

Chapter-VIII

SOCIAL FACILITIES

Education

Tamil Nadu's human development achievement has been largely a result of its strong educational heritage. Even in the early years, when the State was Madras Presidency, education was actively pursued and promoted. ¹Government enquiry into the state of education in Madras Presidency, initiated by Sir Thomas Monro in 1822, showed that there was one school per thousand population and that the number of boys taught was one fourth of the total school age population. It also showed that the instructions impart in these indigenous institutions was of little practical value and hence a board was appointed to organize a system of public instruction. In 1826, 14 Collectorate and 81 taluk schools with a central school at Madras were opened. In 1836, this scheme was pronounced a failure and the schools were abolished as inefficient. In 1840, a University Board was constituted by Lord Ellenborough's Government to organize to establish a Central School and a few provincial schools. In 1841, the central school was converted into a high school: in 1853, a college department was added to it and later it developed into the presidency college. In 1854, the court of Directors issued its memorable dispatch regarding education. Thereupon the Department of Education, with Directorate of Public Instruction and its inspecting staff was organized; the so-called Madras University was remodeled and designated the Presidency College; Zillah or district schools were opened; and the grant-in-aid scheme was introduced. While in 1853 there were 460 educational institutions with 14,900 pupils, by 1904 this number had risen to 26,771 with 7, 84,000 pupils¹.

8.02 The report of the Elementary Education survey of the Madras Presidency, 1925, points out that there were three agencies managing elementary schools in the province viz. (i) private bodies, (ii) local boards and municipal councils, and (iii) government. Though early initiatives made some headway in education, major breakthrough came with the Madras Elementary Education Act, 1920. Under this Act, local bodies were given the responsibility for elementary education and were also given powers to levy special cess to raise funds for education.

¹ Source: Madras Gazetteer (M.Francis)

8.03 Tamil Nadu has been a pioneer in the introduction of various schemes to enhance enrolment of children in elementary education. The most important of these schemes is the massive programme viz. Noon Meal Scheme, introduced by the Government in 1982 with the main objective of not only to ensure nutritional support, but also to act as an incentive to achieve universal enrolment and retention in primary schools; about 6.4 million children in the age group of 5 to 14 are covered under this scheme. Provision of free text books and free uniforms by the Government for children in the Government and Government aided schools are aimed at reduction of economic cost of sending a child to school by the parents; these measures have improved attendance and reduced drop out rates.

8.04 In the literacy rate, the Tamil Nadu has attained third position behind Kerala and Maharashtra both in terms of overall and female literacy, as per 2001 Census. Literacy in Tamil Nadu has gone up from 62.7% in 1991 to 73.47% in 2001 (against all India average of 65.38%). Tamil Nadu state Government is committed to the task of providing universal primary (elementary) education for all children upto 14 years.

8.05 Every habitation with a population of 300 and above should have a primary school within a distance of 1 km. is the policy of Tamil Nadu Government and it has been achieved. The levels of basic infrastructure, educational infrastructure and pupil-teacher ratio in primary schools in Tamil Nadu are ranked within first three among the major states in our country. A major legislative effort for universalisation of education has been to introduction of Tamil Nadu Compulsory Education Act, 1994. 85% percent of the habitations in Tamil Nadu have been provided with secondary school facilities within a distance of 5 km and in secondary education also the State is ranked high among the States in our country.

8.06 In the tertiary education during the last decade, Tamil Nadu witnessed a rapid growth in the number of institutions in higher education ranging from industrial training institute (ITI) and polytechnics to arts and science colleges and engineering colleges.

8.07 The Government of Tamil Nadu have ensured 100% schooling access not only at primary level, but also at the middle school level. This has been achieved by opening 1,112 new primary schools during 2001-2004 and by upgrading 2106 primary schools as middle schools during 2001-2005. By these actions of bringing these facilities nearer to the residence of school going children it has helped in bringing down the school trip and ratio in primary schools from 16% in 2001-02 to 8% in 2003-04. In 2005-06, Government have upgraded 90 middle schools into high schools and 60 high schools

into higher secondary schools. Government have proposed to improve infrastructure in 549 high schools & higher secondary schools in the State at a cost of Rs.232 crores. A special Literacy programme for women is also implemented to bring down the literacy gap between males & females to achieve a key millennium development goal. The Government are also implementing the technical education quality improvement programme with assistance from the World Bank in 8 engineering colleges and 3 polytechnics with an initial outlay of Rs.63 crores.

I.T. initiative in Education

8.08 Tamil Nadu has been at the foremost in IT and is one of the States to announce a far-reaching, industrial friendly IT Policy. Recognising that the computer education at the school level is essential to enable children coming out of school to be computer literates, and that acquiring basic knowledge in computers would be useful to them either in gaining employment or in pursuing higher studies, it was introduced in school level itself.

8.09 Recognising that the industrial development of the State depends on skilled manpower, the Government set up a vast network of ITIs in the State. There are 53 Government Industrial Training Institutes (ITI), and 590 private ITIs in the State. There are 422 arts and science colleges (67 Government, 161 Govt. aided and 194 Self financing) in the State and the number has almost doubled when comparing the 1991 figure of 224. There are 202 polytechnics and 236 engineering colleges in the State.

8.10 The State spends almost 20% of its revenue expenditure for education. In the Tamil Nadu Human Development Report, it is found stated that though Tamil Nadu's expenditure is not very high, it has managed to sustain its performance due to existing levels of infrastructure as well as strong presence of the private sector, especially in higher education.

Chennai Metropolitan Area

8.11 In Chennai, being the State capital, the educational facilities available are of high and specialized when comparing the rest of the State. CMA comprises of Chennai City (176sq.km.) and parts of urban rural areas in Kancheepuram District (to an extent of 376. sq.km.) and Thiruvallur District (637.sq.km.). Some of the relevant statistics relating to literacy, educational infrastructure are given in the Table No 8.01.

Table No.8.01: Literacy & Educational Infrastructure in the Districts Covered in CMA

Sl.No.	Description	Chennai City	Kancheepuram District	Thiruvallur District
1	Life expectancy at birth (yrs) (2005)	M-77.14% F-77.56%	N.A	N.A
2	Literacy rate (2001)	76.81	67.84	67.73
	Male	81.10	74.73	74.98
	Female	72.35	60.78	60.26
3	Sex ratio (2001)	95.10	96.10	97.10
4	Gross enrolment rate (2005)			
	(a) Primary	93.97	93.88	96.17
	(b) Upper Primary	94.58	97.91	93.81
	Total	93.85	95.29	95.25
5	Gross Dropout rate (2005)			
	(a) Primary	6.75	3.61	7.43
	(b) Upper Primary	6.02	7.04	8.02
6	Pupil-teacher ratio (2005)			
	(a) Primary	47	42	42
	(b) Upper Primary	39	56	55
7	Enrolment of girls in primary schools as % of enrolment of boys (2005)			
	(a) Primary	97.14	96.49	97.00
	(b) Upper Primary	98.60	92.66	94.51

Source : General Education Statistics of Tamil Nadu, Directorate of School Education

8.12 Planning for educational facilities in a Metropolis like Chennai should take into account regional bearings as it cater, not only the requirements within it but also the surrounding districts, and surrounding States in respect of specialized / higher education.

8.13 In CMA, most of the middle schools include primary classes, high schools include middle and primary classes and the higher secondary schools include primary, middle and high school classes. It is provided both by private and public (State and Central Governments, local bodies). A primary school for about 5000 population (370 school going children of that group), a high school for 7000 population (732 school going children of that age group) and a higher secondary school for 10,000 population (210 school going children of that age group) is available as per 2001 Census.

8.14 The existing educational institutions, category-wise, in Chennai City and rest of CMA is given in the table No. 8.02:

Table No.8.02 Educational Institutions in CMA								
Sl.No.	Category of institutions	Chennai City			Rest of CMA			
		Govt./ Govt. aided	Private	Total	Govt./ Govt. aided	Private	Total	Grand Total
1	Schools							
	(a) Primary	164	315	479	233	144	377	856
	(b) Middle	125	127	252	65	56	121	373
	(c) High School	55	171	226	37	139	176	402
	(d) Higher Secondary	60	366	426	32	204	236	662
2	Colleges							
	(a) Arts and Science	22	11	33	7	9	16	49
	(b) Training Colleges	5	1	6	-	-	-	-
	(c) Physical Education	1		1	-	-	-	
	(d) Others including Research Institutions	25	13	38	-	-	-	-
3	Technical Education							
	(a) I.T.I's	3	87	90	2	26	28	118
	(b) Polytechnics	11	2	13	2	18	20	33
	(c) Engineering colleges	4	2	6	1	37	38	44
4	Medical Education							
	(a) Medical Education	3	-	3	0	1	1	4
	(b) Dental Colleges	1	0	1	0	6	6	7
	(c) Siddha	1	0	1	0	1	1	2
	(d) Homeo	-	-	-	-	2	2	2
	(e) Unani	1	-	1	-	-	-	1
	(f) Ayurveda	-	1	1	-	1	1	2
	(g) Pharmacy	1	2	3	-	4	4	7
	(h) Nursing	1	-	1	0	5	5	6
5	Veterinary College	1	-	1	-	-	-	1
6	Law College	1	-	1	-	-	-	1

Source: Census of India

8.15 The table No 3.17 [in chapter-III] shows the age group details over the years 1971 to 2001. Because of the family planning and population control measures taken in our country, from 1971 there is large variation in age structure including the school going children age group. It is estimated that in the future years the school going age group would stabilize at 7.5 % for primary school going age group, 5.19% for middle school going age group, 3.71% for high school going age group and 3.96% for the higher secondary going age group. Based on these estimates, the future demand for schools has been worked out and tabulated in table no 8.03:

Table No: 8.03 CMA_ Age Structure for School Going Population-2026						
Age Group	% Assumed @2011	2001	2011	2016	2021	2026
0-5	7.82	549811	692665	778078	874051	981952
6-10	7.50	527593	664675	746636	838732	942273
11-13	5.19	365266	460172	516915	580675	652359
14-15	3.71	260857	328634	369158	414693	465886
16-17	3.96	278203	350488	393706	442269	496866

8.16 For the future population of 2011, 2016, 2021, 2026, the number of primary, high and higher secondary schools to be opened or existing schools to be strengthened to accommodate the growth of school going children is given in the table no 8.04:

Table No: 8.04 Number of Schools Required_2026							
	2001 No. of Schools	Average No of Students_2001	Average Strength assumed	2011	2016	2021	2026
Primary	1427	370	500	1329	1493	1677	1885
Upper Primary	775	471	500	920	1034	1161	1305
High School	998	261	400	822	923	1037	1165
HSC School	662	210	400	438	492	553	621

8.17 Collegiate, technical and other professional higher educational institutions in CMA are concerned, it serves not only the CMA region, but also the state level apart from the national level for certain specialized fields. However periodical reviews of change in demand for this category of educational institutions should be made at least once in 10 years and necessary infrastructures have to be provided. Human resource development for the present and future demands and also Research and Development for economic development depend on investment and improvement on this higher education sector.

Health

8.18 Planning for health becomes an integral part of metropolitan planning and health status of population is an important indicator of human resource development. Investments in health sector have direct relationship with longevity and improvements in physical and mental development of people. Tamil Nadu's health indicators place it near the top among the States of India. Policy of the Government is to provide a healthy and disease free life to the people of Tamil Nadu. Director of Medical & Rural Health Services (DMRH) is in charge of planning and implementation of programmes of Medical Services through a network of 29 district headquarters hospitals, 155 taluk

headquarters hospitals, 80 non-taluk hospitals, 12 dispensaries, 11 mobile health care units, 7 women & children hospitals, 2 T.B. hospitals, 2 T.B. clinics and 7 leprosy hospitals. This Directorate provides the health services in the districts except in Chennai City.

8.19 The Dept. of Public Health and Preventive Medicine (DPHPM) is providing primary health care services. Through a network of 1,415 primary health centers (PHC) and 8,682 Health Sub-Centres (HSCs) spread over the State. These PHC's and HSCs provide preventive, promotive, curative and rehabilitative healthcare services and are equipped with basic facilities. Maternal and child healthcare services are most important of the services provided by this Department. School Health Programme provides for comprehensive health care services to the students in Government & Government-aided schools up to higher secondary level; all Thursdays are observed as 'school health days' and all Saturdays are observed as 'referral days'. Control of communicable diseases, hygiene and health, Malaria control, Fileria control, Japanese & Encephalitis control, National Leprosy Eradication Programme, Dental Health, Integrated Diseases surveillance, Congenital disorders & birth defect registry, Rural Diabetics survey and Mobile Health Service Programme are implemented by this Department. The State has set the norms of 1 PHC for 30,000 population, 1 Community health Centre for 1 lakh population and 1 HSC for 5,000 population.

8.20 Indian Systems of Medicine (Siddha, Ayurveda, Unani, Homeopathy and Yogaand Naturopathy) regained its importance and the Government has attached special importance to the growth and development of Siddha system, which is a part of Tamil culture. Government has proposed to provide one ISM practitioner in each PHC in a phased manner, recognizing that ISM is modern system of medicine can play complementary roles. Directorate of Indian Medicine and Homeopathy deals with teaching as well as providing health care system of Indian Medicine. The National Institute of Siddha established at Tambaram developed at a cost of Rs.47 Crores is a joint venture of GOI and GTN and it has been established and with the objective of imparting post graduate education in Siddha system and to provide medical care through Sidha system of Medicine.

8.21 The Tamil Nadu Health Systems Project (TNHSP), a 5-year project implemented since Jan. 2005, with total outlay of Rs.597 crores. It aims to improve the effectiveness of the health care system, both public and private in the State through increased access to and utilization of health services (particularly by poor and disadvantaged) development of effective interventions to address key health challenges including non-

communicable diseases, improved oversight and management of the health care system (both public & private), and increase effectiveness of public sector hospital services.

8.22 In this State there are 11 medical colleges in Government sector, and 2 medical colleges and 9 dental colleges in private sector. There are 42 teaching hospitals in the State under the control of Director of Medical Education.

8.23 Chennai has established itself as the health Capital of the country and is fast becoming the health destination of choice for people all over the world with its excellent facility, competent specialist and good nursing care.

8.24 In Chennai there are 3 major Government Hospitals. The details of no. of bed in the major hospitals are given in Table No.8.05

Table No: 8.05 Number of Beds in Government Hospitals in Chennai		
Sl.No.	Name of the Institution	No. of beds
1	Government General Hospital	2029
2	Government Stanley Hospital	1231
3	Kilpauk Medical Care Hospital	512
4	Government Royapettah Hospital	212
5	I.O.C. & H.I. for Women & Children	752
6	I.C.H. & H.I. for Children Hospital	537
7	R.I.O. & Government Opthal hospital	478
8	Institute of Mental health	1800
9	Govt. Kasturiba Gandhi Hospital	695
10	Govt. RSRM Hospital	510
11	G.H.T.M. Tambaram	776
12	Government T.B. Hospital (Otteri)	222
13	Institute of Thoracic Medicine	100
14	Government Peripheral Hospital (AA Nagar)	100
15	Government Peripheral Hospital (KK Nagar)	100
16	Government Peripheral Hospital (Periyar Nagar)	100
17	Government Peripheral Hospital (Tondiarpet)	100
18	Artificial Limb center	60
19	Government Hospital, Saidapet	33
20	Communicable Diseases Hospital	550
21	ESI Hospital (Ayanavarum)	616
22	ESI Hospital (KK Nagar)	400
23	ESI Hospital (Kilpauk)	n.a
24	Government TB Sanatorium	n.a
25	Arignar Anna Government Hospital for Indian Medicine	229
26	Varma Hospital	29
27	Railway hospital	151
28	Port Trust hospital	200
	Total	12522

Source: Corporation of Chennai

8.25 The following table gives the list of major private hospitals with bed strength exceeding 50 numbers in Chennai City.

Table No: 8.06 Number of Beds in Private Hospitals in Chennai City

S.No	Name of the Hospital	No. of Beds
1	A.G. Hospital	55
2	Apollo First Med Hospital	80
3	Apollo Hospital	201
4	Apollo Hospital (Greems Road)	600
5	Apollo Hospital (Tondiarpet)	60
6	Apollo Specialty Hospital	200
7	Aysha Hospitals	60
8	Balaji Hospital	75
9	Billroth Hospital	600
10	C.S.I. Rainy Multi Specialty Hospital	250
11	Cancer Institute	156
12	Chennai Kalliappa Hospital	65
13	Childs Trust Hospital	200
14	City Tower Hospital	70
15	Deepam Hospital (P) Ltd.	100
16	Devaki Hospital	100
17	Dr. Agarwal Eye Hospital	112
18	Durgabai Deshmuk Hospital	175
19	Esware Prasad Tottathrya Orthopedic Clinic	111
20	Frontier Lifeline Pvt.Ltd.	120
21	Hande Hospital	50
22	Hindu Mission Hospital	160
23	Kalyani General Hospital	200
24	Kumaran Hospital	100
25	M.V.Diabetics Research Centre	50
26	Madras Medical Mission	218
27	Malar Hospital	160
28	Medical Research Foundation	101
29	MIOT Hospital	296
30	Philips Hospital	75
31	Santhosh Hospital	60
32	Saveetha University	100
33	Sooriya Hospital	110
34	Sri Ramachandra Medical Centre	1650
35	St. Isabel Hospital	250
36	St. Joseph Hospital	50
37	Sundaram Medical Foundation	100
38	Sundaram Medical Foundation	161

39	The Guest Hospital	50
40	Vijaya Hospital	610
41	Vijaya Medical Educational Trust	250
42	Voluntary Health Services	220
	Total	8411

8.26 Government agencies involved in provision of health infrastructure are Directorate of Medical Education, Directorate of Public health and Preventive Medicine, Directorate of Medical and Rural Health Services, Directorate of Family Welfare, Directorate of Drugs Control, Commissionarate of Indian Medicine and Homeopathy, Tamil Nadu State Health Transport Dept.

8.27 A large number of private hospitals deliver health care in CMA, Apollo Hospitals, Sri Ramachandra Medical College Hospital, Malar Hospital, Vijaya Hospital, Devaki hospital, CSI Rainy Hospital, CSI Kalyani Hospital etc. are the major hospitals. According to the approved Government list, there are 130 private hospitals function in the City area itself. Table no 8.07 shows the number of Government & private hospitals zone-wise & bed number wise.

Table No: 8.07 Number of Beds in Hospitals in Chennai City _Corporation Zone Wise										
Zone	No. of Govt. Hospitals					No. of approved private hospitals				
	0-50 beds	51 – 100 beds	101- 200 beds	201- 500 beds	> 500 beds	0-50 beds	51- 100 beds	101- 200 beds	201- 500 beds	> 500 beds
I	5	1	-	-	-	35	-	-	-	-
II	1	-	-	1	-	23	1	1	-	1
III	6	-	-	-	-	26	-	-	-	-
IV	4	1	-	-	2	12	13	-	-	-
V	2	2	-	1	2	41	12	4	-	-
VI	2	1	-	-	-	15	-	-	1	-
VII	7	1	-	-	2	31	-	1	2	-
VIII	2	-	-	-	-	25	1	3	1	1
IX	1	-	-	-	-	10	-	-	1	-
X	-	-	1	-	-	29	2	-	-	1

Source; Corporation of Chennai

8.28 In Chennai City area, the Corporation of Chennai runs health posts. Zone-wise distribution of health posts is given in the Table No. 8.08:

Table No: 8.08 Number of Hospitals and Dispensaries Run by Chennai's Corporation in Chennai City			
Sl.No.	Corporation zones	Number of Hospitals	Number of Dispensary
1	Zone-I	10	6
2	Zone-II	9	10
3	Zone-III	13	12
4	Zone-IV	11	6
5	Zone-V	9	4
6	Zone-VI	8	13
7	Zone-VII	8	8
8	Zone-VIII	11	6
9	Zone-IX	8	4
10	Zone-X	6	7

Source: Corporation of Chennai

In the rest of CMA, there are 10 primary health centers functioning at Minjur, Naravarikuppam, Avadi, Medavakkam, Porur, Poonamallee, Manali New Town, Madhavaram, Pozhichalur and Pudur.

8.29 The statement recommended in the Urban Development Plans Formulation and Implementation (**UDPFI**) Health care facilities is given in the Table No 8.09:

Table No: 8.09 Urban Development Plans Formulation and Implementation Standards on Health Facilities			
Sl.No.	Name of the Institution	No. of beds	
1	G.H. with 500 beds	500	1 per 2.5 lakh population
2	Intermediate hospitals (category A)	200	1 per 1 lakh population
3	Intermediate hospitals (Category B)	80	1 per 1 lakh population
4	Polyclinics with some observation beds		1 per 1 lakh population
5	Nursing Home, Child Welfare & Maternity Centre	25	1 per 0.45 to 1 lakh population
6	Dispensary		1 per 0.15 lakh population

Source: Urban Development Plan Formulation and Implementation Guidelines

8.30 The no. of beds available in Chennai City and Kancheepuram & Thiruvallur District which pending lie in CMA are given in Table No 8.10:

Table No: 8.10 Total Number of Beds in Chennai, Kancheepuram and Thiruvallur Districts				
Sl.No.	District	Population	Total beds	Population per bed available
1	Chennai	4343645	10999	383
2	Kancheepuram	2869920	2735	1049
3	Thiruvallur	2738866	594	4611

Source: *Statistical Hand Book of Tamil Nadu - 2003*

8.31 From the Census figures, it appears that the total number of beds given relates only to Government hospitals and not private. Specialty and the bed availability in private hospitals may be about 100% more than the Government ones.

8.32 Considering the longevity in life, improved health conditions predicated, it is assumed that the number of beds required in future may be at the rate of one in 500 population. The number of beds required for the projected population, for the year 2006, 2011, 2016, 2021, and 2026 are 15,800, 17,700, 19,900, 22,400 and 25,100 respectively.

8.33 The existing facilities particularly the specialized & higher order ones are concerned, it serves not only the CMA population, but also the rest of Tamil Nadu and the adjoining states population; as regards private sector, it attracts patients from all over India and also some of the foreign countries. It would be difficult to assess the adequacy of these facilities. Because of accessibility of good infrastructure including specialist manpower, technology, private sector investments in health sector high in recent times, the trend is expected to continue. On the government part, with assistance from World Bank, health infrastructure is being improved. A detailed study on the health infrastructure in CMA, delivery to poor, accessibility spatially, future requirements, contribution by private sector, future requirements, modernization requirements in govt. sector etc. have to be made which may be a basis for formulation of Master Plan for Health infrastructure in CMA. The position may be reviewed every 10 years and suitable measures taken on health infrastructure investments.

Recreation

8.34 Recreation becomes an essential part of life in any civilized society. It is an activity people pursue for relaxation, personal enjoyment usually during their leisure time to break from their routine busy work. In an urban environment, such recreation facilities have to provide a variety of opportunities accessible, affordable and attractive to all groups of population.

8.35 Recreation is a broad function being organised and unorganized, indoors and outdoors, daily and intermittent, local and distant. Sometime even sidewalks could be a more important recreational facility than others in a residential area. Television viewing has become a major daily recreational facility within houses apart from music, hobbies & crafts. Indoor recreation activity pursued by people include the ones provided by cinemas, drama halls, music sabhas (halls), clubs, indoor stadium, exhibition and fairs; outdoor recreation facilities includes parks, playgrounds, beaches, zoos etc.

8.36 In order to provide for the preservation and regulation of parks, playfields and open spaces in the State of Tamil Nadu, the 'Tamil Nadu Parks, Playfields and Open Spaces (Preservation and Regulation) Act, 1960' was enacted. Parks, playfields & open spaces are periodically notified under the Act by the local bodies concerned. These spaces shall be maintained for the purposes notified in a clean and proper condition.

8.37 Chennai is endowed with the second longest straight sandy beach in the world, called *Marina*. Elliots Beach, another major beach in Chennai attracts large number of people. Thiruvanmiyur Beach, Kottivakkam Beach, Neelankarai Beach and small beaches at Thiruvottiyur are also being used by people in those areas. These beaches are used by the people throughout the year and the Marina & Elliots Beaches attract thousands of people every day.

8.38 In Chennai City, there are about 195 parks with extent varying from 150 sq.m. to 3.5 hectares and totaling to more than 60 hectares. Playgrounds maintained by the Chennai Municipal Corporation is concerned, it is more than 200 nos., with a total extent exceeding 50 hectares. In the rest of CMA, unlike the City, the parks & playfields are a very few.

8.39 In new layout developments, a proportion of the site (10% of site extent excluding roads in layouts exceeding 3000 m²) is earmarked and handed over to the local body concerned for maintenance as parks / playgrounds. By this, in the rest of CMA, over these years from 1975, about 300 hectares of parks / playgrounds have been reserved by the developers and taken over by the local bodies. Apart from the layout developments, in cases of residential / commercial developments and multistoreyed developments, where the extent of the site exceeds 3000 sq.m. reservation of parks / playgrounds are made & handed over to local bodies for maintenance. These provisions in D.C.R. generate considerable extent of land required for open spaces and recreational activities for public use.

8.40 CMA also boasts a number of Theme Parks developed commercially in and around CMA, which attracts not only the local population but also tourists.

8.41 Planning for public open spaces has become an important part of metropolitan planning, as a result of the intense demand for outdoor recreation and also the growing need for conservation. Parks are sometimes heavily used, at times breaking down the plant cover, making to disappear its natural character that made them attractive.

8.42 In provision of recreational spaces, one may have to be concerned with the quality of human experience in that space, the release from the intense stimuli of close urban living, the free choice of activity, the chance to become actively engaged to exhibit mastery, opportunity to learn about the non-human world, the ability to meet new people etc. These mostly psychological gains are not achieved by mere conservation of pre-existing state of nature. Ecological balance of the site so that it can renew by itself in spite of the new pressures, which will be put on it.

8.43 Open spaces should be developed not only to provide psychological openness but also for ecological self-renewal. In managing these spaces, carrying capacity to renew itself naturally (for the ground cover to hold, the trees to succeed themselves. or the water to purify itself) should also be taken into account of.

8.44 CMA is dotted with a number of lakes (with minimum water spread in non-monsoon seasons), which may be developed as recreational spaces in a planned way taking into account its environmental aspects also. It will not only help in conserving these water bodies but also preventing encroachments and pollution.

8.45 Sports are an essential requirement for the development of an individual's personality and it teaches one of the values of teamwork and gives the individual the determination to strive, to seek, to find and not to yield. Recognising the importance of sports, the Government of Tamil Nadu have created the Department of Youth Welfare and Sports development in the year 2000. Earlier, Sports was with the Department of School Education and no department was catering to the matters pertaining to the non-student youth community. The main aims of the Department of Youth Welfare & Student Development are

- (i) to establish infrastructure facilities in district headquarters, schools and colleges for development of sports & games

- (ii) to establish sports-cum-recreation centers in all village panchayat and urban areas to provide facilities for indoor games, small area games and physical exercise to the public
- (iii) to identify talented sports persons, to train them and to render suitable financial assistance to enable them to participate successfully in national and international competitions
- (iv) to promote among the student as well as non-student youth community a spirit of adventure and love of physical activity
- (v) to implement the various schemes of GOI & GoTN aimed at the promotion of sports & youth welfare
- (vi) to conduct various sports youth festivals and exhibitions
- (vii) A Sports Development Fund was created by GoTN and the fund is used for achieving aims of the department.

8.46 In Chennai City the following facilities are available:

- (i) Jawaharlal Nehru Stadium, Periamet, with Football field (grass), Athletic Track (400 m eight lane synthetic track), 3 Volleyball Courts, floodlighting and electronic scoreboards, etc.
- (ii) Multipurpose Indoor Stadium, Periamet, with facilities for Volleyball, Basketball, Table Tennis, Badminton, Boxing, Wrestling, Weightlifting, etc.
- (iii) Hockey Stadium, Egmore with Astroturf Hockey field.
- (iv) Aquatic Complex with one Racing Pool (50 m x 25 m), one Diving Pool (18 m x 25 m) and one Warm up Pool (20 m x 25 m).
- (v) Tennis Stadium at Nungambakkam with 7 courts.
- (vi) Nehru Park Sports Complex with Football field, 400 m Athletic Track, 2 Basketball courts, 2 Kabaddi Courts, 2 Tennis Courts, 2 Volleyball Courts and one Squash Court.
- (vii) Shenoy Nagar Swimming Pool with 33 m x 21 m swimming pool, 1 Volleyball Court and 1 Shuttle Court.
- (viii) Anna Swimming Pool at Marina

8.47 Special coaching camp for sports developments is conducted by other department with GoTN assistance. Sports Development Authority of India has established sports training centers at Jawaharlal Nehru Stadium (for hockey and foot balls for boys) and Nehru Park Sports (for hockey and volley ball for girls). The Department is preparing a perspective plan for development of sports upto the year 2020. A number of national and international sports competition are conducted in Chennai. The Government of Tamil Nadu strive to improve / provide all necessary infrastructure to make it a preferred destination for international sports events.