbage" concept to the maximum, so that no dumping or sanitary landfill is needed. Transportation of solid waste for disposal will also be minimal.

2.6.13 Power-Energy-Telecommunication: Concerned with the ecological implications of energy consumption, Auroville has been experimenting from the beginning with the use of renewable energy sources such as sun and wind that are continuously available, as opposed to fossil fuels (coal, oil, etc.). Auroville's vision is to become energy independent and self-sufficient, with all its energy requirements met from renewable sources.

2.6.14 Already 150 houses use solar photovoltaic electricity and solar water heaters for their energy requirements. There are about 140 solar water pumping systems and 30 wind pumps operational in Auroville for gardening and irrigation purposes. Specially designed ferro-cement biogas systems process animal and vegetable wastes to produce methane gas for cooking and organic fertilizer.

2.6.15 Auroville in co-operation with Government of India Departments has installed a 36.3 KW solar photovoltaic power plant close to the Matrimandir, which is the largest stand-alone

solar power plant in the country. A unique solar bowl has also been installed on the roof of the Solar Kitchen, which generates enough energy to cook meals for about 1,000 persons a day for the Auroville community.

2.6.16 Expanding the use of renewable resources is possible because of five workshops in Auroville which produce and market different types of renewable energy systems. However, due to limitations of technology and high cost, Auroville will have to draw its major power requirements for the first phase from the Tamil Nadu Electricity Board grid. Auroville is now drawing 2.1 million KW of power per year from TNEB and its demand in the first phase would be in the order of 20 million KW per year based on the present per capita energy consumption. Conservation measures are expected to bring this down to about 14 million KW. In order to fulfil its energy objectives Auroville is considering two important avenues:

- To build a wind farm in southern Tamil Nadu that would supply energy to the TNEB grid, which could be drawn at Auroville.
- To build gasifier plants in Auroville to draw energy from biomass resources in the region. Proposals for pilot plants of 3 MW total capacity are under consideration.

2.6.17 Solar photovoltaics will serve as the main energy source, backed up by the Tamil Nadu Electricity Board (TNEB). Alternative sources of energy will be incorporated. Solar panels will be installed on the rooftops. Auroville's approach would consist of both Demand Side Management

(reducing wastage) and Supply Side Management from renewable sources of energy.

2.6.18 The requirement of 10,000 telephone lines for Auroville is based on the fact that it will have a proportionately larger number of resource persons engaged in several activities of sustainable development which naturally means that use of computers would be more or less universal. Accordingly, the Auroville Telephone Service is negotiating with the Department of Telecommunications to fulfil its future requirement of 10,000 telephone lines.

B. Social Infrastructure:

2.6.19 The social infrastructure in Auroville will consist of two distinct parts namely the facilities needed by the residential population (which is predominantly located in the Residential Zone) and the other facilities that will be part of the main function of the Auroville Universal Township. The latter will be located mainly in the International and Cultural Zones. The social infrastructure required for serving the residential population is proposed to be at four levels namely,

- Cluster or community level, serving a population of 250 persons.
- Sector level, serving a population of 1,000 persons.
- Neighbourhood level, serving a population of 5,000 persons
- City/District level, initially serving a population of 15,000 persons with an ultimate target of 50,000 persons.

2.6.20 The social infrastructure has been worked out for a population of 15,000 Aurovilians that is to be achieved in the first phase. The facilities indicated under City/District level have been worked out for a population of 15,000, but will also serve the needs of a bigger population as the city grows. During periodical review, the infrastructure requirement for the increasing population would be assessed in the development plan after every five years and provided as per necessity.

2.6.21 Details of such facilities proposed at the four levels mentioned above, as well as the summary of land requirements for the social facilities for a population of 15,000 in the Residential Zone are indicated in the **Tables 18 and 19**. The allocation of land for various categories of facilities would be worked out on the basis of UDPFI guidelines.

2.6.22 Tourist Facilities: Auroville, by its very concept and the diverse activities in which it is involved, will draw a large number of visitors from abroad as well as from within the country, who come to experience both spiritual and material experiments and progress. It will also attract a number of general tourists, particularly to visit the Matrimandir and to shop for special handicraft works, for which Auroville is becoming an important centre both nationally and internationally. Facilities for this activity are being provided at strategic points within the City area itself as well as in the service nodes provided at the four approaches to the City. Such facilities will consist of guesthouses, restaurants, information centres and other amenities required by tourists.



Visitors



Table 18: Social Infrastructure requirement for a Population of 15,000
(No. of facilities at various levels)

Infrastructure	Total area (ha.)	Community Level	Sector Level	Neighbourhood Level	District / City Level
Population Served		250	1,000	5,000	15,000
Health	8				
Emergency Clinic		1			
Polyclinic			1		
Hospital				1	1
Alternative health Facilities			1	1	1
Education	80				
Crèche & Kindergarten		1			
School (age 6-10)			1		
School (age 11-19)				1	
University					1
Recreation					
Community parks & playgrounds		1			
Sector parks & playgrounds			1		
Neighbourhood parks & playgrounds				1	
City level playground					1
Commercial	30				
Shopping		5 shops	10 shops	25 shops	superstore
Guesthouses				2	8
Tourist centre					3
Culture	10				
Exhibition space			1		
Cinema				1(mini-cinema)	1
Auditorium					1

Table 18: Social Infrastructure requirement for a Population of 15,000

(No. of facilities at various levels)

Infrastructure	Total area (ha.)	Community Level 250	Sector Level 1,000	Neighbourhood Level 5,000	District / City Level 15,000
Population Served					
Utility & Services	25				
Maintenance centres			1	1	
Zonal offices					1
City level offices & Town administration					1
Burial & cremation site					1
Water distribution				1	
Waste water treatment				1	
Solid waste recycling				1	1
Service nodes	32				
Traffic & village interface facilities					8

Table 19: Social Infrastructure in Residential Zone

Infrastructure	Extent in ha.
Health	3
Education	7
Public & Semi-public	8
Shopping & Commercial	5
Recreation including open spaces & parks and playgrounds	17
Roads including cycle tracks and footpaths	30
Total	70

2.7 DISTRIBUTION OF THE ASSIGNED POPULATION

2.7.1 The ultimate population of 50,000, as well as the Phase I population of 15,000 is proposed to be distributed in various use zones as per the details given in **Table 20**.

Zone	Ultimate	Phase I
Residential	40,000	11,000
International	600	300
Industrial	1,800	600
Cultural	600	300
Crown area in all zones	5,000	1,800
Green Belt	2,000*	1,000*
All Zones	50,000	15,000

(*) Excludes the village settlement population in the Green Belt. The village population in the Green Belt in Phase I is estimated at 8,600 persons.

2.7.2 The main concentration of Auroville's population will be in the Residential Zone. The overall density in the Residential Zone will be 240 persons/ha. There will be housing developments ranging from low-density individual housing units to high-density community units as indicated in **Table 21**.

Table 21: Types of Residential Accommodation

Type of housing	No. of floors
Single family dwelling	1-2
Low rise apartment	2-4
High rise apartment	5-8

2.7.3 The floor space per person will be in the order of 30 sq. m and 55% of the area will remain unpaved. The proposed development would be achieved in a unique way with lower densities closer to the crown area and higher densities as they approach the green belt, as per the original concept. The objective of the design is twofold:

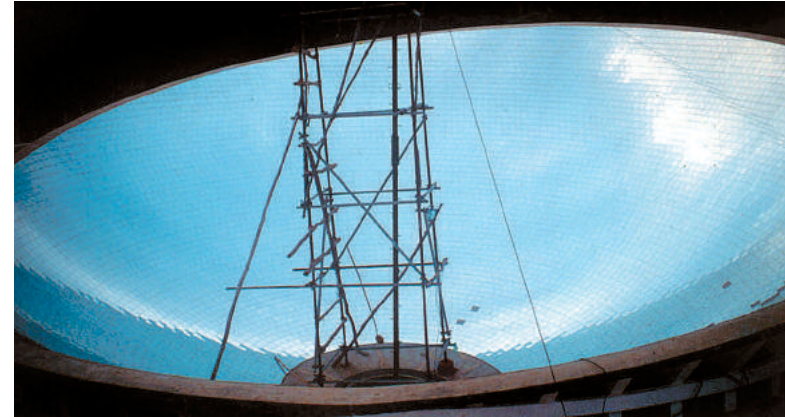
- To establish that urban areas can and should achieve high densities, without compromising on form or amenities and without sacrificing or reducing the amount of open spaces, which determine the quality of environment and living conditions.
- To establish that conversion of agriculture lands for urban use should be avoided to the maximum extent.

2.7.4 Density and Distribution of Population: It is proposed that the Residential Zone be delineated into ten sectors of approximately 10 ha. each. Each of these sectors will be developed at densities varying from 100 persons/ha. to 640 persons/ha. particularly in high-rise building blocks in a wide range of urban forms. The net size of residential areas would be about 100 ha., which would provide a residential floor space of 1,500,000 sq.m. (FAR 150), that could accommodate the entire 40,000 persons at an average floor space of 30 sq.m. / person.

2.8 DEVELOPMENT MODELS FOR BUILT SPACE

2.8.1 Auroville has been developing new and innovative models of planning, building design and built-up spaces. This is evident not only in the use of materials and construction technologies, but also in the introduction of new principles of waste treatment, water harvesting, energy development and other fields. This work will continue with greater vigour as a follow-up of the Master Plan (Perspective: 2025). A few examples of projects/experiments, either ongoing or ready for implementation, showing the type of development and the principles underlying such models are:

Solar Kitchen & Plaza: The Plaza complex houses the community kitchen and other facilities required for the inhabitants, particularly those of the Residential Zone, and includes a department store, library, restaurant, communication centre and multipurpose public space. This complex is located in the Residential Crown. Here it forms the main link between the four zones, connecting the public services in each zone. On the inner side of the Crown Road there will be a complex of buildings not more than 10 meter high and 20 meter wide, while on the periphery there will be a continuous boulevard. The complex will integrate several eco-friendly practices water harvesting, waste treatment and use of alternative energy. The solar bowl on top of the Solar Kitchen, which is already installed and functioning, is one of the largest in the world and it provides energy required for cooking meals for 1000 persons at a time in the community kitchen (**Drawing 9**).



Solar Kitchen Bowl

'Creativity' - Urban Eco-community: Creativity, a residential community, has been conceived as having housing units grouped into 6 clusters of 50-60 members each (**Drawing 10**). A central spine or pedestrian street runs through the site in a crescent shape serving all 6 clusters. This street is thus the main area of interaction and several community facilities spill over to it. Another pathway running perpendicular to it links the recreation area and the green corridor, and provides a quiet walkway and ambience. The different clusters enclose a courtyard space that is semi-public, yet protected from the larger community. The individual units are separated from the interaction zone through the buffer of buildings for common facilities. Climatic comfort is being emphasised by using insulating roofing material, cross-ventilation and appropriate landscape design. Apart from single and family units of varying sizes, there will be provision for 4-5 groups of singles to share common kitchenettes, living rooms and bathroom facilities to encourage social interaction and community building.



DEVELOPMENT MODELS PLAZA & SOLAR KITCHEN

1 - SOLAR KITCHEN 2 - CROWN ROAD 3 - PARKING 4 - POUR TOUS - FINANCIAL SERVICE 5 - MEDIA CENTRE AND LIBRARY 6 - EXPANSION
 7 - PEDESTRIAN BOULEVARD 8 - SEMI PAVED AREA 9 - PLAZA COVERED 10 - PLANNED GREEN AREA 11 - MAHALAKSHMI PARK

DRG 9



Residential Cluster
 Collective Facilities (cluster level)
 Collective Facilities (Common to all)

DEVELOPMENT MODELS - CREATIVITY HOUSING PROJECT

DRG 10



NORTH

Facilities for the whole cluster, such as common kitchen, laundry, internet, office, gym, TV and video room, and common study areas will encourage further interaction and avoid duplication.

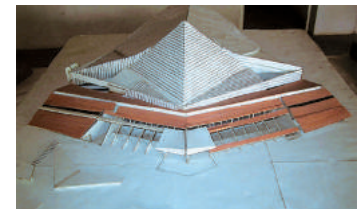
Line of Force - 'Progress': 'Progress' is proposed as a collective building of medium density, to be constructed shortly in sector II of the Residential Zone. It is composed of 7 interconnected modules shaped as one of the lines of force of a galaxy. The dimension and height of these modules vary from ground + 1 floor to ground + 6 floors, so that this building grows horizontally and slowly increases in height towards its end. The whole project is a research in medium-density housing, combining architecture and art, eco-friendly construction materials and techniques, ecological systems for water, energy and landscaping. It will provide accommodation for about 350 people. There will be some modules with pillared supports at ground level to allow air movement. 'Progress' will contain facilities to promote a more communal lifestyle. A number of common areas and collective services have been considered, such as kitchen and dining room, video room, laundry, swimming pool, library, communication centre and multipurpose spaces for physical exercise and cultural programs. Other facilities may be considered according to future needs and development. The collective life will be combined with a clear respect for individual movements and spaces. A special arrangement will be done for the youth. The modules can be built in phases and in various ways, allowing people to choose the part of the building which fits most with their lifestyle or present needs. There will be different types of apartments, varying in size, facilities and finishing. The finishings will be designed in consultation with artists to create beautiful spaces.

Savitri Bhavan: The proposed Savitri Bhavan is located in the Crown area of the International Zone. It will focus on studies related to Sri Aurobindo's revelatory epic 'Savitri'. It will accommodate facilities and activities to enhance the understanding and enjoyment of this text using supports such as an art gallery, hall, amphitheatre, library, audiovisuals, and office and study areas.

The Unity Pavilion: This proposed project is located in the Crown area of the International Zone. The Unity Pavilion will act as a seed and a catalyst for the development of the International Zone. It is seen as a movement to join forces, a transitional space and an experimental ground for the emergence of the individual pavilions. The Unity Pavilion complex will include spaces for offices, research, lectures, seminars, exhibitions and audiovisual equipment, as well as performance areas and guest accommodation. The focus of the work in the Unity Pavilion will be collaboration and development of the continental areas and the interaction of

cultures beyond national borders.

Bharat Nivas: Bharat Nivas is the Indian pavilion in the International Zone. It consists of an 840 seat auditorium, a Centre for Research in Indian Culture and its guesthouse facility. Presently the campus acts as a hub of various town-related services such as town planning, archives, post office, public library, entry group, visa service,



Bharat Nivas model

secretariat, Auroville Foundation office and many others.

Service Nodes: There are two types of service nodes suggested in the Proposed Land Use Plan. Primary Nodes, located at the boundary of the township, would regulate most of the visitors' traffic. The visitor would shift to a non-polluting transport mode to visit the various places in the township. It would also provide a space (for social as well as economic purposes) for interaction between Auroville and the surrounding villages. It will include tourist related facilities and services. Secondary service nodes are proposed to function as additional regulatory / channelising nodes up to which the resident could bring their vehicles for parking and garage facilities. As Auroville has yet to acquire a large amount of land, especially in the green belt area, the secondary nodes, which are closer to the city area, would be developed first (**Drawing II**).

2.8.2 All these models will be helpful in the implementation of various built components of the Master plan in an innovative manner. The architectural design of public buildings will be barrier free as per the requirements of the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 and will provide a wide variety of experiences through its landscape design concept.

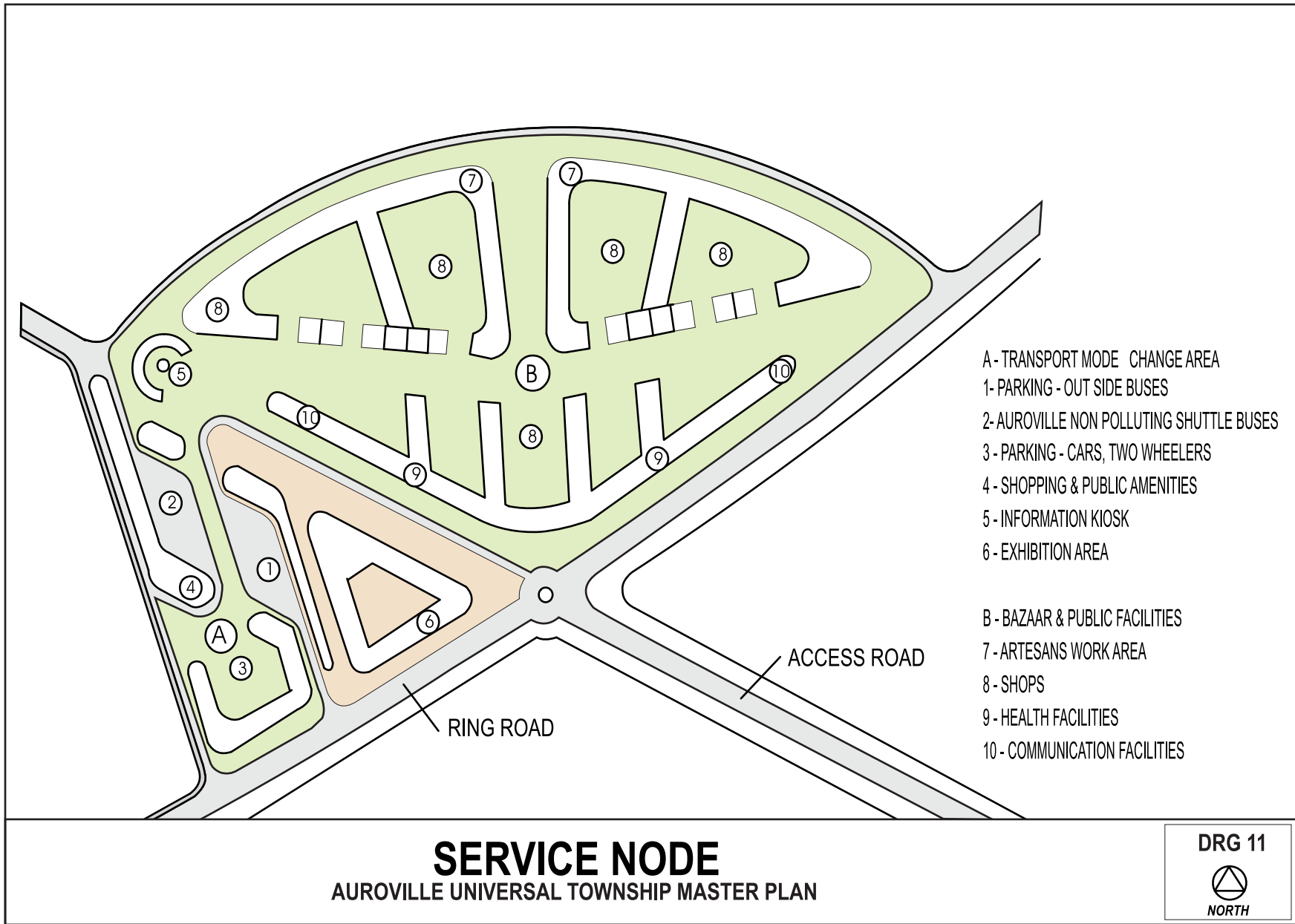
2.9 IMPLEMENTATION AND MONITORING MECHANISM

2.9.1 The implementation of the Master Plan (Perspective:

2025) for Auroville requires a more structured organisational set-up than hitherto available. A start will be made putting such an organisation in place when the European Union funded project on the Centre for Innovative Urban Management becomes operational in early 2001.

2.9.2 The Planning Group will be responsible for the preparation of the Five Year detailed Development Plans followed by Annual Plans and Layout Plans/Detailed Schemes within the framework of the Master Plan (Perspective: 2025). The implementation and monitoring of the projects will continue to be the responsibility of the concerned AV group through their project leaders. However, the overall co-ordination and monitoring of the work will be the responsibility of the Planning Group.

2.9.3 There are three important aspects of the plan, the implementation of which will require full support and involvement of the Government of Tamil Nadu and the Pondicherry UT. The first one relates to the provision of main access ways to the township. There are four such principal access ways connecting the four main zones. The present accesses to these areas are narrow and pass through village settlements. Widening of the roads needs to be carried out on some stretches, and realignments need to be introduced to avoid disrupting village settlements. In the longer term it would also be necessary to establish the Northern and Southern by-passes connecting the East Coast Road and Tindivanam-Pondicherry roads to facilitate easy and direct access between these highways.



- A - TRANSPORT MODE CHANGE AREA
- 1- PARKING - OUT SIDE BUSES
- 2- AUROVILLE NON POLLUTING SHUTTLE BUSES
- 3 - PARKING - CARS, TWO WHEELERS
- 4 - SHOPPING & PUBLIC AMENITIES
- 5 - INFORMATION KIOSK
- 6 - EXHIBITION AREA

- B - BAZAAR & PUBLIC FACILITIES
- 7 - ARTESANS WORK AREA
- 8 - SHOPS
- 9 - HEALTH FACILITIES
- 10 - COMMUNICATION FACILITIES

2.9.4 The second important aspect relates to securing the lands that are not under the ownership of Auroville for developments proposed in the Master Plan. For the securing of land, various options such as land exchange, lease of land, land pooling techniques etc., as indicated in Appendix IV, are suggested. This calls for the regulation of the use of lands not owned by Auroville to avoid non-conforming uses, and acquisition of such lands that are required for development by Auroville. The Auroville Foundation, being governed by an act of Central Government, anticipates full co-operation from the Government of Tamil Nadu and the Pondicherry UT in the implementation of these proposals.

2.9.5 Another important aspect is the development of villages within the designated area of Auroville as well as those in its 'bio-region'. Auroville groups are already assisting the villages in improving their socio-economic conditions. The five-year indicative plan has envisaged a provision of about Rs. 3 crores for this purpose. Auroville would collaborate with the village panchayats as well as with the Government in identifying development projects, and funds for projects will be sought from the Central Government and the State Government to support various aspects of development in these villages and the bioregion.

2.9.6 The proposed set-up in the Planning group provides for an independent Division which will be involved in implementation work. The details of the proposed structure for the implementation of the Master Plan (Perspective: 2025) is given in Appendix V.



Kuilapalayam village

2.9.7 The present momentum in Development and Environmental activities will be strengthened through a participatory Environmental Management process which will be integrated within all development, planning and urban design elements.

2.10 PHASING AND RESOURCE MOBILISATION

2.10.1 The Master Plan (Perspective: 2025) has been conceived for a total population of 50,000, and takes into account a population of 15,000 by the year 2010. The Five Year Development Plan (2001-2006) proposals are given in **Table 22** along with the Five Year programme for overall city development and special projects.

2.10.2 In the Development Plan proposals for 2001-2006,

Table 22:Development Plan Five Year Programme 2001-2006

Project	Estimated Cost (Rs in Crores)
A. RESIDENTIAL ZONE	
I. Ongoing / projects in the pipeline:	
1. Rêve - 42 apartments	
2. Creativity - 50 apartments	
3. Line of Force Progress - 3 apartments	
4. Other Residential & related facilities	
Sub-Total	3.41
II. Proposals	
1. Land for immediate development (10 ha.)	0.80
2. Residential units for 4000 persons in an area of 120,000 sqm	96.00
3. Social infrastructure (3000 sqm)	2.40
4. Crown development (3000 sqm)	3.00
5. Off-site infrastructure (16 ha.)	0.96
6. Land required for 2 nd stage of development (6 ha.)	0.60
Sub-Total	103.76
Total (Residential Zone)	107.17

Table 22:Development Plan Five Year Programme 2001-2006

Project	Estimated Cost (Rs in Crores)
B. INDUSTRIAL ZONE	
I. Ongoing / projects in the pipeline:	
1. Incense, food processing and soya units	0.76
2. Town Hall	0.50
Sub-Total	1.26
II. Proposals	
1. Land for immediate development (10 ha.)	0.80
2. Industrial space (15,000 sqm)	12.00
3. Town Hall	4.50
4. Residential units (500 - 15,000 sqm)	12.00
5. Social & workers welfare infrastructure (2000 sqm)	0.16
6. Off-site infrastructure (8 ha.)	0.48
7. Crown development (4000 sqm)	4.00
8. Land acquisition for 2 nd Stage (7 ha.)	0.70
Sub-Total	34.64
Total (Industrial Zone)	35.90

Table 22:Development Plan Five Year Programme 2001-2006

Project	Estimated Cost (Rs in Crores)
C.INTERNATIONAL ZONE	
I. Ongoing / projects in the pipeline	
1. Bharat Nivas	0.35
2. Tibetan Pavilion	0.80
3. Unity Pavilion	0.24
4. Visitors Centre extension	0.20
5. Guest House	0.15
6. Savitri Bhavan extension	2.90
Sub-Total	4.64
II. Proposals	
1. Land for immediate development (10 ha.)	0.80
2. National Pavilions	7.50
American, Russian, African and Tamil Cultural Centre (5000 sqm)	
3. Centre for International Research on Human Unity (CIRHU) (6000 sqm)	9.00
4. Crown development (12000 sqm)	
200 units residential (6000 sqm)	4.80
+guest houses, visitors (6000 sqm)	6.00
5. Off-site infrastructure (7 ha.)	0.42
6. Land for 2 nd Stage (6 ha.)	0.60
Sub-Total	29.12
Total (International Zone)	33.76

Table 22:Development Plan Five Year Programme 2001-2006

Project	Estimated Cost (Rs in Crores)
D.CULTURAL ZONE	
I. Ongoing / projects in the pipeline:	
1. High school	1.30
2. Sports complex, Evening school, Arts workshop and glass training centre	0.90
Sub-Total	2.20
II. Proposals	
1. Land required for immediate development (10 ha.)	0.80
2. Cultural & Educational complex (20,000 sqm)	20.00
3. Crown development (300 units =9000 sqm)	7.20
4. Residential +6000 sqm for social infrastructure	6.00
5. Off-site infrastructure (10 ha.)	0.60
6. Land for 2 nd Stage (5 ha.)	0.50
Sub-Total	35.10
Total (Cultural Zone)	37.30

Table 22:Development Plan Five Year Programme 2001-2006

Project	Estimated Cost (Rs in Crores)
E.GREEN BELT	
I. Ongoing / projects in the pipeline:	
1. Restoration of TDEF	
- Botanical Garden, Check dams, Afforestation, Seed Bank, Farming, Organic Agriculture	3.50
Sub-Total	3.50
II. Proposals	
1. Applied research projects in aspects of urban & rural sustainable development, including farming and forestry	10.00
2. Village development & environment improvement	3.00
3. Service nodes - 1 primary & 2 secondary nodes	2.00
4. Development of city level recreational facilities	3.00
5. Cremation and burial site	1.00
6. Pathways & cycle tracks with culverts (12 km.)	0.12
7. Land acquisition (400 ha.)	40.00
Sub-Total	59.12
Total (Green Belt)	62.62

Table 22:Development Plan Five Year Programme 2001-2006

Project	Estimated Cost (Rs in Crores)
F. CITY DEVELOPMENT & SPECIAL PROJECTS	
1. Main access road	
Township access road (9 km.)	0.90
Land for widening by 20 m =18 ha.	1.44
2. Crown & outer ring (16 km)	1.60
Security lighting	0.75
3. Transport vehicles 10 nos (non polluting)	1.50
4. Centre for Innovative Urban Planning	2.50
5. Archaeological projects	1.00
6. Environmental laboratory	1.00
7. Documentation, information dissemination and city networking	3.50
8. Biomass energy generation	12.00
(6 units of 1/2 Mw =3 Mw)	
9. Solar application for pumping, etc.	2.00
10. Renovation of Irumbai Temple including landscaping lighting & renovation of tank, as a religious and cultural resource for surrounding villages	0.25
Total (City Development & Special Projects)	28.44
Grand Total	341.19

Table 23: Funding Sources for Development Plan (2001-2006)

Source	Amount (Rs. in crores)
Auroville commercial units	50.00
Consultancy from AV Research	10.00
Grants for projects	
1 India	65.00
2 International	100.00
Private donations from India and abroad	50.00
Contributions from AV residents	75.00
Total Rs. in Crores	350.00

Auroville proposes to invest Rs. 350 crores on infrastructure development, which will be funded from the sources given in **Table 23**, to accommodate the population growth.

2.10.3 A summary of the investments for 2001-2006 in residential, international, industrial and cultural zones is given in **Table 24**.

2.10.4 Auroville activities are financed by donations and financial inputs from residents, through income generated by Auroville-run business units, and grants and donations from national and international agencies. Auroville, being an institution that has been established through an Act of Parliament, also obtains financial support from the Government of India.

2.10.5 The sources of funding for the Auroville activities are:

Table 24 : Summary of Investments 2000 – 2006
(Rs. In Crores)

Zones	Total	Res.	Indus	Admin, Crown & Pavilions & culture	Social Infrastr.	Physical Infrastr.	Land	Sustainable develop. & village develop.	Other
Residential	107.17	99.41	-	-	5.40	0.96	1.40	-	-
Industrial	35.90	12.00	12.76	5.00	4.16	0.48	1.50	-	-
International	33.76	4.80	-	21.14	6.00	0.42	1.40	-	-
Cultural	37.30	6.00	-	22.20	7.20	0.60	1.30	-	-
Green Belt	62.62	-	-	-	-	3.12	40.00	19.50	-
Overall city	28.44	-	-	2.50	-	20.19	-	-	5.75
Total	305.19	122.21	12.76	50.84	22.76	25.77	45.60	19.50	5.75

Note : Parameters for Project Cost Estimates are given in Appendix VI

Trusts under the Auroville Foundation: At present, there are over a hundred large and small commercial units grouped in 15 trusts under the Auroville Foundation. During the financial year 1999-2000 alone, 20 small-scale units were added. Over the past 10 years, commercial units have contributed finances in the order of Rs.10 crores towards Auroville's maintenance and development.

Centre for Scientific Research (CSR): The CSR is a research institution set up in 1984 to focus on research and development in the field of renewable energy, wastewater recycling and sanitation, and appropriate building technology. Its activities include R&D projects, transfer of technology via training programmes and workshops, promotion of renewable energy systems, dissemination of information via seminars, workshops and publications, production of ferrocement building components and biogas plants, architectural design, consultancy and construction projects. It receives funds from national and international agencies, which are also channelled into Auroville's development.

Government of India: The Government of India's support for Auroville activities in the last 10 years has been in the order of Rs. 8 crores.

Grants and Donations: International grants and donations, both from India and abroad, are channelled through Auroville Fund. Similarly, the Sri Aurobindo International Institute of Educational Research (SAIIER) receives Indian and international funds for its cultural and educational activities. Auromitra Trust

Table 25 : Source of Funding 1990 – 2000

Source	Rs. in Crores
Auroville commercial units	10
Government of India	8
Sources from India	19
International sources	23
Total	60

receives funds for environmental, social, technological and research programmes in the field of soil and water conservation, afforestation and farming.

2.10.6 During the past 10 years (1990-2000) Auroville has mobilised about Rs. 60 crores, the break-up of which is given in **Table 25**.

2.10.7 These funds have helped to finance and create assets which include a variety of infrastructure assets in the sector of road building, water and sanitation, power (including from alternate sources such as solar, wind and biomass), telecommunication, and housing for Auroville residents. It is established that the total value of assets created over the last 30 years is in the order of Rs.500 crores.

2.10.8 Mobilisation of Resources for Development: Even with limited resources, Auroville has undertaken innovative projects in human settlement building, which integrates environmental regeneration with urban development, on the national and international scene. This has generated interest

from agencies, which are funding such sustainable development programmes, to support the further development of Auroville. A recent instance is the financial assistance from the European Union under its Asia Urbs programme towards the construction of a Centre for Innovative Urban Management, which has also put in place an effective municipal structure for Auroville's future development.

2.10.9 Auroville's work in the various sectors of innovative and appropriate technology, both in rural and urban areas, has been recognised by both the State Government of Tamil Nadu and the Central Government, which have provided grants via various ministries. Also, the expertise accumulated over the past 30 years is attracting consultancy assignments from both non-government and public agencies from within India.

2.10.10 The organisational structure that is expected to be created shortly will explore other resource/avenues for funding and working out the projects in greater detail to meet the requirements of funding agencies. However, as Auroville is a unique experiment quite different from other towns, it cannot obtain resources from traditional sources such as loans and bonds for all its development. Auroville's commercial units have been increasingly contributing to its development, but they would not be able to fund all of the anticipated developments. In the first phase, Auroville will continue to depend upon project funds and contributions from its present and future residents.

2.11 REVIEWING THE MASTER PLAN (PERSPECTIVE: 2025)

2.11.1 Although the Master Plan (Perspective: 2025) indicates a time horizon of 25 years, it will neither be traditional, nor static and rigid. In the framework of Perspective 2025, the Planning Group would prepare a detailed Five Year Development Plan containing the priority items to be taken up for development as given in Table 22. At the close of the first Five Year Development Plan, the progress would be assessed. A second-phase detailed development plan would then be prepared on the basis of the feedback obtained from the field/monitoring which will be followed by further detailed development plans for subsequent five-year periods.

2.11.2 The inputs for the review will flow from the implementation of five-year Development Plans and the monitoring of Land Use Regulations. Two Groups, namely the Planning

Meditation under the Banian tree



3. **Part Three**

Development Promotion
Code / Regulation

3.1 ZONING AND DEVELOPMENT PROMOTION REGULATIONS

3.1.1 To achieve an orderly and balanced development, there cannot be a complete freedom for individuals, groups of individuals or institutions to carry out developments without consideration for the surrounding environment. Development guidelines need to be established, which would encourage development without violating the principles of planning for the common good. Therefore a number of zoning and development promotion regulations have been drawn up. The regulations cover four broad areas, namely land uses (what is permissible and what is prohibited), maximum buildable area on all floors in a given context, total floor area that can be covered on a site and minimum size of site required for development where applicable.

3.1.2 All project holders will have the freedom to try out innovative developments as long as the basic parameters of the Master Plan (Perspective: 2025) are met. The Planning Group envisaged under the Master Plan (Perspective: 2025) will be in charge of ensuring that all future projects conform to these regulations. These regulations would also serve as guidelines for the use of lands, especially in the Green Belt. Support from the concerned local bodies, i.e. the Panchayats becomes very important to the proper implementation of the Master Plan (Perspective: 2025). Both Governments, State and Central, have fully recognised Auroville's beneficial and positive activities, and various Departments and Ministries such as Environment and Forest and Rural Development have been assisting Auroville in various ways including providing finance for projects. Similarly,

a large number of international development organisations are working with Auroville to promote a sustainable development that will benefit the country at large. The UNESCO on several occasions has recommended Auroville to its member states, requesting them to accord full support.

3.1.3 In order to build further on the foundation that has already been laid, the State as well as the Central Government need to ensure that the proposals of the Master Plan (Perspective: 2025), together with the Development Promotion Regulations, are implemented effectively for an orderly development of Auroville and its surroundings.

3.2 DEVELOPMENT PROMOTION REGULATIONS

1. Title

These regulations may be called "Auroville Universal Township Master Plan Development Regulations" (hereafter referred to as the "Master Plan Development Regulations").

2. Definitions

- (a) **Auroville Foundation** means the Foundation established under sub-section (1) of section 10 of the Auroville Foundation Act 1988.
- (b) **Development** is defined and understood as the carrying out of building, engineering, mining or other activities in,

over or under the land, or the making of any material change in the use of any building or land.

- (c) **Residents Assembly** shall have the same meaning as assigned to it in the Auroville Foundation Act, 1988.
- (d) **Master Plan** means the Master Plan of Auroville formulated by the Residents Assembly as per clause 19 (2) of the Auroville Foundation Act and approved by the Governing Board to ensure the development of Auroville as planned.
- (e) **Prescribed Authority** means the authority decided by the Auroville Foundation for operation and implementation of Master Plan including Development Promotion Regulations.
- (f) **F.A.R.** (Floor Area Ratio) means total floor area on all floors divided by the total site area multiplied by 100, i.e.

$$\text{F.A.R.} = \frac{\text{Total floor area on all floors}}{\text{Total site area}} \times 100$$

3. Permissible Land Use

- (a) All developments in the Master Plan Area shall conform to these regulations.
- (b) No land, premises or buildings shall be changed or put to any use not in conformity with the zoning regulations which are to be seen as part of these regulations.

4. Procedure For Development

- (a) Any person intending to carry out development on any land shall make a written proposal to the prescribed authority with such plans and particulars as may be required.
- (b) No person shall commence or carry out any development unless he or she has received the written approval from the prescribed authority.
- (c) Development proposals will be considered only if the development is:
 - i. In conformity with the requirements of these regulations.
 - ii. In conformity with the applicable building rules/regulations or other provisions of the National Building Code as may be specified.
 - iii. Effectively eco-friendly and environmentally appropriate as may be decided in each case.
- (d) The prescribed authority, after considering feedback that may be received, may:
 - i. Approve the proposal with such modifications as may be considered necessary or
 - ii. Return the proposal for re-submission with additional particulars, or
 - iii. Refuse approval, giving reasons for such refusal.

ZONING REGULATIONS

Zone/ sub-zones	Uses permitted	Uses permitted on application to the prescribed Authority	Uses not permitted	FAR Max ground coverage	Minimum plot size		
1	2	3	4	5	6		
A. Peace Area	Matrimandir, lake, parks and gardens and other landscape elements enhancing the dignity, peace and harmony of the area.	Only uses accessory/ancillary to Matrimandir, namely: essential utility and transport related infrastructure, temporary non-polluting operational uses related to ongoing Matrimandir developments. Visitors facilities or any permissible structure not exceeding the height of 4.5 meters.	All uses not specifically mentioned in col. 2 and 3.	<table border="1"> <tr><td>10</td></tr> <tr><td>4%</td></tr> </table>	10	4%	—
10							
4%							
B. Residential Zone							
A - Primary Residential	Residential community buildings and uses consisting of dwellings, work studios, community meeting spaces, crèche, kindergarten and schools for age group 6-12, first aid centers, kiosks and convenience stores, tot lots, parks, playgrounds, and landscape elements, vehicle parking areas.	Handicraft ateliers up to 40 sqm and employing not more than three persons, including the residents.	All uses not specifically mentioned in col. 2 and 3.	<table border="1"> <tr><td>150</td></tr> <tr><td>40%</td></tr> </table>	150	40%	Group development 2 ha.
150							
40%							

1	2	3	4	5	6			
B - Crown	Dwellings and community level retail stores, display areas, communication and recreation centers, restaurant and dining, library and reading rooms, health centers, essential utility uses, indoor recreation, administrative sub-offices of city management, including: fire, water, sanitation, sub-post office, parks and green areas and vehicle parking.	Guest-houses, department stores, professional offices up to 40 sqm, utility maintenance centers, essential transport related infrastructure and conference facilities	All uses not specifically mentioned in col. 2 and 3	<table border="1"> <tr><td>200</td></tr> <tr><td>—</td></tr> <tr><td>60%</td></tr> </table>	200	—	60%	Group development 0.1 ha.
200								
—								
60%								
C. International Zone								
A - Pavilions	National and international pavilions, conference and exhibition halls, communication centers and visitors information centers and ancillary uses, residential staff quarters, hostels, guest houses, restaurants, kiosks and convenience stores, parks, playgrounds and green areas.	Medical centers, transport infrastructure.	All uses not specifically mentioned in col. 2 and 3.	<table border="1"> <tr><td>100</td></tr> <tr><td>—</td></tr> <tr><td>35%</td></tr> </table>	100	—	35%	2 ha. Group Development
100								
—								
35%								

1	2	3	4	5	6			
B - Crown	Residential staff quarters, dwellings, shopping arcades, restaurants, guest houses, hostels, indoor recreation, visitors facilities, banking and financial services, parks and green areas.	Dwellings and community level retail stores, display areas, communication and recreation centers, restaurant and dining, library and reading rooms, health centers, essential utility uses, indoor recreation, administrative sub-offices of city management, including: fire, water, sanitation, sub-post office, parks and green areas and vehicle parking.	All uses not specifically mentioned in col. 2 and 3.	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td style="text-align: center;">150</td></tr> <tr><td style="text-align: center;">—</td></tr> <tr><td style="text-align: center;">60%</td></tr> </table>	150	—	60%	0.1 ha.
150								
—								
60%								
D. Industrial Zone								
A – Manufacturing and Economic	Manufacturing services and other non-polluting industries, professional consultancy offices, retail and whole sale distribution, industrial display areas, R&D staff quarters, related welfare facilities, crèche, canteen, rest rooms, kiosk and convenience stores, and vehicle parking. Vocational training centers and related laboratories, City level administration offices. Parks and playgrounds and green areas.	Residential staff quarters, effluent and waste treatment plants and transport related infrastructure, material testing yards and buildings.	All uses not specifically mentioned in col. 2 and 3.	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td style="text-align: center;">125</td></tr> <tr><td style="text-align: center;">—</td></tr> <tr><td style="text-align: center;">50%</td></tr> </table>	125	—	50%	0.5 ha.
125								
—								
50%								

1	2	3	4	5	6
B - Crown	Hostels, dwellings and guesthouses, post and communication centers, retail stores, banking and financial services parks and green areas.	Dwellings and community level retail stores, exhibition and display areas, conference hall, communication and recreation centers, restaurant and dining, library and reading rooms, health centers, essential utility uses, indoor recreation, administrative sub-offices of city management, including: fire, water, sanitation, sub-post office, parks and green areas and vehicle parking.	All uses not specifically mentioned in col. 2 and 3.	200 <hr style="width: 50%; margin: 0 auto;"/> 60%	Group development 0.1 ha.
E. Cultural Zone					
A - Major Cultural	Educational institutions and research centers related to education, arts and sports, City level cultural uses including auditoriums, exhibition halls and incidental uses thereto., kiosks and convenience stores, parks and playgrounds and green areas	Residential staff quarters, major transport related infrastructure, stadium and large space consuming sports facilities.	All uses not specifically mentioned in col. 2 and 3.	100 <hr style="width: 50%; margin: 0 auto;"/> 40%	1.0 ha.
B - Crown	All uses permissible in Residential Zone under col. 2, and galleries, guest rooms, dormitories, cafeteria, exhibition room, working ateliers.	Guesthouses, department stores and library, professional offices up to 40 sqm, utility maintenance centers and essential transport related infrastructure and conference facilities.	All uses not specifically mentioned in col. 2 and 3.	150 <hr style="width: 50%; margin: 0 auto;"/> 60%	0.1 ha.

1	2	3	4	5	6		
F. Green Belt Zone							
A - Green Use Zone	<p>Agriculture, especially organic agriculture and rural development activities that can be applied to developing countries' situations, especially within the country and specifically Tamil Nadu, related to both traditional and modern geo-climatic, topographic and soil characteristics. Education, research including applied research in all areas of sustainable urban and integrated rural developments, including energy farms, water and waste management, traffic and transportation, forests, dairy, fruits and flowers, poultry and agricultural food products needed for the town. Botanical gardens, gene pools, bio-reserve. Ecological restoration, reforestation and restoration of the tropical indigenous forest. Watershed management and groundwater recharge. Co-development and partnership in these areas with the village settlements.</p>	<p>City level waste treatment plants and other uses. Dwellings will be restricted to essential operational persons. Uses associated with assembly and marketing and preliminary processing of farm products. Normal needs of village settlements.</p>	<p>All uses not specifically mentioned in col. 2 and 3.</p>	<table border="1"> <tr><td>10</td></tr> <tr><td>5%</td></tr> </table>	10	5%	<p>—</p>
10							
5%							
B – Service Nodes	<p>Public services & utilities</p>	<p>Infrastructure related uses</p>	<p>All uses not specifically mentioned in col. 2 and 3.</p>	<table border="1"> <tr><td>75</td></tr> <tr><td>35%</td></tr> </table>	75	35%	<p>—</p>
75							
35%							

Appendix



Appendix I

Members of Governing Board and International Advisory Council of Auroville Foundation

Governing Board

1. Dr. Kireet Joshi
Chairman
Noted Educationist, former Special Secretary (Education) to the Government of India.
2. Dr. D.P. Chattopadhyaya
Renowned scholar, former Governor of Rajasthan, former Union Minister.
3. Dr. L.M. Singhvi
Member of Parliament, noted Jurist, former High Commissioner of India to the United Kingdom
4. Dr. Subhash C. Kashyap
Former Secretary General of Lok Sabha.
5. Mr. Roger Anger
Chief Architect of Auroville and member of Club of Budapest
6. Mr. Dibyasingh Deb
Maharaja of Puri
7. Mrs. Jyoti Madhok
Long-time associate of Auroville
8. Mr. D.P. Singh, IAS
(Ex-officio), Director (UNESCO Unit),
Ministry of Human Resource Development
9. Mr. Sanjay Narayan, IAS
(Ex-officio), Joint Secretary & Financial Advisor to
Ministry of Human Resource Development

International Advisory Council

1. Dr. Kireet Joshi Chairman
 2. Prof. Norman Myers Noted Environmental Economist
 3. Dr. A.T. Ariyaratne Chairman, Sarvodaya Shramdan Movement of Sri Lanka, noted social worker.
 4. Dr. Mary E. King Noted educationist and writer
- Mr. N. Bala Baskar, I.A.S. Secretary, Auroville Foundation

Appendix II

Role & Responsibilities of Different Working Groups in Auroville

Development Council

A broad-based co-ordination and planning group, the Development Council was established to ensure that the development of Auroville is in accordance with the ideals set forth by the Mother.

To facilitate this, the Group:

- Defines collective priorities for development.
- Defines and select surveys required and projects for study.
- Implements the Master Plan approved by the Residents Assembly.
- Monitors current and future Auroville Development Scheme grants, and allocates unspecified funds for development.
- Develops the strategy and sets priorities for purchase, sale and lease of land.
- Assesses and gives approval for all building applications on Auroville land.

Economy Group

The Economy Group monitors Auroville's internal economy and acts as a liaison body between the community and its commercial units. Particular attention is given to the Central Fund and its disbursements each month. In specific terms, the Group grants loans; keeps close contact with the Auroville services, the Auroville Board of Commerce, the productive units and collective budget holders; raises funds for the overall maintenance needs of the community; and studies the AV economy to find ways of moving it towards a true collective economy.

Entry Group

The Entry Group processes all applications to join Auroville, oversees the entry procedures, and decides on the use of the Repatriation Fund.

Executive Council

The Executive Council deals with matters affecting the internal functioning of the community. This mostly entails:

- Policy co-ordination
- Facilitating communication by way of seminars, meetings and referendums.
- Acting as clearinghouse for problems arising within the community.

Funds and Assets Management Committee (FAMC)

The FAMC is one of the official committees of the Auroville Foundation, specifically required to advise the Governing Board on the following:

- The utilisation of the funds and management of assets.
- Taxes and audits.
- The sale, acquisition and utilisation of immovable assets.

The FAMC consists of representatives of the following working groups: ABC core group, AV Fund, AV Maintenance Fund, CSR, Development Group, Economy Group, Entry Group, Executive Committee, Farms & Forest Groups, Financial Service, Housing Service, Land and Estate Management, Matrimandir, SAIER administration and the Working Committee. As members of the Governing Board residing in Auroville, the Secretary and the Finance Officer are also members.

Land and Estate Management (LEM)

Auroville's land management office, is located at Bharat Nivas. LEM is the centralised facility where maps and records can be consulted, land purchases and allocation discussed etc. Essentially, LEM has 3 main functions:

- Management of all Auroville lands and fields not looked after by or forming part of an AV community.
- Land surveys (where the boundary between AV and private land is not clear), administration, maintenance of records,
- Payment of land taxes, liaison with local authorities on land matters, and court cases where land ownership is disputed.
- Negotiation and registration of new land purchases.

Project Co-ordination Group

Co-ordinates all grant proposals for AV Projects to ensure maximum effectiveness and non-duplication of approach to potential donors. In support of this, a project consultancy-cum-writing service called "Abundance" is provided.

The Group is Auroville's officially recognised channel to Auroville International Centres, the Foundation for World Education and Stichting de Zaaier on all fund raising matters, and is the only body authorised to endorse proposals for fund raising outside Auroville.

Working Committee

An official Auroville working group specifically responsible, under the Auroville Foundation Act, for assisting the Residents Assembly and liaising with the Governing Board of the Auroville Foundation and the outside. The Committee deals with many of the major issues that arise affecting Auroville vis-a-vis the outside world, while Auroville internal matters are mostly looked after by the Executive Council. Members usually hold office for a period of 2 years, but many serve longer.

Auroville Village Action Group

AVAG works in 35 local villages, directly benefitting 2,000 people and indirectly 30,000+ through its team of 20 development workers. The main aim of AVAG is to make the local people aware of their social, cultural and environmental conditions while bringing general benefit to them. Areas of specific action, involvement and/or achievement include:

- Supporting Isaiambalam Research School, Kindergarten and Crèche; a Life Education Centre in Kottakarai offering education and vocational training for young school-drop-out girls; and Night Schools in 23 villages plus crèches in schools by introducing innovative and participatory educational methods.
- Supporting 29 women's groups that meet regularly, initiate and implement community projects, operate savings clubs, and support each other in crisis.
- Promoting environmental awareness, health awareness and community hygiene in collaboration with the Auroville Health Centre and other Auroville groups.
- Giving small grants for community service initiatives on a cost-sharing basis with village groups.

Farm Group

The Farm Group meets regularly to coordinate Auroville's farming activities and share information with a view to increasing Auroville's self-sufficiency in food production. Along with the Forest Group (see separate note) the Group is represented on the Green Group, and also sends representatives to other policy-making meetings in Auroville.

Financial Service/Auroville Maintenance Fund

The maintenance Fund, which incorporates the Central Fund (see separate Note), is Auroville's major fund concerned with internally generated and circulating money, as opposed to contributions from outside, which are handled by Auroville Fund.

The administrative aim is to collect monthly maintenance contributions for Aurovilians from Auroville units, individual contributions and guest contributions, and handle the distribution, mainly through the Central Fund. The Fund is computerized and linked with Pour Tous, so can arrange payment for gas bottles, food, purchases from commercial unit, and water service, electricity, telephone, milk and bakery bills.

The Financial Service/AMS can also exchange foreign currency, travellers cheques and personal cheques.

Forest Group

A group actively involved in the planting and maintenance of Auroville's forested areas, particularly the protective Green Belt around the township.

Green Group

The Green Group, consisting of representatives from the Farm Group and Forest Group, reviews issues pertaining to the development of the Green Belt, and advises on them according to environment protection principles while trying to facilitate the overall growth of Auroville. Though the primary concern at present is watershed management and reforestation, integrated farming practices are also a priority. The Group interacts with the Development Council as required.

Appendix III

Auroville Foundation – Consolidated Income & Expenditure For the Year Ended 31.09.1999					
Research / Service Units					
1997-98	Expenditure	1989-99	1997-98	Income	1998-99
114,449.74	To Auromitra	139,083.54	491,518.84	By Auroville services	—
7,008,796.83	Auroville Fund			Auroville Fund	14,247,273.88
8,326,438.68	Centre for Scientific Research	3,012,002.47			
722,742.29	Sri Aurobindo International Institute of Educational Research	704,639.99	15,837,902.55	By Excess of Expenditure over Income	—
156,993.85	Sri Aurobindo International Institute of Educational Research (GOI)	263,405.30			
	Excess of Income over Expenditure	10,128,142.58			
16,329,421.39		14,247,273.88	16,329,421.39		13,247,273.88

Auroville Foundation – Consolidated Income & Expenditure For the Year Ended 31.09.1999

Commercial Units

1997-98	Expenditure	1989-99	1997-98	Income	1998-99
—	To Auroville Export Trust	3,307.21	172,340.95	To Auroville Export Trust	—
—	To Aurore Trust	100,098.41	13,940,742.39	Aravinda Trust	19,340,663.88
3,877,818.38	Aurosarjan Trust	2,730,344.12	226,282.43	Altecs Trust	437,397.51
—	Auro Service D' Av 1993 Trust	649,362.47	1,170,276.01	Ankur Trust	393,730.55
1,701,810.87	To ABC Trust	937,638.37	2,445,777.07	Artisana Trust	3,764,016.58
2,160,014.70	ADPS Trust	3,387,498.47	2,078,667.79	Auromics Trust	495,003.85
25,486.08	Centre for Scientific Research	—	2,065,415.50	Auromode Trust	660,002.61
570,617.77	Filaure Trust	—	161,120.92	Auroservice d' AV 1993 Trust	—
31,405.51	New Engineering Trust	196,269.76	—	Filaure Trust	421,122.35
			135,316.15	Kalki Trust	282,054.57
14,317,943.99	To Net Profit	18,184,745.03	289,158.09	Toujours Mieux Trust	392,271.94
22,685,097.30		26,186,263.84	22,685,097.30		26,186,263.84

Appendix IV

Securing Land for Orderly & Planned Development

The designated Auroville Township area covers 19.63 sq. km, i.e. 1963 ha. as on 1st August 2000 Auroville has under its ownership 778 ha. of land in the designated township area, while about 980 ha. still have to be secured for Auroville's proper and complete development into a township for 50,000 people. All the lands so far have been acquired by negotiated purchase from land owners.

All over India, the acquisition of land for development purposes by compulsory acquisition under the Land Acquisition Act has become more and more difficult. Acquiring land by negotiation is also becoming increasingly difficult and expensive because of speculative tendencies, particularly by real estate developers. In the case of Auroville, the situation is much more critical. The development of Auroville has transformed a barren inhabitable plain into a verdant area. This has attracted speculative developers from the neighbouring urban areas.

One of the principal objectives of the Auroville Master Plan (Perspective: 2025) is to ensure that planned developments are not overtaken by haphazard and deleterious development by speculators for personal gain. It will be observed from zoning regulations that farming and research for increasing productivity in the agricultural and farm sectors (especially to apply to other parts of the State) will be one of the main uses of lands that surround the inner part of the Auroville Township. In the context of the above situation, it is proposed to employ different options for securing the land for the development of Auroville as planned.

1. Land Exchange

Auroville has presently under its ownership extents of land outside the 20 square kilometres area. Some of these lands could be offered in exchange for unutilised lands that are needed to establish research and field stations for agricultural and farm development in the Green Belt.

2. Land for employment

There are several pockets of land owned by villagers, which are not of a viable size for supporting economic production. Further, a large number of persons have a right on the land, which makes it difficult to put it to useful purposes. In such cases, Auroville could offer employment in farming, forestry and other Auroville activities, including vocational training, in return for the land that will be offered at a negotiable price.

3. Leasing of land

As an alternative to (2), Auroville proposes to make lease agreements with landowners. These agreements would stipulate that Auroville has the first option of purchase against payment of a yearly amount to the landowner. The agreement would also stipulate restrictions on land use and prevent sale to third parties.

4. Land pooling and sharing for joint development

Auroville proposes this approach as a method that will benefit both the landowner and Auroville. Auroville will use its resources and expertise to generate crops and other produce on the land, which will generate much higher returns after setting apart amounts for the inputs of Auroville resources. The villager will continue to own and work on the land.

5. Purchase of land

Auroville's policy has always been to secure the land by voluntary sale via negotiation with the landowners, with no compulsion or coercion, keeping in mind their needs and long term welfare. This method will continue to be pursued for lands to be acquired for Auroville's development.

6. Acquisition under the Land Acquisition Act

The Auroville Foundation is a statutory body, created by an Act of Parliament to further the development of Auroville in accordance with its original Charter, given by The Mother. Therefore, any acquisition of land towards the development of Auroville would come under the definition of public purpose under the Land Acquisition Act.

There are certain important developments, such as road widening and construction of utility structures, which cannot be normally secured by the options mentioned above. Auroville proposes to approach the Tamil Nadu State Government in order to obtain such lands through the Land Acquisition Act.

Another instance is where real estate developers propose to dispossess the landowner of his land for his own monetary benefits. In such cases also, Auroville will propose acquisition of these lands, unless one of the above mentioned options can be used.

7. Zoning Regulations

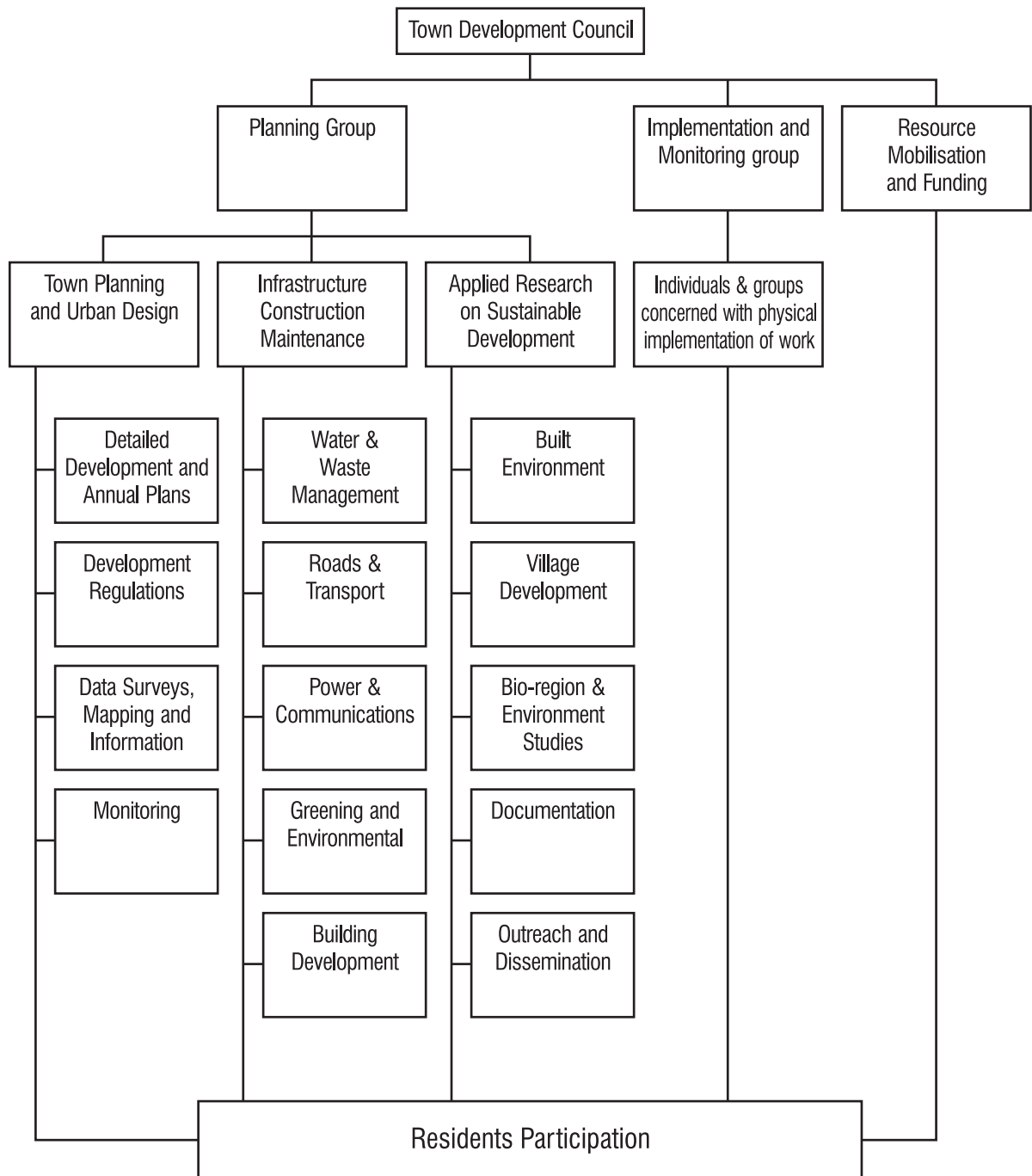
Most of the options listed above will take time and effort. There are bound to be instances where a single unplanned development may jeopardise not only future developments, but even those that have been carried out earlier. Hence, it becomes imperative that all the lands that are required for the development of Auroville are covered in such a way that no person would contravene the zoning regulations made in the Master Plan. For this purpose, necessary mechanisms have to be approved by the Government of India along with the State Government. Such mechanisms would provide a most important and decisive tool for safeguarding the lands needed for Auroville's development from speculative, damaging and environmentally unsound development.

8. Conclusion

It is envisaged to secure an annual average of 100 hectares per year over the next 10 years by employing these various mechanisms.

Appendix V

Organisational Structure for Master Plan



Appendix VI

Parameters for Project Cost Estimation

- 1. First Phase 1st Stage (2000-2006)Additional 5000 population
- 2. Land cost 1st StageRs. 8 lakh/ha.
- 3. Land cost 2nd StageRs. 10 lakh/ha.
- 4. Construction cost:
 - ResidentialRs. 8,000/sq.mt.
 - IndustrialRs. 8,000/sq.mt.
 - CrownRs. 10,000/sq.mt.
 - International/CulturalRs. 15,000/sq.mt.
- 5. Off-site infrastructureRs. 6 lakh/ha.
(including road, power, water, sewage, communication)
- 6. Land development in zonesAbout 10% of zone area for 1st stage
- 7. Residential space30 sq.mt./person
- 8. Social infrastructure in Residential zone per 1000 sqm of built up area25 sqm
- 9. Biomass energy generation for ½ Megawatt.....Rs. 2 crores
(assuming 6000 hours of operation)
- 10. Security lighting for 25 km of road, at 10 per km and Rs. 30,000 per unit.
- 11. Township Access RoadRs. 10 lakh/km.