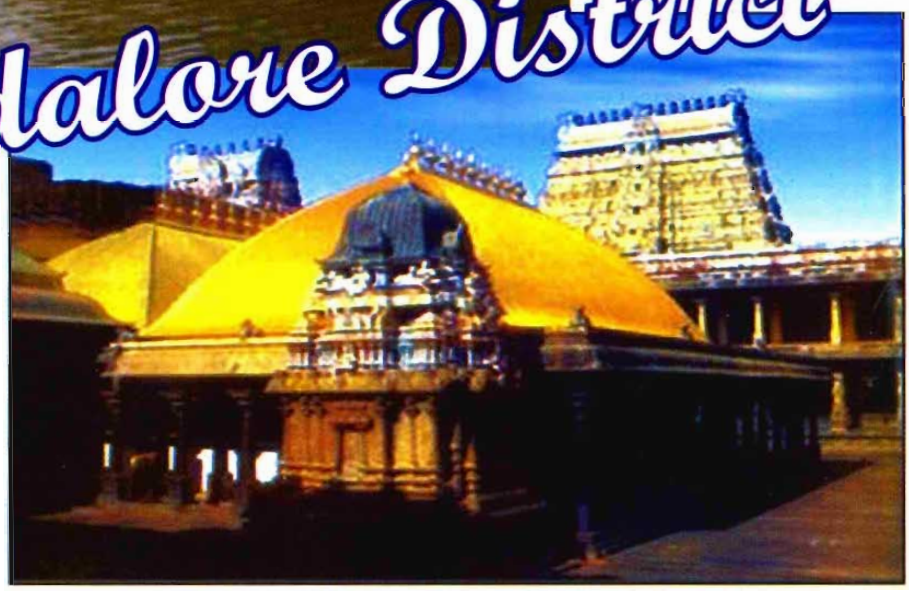
District Human Development Report

Cuddalore District



STATE PLANNING COMMISSION

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Cuddalore
District Human Development Report

District Administration Cuddalore
&
State Planning Commission, Tamil Nadu
in association with
Annamalai University, Chidambaram

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Foreword

United Nations Development Programme has first published the Human Development Report in 1990. Since then 18 reports have been published covering all aspects of human life. The first report constructed a comprehensive index called – Human Development Index – reflecting life expectancy, literacy and command over the resources to enjoy decent standard of living. The famous Pakistani economist late Mahbub-ul-Haq has uniquely designed the first report which kindled a new thinking in defining the quality of life of the people. Subsequent Human Development Reports added new indices such as human rights, gender equality, poverty, sanitation, drinking water, environmental issues, security, culture and language rights. Therefore, human development approach has been widening and covering new indices every year.

The Union Planning Commission published its first National Human Development Report in 2001 in which Tamil Nadu's achievements in education, health, family welfare were highlighted. Particular mention was made regarding the social reform movement in Tamil Nadu. "The state has, historically, been a hot bed of social reform movements, often precipitating political action in the desired direction. Social consciousness inspired by leaders such as Ramasamy 'Periyar' has influenced the people to become responsible parents, among other things, to adoption of family planning as a means to bridge the gap between increasing aspirations and availability of resources to meet these aspirations".

The states are also bringing out Human Development Reports highlighting the specific issues concerning to their states. As indicated in the National Human Development Report (2001), Tamil Nadu has been implementing comprehensive social development and welfare programmes covering child to old age people. It retains third position in the human development indices among the states in India, continuously since 1991 because of the Tamil Nadu government's commendable performance in the primary, secondary and tertiary sectors. The development strategy envisaged by Tamil Nadu government gives importance to equity and social justice. Therefore it is natural for the State Planning Commission to evaluate and ascertain many social and economic development schemes by encouraging human development studies in the districts.

The State Planning Commission with the cooperation of the UNDP and Union Planning Commission is utilising the services of the academia, scholars and policy makers to study, analyse and prepare reports on human development of different districts. These

studies would be helpful to arrive correct intervention programmes for the upliftment of deserving regions and deserving sections of the society.

I commend the services of the District Collector and officers of District Administration for the help they rendered to collect data and required information in the preparation of the Cuddalore District Human Development Report. I convey my thanks to the Chief Secretary and senior officers of the Steering Committee for their valuable suggestions in this regard. I congratulate the efforts of the HDRC team at the Planning Commission and senior academics and scholars of the Annamalai University.

பொருள்கருவி காலம் வினைஇடனொடு ஐந்தும்
இருள்தீர எண்ணிச் செயல் - குறள் 675
(Resources, tools, time, place and deed;
Decide these five and then proceed – Kural 675)

The planning process, as thoughtfully defined by Thiruvalluvar, should prioritize schemes for strengthening and evolving appropriate social sector policies. In this context, the District Human Development Report of Cuddalore will form a milestone in the overall planning and development of the state of Tamil Nadu.

(M.NAGANATHAN) 26.02.2009

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Foreword

Tamil Nadu has been a pioneer in implementing programmes for the development of people ensuring sustained growth tempered with social justice and equity. The State's Eleventh Five Year Plan aims at achieving employment generation, improving the livelihood of the people and reducing inequalities. While the State has been performing well in terms of Human Development indicators, it is necessary that the district differentials are analysed for bettering the well being of the individual.

The State Planning Commission in association with the United Nations Development Programme and Union Planning Commission under the Project "Strengthening State Plans for Human Development" has initiated the preparation of District Human Development Report (DHDR) for the districts of Dindigul, Sivaganga, Tiruvannamalai, Nagappattinam and Cuddalore. The objective of this exercise is to make an in depth analysis of the status of Human Development within a district based on the internationally accepted specific Human Development indicators. This would help to identify areas for intervention for location specific remedial actions.

Based on the conclusions and recommendations in the Reports, the policies and programmes implemented in the districts need to be provided with interventions that recognize the inter district and inter block differences in levels of achievement with respect to health, income and education indices. Better knowledge of the achievements of the district/block with reference to their indicators will lead to transparency which in turn increases the involvement of the community leading to better governance.

It is a matter of great satisfaction that the UNDP and the Union Planning Commission have come forward to support this initiative and

offer technical guidance. I take this opportunity to place on record my sincere thanks to the concerned District Collectors and their colleagues for sharing data on various parameters for the preparation of the report. I appreciate all the stakeholders for their contributions to this report. I am sure that these efforts will prove meaningful in improving the overall Human Development status of the district by quelling the intra district disparities.

(K.ARULMOZHI)

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Foreword

In recent decades much attention has been laid on grass roots programmes aiming at human development. The efforts comprise programmes that vary in size, approach and strategy and the responsibility of their execution is largely lying with the District Administration. The major concerns centre on Health and Education which constitute the prime output measures of human development. Besides the efficacy of the programmes launched brings to focus the income-generating capacity of the people through productive employment. This alone will ensure the sustainability of human development achieved already. We discuss the human development in terms of these set parameters, owing to the inspiration given by the pioneering efforts of UNDP We should also necessarily look at human development from the perspective of broader social concerns such as the welfare of women, children and those deprived of their legitimate share in development. The fact that we launch and operate all our development programmes in the context of globalization, throws open several opportunities. But we should be cautious of the threats also, in order to take into account the interest of the vulnerable groups. Thus drawing up a human development at the district level is indeed a major step in making the district as the nodal agency of development.

I am happy that I could associate myself with the UNDP – SPC sponsored project of preparing the District Human Development Report. It has turned out to be a very successful joint endeavour of an academic institution Annamalai University and the District Administration. This report portrays the various facets of district development from the human development perspective highlighting the positive Government interventions to achieve a faster and sustainable human development. This document is unique for it serves as a ready reckoner for an administrator to understand the core issues like gender, environment, agriculture, industry, social welfare poverty alleviation, rural-urban issues, etc,

This Cuddalore DHDR has been prepared in a participatory manner, involving the panchayats, District Administration, NGOs, academia, media and members of civil society. It is expected that the DHDR will be an input for the deliberations of the District Planning Committee, which is constitutionally mandated to undertake and endorse the preparation of District Plans. The institution of District Planning Committee as envisaged in the 73rd Constitution Amendment Act (73rd CAA) is a landmark in our development history. It marks the realisation of our conscious efforts towards decentralised planning. The desire for decentralised planning was first expressed way back in the first five year plan (1951-56), when it was suggested to break the planning process into national, state, district and local community levels. However the idea was given a concrete shape with the establishment of the District Development Council to consolidate plans prepared at the village level through a participative process. The newly established Panchayat Raj Institutions at the village block and district levels were to help prepare these plans. However, their role and resources were not clearly defined and as a consequence the precise execution of plans suffered at the grassroots level. In this context, DHDR assumes great significance in furnishing guidelines and directions to the policy makers to prepare plans at various levels from human development perspective in the district.

I record my sincere thanks to the former district collector of Cuddalore **Shri Gagandeep Singh Bedi**, presently working as Commissioner of Rural Development and Panchyat Raj. Government of Tamil Nadu, who was associated with this project from its very inception and he lent his solid support for developing this project through various stages, from that of conducting sensitization workshop for officers to the final data validation by the District Administration and SPC.

This project could not progress as fast as originally conceived in view of many intervening events such as General Elections and Disaster Management. However the study team extended their co-operation to the District Collector and his office and waited patiently until they could secure the required quality data. This devoted approach alone has helped bringing out a number of grass root realities. The team was headed by **Prof. R. Elango** former Dean Faculty of Arts, Annamalai University and later by **Prof. E. Selvarajan.** The team members **Dr. K. Ramu, Prof. G. Ravi** and **Prof D. Jankiraman** have put in extraordinary efforts in collecting information at various levels. In particular the stakeholders' meets conducted by the team in more than 90 spots spread across the district have been remarkable that they could bring forth many revealing facts that have policy significance. I thank my colleagues, who rendered all support to the Study Team of Annamalai University and the officials of the State Planning Commission in the preparation of District Human Development Report.

I wish that this document is updated periodically, with special focus on different sectors of Human Development, so that Cuddalore District is able to achieve the 'Millennium Goals' of human Development.

(RAJENDRA RATNOO)
District Collector,
Cuddalore.

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ACKNOWLEDGEMENTS

The preparation of the Cuddalore District Human Development Report (DHDR) has originated primarily from the initiative of the State Planning Commission, Government of Tamil Nadu, with the support received from the UNDP (UNDP). The State Planning Commission took up the assignment as a constructive exercise towards strategizing the government programmes to yield the intended results. At the time of project initiation, Thiru **P. R. Bindhumadhavan**, I.A.S. Member Secretary of the State Planning Commission was the Chairman of the Project. Later Member Secretaries of SPC Tmt. **Smita Nagaraj** I.A.S. and Tmt. **Girija Vaidyanathan** I.A.S. monitored the progress of the project.

The research team records its deep sense of gratitude to the University authorities, for having permitted us to partake in the project, providing all official support needed for its execution. In particular, we are thankful to Professor **L. B. Venkatrangan**, Vice Chancellor and Professor **M. Rathinasabapathi**, Registrar for their constant encouragement in accomplishing the work.

A district level core committee was constituted by the District Collector, Thiru **Gagandeep Singh Bedi**, I.A.S. as chairman, **Dr. R. Elango**, Dean Faculty of Arts, Professor and Head, Department of Economics, Annamalai University as the Co-ordinator. Besides this **Dr. E. Selvarajan**, Professor of Economics, **Dr. K. Ramu**, Sr. Lecturer in Economics, **Dr. G. Ravi**, Professor of Economics and **Dr. D. Janakiraman**, Professor of Rural Development, the Chief Education Officer (**CEO**), the Deputy Director of Health Services (**DDHS**), the Project Officer ICDS, and the Joint Director of Agriculture (**JDA**), constituted the study team of the core committee. First a district level visionary workshop was organized by the UNDP/SPC with the help of the district administration. Major socio-economic issues were discussed in the workshop regarding DHDR preparation. The study team comprising **Dr. R. Elango,**

Dr. E. Selvarajan, **Dr. K. Ramu, Dr. G. Ravi** and **Dr.D. Janakiraman** visited all 13 blocks and 5 municipalities in the district.

More than 90 Focus Group Discussions (FGD) were conducted with programme officers, elected representatives, Self Help Groups (SHG) and other stakeholders in the respective blocks and municipalities. The preparation of the DHDR was possible owing to the untiring efforts of this team that gathered a good deal of qualitative and quantitative data and information. The present report has been prepared after processing the data and making a thorough study of it. The principal authors of the DHDR chapters are as follows.

Chapter 1:	Human Development Report - An Overview	Dr. R. Elango Dean Faculty of Arts Professor and Head Department of Economics Annamalai University
Chapter 2:	Cuddalore District - An Overview	Dr. E. Selvarajan, Professor of Economics Annamalai University
Chapter 3:	Human Development In Cuddalore District - A Comparison With The State Of Tamilnadu	Dr. E. Selvarajan Professor of Economics Annamalai University
Chapter 4:	Dimension of Employment, Income and Poverty	Dr. G. Ravi Professor of Economics Annamalai University
Chapter 5:	Demography, Health and Nutrition	Dr. K. Ramu Sr. Lecturer Department of Economics Annamalai University
Chapter 6:	Contours of Literacy and Education	Dr. D. Janakiraman Professor of Rural Development Department of Economics Annamalai University
Chapter 7:	Challenges Ahead and Road Map for Achieving Human Development	Dr. R. Elango & Dr. E. Selvarajan

Dr. R. Srinivasan, Full Time Member of SPC has paid attention in the project and provided all support for DHDR preparation. The exercise has been fully supported by the State Planning Commission and District authorities, Thiru **Gagandeep Singh Bedi**, I.A.S., District Collector, Cuddalore, Thiru **T. Baskaran** I.S.S., Head of HDRC, Tmt. **Krupa**, Project Specialist

(Research), NUNV, HDRC, Thiru **Ravi Rajappan Pillai** Project Specialist (Operation & IT), NUNV, HDRC, deserve our appreciation. Besides this, the various departments at the District level extended invaluable assistance and provided the team with the required data. In addition to this, the DRDA, Department of Agriculture, ICDS Department, Statistics Department, Health Department, Education Department, Civil Supplies Corporation, Electricity Department, Public Works Department, Water Supply Board, Environmental Engineering Department and others have also co-ordinated with us in executing the work. We also received the unstinting cooperation of the Block Development Officers (BDOs) of 13 Blocks, elected representatives of the district, SHG members, Municipal Commissioners of 5 municipalities and other Programme Officers of the district. The research team acknowledges with thanks the extraordinary help rendered by Professor **J. Vasanthakumar**, HOD of Agricultural Extension, Annamalai University in the Project in a number of ways. The report has drawn heavily from his expertise and consultancy to deal with issues of water management and cropping pattern of the district.

The team acknowledges the hard work put in by Messrs **V. Nagaraj**, **M. Sampathkumar**, Ph.D Scholars and **V. Ravikumar** Project Assistant, Department of Economics, Annamalai University who have shouldered the responsibility of executing various tasks of the project with involvement. Also **S. Chandrasekaran**, Project Officer and **J. Kamalanathan**, Extension Assistant Center for Rural Development Annamalai University deserve our appreciation for lending there valuable services to us, to organize FGDs in many villages. Last, we acknowledge with a deep sense of appreciation, the unremitting cooperation and help of all the officers and staff of the SPC and District administration, without whom the present endeavour would not have achieved fruition.

PREFACE

The conventional measures to assess economic welfare are Gross Domestic Product and Per Capita Income which have been in vogue for long. However, as these measures did not reveal the content and redistributional aspects of economic development, economists wished to capture its qualitative and quantative facets. This gave birth to the compilation of Physical Quality of Life Index, Human Development Index, Gender Development Index, Poverty Index, etc. The use of such indices is a radical departure from the tradition of the 1990's. Toeing the lines of the UNDP, the Union Planning Commission and State Planning Commission compiled the HDI and GDI using three parameters viz life expectancy at birth, education, and command over resources.

According to the State Planning Commission, the Cuddalore District occupied the 16th place in terms of HDI and the 15th place in GDI among all the districts in Tamil Nadu in 2003. The SPC desired to probe into the inextricable linkages between low HDI and its related issues such as nutrition and livelihood security, poverty, unemployment, environment, health and education with a view to enhance the HDI in Cuddalore district in the years to come. The ultimate objective of this exercise is to strategize the development process, initiate, and accelerate the growth process in Cuddalore district. Drawing its inspiration from the UNDP (India), the SPC launched this project to study Human Development in all its dimensions. The work began in the year 2005, with the District Administration as the Nodal Agency, and Annamalai University as the Associating Agency for the project. The research team meticulously followed the guidelines of SPC, in evolving the methodology for data collection. In view of the fact, that the development process has to be closely studied, in terms of human development dimensions, the team conducted more than 90 Focus Group Discussions (FGD), across the 13 blocks and 5 municipalities of the district, which enabled them to gather the views of various stakeholders in each development programme. Incidentally, when the official data furnished by the District Administration was juxtaposed with the

field notes, a few inferences emerged. Through a series of validation meetings conducted with Government Officials, they were refined to suit the purpose on hand, namely, giving useful suggestions to strategize the government schemes to deliver still better goods.

This highlights specific problems and constraints prevailing in various sectors of the district economy. The district is featured by traditional agriculture, relatively poor manufacturing bases and slender service sectors. It is beset with the twin problems of high incidence of poverty and unemployment. The main challenges faced by this district are poverty gap, yield gap, infrastructure gap, regional imbalances, etc. Despite the fact that the District administration rose to the occasion in undertaking the rehabilitation measures in the post-Tsunami situation, the district has yet to go a long way in many spheres in terms of development. The report highlights the areas where the district has made tangible improvements and where it has been lagging behind. It also attempts to point out the future development strategy that needs focus.

The research team holds the view that the district has vast development potential to be unlocked. In the light of the issues highlighted in the report, the district administration has to gear up the development departments to act in unison in undertaking developmental activities. Blocks such as **Mangalore, Nallur, Panruti, Annagrammam, Kammapuram and Virudhachalam** are to be the focus areas in prospective development planning. The existing District Planning apparatus is to be activated to prepare a shelf of practicable projects for Village Panchayats and Municipalities. The approach is three dimensional - to assess the performance made, diagnose the specific developmental problems, and come out with policy prescriptions in each sphere. It is earnestly hoped that the suggestions made by the report will help promote the human development performance of Cuddalore District on par with the best performing districts of Tamil Nadu in future.

CHAPTER – I

HUMAN DEVELOPMENT REPORT – AN OVERVIEW

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Introduction

With the advent of the concept of human development and the publication of the first Human Development Report (HDR) in 1990, a paradigm shift has occurred in interpreting the content and composition of economic development. Currently, "economic development" means much more than economic performance in physical terms. The Human Development Index (HDI) focuses on the kind of life that people live. Economic growth is looked upon not as an end in itself but as a means to enhance the wellbeing of people.

The concept of human development has evolved based on the choices available to the people of a nation. The HDR identifies three choices that are central to human wellbeing: the choice to lead a long and healthy life, indicated by life expectancy; the choice to be educated , indicated by literacy rate, and the access to basic resources, indicated by the purchasing power parity (PPP) income. These are regarded as basic choices because they are necessary for any other choice to be attained.

Using the three variables referred above, this theory of human development has been applied to measure the quality of life of women. The Gender Development Index (GDI) shows the choices available to women in comparison with men with reference to health, education and command over resources.

The Human Development Report of India

The first state HDR in India was published by the State of Madhya Pradesh in 1995. Following this, 22 States undertook the preparation of their State HDR. This report emphasizes that the development activities of the government must facilitate human development in such a way that all the development goals are achieved in full measure. India's first national level HDR was published in 2002 by the Union Planning Commission. In this report, the indicators of human development were analyzed with reference to data

pertaining to the years 1981, 1991 and 2001. As per the report, Tamilnadu occupied the 7th place in 1981. Subsequently, its ranking improved to the 3rd position in 1991 and continued to be in the 3rd position in 2001 also. In this report, HDIs were analyzed adopting the following criteria:

Indicator	Dimension
Longevity	Life expectancy
Education	Education to all
Control over resources	Real Per Capita Income

The Human Development Report of Tamil Nadu

The first HDR was published by the State Planning Commission (SPC) on 14.07.2003. It was prepared under the guidance of the UNDP and the Union Planning Commission. It focused on the same parameters such as efficacy of education, life expectancy and impact of command over resources of the people.

The Human Development Report at District Level

The SPC had already compiled HDI for the State and comprehensively analyzed inter–district disparities in human development attainments. Cuddalore district occupied the 16th place in human development with an HDI score of 0.644 among the districts. However, one could see that the HDIs did not throw light on the existing specific problems within the district and hence were inadequate to facilitate policy making. To understand the real problems of the district and to appreciate the environmental and socio economic conditions at the grass root level, it was felt that each district needed a separate comprehensive HDR. The 73rd and 74th Constitutional Amendments mandate the preparation of district level plans. It was decided that the District Human Development Report (DHDR) would help in this context. This report will not attempt to replace the existing district level planning apparatus but it will be built on this superstructure. This report is prepared solely in coordination with the district administration, Panchayat Raj Institutions (PRIs), Non–Governmental Organisations (NGOs), Academicians, Media and Civil Society members.

Information and Data Inputs for the Report

Photo: Two days National Seminar on *Cuddalore District Human Development Initiatives* held at the Annamalai University, 3rd and 4th April 2006.

The SPC has worked out and published the HDI and GDI aggregate figures of Cuddalore district. But the need of the hour is to interpret the figures in the light of grass root realities and juxtapose them with the efforts of the District Administration and its shortfalls. This exercise has to be executed from a positive perspective of evolving a better strategy. The study has made use of both primary and secondary data. The relevant primary data was collected at the field level by holding discussions with a cross–section of the population, and also personally surveying the assets created under various schemes. Knowledgeable people were identified and their suggestions were sought and incorporated in the report. The study team also held discussions with functionaries of the departments concerned at the village and block levels.

With respect to collection of secondary data, the study team culled out data from various Government sources such as Census documents, Tamil Nadu Human Development Report–2003, Department of Economics and Statistics, and Government of India Annual Reports of various departments concerned at the district level. It may also be noted that the study team has had many rounds of discussions with district officials and elicited their views and suggestions for enriching the contents of the report. The data and information collected from the field level were cross–checked with the officials at the departments in the headquarters. The District Collector has contributed substantially to this report,

by furnishing the data at his disposal as well as through his valuable suggestions in shaping the document. The report has been prepared in accordance to the guidelines given by the SPC. While using secondary data adequate caution has been exercised to ensure that the information and data collected were genuine and authoritative and all efforts have been made to make the analysis comprehensive and comparable.

Plan of the Study

The report has the following chapters:

I Human Development Report — An Overview

II Cuddalore District — An Overview

III Human Development in Cuddalore District — A comparison with the State of Tamil Nadu

IV Dimension of Employment, Income and Poverty

V Demography, Health and Nutrition

VI Contours of Literacy and Education

VII Challenges Ahead and Road Map for Achieving Human Development

CHAPTER – II

CUDDALORE DISTRICT – AN OVERVIEW

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CUDDALORE DISTRICT – AN OVERVIEW

A look into the early history of Cuddalore district shows that it held a proud position during the rule of Chola, Pallava and Pandyas. In 1674, the district came under the control of the British. The famous Nataraja temple at Chidambaram and Padaleswar temple at Cuddalore are located in this district. They are expressions of the district's rich cultural heritage. The Cuddalore port plays a major role in marine fish catch and export of fish. The Annamalai University, one of the premier institutions of higher education in the entire country, adds to the distinction of the district.

The South Arcot district was bifurcated into Cuddalore and Villupuram districts in 1993. Cuddalore district lies between 15° 5"/11°11" and 12° 35" of the northern latitude and 78° 38" and 80° 00" eastern Longitude with an area of 3678 sq. kms. The Cuddalore District is bounded on the east by Bay of Bengal and on the south by Nagapatinam and Ariyalur districts. The Kollidam and Vellar rivers separate the district on the west while Vilupuram district adjoins it in the north. All the rivers in the district flow from west to east into the Bay of Bengal. The rivers in the district are Thenpennaiyar, Kedilam, Vellar, Manimuthar and Kollidam.

1. Profile of Population at District Level

According to the 1991 Census, the total population of the Cuddalore district stood at 21,23,000. It increased to 22,85,000 in 2001. With regard to population density in 1991, it had 582 persons per square km. but it increased to 626 in 2001. The decennial growth rate of population in the Cuddalore district has been showing a declining trend continuously compared to the State. Particularly, the declining rate was significant during 1991 and 2001. It may perhaps signify people's awareness as to the advantage of small family. Details of population are presented in Table 2.1.

Table 2.1
Population Trend in the Cuddalore District

S. No.	District/ State	Area (Sq. Km)	Population (000)		Density (Km)		Decadal Population Growth (%)		
			1991[1]	2001	1991[1]	2001	1971–1981[1]	1981–1991[1]	1991–2001
1.	Cuddalore	3678	2123	2285	582	626	16.48	16.13	7.43
2.	Tamil Nadu	130058	55859	62405	429	478	17.50	15.39	11.19

Source: Census of India 1981, 1991 & 2001 Paper–1
Note: [1]South Arcot District (Cuddalore and Villupuram Districts)

1.1 Block Level Details

The 13 blocks of the district contain 681 village Panchayats. According to the 1991 Population Census, the total population of the rural area was 17,72,462. Among the 13 blocks of the Cuddalore district, Panruti (13.77%), Kurinjipadi (10.58%) and Cuddalore (9.27%) had a higher percentage of population as compared to other blocks. As per the 2001 Census, the total population had increased. In 2001, the composition of population among blocks had undergone drastic changes. The block wise population is presented in Table 2.2.

Table 2.2
Trend in Block–wise Population

S. No.	Name of the Block	1991[1]		2001	
		Total Population	%	Total Population	%
1	Annagrammam	122141	6.89	128576	6.73
2	Cuddalore	164227	9.27	186367	9.76
3	Kammapuram	132848	7.50	141828	7.43
4	Kattumannarkoil	119000	6.71	128945	6.75
5	Keerapalayam	101015	5.70	107374	5.62
6	Kumartchi	119282	6.73	128364	6.72
7	Kurinjipadi	187443	10.58	202513	10.61
8	Mangalore	135479	7.64	146658	7.68
9	Melbhuvanagiri	100808	5.69	105822	5.54
10	Nallur	121535	6.86	134895	7.07
11	Panruti	244149	13.77	267238	14.00
12	Parangipettai	123342	6.96	123505	6.47
13	Virudhachalam	101193	5.71	107211	5.62
	Total	**1772462**	**100.00**	**1909296**	**100.00**

Source: Census of India 1991 & 2001
Note: 1. [1]South Arcot District (Cuddalore and Villupuram Districts)
2. Inclusive of Rural and Town Panchayats

1.2 Municipality Level Details

The Cuddalore district has five municipalities – Nellikuppam, Panruti, Chidambaram, Virudhachalam and Cuddalore. In the 1991 Census, the population of Cuddalore (41.27%) and Chidambaram (16.77%) combined together exceeded 50 percent of the total municipal population. The relative share of the municipal population changed in 2001 Census. In 2001, Cuddalore municipality with 42.17 percent of the total population registered a higher density as compared to other municipalities. The population profile of the municipality is presented in Table 2.3.

Table 2.3
Trend in Municipality–wise Population

S. No.	Name of the Municipality	1991[1]		2001	
		Total population	%	Total population	%
1	Nellikuppam	42783	12.21	44222	11.76
2	Chidambaram	58740	16.77	57733	15.35
3	Cuddalore	144561	41.27	158634	42.17
4	Panruti	51394	14.67	55346	14.72
5	Virudhachalam	52819	15.08	60164	16.00
Total		**350297**	**100.00**	**376099**	**100.00**

Source: Census of India, 1991 & 2001
Note: [1]South Arcot District (Cuddalore and Villupuram Districts)

Box : 2.1 E–Governance, Role Model in Administration and Service Delivery

In 2000, the Panruti Municipality was computerized. It is the first computerized local body in Tamil Nadu. The municipal workers are requested to learn to operate computers and accomplish their work with the assistance of computers. Of late, other local bodies and officers are replicating these functioning and service deliveries of Panruti municipality. The Panruti municipality has established an information center. This center includes the facilities of searching web, dual computer monitor etc. Through this information center, people are able to receive birth and death certificates in dual languages besides paying taxes and rents without delay. This information center is not only used for paying tax and issuing certificates, it is also used for getting information about the details on tax and rent dues and knowing the complaints registered by the public. The complaints are properly registered in the computer and processed in a systematic manner and immediate actions are taken to solve the problems. This information is hosted on the web.

The municipality modified its staff attendance register into a computerized finger print register. For the public convenience, the municipal administration established their service centers in various parts of the municipality.

a) Appar service center – Thiruvathigai
b) Padai Veedu – AVC Park
c) Gandhi center – Gandhi park
d) Avai – Avaiyammal street

In addition to this, the municipality introduced a mobile collection center for collection of tax and non–tax items. It helps the municipality to generate additional sources of income and facilitates to deliver excellent services. Further, with the assistance of Aircel company, the municipality introduced the facility of service delivery through SMS. This service helps people receive the information regarding tax payment and dues.

The E–Governance of Panruti municipality ensures transparency, accountability, service delivery and people's cooperation and participation in development process. It reduces the work load of the municipality and motivates the workers to venture into innovative managerial techniques. People's awareness about E–Governance and their changed mindset of adopting new things and their preferences for receiving speedy service with low cost are the main reason for the achievements of E–Governance in Panruti Municipality.

Following the Panruti municipality model, the municipalities of Cuddalore, Chidambaram, Virudhachalam and Nellikuppam municipalities too are moving towards e–governance gradually.

Source: Commissioner, Panruti Municipality, 2006

1.3 Town Panchayat Level

In 1991, most of the town panchayats in 2001 were village panchayats. After the bifurcation of Cuddalore and Villupuram district, a number of village panchayats had become town panchayats due to changes in nomenclature. According to the 1991 Census, there were only six town panchayats in the Cuddalore district – Thorapadi, Parangipettai, Melbhuvanagiri, Annamalainagar, Gangaikondan and Kurinjipadi. Total population of the town panchayats 2,81,373. It increased to 3,62,187 in 2001. In most of the town panchayats, population had increased as per the 2001 Census as compared to 1991 Population Census except Melpattampakkam, Thorapadi, Parangipettai, and Kurinjipadi). At the same time, population of the two town Panchayats (Kattumannarkoil and Tittakudi) trebled as compared to the 1991 Census. Population explosions in Town Panchayats reveal the increasing urbanization, continuous migration from rural to urban areas in search of jobs, etc. Table 2.4 presents the details of population trend in town panchayats.

Table 2.4
Population Trend in Town Panchayats

S. No.	Name of the Town Panchayats	1991[1]		2001	
		Total population	%	Total population	%
1	Melpatampakkam*	6901	2.45	6598	1.82
2	Annamalai Nagar	9209	3.27	10062	2.78
3	Gangaikondan	8809	3.13	10483	2.89
4	Kattumannarkoil*	6684	2.38	22426	6.19
5	Killai*	9461	3.36	9899	2.73
6	Kurinjipadi	23117	8.22	22883	6.32
7	Lalpet*	9031	3.21	13817	3.81
8	Mangalampet*	7029	2.50	7281	2.01
9	Melbhuvanagiri	17605	6.26	19879	5.49
10	Neyveli (TS)	118080	41.97	127552	35.22
11	Parangipettai	23550	8.37	20912	5.77
12	Pennadam*	12811	4.55	18166	5.02
13	Sethiyathoppu*	7697	2.74	7963	2.20
14	Srimushnam*	8330	2.96	11992	3.31
15	Thorapadi	6538	2.32	5523	1.52
13	Tittakudi*	6521	2.32	20735	5.72
17	Vadalur*	NA	NA	26016	7.18
Total		281373	100.00	362187	100.00

Source: Census of India, 1991 & 2001

Note: [1]South Arcot District (Cuddalore and Villupuram Districts)
NA : Not Available
*Represents the town Panchayats which were village Panchayats in 1991

Box 2.2 throws light on the functioning of Panchayati Raj Institutions (PRIs), which bear all the hallmarks of local governance, in the Cuddalore District.

Box: 2.2 Effectiveness of Three–Tier Panchayati Raj Institutions in the Cuddalore District

Mahatma Gandhi has stated that India lives in villages because development of the country is dependent on development of villages. Agriculture is the driving force behind the development of India. It provides employment to large chunks of the village labour force. Before the constitutional amendents, bottom–up planning was absent. The policies drawn up did not fully reflect the aspirations of the village people. The 73rd Constitutional Amendment made a remarkable change in democratic federal set up, providing for decision–making and decentralization of power to the panchayat Raj. The Panchayat Raj Act came into effect in 24th April 1993.

For the purpose of assessing the functioning of the three tier PRIs in the district, the Focus Group Discussion, inter–group discussion and group interviews were made with panchayat presidents, members and the public. These discussions revealed the problems existing in three–tier panchayats. Hazy knowledge of the panchayat president about his duties and powers, lack of people's participation in development activities, failure to implement the resolutions taken by the Gram Saba, caste divisions, lack of cooperation between president and members, etc are the main causes for the ineffectiveness of Panchayat Raj system in the Cuddalore district.

In addition to this, there is a lack of accountability and transparency in administration witnessed. Panchayat Presidents appoint clerks arbitrarily and pay very meagre salary. In realizing the importance, the present State Government absorbed all the clerks in the mainstream and fixed pay scales for them. The Panchayat computers are not properly used for keeping accounts and maintaining the data base of the village. Still it has to go a long way to train the people and make use of the computers. It was opined that the panchayat leaders and members are to be trained properly for understanding their role in Panchayat Raj administration and organizing Gram Saba meetings and implementing policy decisions. Apart from the routine official audit of accounts, they adhere to the guidelines of the Government and carry out social audits.

Further people suggested that a vigilance officer should be appointed in every block to supervise and prevent pilferage and nepotism. The people themselves should involve in generating assets based on the availability of local resources. This would lead to the self–sustenance of the village. The panchayat president and members should perceive their role in PRI and village development from a right perspective. They may include people's participation into all developmental activities at village level. The goal of preparation of village development plans by the panchayats themselves remains a distinct one. The Panchayats should learn to appreciate the concept of bottom–up planning. Agricultural–oriented village development policies
are to be prepared by the village itself so that the projects will be feasible and viable.

Source: Focus Group Discussion, 2006

1.4 Gender Dimension

Factors such as female education, female infant mortality rate, female life expectancy and female fertility rate needs a deeper probe because they influence women's empowerment gender development. The aggregate sex ratio of the district compares well the State sex ratio. As for the sex ratio, the district had 967 females in 1991; this increased to 986 in 2001. The State too has been witnessing a declining sex–ratio. It is found that the sex–ratio is positive both at the district and the State levels. Table 2.5 presents the details on the number of females per 1000 males with and without age groupings.

Table 2.5
Sex – Ratio of Different Age Groups (1991 & 2001)

S. No.	District/ State	Sex Ratio (Number of female for 1000 male)			
		All age groups		0–6 Age group	
		1991[1]	2001	1991[1]	2001
1.	Cuddalore	967	986	970	957
2.	Tamil Nadu	974	987	948	942

Source: Census of India, 1991 & 2001
Note: [1]South Arcot District (Cuddalore and Villupuram Districts)

2. Composition of SC and ST Population

The total Scheduled Caste (SC) population of the district was at 6,34,479 accounting for 27.76 percent of the total population. The percentage of SC population in the Cuddalore district is higher than that of the SC population for the State (19 percent). In the Cuddalore district, most of the SC population is concentrated in rural areas. Of the total SC population, 81.12 percent are living in rural and the remaining 18.88 percent in urban areas. The same trend is noticed for the State.

The total Scheduled Tribe (ST) population constituted only 0.52 percent of the total population in the Cuddalore district and it was only 1.04 percent of the State's total population. Most of the STs people live in rural areas. The district authorities need to address the additional developmental needs of the marginalized sections of the population and pave the way for their socio–economic development. Table 2.6 gives the composition of the SC and ST population.

Table 2.6
Composition of SC and ST Population

S. No.	District/ State	Scheduled Caste (2001)			% (in total population)	Scheduled Tribes (2001)			% (in total population)
		Total	Rural	Urban		Total	Rural	Urban	
1.	Cuddalore	634479 (100.00)	514729 (81.12)	119750 (18.88)	27.76	11773 (100)	7241 (61.50)	4532 (38.50)	0.52
2.	Tamil Nadu	11857504 (100.00)	8308890 (70.07)	3548614 (29.93)	19.00	651321 (100.00)	551143 (84.61)	100178 (15.39)	1.04
	India								

Source: Census of India 2001
Note: Figures in the parentheses are percentages to total

3. Work Participation Rate by Region

The Population Census of India has termed those who had worked for the major part of the reference period (i.e. 6 months or more) as main workers and those who had not worked for the major part of the reference period (i.e. 6 months or more) as marginal workers.

According to the 1991 Census, in the Cuddalore district, 40.2 percent were main workers and 43.68 percent marginal workers. The number of main and marginal workers was higher in rural areas (main workers 42.28%; marginal workers 46.26%) as compared to urban areas (main workers 29.07%; marginal workers 29.86%). The trend in the State is diametrically opposite to that of the district because the State had more labour population in urban areas (main 52.62%; marginal 52.78%) than the rural areas (main 45.07%; marginal 48.49%).

In 2001, the district had 31.9 percent main workers and 10.6 percent marginal workers. The same trend of 1991 remained in 2001 as well. If the work force of 1991 is compared with that of 2001, a remarkable change is noticed in both urban and rural labour force. With further development, the emergence of service sector has changed the structure of labour force in both areas. Traditional occupation has been superseded by new types of jobs. Details on main workers and marginal workers are set out in Table 2.7.

Table 2.7
Work Participation Rates by Region

S. No.	District/ State	1991[1]						2001					
		Total		Rural		Urban		Total		Rural		Urban	
		Main Workers	Marginal Workers	Main Workers	Marginal Workers	Main Workers	Marginal Workers	Main Workers	Marginal Workers	Main Workers	Marginal Workers	Main Workers	Marginal Workers
1.	Cuddalore	40.20	43.68	42.28	46.26	29.07	29.86	31.90	10.60	33.60	14.10	28.60	3.69
2.	Tamil Nadu	40.82	43.31	45.07	48.49	52.62	52.78	38.10	6.60	40.90	9.40	34.40	3.10

Source: Census of India 1991[1] & 2001
Note: [1]South Arcot District (Cuddalore and Villupuram Districts)

4. District Gross Domestic Product (Current and Constant Prices 1993–94)

The district Gross Domestic Product (GDP) is a summary measure of aggregate value of goods and services produced within the geographical boundaries of the district in a particular year. GDP is an indicator or the performance of the district economy. The Cuddalore district showed a remarkable achievement in GDP growth. The district GDP had been continuously increasing over time. It went up from Rs.3,28,239 lakhs in 1999–2000 and Rs.4,37,678 lakhs in 2002–2003 at current prices. It increased from Rs.2,19,132 lakhs in 1999–2000 to 2,45,412 lakhs in 2002–2003 at constant prices. The robust growth performance of the district creates a great impact on the human development. The comparative analysis of GDP growth trend between State and district shows that the State GDP exhibits an oscillating trend, whereas the growth of the district GDP is sustained.

Table2.8
Gross District Domestic Product
(At Current and Constant Prices 1993–94) (Rs. Lakhs)

S. No.	District/ State	Gross District Domestic Product (At Current Price)				Gross District Domestic Product (At Constant Price)			
		1999–2000	2000–2001	2001–2002	2002–2003	1999–2000	2000–2001	2001–2002	2002–2003
1.	Cuddalore	328239	373883	397083	437678	219132	236219	234527	245412
2.	Tamilnadu	12631300	14109983	14355542	15509925	8457452	9101065	8901065	9170324

Source: State Planning Commission, Government of Tamil Nadu 2005

4.1 District Per Capita Income (Current and Constant Prices)

Per Capita Income (PCI) is only an approximate indicator of the people's standard of living. Per capita income is a function of gross national product divided by population. In terms of current prices, the per capita income of the district was Rs.14,072 in 1999–2000. It gradually increased to Rs.19,100 in 2002–03. The per capita income of the State and district at current prices steadily went up over a period of time but growth rates were different for the State and district.

PCI of the district at constant prices in 1999–2000 stood at Rs.9,394. It increased to Rs.10,709 in 2002–2003. The difference in per capita income at constant prices between State and district is higher as compared to PCI in terms of current prices. This shows that the district has to redouble its efforts to accelerate the rate of economic growth. Table 2.9 displays the PCI of the district and the State at constant and current prices.

Table 2.9
Per Capita Income at Current and Constant (1993–94) Prices

(Rupees in Lakhs)

S. No.	District/ State	Per Capita Income (At Current Prices)				Per Capita Income (At Constant Prices)			
		1999–2000	2000–2001	2001–2002	2002–2003	1999–2000	2000–2001	2001–2002	2002–2003
1.	Cuddalore	14072	15891	16741	19100	9394	10040	9888	10709
2.	Tamil Nadu	20579	22790	23000	24578	13779	14700	14261	14532

Source: State Planning Commission, Government of Tamil Nadu, 2005

4.2. Share of DGDP to State Domestic Product (1993–1994 Constant and Current Prices)

The district share to the State GDP was 2.6 percent in 1999–2000 and 2.82 percent in 2002–2003 at current prices and 2.59 percent and 2.68 percent at constant prices respectively. The district's contribution to the State GDP was not as impressive as that of many other districts. This goes to emphasize the view that acceleration in the rate of the district's economic growth is rather imperative now. Data on the share of the district GDP to the State GDP is presented in Table 2.10.

Table 2.10
Contribution of District Domestic Product to State Domestic Product (1993–94 Prices)

S. No.	District/ State	Gross District Domestic Product (At Current Prices)				Gross District Domestic Product (At Constant Prices)			
		1999–2000	2000–2001	2001–2002	2002–2003	1999–2000	2000–2001	2001–2002	2002–2003
1	Cuddalore	2.60	2.65	2.77	2.82	2.59	2.60	2.63	2.68
2	Tamil Nadu	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: State Planning Commission, Government of Tamil Nadu, 2005

4.3 Sectoral Contribution to District GDP at Current Prices –

In 2001–02, the primary sector contributed 44.12 percent, the service sector 40.68 percent and the secondary sector 15.20 percent to the GDP of the district. Among the three sectors, the agriculture sector plays a significant role in terms of employment content and livelihood security. This trend is totally opposite to the State's sectoral contribution. The service sector is the dominant contributor to the State's GDP (50.76%), followed by the secondary sector (31.02%) and the primary sector (18.22%). The sectoral contribution to the district GDP in 2002–2003 was marginally better than the previous years and the trend in sector–wise contributions also changed. The agricultural sector continues to be predominant in this district during 2002–03, although its contribution has slightly diminished (41.84%). Other sectors such as service (41.18%) and industry (16.98%) have recorded a better share in their contribution to the district GDP. Sectoral contribution of district GDP at current prices is given in the table 2.11.

Table 2.11
Composition of Gross District Domestic Production at Current Prices

S. No.	District/ State	2001–2002				2002–2003			
		Sectoral Contribution (% Share)				Sectoral Contribution (% Share)			
		Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
1.	Cuddalore	44.12	15.20	40.68	100.00	41.84	16.98	41.18	100.00
2.	Tamil Nadu	18.22	31.02	50.76	100.00	13.97	32.91	53.12	100.00

Source: State Planning Commission, Government of Tamil Nadu, 2005

4.4. Sectoral Growth of Gross District Domestic Product

Among the three sectors, i.e., the agriculture, service and industry sectors, the agriculture sector showed a negative trend (–2.69 %). This is due to erratic spatiotemporal distribution of rainfall. This trend was also noticed in the State's primary sector. The other two sectors i.e., industry (2.08%) and services (0.61%) witnessed sizeable growth in the GDP.

The Cuddalore district is traditionally agriculture–oriented, but its growth rate has not been significant at all. The industry and service sectors registered commendable growth. It emphasizes the fact that the district planners must diagnose the causes for the retardation of the agricultural sector and need to ensure the people's livelihood is secured. It calls for invigoration of agriculture through adoption of best farming practices. Table 2.12 depicts the sectoral growth rate at constant and current prices.

Table 2.12
Sectoral Growth of Aggregate District Domestic Product (2002–03)
(at constant price 1993–94)

S. No.	District/ State	Annual Average Rate of Growth		
		Primary	Secondary	Tertiary
1.	Cuddalore	– 2.69	2.08	0.61
2.	Tamil Nadu	– 4.82	2.13	2.69

Source: State Planning Commission, Government of Tamil Nadu, 2005

4.5. Growth Rate and Sectoral Contribution

During this period (2002–2003), the average district per capita income was Rs.10,709. The per capita income of the district and the GDP growth rate were deplorably lower than that of the State as a whole. Table 2.13 compares the district domestic product per capita income, district GDP growth rate and sectoral contribution, with the State level performance.

Table 2.13
Growth of Per Capita Income and Sectoral Contribution

S. No.	District/ State	Per Capita Income (in Rs)	Sectoral Contribution (% share)		
		2002–2003	Primary	Secondary	Tertiary
1	Cuddalore	10709	42.52	14.94	42.54
2	Tamil Nadu	14532	14.75	29.81	55.44

Source: State Planning Commission, Government of Tamil Nadu, 2005

5. Incidence of Poverty in the Cuddalore District

Economic development is analogous to a ladder with higher rungs representing steps up the path to economic well–being. It is likely that many people will be hungry and desolate even to set one foot on the first rung of the development ladder. These people are the "poorest of the poor" or the "extreme poor" of the district. The main objective of economic development for the Cuddalore district is to help those who are poor to gain a foothold on the ladder.

Poverty, according to an official definition, is the inability of an individual to secure a minimum level of living. Thus, those living below poverty line (BPL) are not able to secure such a level of living. In Tamil Nadu Human Development Report–2003, the districts were divided into three different categories based on the level of poverty, namely, higher poverty (above 40%), moderate poverty (30–40%) and lower poverty (below 30%) districts. In this classification, the Cuddalore district belongs to the higher poverty category.

Poverty is an obstacle to economic development of a country.It is recognized that poverty is multi-dimensional in character taking the shape of low income ,vulnerability to disease, exclusion from education, chronic hunger and malnutrition, lack of access to basic amenities such as clear water and sanitation and environmental degradation such as deforestation and land erosion that threatens lives and livelihoods. Although the Cuddalore district was successful in reducing poverty, it has stuck in the vicious circle of poverty due to multifarious reasons. Officially, poverty is defined as the inability of any human being to get ordinary or subsistence living. Keeping 1973-74 as the base year ,the poverty line was fixed at the per capita monthly consumption expenditure of Rs.49.09 and Rs.56.64 in rural and urban areas respectively. Since then , poverty continues to be defined in terms of per capita monthly expenditure corresponding to per capita daily requirement of 2400 calories in rural areas and 2100 calories in urban areas. The per capita consumption expenditure is put at higher levels, accumulating the price changes over the

years. The Indian Planning Commission's Expert Committee recommended a cut-off minimum to fix the poverty line in the year 2001.

According to the Planning Commission, the poverty line for Tamil Nadu was set at 296.63 per capita per month in rural areas. It is based on this norm that people below poverty were estimated in Tamil Nadu between 1999 and 2000 .This methodology has been used for the Cuddalore district to measure its rural as well as urban property.

According to the 2004 – 05 estimates, more than a quarter of the total population of the district (29.4%) remained in poverty, which was higher than that of the 1993–94 estimation. The BPL population in urban area (37.90%) was higher than rural PBL (24.7%). The percentage of BPL population of the State is lower than the district. In 2004–05 estimation 21.60 percent of the population has remained in below poverty line. The BPL population in urban area (23.5%) was higher than the rural BPL (19.8%) population. In the Cuddalore district, BPL population in urban area is significantly higher than that of the BPL population in rural area .The PBL population has increased over the period, as shown in table 2.14. It warrants the necessity to combat this situation more effectively. Along with appropriate employment programmes, suitable skill development programmes are to be implemented. There is an urgent need to improve the living conditions of these populations, which are evident from the access to sanitation and drainage facilities.

Table 2.14
Incidence of Poverty

S. No.	District/ State	1993–1994						2004–2005					
		Rural		Urban		Total		Rural		Urban		Total	
		BPL Population (Lakhs)	%	BPL Population (Lakhs)	%	BPL Population (Lakhs)	%	BPL Population (Lakhs)	%	BPL Population (Lakhs)	%	BPL Population (Lakhs)	%
1	Cuddalore	1.69	15.55	1.12	36.71	2.81	20.21	3.67	24.7	3.14	37.90	6.82	29.4
2	Tamil Nadu	112.01	28.93	58.51	38.63	170.52	31.66	67.22	19.8	71.04	23.5	138.26	21.60

Source: Department of Economics and Statistics, Government of Tamil Nadu, 2005 and District Administration, 2007

Any attempt to strategize and direct development from the human development angle necessitates a reflection on the United Nation's Millennium Declaration 2002 adopted by the 191 UN members. The fact that the

declaration aimed at attaining eight Millennium Development Goals and 18 targets will help the administrators to ensure that their targets are met within a stipulated time frame.

Box : 2.3 The Millennium Development Goals

1.	Eradicate extreme poverty and hunger	Reduce to half the proportion of people whose income is less than one dollar a day between 1990 and 2015. Reduce to half the proportion of people who suffer from hunger between 1990 and 2015.
2.	Achieve universal primary education	Ensure that by 2015, children everywhere, boys and girls alike will be able to complete a full course of primary schooling.
3.	Promote gender equality and empower women	Eliminate gender disparity in primary and secondary education, preferably by 2005, and at all levels of education no later than 2015.
4.	Reduce child mortality	Reduce by two thirds the under–five mortality rate between 1990 and 2015.
5.	Improve maternal health	Reduce by three quarters the maternal mortality ratio between 1990 and 2015.
6.	Combat HIV/AIDS, malaria and other diseases	Have halted by 2015 and begun to reverse the spread of HIV/AIDS. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.
7.	Ensure environmental sustainability	Integrate the principles of sustainable development into country's policies and programs and reverse the loss of environmental resources. Reduced to half the proportion of people without sustainable access to safe drinking water and basic sanitation. Achieve a significant improvement in lives of at least 100 million slum dwellers by 2020.
8.	Develop a global partnership for development	Develop an open, rule–based, predictable, nondiscriminatory trading and financial system. Includes a commitment to good governance, development, and poverty reduction–both nationally and internationally. Address the special needs of the least developed countries. This includes: tariff–and quota–free access for the least developed countries exports; an enhanced program of debt relief for heavily indebted poor countries (HIPC) and cancellation of official bilateral debt; and more generous official development assistance (ODA) for countries committed to poverty reduction. Address the special needs of landlocked countries and small island developing states (through the Program of Action for the Sustainable Development of Small Island Developing States and the outcome of the twenty–second special session of the General Assembly). Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term. Develop and implement strategies for decent and productive work for youth in cooperation with developing countries.

	Provide access to affordable, essential drugs in developing countries in cooperation with pharmaceutical companies.
	Make available the benefits of new technologies, especially information and communications in cooperation with the private sector.

Source: UNDP, Attaining the Millennium Development Goals in India: Role of Public Policy & Service Delivery, 2004

6. Quality of Housing Stock

Number of Rooms per Housing Units – Rural Area

Housing units in the rural area are classified into households without room, with one room, two rooms, three rooms and more than three rooms. Total households of the rural area were 3.49 lakhs and it was 4.21 percent of rural household of the State (82.74 lakhs). Of the rural households 78,741 (22.55 percent) were without room, 1,49,196 (42.73 percent) had one room, 85,422 (24.47 percent) had two rooms, 24,641 (7.06 percent) had three rooms and 11,119 (3.18 percent) rural households had more than three rooms. Within this category, the number of households with one room was more pronounced in rural areas. A high concentration of households with one room and households with no rooms highlights the incidence and impact of the rural poverty. It explains the poor quality of the housing stock. Details on housing units by number of rooms in rural areas of the Cuddalore district are presented in table 2.15.

Table 2.15
Number of Rooms per Housing Unit in Rural Area (2001)

S. No.	District / State	Total Housing Units	Occupied Housing Units by Number of Rooms				
			No exclusive Rooms	One Room	Two Rooms	Three Rooms	More than Three Rooms
1	Cuddalore	349119 (100.00)	78741 (22.55)	149196 (42.73)	85422 (24.47)	24641 (7.06)	11119 (3.18)
2	Tamil Nadu	8274790 (100.00)	1219903 (14.74)	3795106 (45.86)	2069274 (25.01)	730908 (8.83)	459599 (5.55)

Source: Census of India, 2001
Note: Figures in parentheses represent percentages of respective total.

6.1 Number of Rooms per Housing Units–Urban Area

The total household units in urban areas were 1,53,938. Of this 20,632 houses (13.40 percent) had no rooms, 55,326 (35.94 percent) houses were with one room, and 48,545 (31.54 percent) houses had two rooms, 19,536 (12.69

percent) houses had three rooms and 9,899 (6.43 percent) had more than three rooms. The same trend which was prevailed in the rural area has clearly reflected in the urban. The details of housing stock in urban areas are given in Table 2.16.

Table 2.16
Number of Rooms per Housing Unit –Urban Areas
(2001)

S. No.	District/ State	Total Housing Units	Occupied Housing Units by Number of Rooms				
			No Exclusive Rooms	One Room	Two Rooms	Three Rooms	More than Three Rooms
1	Cuddalore	153938 (100.000	20632 (13.40)	55326 (35.94)	48545 (31.54)	19536 (12.69)	9899 (6.43)
2	Tamil Nadu	5898836 (100.00)	347949 (5.90)	2200249 (37.30)	1724194 (29.23)	954486 (16.18)	671958 (11.39)

Source: Census of India, 2001
Note: Figures in parentheses represent the percentages of respective total.

7. Drinking Water, Electricity and Sanitation

Adequate supply of potable drinking water, regular power supply and sanitation facility are indispensable for leading a healthy life. These facilities are available in the district as explained below:

7.1. Households Having Sources of Protected Drinking Water Supply

It is a matter of gratification that two thirds of households (65.86%) have access to safe drinking water in the Cuddalore district. However, it is suggested that the remaining one third of the households too must gain access to this basic need at the earliest. The households of the urban area have greater access to get safe drinking water compared to rural households because of the special initiatives made in urban areas. As a result 70.19 percent of total households of the urban area have access to protected water. This achievement of the district makes it excel the average performance of the State in this regard. Table 2.17 presents the percentage of households having potable water in urban and rural areas of the Cuddalore district.

Table 2.17

Households Having Protected Drinking Water Facility

S. No.	District/ State	Percentage of Households Having Protected Drinking Water Facility (2001)		
		Total (%)	Rural (%)	Urban (%)
1.	Cuddalore	65.86	63.95	70.19
2.	Tamil Nadu	62.53	60.48	65.40
	India*	84		
	World*	82		

Source: Census of India, 2001, *Human Development Report 2004, UNDP

7.2 Households Having Electricity Facility

More than three fourth of the total households (76.76 percent) have electricity connection in the Cuddalore district. It includes free electricity connections also (one light connection). Region–wise statistics show that 82.70 percent of urban households and 74.14 percent of rural households have the electricity connections. Table 2.18 presents the number of electricity connection holders in rural and urban areas.

Table 2.18

Households Having Electricity Facility

S. No.	District/ State	Percentage of Households Having Electricity Facility (2001)		
		Total	Rural	Urban
1.	Cuddalore	76.76	74.14	82.70
2.	Tamil Nadu	78.18	71.18	88.00

Source: Census of India, 2001

Box : 2.4 Electricity Distribution in the Cuddalore District

All the hamlets and habitations are electrified in the Cuddalore district. The district electricity distribution is controlled by six maintenance divisions. The Cuddalore Electricity Distribution Circle covers a total area of 3658 sq.kms, comprising 13 Blocks and 681 Panchayats. There are 40 sub–stations within the circle. The following Table presents data on power consumption by different categories.

Details of Electricity Connections up to 2006

Division	Block	Number of Connections						
		Domestic	Public Lighting	Water works	Industries Services	Commercial Services	Agricultural Services	HUT Services
Cuddalore	Cuddalore Kurinjipadi	71920	1125	499	957	12759	6084	6228
Nellikuppam	Panruti Annagrammam	28057	750	326	347	6072	2845	5312
Panruti	Cuddalore Panruti Annagrammam	39140	800	532	644	6433	8210	9235
Kurinjipadi	Kurinjipadi Panruti Annagrammam	40487	916	451	448	6587	4975	9016
Chidambaram	Melbhuvanagiri Keerapalayam Kammapuram Parangipettai Kumaratchi Kattumannarkoil	85655	2440	1052	830	14665	13933	33604
Virudhachalam	Virudhachalam Kammapuram Nallur Mangalore	95790	2115	1141	732	10292	26084	20477
Total		**361049**	**8146**	**4001**	**3958**	**56808**	**62131**	**83872**

Source: Tamil Nadu Electricity Board, Cuddalore, 2006

During the last decade, five 110 KV sub stations were newly commissioned at Panruti, Nallathu, Koranapattu, Thoppukollai, and Umangalam. Further, a substation with the capacity of 33/11 KV was commissioned in Komangalam. The district is agriculture–oriented. Due to increasing mechanisation in agriculture, the demand for power has substantially increased. Free power supply to agriculture sector and small hamlets encourages high level of power consumption leading to power shortage.

The depletion of ground water level resulting from mining activities of the Neyveli Lignite Corporation necessitates increased use of high horse power pump sets by farmers thereby increasing the pressure on the distribution system. About 14 percent of distribution transformers failed annually in the district compared to the State average of only 6 percent.

The Tamil Nadu Electricity Board (TNEB) has to deal with power theft besides transmission losses occurring due to lack of modernization. Recently the Accelerated Power Development Programme has been implemented in the urban areas of the district at a cost of Rs. 883.79 lakhs, with the purpose of providing high quality meters, capacitors, computerized billing at collection centers etc.

Source: Tamil Nadu Electricity Board, Cuddalore, 2006.

7.3 Households Having Toilet Facilities

Only 26.19 percent households had toilet facilities in the Cuddalore district out of which 57.83 percent are urban households and 12.10 percent are rural households. On the whole, toilet facilities have to be enhanced considerably, especially in rural areas. Basic sanitary facilities and hygienic

conditions have to be improved tremendously. Details of toilet facilities in the rural and urban areas of the district are given in Table 2.19.

Table 2.19
Households Having Toilet Facilities

S. No.	District/ State	Percentages of Households Having Toilet Facilities (2001)		
		Total (%)	Rural (%)	Urban (%)
1.	Cuddalore	26.19	12.10	57.83
2.	Tamil Nadu	35.16	14.36	64.33
	India*	28		
	World*	61		

Source: Census of India, 2001, * Human Development Report 2004, UNDP.

7.4 Households without Basic Facilities

Of the total households, 34.14 percent of the households do not get potable drinking water. The percentage of households not having potable water is relatively higher in rural areas (36.05 percent) than in the urban areas (29.81 percent). With regard to the provision of safe drinking water, the performance of the Cuddalore district is better than that of the State (total 37.47 percent, rural 39.52 percent and urban 34.60 percent).

It is disheartening to note that the basic sanitation facility, namely toilet, is not owned by 73.91 percent of the district households. Of these, 87.90 percent of rural households and 42.17 percent of the urban households had no such facilities. The percentage of households living without toilet facilities is 64.84 percent in the State. In respect of the total urban and rural households, 35.67 percent urban households and 85.64 percent rural households have no such facilities.

Households that have no electricity connection form 23.24 percent in the Cuddalore district. A still higher percentage of rural households live without power supply connection (25.86 %). The detail of households having none of the three facilities namely toilet, electricity and potable water is presented in Table 2.20.

Table 2.20
Households without Protected Drinking Water, Toilets and Electricity Facility

S. No.	District/ State	Households Without Protected Drinking Water (2001) (%)			Households Without Toilets (2001) (%)			Households Without Electricity (2001) (%)		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1	Cuddalore	34.14	36.05	29.81	73.91	87.90	42.17	23.24	25.86	17.30
2	Tamil Nadu	37.47	39.52	34.60	64.84	85.64	35.67	21.82	28.82	12.00

Source: Census of India, 2001

8. Social Security Profile

The concept of social security means to provide support to individuals so that they can attain reasonable standards of living and/or to ensure that they do not experience a diminution in their standard of living due to occurrence of any contingency. The broad social objective of a social security programme is to improve the quality of life. Its goal is to redistribute income through a combination of promotional and protective measures. While promotional measures include both growth–mediated as well as direct anti–poverty measures, the various protective measures adopted seek to provide guarantees or entitlements to those vulnerable. It focuses primarily on the elderly population and thereby addresses an important human development issue.

There are various pension schemes in effective operation in the district– the Old Age Pension (OAP), the Destitute Agricultural Labour Pension (DALP), the Destitute Physically Challenged Pension (DPCP), the Destitute Widow Pension (DWP) and the Destitute Deserted Wife Pension (DDWP). Table 2.21 details the record of performance of these various schemes.

Table 2.21
Details of Social Security Schemes – 2006 (OAP, DALP, DPHP, DWP and DDWP)

S. No	District/ State	OAP (Normal)	DPHP	DWP	DALP	DDWP	Total
1	Cuddalore	12252	1517	14290	3119	469	31647
2	Tamilnadu	474889	65036	483677	91087	82062	1196751

Source: District Revenue Department and also obtained from National Institute Public Finance & Policy, New Delhi, 2007

Note: OAP – Old Age Pension (Normal) Scheme.
DPHP – Destitute Physically challenged Pension Scheme.
DWP – Destitute Widow Pension Scheme.
DALP – Destitute Agricultural Labour Pension Scheme.
DDWP – Destitute Deserted wives Pension Scheme.

Conclusion

This chapter explains the rationale behind preparing the District Level Human Development Report for the Cuddalore district. It outlines the specific problems in the Cuddalore district and the constraints faced by the administration in resolving them. All efforts are being made to ensure the all–round economic development happens in the district. In this context, the quality of housing stock and basic civil facilities need improvement to a great extent from the point of view of enhancing the level of human development, and in particular, gender development.

CHAPTER – III

HUMAN DEVELOPMENT IN THE CUDDALORE DISTRICT – A COMPARISON WITH THE STATE OF TAMILNADU

CHAPTER– III

HUMAN DEVELOPMENT IN THE CUDDALORE DISTRICT – A COMPARISON WITH THE STATE OF TAMILNADU

As mentioned at the beginning of the report, the Human Development Report serves as a hallmark against which the extent of human development that has taken place in a district can be assessed. This report can be used to rank a district among other districts and compare it with the State as a whole in terms of certain parameters such as literacy rate, life expectancy, education, etc. This report will come in very handy to the district and State administration for planning economic activities and hastening the development process in the district.

This report has been compiled based on the methodology of the UNDP. Of late, the importance of such a compilation has been increasingly realized by UNDP, as a necessary yardstick of development at regional levels. The purpose of the report is so far–reaching that many other dimensions such as gender development/gender deprivation can also be assessed. The report can be used to identify the factors that constrain the economic growth of the district. In this Chapter, a comparison between the Human Development Index (HDI) of the Cuddalore district and that of Tamil Nadu, under various heads has been made.

1. The Human Development Index

The value of the HDI is usually measured on a scale of 0–1 and in places where the value is nearer unity higher will be the human development. These values help in identifying the gap between the current level of development in the district and the immense possibilities that the district can realize with respect to human development. Hence, it paves the way for evolving a growth strategy and setting the development goals with a high degree of precision. Inter and intra district imbalances in growth prospects can be also be assessed using the above scale.

1.1. Indicators of Human Development

Life expectancy at birth (longevity), literacy, per capita income, per capita purchasing power parity, per capita domestic product, infant mortality

rate, maternal mortality, death rate, birth rate, etc are all critical indicators of human development. Among these indicators, life expectancy at birth, literacy, and education are measured in absolute terms, whereas the indices such as per capita income and per capita purchasing power parity are generally measured in terms of rupees. Except life expectancy at birth, all the indicators in the Cuddalore district are lower as compared to the values obtained for Tamilnadu. The Cuddalore district occupies the 24th place in the district domestic real per capita income. Table 3.1 highlights the human development indicators.

Table 3.1
Human Development Indicators

S. No	District/ State	Life Expectancy at Birth (yrs) (1997)	Literacy Rate (2001)	Literacy Index	Combined Gross Enrolment Ratio (1998–1999)	Combined Enrolment Index	Per capita income (Rs in constant prices), (1993–94, 1998–99)	Real dist. GDP per capita in PPP	Real dist. GDP per capita (Rank)
1	Cuddalore	68.87	71.85	0.719	80.88	0.809	8359	1488.71	24
2	Tamil Nadu	66.74	73.50	0.735	83.15	0.832	11775	2097.09	–
	India	62.90	56.5		56.00	0.56		2248	0
	World	66.7			65	0.74		6980	

Source: Tamil Nadu Human Development Report, 2003

1.2. The Human Development Index in the Cuddalore District

Indices such as longevity, education and income for the Cuddalore district are 0.731, 0.749 and 0.451 respectively as seen in Table 3.2. Except life expectancy at birth, the district falls below the related State indices. The fact that the Cuddalore district has only a lower ranking among the districts implies that the future polices of development have to be strategized and initiated towards holistic human development.

Table 3.2
The Human Development Index

S. No	District/ State	Life Expectancy at Birth Index	Education Index	Income Index	HDI		Real Per capita (PPP$) Rank minus HDI Rank
					Value	Rank	
1	Cuddalore	0.731	0.749	0.451	0.644	16	8
2	Tamil Nadu	0.696	0.767	0.508	0.657	–	–
	India*	0.63	0.56	0.52	0.571	115	–
	World*	0.70	0.74	0.71	0.716		

Source: 1. Tamilnadu Human Development Report, 2003
2. * Human Development Report 2001, UNDP

2. Income Index

On the basis of the district gross domestic product, the per capita income, purchasing power, adjusted income and equally distributed income index have been worked out. The real district GDP per capita purchasing power parity at Rs.1488.71 is lower than that of State purchasing power parity. In addition to this, real per capita GDP in purchasing power parity for male and female was also lower than that of the State. Further, equally distributed income index of Cuddalore district (0.418) was lower than the State income index (0.477). This proves the economic backwardness of the district and greater inequality in income. The income index of Cuddalore district is presented in Table 3.3.

Table 3.3
Income Index

S. No	District/ State	Real dist. GDP Per Capita in PPP$	Real GDP Per Capita In PPP$		Adjusted Income		Equally distributed Income Index
			Male	Female	Male	Female	
1	Cuddalore	1488.71	821.58	2146.55	0.352	0.512	0.418
2	Tamil Nadu	2097.09	1157.16	3024.19	0.409	0.569	0.477
	India	2248	1195	3236			
	World	6980					

Source: Tamilnadu Human Development Report, 2003

3. Gender vs. Human Development Indices

The Gender Development Index (GDI) is the specific indicator of the estimation of gender rights. If the value of GDI of a district fares poorer than the HDI of a district, it signifies that the district lags behind in women empowerment. If the value of GDI equals the value of HDI, it reflects that the women are entitled to equal rights in human development. It will be ideal if GDI and HDI have the same values and move closer to unity. If we look at the level of these indices as represented in Table 3.4, the value of the Tamil Nadu Gender Development Index (0.654) was greater than that of the all India level during 2001. The Cuddalore district occupied the 15th place in the GDI and the 16th place in HDI with respective values of 0.643 and 0.644. This highlights the point that gender development is far below human development in the Cuddalore district. At the State level, the districts are classified into three categories based on the values of HDI and GDI. They are as follows:

- Districts where GDI is greater than HDI.
- Districts where GDI is equal to HDI.
- Districts where GDI is less than HDI.

On the basis of the above classification, although the Cuddalore district comes under the third category, the positive and reassuring note is that the gap between the GDI and HDI of the district is not vast and can be made equal with appropriate efforts.

Table 3.4
Gender vs. Human Development Indices

S. No.	District/ State	GDI Value	GDI Rank	HDI Value	HDI Rank
1.	Cuddalore	0.643	15	0.644	16
2.	Tamil Nadu	0.654	–	0.657	–
	India*	0.553	105	0.571	115
	World*			0.716	

Source: 1. Tamilnadu Human Development Report, 2003
* 2. Human Development Report 2001, UNDP

3.1. Gender Inequality Profile: Female Population and Sex Ratio

The sex–ratio came down from 972 in 1981 to 967 in 1991. However, it increased to 986 in 2001. This implies that there is a gradual increase in the number of female population in recent years. It is worthwhile to mention that over a period of time, the sex ratio of the Cuddalore district was almost

synchronous with that of the Tamil Nadu State. Table 3.5 portrays the female population and sex–ratios.

Table 3.5
Female population and Sex–Ratio

S. No	District / State	Female Population (in lakhs)			Sex–Ratio of Female to 1000 Male		
		1981[1]	1991[1]	2001	1981[1]	1991[1]	2001
1	Cuddalore	20.71	23.96	11.34	972	967	986
2	Tamil Nadu	239.20	275.59	310.04	977	974	987

Source: Censuses of India 1981–1991, 2001
Note: [1]South Arcot District (Cuddalore and Villupuram districts)

4. Aging Profile

4.1 Elderly Population and the Gender Ratio of Elderly Population

Approximately 1.81 lakh persons in the Cuddalore district belonged to the elderly category. If we classify the elderly population by gender, the number of male elderly population (0.94 lakh) was larger than that of the female elderly population (0.87 lakh). This is 51.74 percent and 48.26 percent respectively. Table 3.6 gives the details on the elderly population of the Cuddalore district and the State. Of 55 lakh elderly population in the State including male and female, the Cuddalore district accounted for 3.3 percent.

Table 3.6
Elderly Population Percentage to Total Population by Sex (%)
(2001)

S. No	District / State	Elderly Population (60+)		(in '000)
		Male	Female	Total
1	Cuddalore	94	87	181
		(51.74)	(48.26)	(100.00)
2	Tamil Nadu	2735	2771	5507
		(49.67)	(50.33)	(100.00)
	India (%) pop 60+			5.0
	World (%) pop 65+			7.1

Source: Census of India, 2001
Note : Figures in parenthesis represent percentages of respective population

4.2. Proportion of the Elderly Population by Region and Sex

Table 3.7 depicts the proportion of the elderly population based on region and sex. The percentage of elderly population of the district in the State

is put at 7.94 percent (8.16 percent of male and 7.72 percent of female). The State elderly population to the total State population was 8.83 percent. It is worthwhile to mention here that at both the State and the district levels, the male elderly population was greater than the female elderly population. The percentage of elderly population in the urban area was 7.56 percent, comprising 7.53 percent of male and 7.58 percent of female population. The corresponding percentage of the State was 8.31 percent in total, with 8.08 percent of male and 8.55 percent of female population. On the other hand, the percentage of elderly population in rural area was 8.13 percent comprising 8.47 percent of male and 7.79 percent of female population. The values of the State were 9.23 percent comprising 9.22 percent of male and 9.24 percent of female population.

The proportion of elderly population warrants studying their economic status, healthcare needs and nutritional status. In particular, the status of the elderly population in rural and urban poor needs a closer study for formulating adequate programmes. Provision of livelihood opportunities and healthcare delivery in nearby areas are a few in this concern. Further this stresses the need to provide geriatric health care, nutritional supplies and other welfare activities.

Table 3.7
Proportion of Elderly Population by Region and Sex (2001)

S. No	District / State	Total (%)			Rural (%)			Urban (%)		
		Persons	Male	Female	Persons	Male	Female	Persons	Male	Female
1	Cuddalore	7.94	8.16	7.72	8.13	8.47	7.79	7.56	7.53	7.58
2	Tamil Nadu	8.83	8.71	8.94	9.23	9.22	9.24	8.31	8.08	8.55

Source: Census of India, 2001

4.3. Dependency Rate and Work Participation Rate

The dependency rate and the work participation rate are important indicators of human development in the context of a developing economy. These indicators are the predominant determinants of per capita income, production and saving. As described in Table 3.8, the total dependent population is 57.42 in this district, and this is greater than that of the State. In the case of work participation rate, it stood at 55.3 for males and 29.6 for females. The respective values for the State were 57.6 and 31.5 respectively.

Table 3.8
Dependency Rate and Work Participation Rate (%) (2001)

S. No	District / State	Dependency Rate			Work Participation Rate		
		Total	Female	Male	Total	Male	Female
1	Cuddalore	57.42	70.37	44.66	42.60	55.30	29.60
2	Tamil Nadu	55.30	68.50	42.40	44.70	57.60	31.50

Source: Census of India, 2001

5. Enrolment of Girls in Primary Schools and Upper Primary Schools

The enrolment of girls in primary schools compared with percentage of enrolment of boys in the district was 95.36 percent and the enrolment in upper primary was 93.74 percent as represented by Table 3.9. The total enrolment of the Cuddalore district is 51.34 percent for male and 48.66 percent for female. The percentages of primary and upper primary are comparably higher than that of State percentage (Primary 93.05, Upper primary 92.19). This denotes the commendable performance of the educational status of the district. On the other hand, the total enrolment rates are more or less equal for the State and the Cuddalore district.

Table 3.9
Enrolment of Girls in Primary Schools and Upper Primary Schools (2004)

S. No.	District / State	Enrolment of Girls in Primary Schools as % of Enrolment of Boys	Enrolment of girls in Upper Primary Schools as % of Enrolment of Boys	Gender–wise Enrolment %	
				Male	Female
1	Cuddalore	95.36	93.74	51.34	48.66
2	Tamil Nadu	93.05	92.19	51.88	48.12

Source: DISE, 2004

6. Crimes Against Women

Crimes against women can be classified into four categories–rape, molestation, dowry death, and kidnapping. In the Cuddalore district, the number of crimes against women has been on the increase from 2001 to 2005. This situation warrants maintaining law and order effectively to control such crimes. In addition, women empowerment needs to be strengthened and civil societies

promoted further in order to fight against crimes. The crime at the district level also conforms to the State situation, where the crime rate has gradually increased between the periods 2001 and 2005.

Table 3.10
Crimes Against Women

S. No	District /State		2001	2002	2003	2004	2005
1.	Cuddalore	Rape	16	27	19	18	32
		Molestation	136	113	73	53	45
		Dowry Death	4	11	10	6	12
		Kidnapping	18	17	10	22	32
2.	Tamil Nadu	Rape	432	547	557	618	571
		Molestation	1773	1866	2022	1861	1765
		Dowry Death	194	247	220	225	215
		Kidnapping	659	720	632	692	863

Source: DIG of Police (Social Justice& Human Rights) Chennai, 2006

7. Health Profile

Usually the District/State health profile is drawn up with the help of birth rates, death rates and infant mortality rates. As seen from Table 3.11, in 2000, the birth, death and infant mortality rates in the district were 20.1, 6.2 and 34.3 respectively against 19.3, 7.9 and 51.0 for the State. In 2005, birth rate, death rate and infant mortality rate of the district were 17.3, 5.7 and 30.8 respectively. If we compare the values for the Cuddalore district with that of Tamil Nadu, the figures stood at a lower level for the State, for the periods 2000 and 2005. It is therefore clearly seen that the health condition has improved significantly over the years.

Table 3.11
Health Profile

S. No	District / State	2000			2005		
		Birth Rate	Death Rate	Infant Mortality Rate (IMR)	Birth Rate	Death Rate	Infant Mortality Rate (IMR)
1	Cuddalore	20.10	6.20	34.30	17.30	5.70	30.80
2	Tamil Nadu	19.30	7.90	51.00	18.30	7.60	43.00
	India	25.8	8.5	68	23.8	7.6	58
	World			56			

Source: Tamilnadu Statistical Hand Book 1999–2000, 2004–2005

8. Literacy Rate

According to the 1991 and 2001 population Census in the Cuddalore district, the literacy rate stood at 58.6 and 71.0 respectively. The literacy rate for the district was significantly lower than that of the State. At the same time, percentage change during 1991 and 2001 was comparably higher in Cuddalore district than the State.

According to the 1991 Census, 71.5 percent of males and 45.2 percent of females were literates in this district. It increased to 81.6 percent for male and 60.3 percent for female in 2001. The improvement in the female literacy is due to the development in the female education front. This situation signifies augurs well for the improvement and gender development in the district.

Table 3.12
Literacy Rate

S. No	District / State	Literacy Rate					
		Total		Male		Female	
		1991[1]	2001	1991[1]	2001	1991[1]	2001
1	Cuddalore	58.60	71.00	71.50	81.60	45.20	60.30
2	Tamil Nadu	62.70	73.50	73.80	82.40	51.30	64.40
	India						

Source: Censuses of India, 1991, 2001
Note : [1]South Arcot District (Cuddalore and Villupuram districts)

8.1. Trend in the Attendance Rate in Schools

An increasing trend in the attendance rate at the primary and upper primary education has been registered in the district from 2002 to 2004. In the primary level, the attendance rate was 88 percent, 91 percent and 93 percent, whereas in the upper primary level the attendance rates were 78 percent, 83 percent and 87 percent in 2002, 2003 and 2004 respectively. The attendance rates in both primary and upper primary schools registered an upward trend.

It is worth mentioning that the attendance rates of the district were lower than those obtained for the State. However, the rate of changes at both the district and State levels shows a good improvement in attendance levels. Due to the efficient performance of the district educational process and regulation, a significant improvement can be seen both at the primary and upper primary levels. The following table 3.13 presents the attendance rate.

Table 3.13
Trend in Attendance Rate

S. No	District / State	Primary			Upper Primary		
		2002	2003	2004	2002	2003	2004
1	Cuddalore	88.00	91.00	93.00	78.00	83.00	87.00
2	Tamil Nadu	91.00	93.00	95.00	88.00	91.00	93.00

Source: DISE Monthly Review Reports

8.2. Pupil–Teacher Ratio (PTR) in Primary and Upper Primary Levels

The pupil–teacher ratio (PTR) is closely associated with the quality of education. If this ratio is lower or higher than that of the norm prescribed, the quality of education will get diluted. Therefore, the human development will get hindered. PTR for both the primary and upper primary levels for the years 2002, 2003 and 2004 is furnished in Table 3.14. In the Cuddalore district, PTR increased from 37 in 2002 to 38 in 2004 at the primary education level. It conforms to the norm stipulated. In the State, at the primary level, the overall PTR has dropped from 41 in 2002 to 36 in 2004. At the upper primary level, the overall PTR has dropped from 49 in 2002 to 46 in 2004, indicating a 3% decrease. At the upper primary level, it reduced from 57 in 2002 to 50 in 2004. The district PTR was greater than that of the State. The Cuddalore district showed a decreasing trend in upper primary level.

Table 3.14
Pupil –Teacher Ratio

S. No	District / State	Primary			Upper Primary		
		2002	2003	2004	2002	2003	2004
1	Cuddalore	37	38	38	57	58	50
2.	Tamil Nadu	41	39	36	49	42	46

Source: DISE Monthly Review Reports

9. Non–availability of Basic Facilities in Schools

Availability of basic facilities in schools such as drinking water, common toilets, and separate toilets for female students etc., determines the quality of education. The number of primary schools without the provision for

drinking water supply in Cuddalore district was 76. During 2004–05, non availability of common toilets was found in 626 primary schools, 152 primary with upper primary schools, 10 upper primary schools with Secondary/Higher Secondary schools.

If we compare the status of the Cuddalore district with that of the State, all the figures were relatively lower. Statistics show that all the schools in this district lack in the basic facilities such as drinking water and toilet facilities. It is obviously inimical to the promotion of school education. The number of primary schools that do not have separate toilet facilities for women in the district is 622, with 118 in primary with upper primary, 8 in upper primary with Sec/Hr. Sec Schools. The corresponding numbers for the State were 21,969, 3,324, 123, 23 and 2,059 respectively.

Table 3.15

Non–availability of Basic Facilities in Schools (2004–2005)

S. No	District / State	Without Common Toilet Facility					Without Girls Toilet Facility				
		Primary	Primary with Upper Primary	Primary with Upper Primary & Sec/H.Sc	Upper Primary Only	Upper Primary with Sec/H.Sc	Primary	Primary with Upper Primary	Primary with Upper Primary & Sec/H.Sc	Upper Primary Only	Upper Primary with Sec/H.Sc
1	Cuddalore	626	152	0	0	10	622	118	0	0	8
2	Tamil Nadu	19921	4609	1348	43	3936	21969	3324	123	23	2059

3.15 Contn...

S. No	District / State	Without Drinking Water Facility				
		Primary	Primary with Upper Primary	Primary with Upper Primary & Sec/H.Sc	Upper Primary Only	Upper Primary with Sec/H.Sc
1	Cuddalore	76	8	0	0	1
2	Tamil Nadu	1710	284	23	0	276

Source: DISE 2004, 2005

Note: Cuddalore district information Comprises of Tribal / Social Welfare Department and Local Body Management Schools. But the State level information is also inclusive of Private Schools and Aided Schools.

The analysis of HDI for Cuddalore district against the HDI for Tamil Nadu reveals that the progress made in Cuddalore is not found gratifying. **The district is trailing behind the State as seen through the prism of all**

development parameters. A strategy needs to be developed for dealing with unemployment and poverty, which are the hardcore problems of the district. To completely wipe out unemployment and poverty, appropriate policies should be evolved thereby leading to sustained economic growth. The ultimate goal is to uplift the people above the poverty line and enable them to get a foothold on the economic development ladder. What is needed today is a broad–based economic development that encompasses multiple sectors, such as agriculture, services and manufacturing. The achievement of 'a more inclusive growth' as envisaged by the Eleventh plan approach paper will be a reality, only when the Human Development goals are achieved at the regional level. This will undoubtedly lead to the enhancement of human capabilities and the consequent increase in the number of opportunities available to the people.

CHAPTER – IV

DIMENSION OF EMPLOYMENT, INCOME AND POVERTY

CHAPTER – IV

DIMENSION OF EMPLOYMENT, INCOME AND POVERTY

The crucial factors that determine human development are the percentage of population employed in productive work, quality of workforce and earning profiles of the workforce, seasonality of work done, etc. Sustained employment means relief from the sense of vulnerability, uselessness and redundancy. Due to lack of formal and technical education, a significant proportion of rural labour force take up low paid wage employment in the agricultural sector. Unemployment brings in great difficulties in their personal lives and crisis in the society. Such a situation results in acute poverty of various dimensions. A close link among income, poverty and employment can hardly be over emphasized. There is no significant change in the structure of employment in the State and the economy registers a declining share of primary sector in the total State Domestic Product (SDP). In the process of decentralized economic transformation one can expect the transfer of labour from the primary sector to the secondary sector and then to the tertiary sector. This chapter analyses the sectoral trend in income and employment in the Cuddalore district.

1. Employment

In 2001, the work force in the Cuddalore district was 9.73 lakhs, i.e., out of the total population, the work force accounted for 42.58 percent. As compared to the State level as a whole (44.67 percent), the Cuddalore district had a lesser percentage of work forces to total population.

Table 4.1
Total Workers and Non–Workers in Cuddalore District

S. No	Category	Cuddalore (Lakh)		Tamilnadu (Lakh)		India (Lakh)	
		2001	%	2001	%	2001	%
1	Workers	9.73	42.58	278.78	44.67	4025.12	39.26
2	Non workers	13.12	57.42	345.27	55.33	6227.39	61.74
Population		**22.85**	**100.00**	**624.05**	**100.00**	**10252.5**	**100.00**
3	Main workers	7.29	74.92	237.57	85.22	3131.73	77.80
4	Marginal workers	2.44	25.08	41.21	14.78	893.39	22.19
Total		**9.73**	**100.00**	**278.78**	**100.00**	4025.12	**100.00**

Source: Census of India, 2001

1.1 The Work Participation Rate and Number of workers in the Cuddalore District

The share of cultivators in the total work force declined over time. The 2001 population census data shows that the rate of agricultural workers' participation in the Cuddalore district was lesser than that for the State. Conversely, it is not the same with respect to non–agricultural labourers. The reason is that the share of salaried employees and self–employed workers is very low and most of the labourers are daily wage earning agricultural labourers.

Work participation rate and number of workers has been explained in table 4.2. According to the 2001 Census, the total work force of the Cuddalore district was 9.73 lakhs (42.6 percent), it comprises 7.29 lakhs of rural work force (47.7 percent) and 2.43 lakhs of urban work force (32.3 percent). The number of workers and work participation rates in rural area was slightly higher than that of urban area. It clearly explains the ground reality of the regions of urban and rural areas in the juncture of work participation rate. If we compare the work participation rate by gender, the male population (male: 55.3 percent, female: 29.6 percent) has dominated as a hole. But in urban area the female work participation rate (male: 52.1 percent, female: 12.3 percent) was low as compared to male work participation rate. If we made the comparative analysis in between state and district, a similar trend can be seen.

Table 4.2

District Worker Participation Rate and Number of Workers – 2001

Particulars	Cuddalore		Tamil Nadu	
	Workers Participation Rate (WPR) (percentage)	Workers (Lakhs)	Workers Participation Rate (WPR) (percentage)	Workers (Lakhs)
Rural				
Male	57.00	4.39	59.10	103.61
Female	38.20	2.90	41.40	71.99
Persons	47.70	7.29	50.30	175.6
Urban				
Male	52.10	1.97	55.80	77.40
Female	12.30	0.46	18.90	25.79
Persons	32.30	2.43	37.50	103.19
Total				
Male	55.30	6.36	57.60	181.00
Female	29.60	3.36	31.50	97.78
Persons	42.60	9.73	44.70	278.78

Source: Census of India, 2001

1.2 Scenario on the District Employment Exchange

Table 4.3 presents employment and registration figures obtained from the Directorate of Employment and Training at Chennai for the period up to 1.04.2004. The figures show that only 749 people got employment against the total number registered during the reporting period. For Tamil Nadu as a whole, a larger number of people 31,548 got employment through registration.

Table 4.3
Details of the People Registered in the District Employment Exchange up to 01.04.2004

S. No	Particulars	No. of People Registered in the Chennai Employment Exchange	No. of People Received Employment from the Chennai Employment Exchange	Registered and Waiting for Employment in the District Employment Exchanges
1	Cuddalore	5395	749	189719
2	Tamil Nadu	43717	31548	4985289

Source: Directorate of Employment and Training, Chennai, 2005

1.3 Classification of Workers in Total Work Force

According to the 2001 Census, Table 4.4 reveals that 19.1 percent were cultivators, 46.17 percent agricultural labourers, 3.13 percent family business and production–oriented workers and 31.6 percent constituted the other workers. The percentage of agricultural labourers was conspicuously higher than the corresponding figure for Tamil Nadu; which stood at 30.98 percent. In family business and other related employment, the Cuddalore district fell behind the State. The reason is that the district does not have any strong manufacturing base and most of the work force relies on agriculture. As a result, the district has less per capita income and more economic vulnerabilities.

Table 4.4
Classification of Workers by Occupation – 2001
(Main and Marginal Workers Combined)

S. No	Nature of occupation	Cuddalore (Lakhs)		Tamilnadu (Lakhs)	
		2001	% (share)	2001	% (share)
1	Cultivators	1.86	19.10	51.16	18.35
2	Agriculture workers	4.49	46.17	86.38	30.98
3	Business, Etc	0.30	3.13	14.99	5.38
4	Others	3.08	31.60	126.25	45.29
	Total	**9.73**	**100.00**	**278.78**	**100.00**

Source: Census of India, 2001

1.4 Composition of Main Workers by Occupation

The detail of main workers by occupation has been given in table 4.5. According to 2001 Census of the total workers, the share of main workers in Cuddalore district was 74.92 per cent (see table 4.1), while it was larger (85.22 per cent) for Tamil Nadu. Among the categories of various occupations (see table 4.5), concentration of other workers population (38.3%) is high. In the Cuddalore district, the share of cultivators and agricultural workers in rural area (cultivators: 30.3%, agricultural labourers 46.8%) was relatively high as compared to urban (cultivators: 3.5%, agricultural workers12.0%). But, those who depend on family-based employment, production-based employment and other labourers had a higher share in the urban areas as compared to the rural areas. Considering the share of female workers, it was lower than that of male workers. The same trend has been revealed in the state's main workers population.

Table 4.5
Composition of Main Workers by Occupation

Area		Total Main Workers			Cultivators (%)			Agricultural Labourers (%)			Workers in Household Industries (%)			Other Workers (%)		
		Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
Cuddalore	Total	729,764	527,108	202,656	22.4	22.6	22.0	36.5	29.9	53.8	2.8	2.4	3.8	38.3	45.2	20.4
	Rural	514,015	347,093	166,922	30.3	32.4	26.0	46.8	40.3	60.3	2.4	2.2	2.9	20.4	25.1	10.7
	Urban	215,749	180,015	35,734	3.5	3.6	3.0	12.0	9.7	23.6	3.7	2.9	7.9	80.8	83.8	65.5
Tamil Nadu	Total	23,757,783	16,303,310	7,454,473	19.9	19.1	21.9	25.5	20.1	37.4	5.3	3.6	8.9	49.2	57.2	31.8
	Rural	14,290,543	9,039,189	5,251,354	30.9	31.9	29.2	36.4	30.6	46.3	4.8	3.5	7.1	27.9	34.0	17.4
	Urban	9,467,240	7,264,121	2,203,119	3.4	3.1	4.5	9.1	7.0	16.2	6.1	3.9	13.3	81.4	86.1	66.0

Source: Census of India 2001

1.5 Percentage of Marginal Workers by Occupation

The composition of marginal workers by occupation, comparison between district and state has been explained in table 4.6. Of the total workers, share of marginal workers of the Cuddalore district was higher than that of marginal workers in Tamil Nadu. It stood at 25.08 percent and 14.78 percent respectively in Cuddalore and Tamil Nadu (See table 4.1). According to the statistics based on occupation, agricultural labourers (75.1%) is higher than that of other working groups like cultivators (9.2%), household industries (4.1%) and other workers (11.6%) as such. The region–wise values show that the share of marginal workers is more pronounced in rural areas as compared to urban areas. The values based on gender reveals that the share of females is more than that of the males. This situation of gender deviation in marginal workers is vigorously opposite to the main workers population

Table 4.6
Composition of Marginal Workers by Occupation

Area		Total Marginal Workers			Cultivators (%)			Agricultural Labourers (%)			Workers in Household Industries (%)			Other Workers (%)		
		Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
Cuddalore	Total	243,302	109,803	133,499	9.2	9.9	8.7	75.1	70.1	79.2	4.1	2.3	5.6	11.6	17.7	6.6
	Rural	215,726	92,653	123,073	10.0	11.2	9.2	79.3	76.4	81.5	3.9	2.1	5.2	6.8	10.3	4.1
	Urban	27,576	17,150	10,426	2.9	3.1	2.6	42.2	36.2	52.1	5.8	3.3	9.9	49.1	57.4	35.4
Tamil Nadu	Total	4,120,499	1,797,087	2,323,412	9.2	8.6	9.6	62.5	54.7	68.5	5.8	3.0	7.9	22.6	33.7	14.0
	Rural	3,269,225	1,321,537	1,947,688	10.9	11.0	10.8	71.4	66.1	74.9	4.8	2.7	6.2	12.9	20.1	8.0
	Urban	851,274	475,550	375,724	2.4	1.9	3.0	28.3	22.9	35.2	9.5	3.9	16.7	59.7	71.4	45.0

Source: Census of India 2001

Box : 4.1 An Overview of the National Rural Employment Guarantee Act

The National Rural Employment Guarantee Act (NREGA) was introduced to eradicate poverty and generate gainful employment in rural areas. Under this Act, gainful employment is provided during the slack season to the rural poor, directed towards constructing assets of durable nature. This Scheme offers employment to two members of each BPL family. The Central and State Governments share the cost of the programme on 90:10 basis.

In Tamil Nadu, the Act is being implemented in the name of Tamil Nadu Rural Employment Guarantee Scheme (TNREGS). Cuddalore is one among the six districts where the TNREGS is being implemented at the first phase. The TNREGS faces some problems in implementation in the choice of workers and selection of works because works are undertaken at peak agricultural season, and people do not come forward to be employed under TNREGS. As a result, works are carried out during the rainy season. This affects the quality of works undertaken. For this reason, the Government has streamlined the working of the scheme by way of timely release of funds and undertaking works during off–season.

The team conducted Focus Group Discussions (FGDs) and interviews in all the blocks in the Cuddalore district. The FGDs brought to focus the deficiencies in the functioning of TNREGS. It was reported that under the Food for Work Programme, large amounts of money was spent illegally for obtaining the contracts. In addition to this, they used machines for doing works to save time and money. This practice defeats the very spirit of the programme. The contractors were also involved in suppressing the facts during inspections conducted by competent officers. On the contrary, the contractors opined that work satisfaction was high, if machines were used instead of manual labour. Under the Food for Work Programme, Rs.54 is given as wages per day, while the relative wages in other works is higher, in the range of Rs.100–120 per day. Therefore, people do not come forward to do work under this programme. TNREGS too is facing problems of a similar kind, as more rice was given under the Food for Work Programme, and there was pilferage of rice to black and open markets.

Constraints faced by the Food for Work Programme and TNREGS mirror the ineffective implementation of the programmes and lack of peoples' participation. Therefore, the district authorities and DRDA should adopt corrective measures to fine–tune the working of these programmes and see that the objectives fructify.

Source: Project Officer DRDA, Cuddalore and Focus Group Discussion, 2006

1.6 Child Labour

Child labour is nearly eradicated in Cuddalore District through the Government's special initiatives such as Sarva Shiksha Abhiyan (SSA), Mid–

day Meal Scheme, Free Meal, Uniform, Free Supply of textbooks and Female Child Development schemes.

1.7 Status of Child labour in the Cuddalore District

Brain development in children within the age of 5–14 is very fast. Child labour stunts their mental and physical growth and lowers their learning curve and productive capacity. Therefore, child labour has always been condemned and laws have been enforced to abolish the problem in different ways at different points of time. According to the Indian Constitution, under sub–section 24, employment of children below 14 years of age in industries, mining and other hazardous jobs is strictly prohibited. Under sub–section 39, children are not to be misused for the sake of economic reasons and are not to be compelled to work in any occupation, unsuitable for their age and capacity. Children are to be protected from selfish use for economic and social reasons. In the Cuddalore district, the incidence of child labour in the unorganized sector was estimated at 0.14 percent (Table 4.7). They were employed in own family–based occupations as trainees and in industries. In 2006, according to the Cuddalore Labour Officer's claim, child labour in the district has been completely eradicated.

Table 4.7
Magnitude of Child Labour in the Cuddalore District

S. No	District / State	5–8 Age Group	9–14 Age Group	Total	Percentage to State
1	Cuddalore	0.00	95	95	0.14
2	Tamilnadu	7700	62644	70344	100

Source: State Child Labour Rehabilitation cum Welfare Society – 2004
http://intra.tn.nic.in/childlabourpdl

Box : 4.2 Swaranajayanthi Gram Swarozgar Yojana (SGSY)

The objective of SGSY is to bring the self employed above the poverty line by providing income–generating assets through bank credit and bank subsidy. This programme is an integration of all earlier self–employment programmes viz: IRDP, DWCRA, TRYSEM, SITRA, GKY and MWS. The Centre and the State share the cost of the programme in the ratio 75:25. Micro credit and micro finance are the lifeblood of the programme. Under the programme, the distribution of beneficiaries will be SC/ST (50 percent), women (40 percent), physically handicapped (3 percent).

The first Self Help Group (SHG) was formed in Thokanampakkam in 2002 with 14 members. They received training in capacity building and in other spheres. In due course, a number of SHGs were formed in other areas. They purchase raw materials, manufacture the products and market them successfully. Profits realized

by the SHG are sustained. Mostly, NGOs are involved in forming SHGs and integrating them methodically. The government has been underpinning SHGs with the provision of a Revolving Fund of Rs 12,000. At present, the SHG comprises both male and female members.

Effective training for capacity building, identification of niche market for the products manufactured and team sprit are prerequisites for effective working of the SHGs.

Source: Project Officer DRDA, Cuddalore, 2006

2. Identifying BPL Population

The Union Ministry of Rural Development initiated an alternative method for identifying the poor. The identification is based on 13 scorable indicators. The objective of the survey is to identify the target groups for poverty reduction programme.More details are provided in Box 4.3

2.1 Magnitude of Poverty by Block

Based on the above definition, 21.42 percent of the total population in Tamil Nadu came under the poverty line, i.e. 13.05 million people were below the poverty line. For the last few decades, the ratio of people living below poverty and percentage of population has been on the decrease considerably. Forty-three percent of population lived below the poverty line in 1987–1988. In 1999–2000, it had come down to 21.42 percent.

Table 4.8
BPL Households by Block – 2005

S. No.	Name of the Block	Total Population	Total Number of Households	Number of BPL Households	Percentage
1	Annagrammam	128576	35067	11710	33.39
2	Cuddalore	186367	51739	16310	31.52
3	Kammapuram	141828	41229	13557	32.88
4	Kattumannarkoil	128945	29094	9536	32.78
5	Keerapalayam	107374	36184	11474	31.71
6	Kumaratchi	128364	28977	9203	31.76
7	Kurinjipadi	202513	36963	11078	29.97
8	Mangalore	146658	42238	12991	30.76
9	Melbhuvanagiri	105822	22939	7674	33.45
10	Nallur	134895	33661	11534	34.27
11	Panruti	267238	40568	12263	30.23
12	Parangipettai	123505	22950	7880	34.34
13	Virudhachalam	107211	31659	10373	32.76
Total		**1909296**	**453268**	**145583**	**32.12**

Source: Project Officer DRDA, Cuddalore, 2006

Table 4.8 shows the extent of people living below the poverty line in the 13 blocks of the Cuddalore district. Some of the blocks having the poverty level above the average of Cuddalore district (32.12 %) were Virudhachalam (32.76%), Annagrammam (33.39%), Kattumannarkoil (32.78%), Nallur (34.27%), Parangipettai (34.34%), Melbhuvanagiri (33.45%) and Kammapuram (32.88%). However, in Kurinjipadi (29.97%), Panruti (30.23%), Mangalore (30.76%), Kumartchi (31.76%), and Keerapalayam (31.71%) blocks, poverty level is lower than the average for the Cuddalore district. This table draws our attention to the fact that 13 blocks need eradication of poverty by the implementation of intensive wage and self employment oriented programmes. Even among these blocks, seven blocks need a still greater focus due to the incidence of poverty in these blocks being higher than that of the District as a whole.

2.2 Magnitude of Poverty by Municipality

Of the five municipalities, the Nellikuppam municipality had 49 percent of people living BPL; followed by Nellikuppam, the Chidambaram municipality had a BPL population of 44.64 percent. The other three municipalities –Cuddalore (37.97%), Virudhachalam (39.77%) and Panruti (40.29%) recorded the incidence of poverty below the urban average (40.95%).

Table 4.9
BPL Households by Municipality (2005–2006)

S. No.	Name of the Block	Total Number of Population	Total Number of Households	Number of BPL Households	Percent age
1	Chidambaram	57733	12866	5744	44.64
2	Cuddalore	158634	34461	13085	37.97
3	Nellikuppam	44222	9643	4725	49.00
4	Panruti	55346	11638	4689	40.29
5	Virudhachalam	60164	12770	5078	39.77
Total		**376099**	**81378**	**33321**	**40.95**

Source: Municipal Commissioners, Five Municipalities of Cuddalore District, 2006

A brief critique of the methodology used in identifying the BPL is given in box 4.3.

Box : 4.3 Evaluation Methodology followed in Identifying BPL Population

Incidence of poverty is a thorny problem. The level of poverty differs across the States and Districts. Difficulties arise in the determination of poverty line and identification of BPL population. As per the World Bank yardstick, those who do not earn 1$ per day in developing country and those who do not earn 2$ per day in developed country are considered BPL population. The Union Planning Commission fixes a norm on the basis of calorie intake. Based on the calorie intake, poverty is defined in terms of per capita expenditure corresponding to per capita daily requirements of 2400 calories in rural areas and 2100 calories in urban areas. The entire process of poverty estimation is featured by arbitrariness and manipulations. The consumption basket based on the needs of families is an outdated one. To overcome these problems, an alternative method for identifying BPL population has been suggested by the Union Ministry of Rural Development in 2002. It has suggested to include the following parameters:

- Size of operational holdings
- Type of house
- Availability of clothing
- Food security
- Sanitation
- Ownership of consumer durables
- Literacy Status
- Status of household labour force
- Means of livelihood
- Status of children (5–14 years)
- Type of indebtedness
- Reason for migration from household
- Preference of assistance

Thirteen indicators with four sets of answers carry points between 1 and 4. From these points, an aggregate score value has to be worked out. The maximum aggregate score is 52 (13 x 4).

Poverty line is used as a tool for targeting the Government benefits and provision of social goods and subsidies by the State and Central Governments. Percolation of benefits to the under–privileged people equitably is indispensable. For the implementation of employment and poverty eradication programmes effectively, the definition of poverty line or cut off point is to be flawless, scientific, rational and just.

Source: Project Officer, DRDA, Cuddalore, 2006 and Focus group Discussions, 2006

2.3 Magnitude of Rural and Urban Poverty

The magnitude of rural and urban poverty can be understood from the values presented in Table 4.10. The extent of poverty stood at 40.95 percent in municipalities and 32.12 percent in blocks. The incidence of poverty is more striking in municipalities than in blocks.

Table 4.10
Rural and Urban Poverty – 2006

S. No.	Particulars	Total Number of Population	Total Number of Households	Number of BPL Households	Percentage of BPL Households
1	Blocks	1909296	453268	145583	32.12
2	Municipalities	376099	81378	33321	40.95
Total		**2285395**	**534646**	**178904**	**33.46**

Source: Project Officer DRDA, Cuddalore, 2006

3. A Comparison of State Per Capita Income with the District

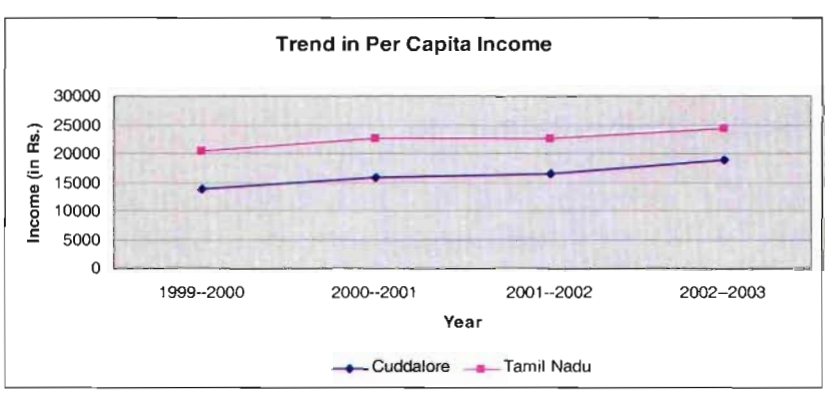
The per capita income of a place is an approximate measure of its economic welfare. The per capita income of Tamil Nadu was showing an increasing trend from 1999–2000 to 2002–03. In 1999–2000, the per capita income of Tamil Nadu was Rs. 20,579 and it rose to Rs. 24,578 in 2002–2003. Although the same trend was registered by the Cuddalore district from 1999–2000 to 2002–03, the district gained only to a lesser extent as compared to the State (see Table 2.9). Figure 4.1 shows the trend in per capita income in the Cuddalore district. With a view to raising the per capita income in the district, the yield rate in agriculture has to be increased with the adoption of modern technology. A detailed discussion on making agriculture a still better and more remunerative source of livelihood follows next.

Box: 4.4 People's Perception about Poverty Estimate

In this connection, we conducted a number of FGDs bringing together a cross–section of the population such as members of NGO's, Village Panchayat Presidents, Officials of Municipalities, Municipal Chairmen, Government Officials and beneficiaries. Of them, 90 percent reported that the method of identifying the poor was not appropriate, due to lack of adoption of proven guidelines. To identify the people below the poverty line, the Revenue Department Officials (Village Administrative Officer) and the Rural Development Officers combined together should prepare the list of the BPL population, adopting fool–proof norms.

Source: Focus Group Discussion, 2006

Figure 4.1



Box : 4.5 The World Bank Aided Vazhndhu Kaattuvom Project

The Government of Tamil Nadu is committed to addressing inequity and alleviating poverty by implementing various developmental schemes. While Mahalir Thittam and other initiatives have been successful in mobilising and forming SHGs comprising the poor, more efforts are required to:

- Include the poorest of the poor in the SHG movement.
- Strengthen existing SHGs by building their skills, capacities and resources to make them self–sufficient and sustainable.
- Provide financial resources and linkages for enhancing the livelihoods of SHG members, thereby generating significant increase in their incomes.
- Promote stronger linkages between SHGs and Village Panchayats.

With these objectives in mind, the Government of Tamil Nadu prepared a concept note on "Tamil Nadu Poverty Reduction Initiative" in 2000–01. Based on this concept, the Vazhndhu Kaattuvom Project was prepared and submitted to the World Bank for assistance. This project was approved by the World Bank in July 2005 and launched in November 2005. This project will be implemented over a 6–year period with the World Bank assistance. The total outlay of this project is Rs.717 crores. This Project is a community–driven development–based project with a shift in focus from group formation and social empowerment of Mahalir Thittam to livelihood promotion and economic empowerment. The target population of this project will primarily be very poor households, the most vulnerable sections, marginalized communities and the physically challenged. The targeting will be based on participatory identification of the poor from the above categories.

Project Area

The Project will be implemented in 2432 Village Panchayats in 70 backward Blocks spread over 15 districts. Cuddalore is one among the districts where this project will be implemented. The project Blocks and districts have been selected based on the following criteria:

- 50% weightage accorded to percentage of SC/ST population of the Blocks.
- 50% weightage given to the Below Poverty Line population.

Forming and Strengthening Village Institutions

The initial project activities such as communication campaigns, participatory identification of the poor, formation of Village Poverty Reduction Committee (VPRC) and formation of Self Help Groups of the remaining poor people are undertaken in this component.

Source: Project Officer, Vazhndhu Kaattuvom, Cuddalore, 2006

4. Agriculture and Livelihood Strategies for the Cuddalore District

4.1. Agro–climatic Zones and Soil Types

There are seven agro–climatic zones in Tamil Nadu. The Chidambaram and Kattumannarkoil taluks of the Cuddalore district come under the Cauvery delta zone, while the remaining taluks are under the North–Eastern agro–climatic zone. The soil types of the district are red loam, laterite soil, black soil and sandy coastal alluvium. The Panruti, Kurinchipadi and Vridhachalam taluks

consists of red loamy soil. The Vridhachalam and Thittakkudi taluks have laterite soil. Black soil is prevalent in Kattumannarkoil, Cuddalore and Chidambaram taluks. Sandy coastal alluvium is found in the Cuddalore, Kurinjipadi and Parangipettai taluks.

4.2. Block–wise Agricultural Development Indicators: Rainfall, Total Cropped Area and Irrigated Area.

Table 4.11 portrays the block–wise Agricultural Development Indicators such as total cropped area, rainfall and irrigated area. The total cropped area ranges in between 13,917 and 30,458 hectares of the Parangipettai and Kurinjipadi blocks respectively. A significant difference is observed among the blocks due to variations in the administrative area and topography of the blocks.

The Cuddalore district receives an annual rainfall of about 1090 mm. Almost two–thirds (62.88%) of its rainfall is received during North East Monsoon and 28.99 percent during the South West Monsoon. These two account for 92 percent of the annual rainfall. Rainfall during the hot weather season and winter is meagre. The coastal belt of the Cuddalore district falls under the high rainfall region, whereas the western parts of Cuddalore district are classified under the medium rainfall region.

A significant reduction in the area of irrigation can be seen in all the blocks. It ranged in between 8935 and 21,221 hectares of the Panruti and Kurinjipadi blocks respectively. A detailed analysis can be seen in table 4.11.

Table 4.11

Block wise Agricultural Development Indicators

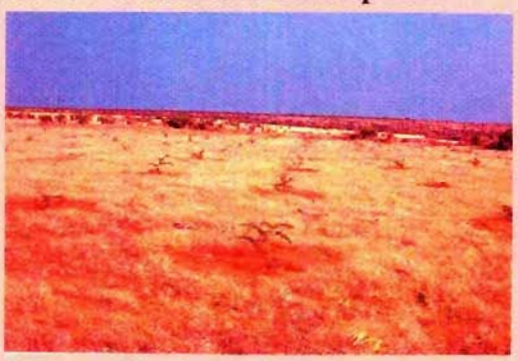
S.No.	Blocks	Total Cropped Area(in hec)	Average Rain Fall for Last Six years(in m.m)	Area Irrigated (in hec)
1	Annagrammam	15826	967.93	15230
2	Cuddalore	23600	1141.20	19477
3	Kammapuram	20199	981.00	14139
4	Kattumannarkoil	20552	825.34	14785
5	Keerapalayam	22946	1197.79	16386
6	Kumartchi	18654	1371.80	12243
7	Kurinjipadi	30458	1038.60	21221
8	Mangalore	25489	827.27	9942
9	Melbhuvanagiri	22244	1371.80	13479
10	Nallur	19412	838.00	12410
11	Panruti	24119	967.93	8935
12	Parangipettai	13917	1587.80	9511
13	Virudhachalam	19438	1052.50	13034
All		**276854**	**1089.92**	**180792**

Source: 1. Annual Credit Plan 2005–2006, Indian Bank, Lead Bank Department, Cuddalore.
2. Project Officer DRDA, Cuddalore (2005–2006).

4.3. Area and Production of Food Crops and Oil seeds

The district has an area of 1,15,000 hectares under cereals and millets, 33,000 hectares under pulses and 38,000 hectares under oil seeds. It has an annual harvest of 3,32,000 tons of cereals and millets, 11,000 tons of pulses and 72,000 tons of oil seeds. Paddy is the major crop under cereals and millets, while black gram is the major crop under pulses. Apart from this, fruits and vegetables are also grown over an area of 44,000 hectares.

Box : 4.6 Waste Land Development



We should not understate the potentialities of the agricultural sector. The Cuddalore district is agrarian in nature where paddy, groundnut, tapioca, jackfruit, coconut, cashewnut and sugarcane crops are being cultivated predominantly over an area of 2,43,000 hectares out of the total cultivable area of 2,97,000 hectares. The rest of the areas in this district are wasteland.

Eventhough we have already attainted self–sufficiency in food production, it is indispensable to realize the full potential output. Uncultivable lands should be converted into cultivable land either by individuals or on a group basis. Vast areas of wasteland should be brought into cultivation through a package treatment. Development of wasteland will improve agriculture production and generate new employment opportunities in rural areas. Cultivable wasteland is around 6,600 hectares apart from current fallow land of 14,944 hectares in the Cuddalore district. Land development activities comprise land leveling, bending, soil conservation, reclamation of saline and alkaline soils, water management, and waste land development. The district has an area of 59,270–hectares fallow land, which offers good potential for bringing some of the areas under cultivation with proper treatment. The predominant types of soils found in the district are red soil, red loam, clay loam, and sandy loam.

Efficient management of land is a prerequisite for achieving higher production in agriculture. Substantial increase in the production and yield rate can be achieved by systematic treatment of land. The Government of India has evolved the following strategies towards this.

Waste Land Development Activities

The State is implementing the Waste Land Development Programme on watershed basis with the help of the Agriculture Engineering Department Under National Watershed Development Programme for Rain fed Areas (NWDPRA). The State Government is undertaking soil and water conservation works at 12 micro watersheds in the Cuddalore district.

The Comprehensive Watershed Development Programme (**CWDP**) is under implementation in 18 watershed areas spread over the Mangalore, Nallur, and Virudhachalam blocks of the district. The major activities undertaken include clearance of bushes, land leveling, sinking of deep tube wells, and rising of plantation. This programme was also extended into three more blocks viz, Cudddalore, Kurinjipadi, and Parangipettai.

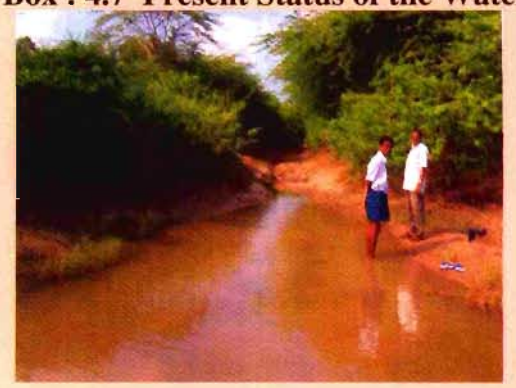
The Integrated Waste Land Development Programme (**IWDP**) is also under implementation in the Cuddalore and Panruti blocks in the district covering 9 micro watersheds with an aggregate area of 5580 hectares. Major activities undertaken are construction of ponds, percolation of tanks, renovation of channels, and construction of retaining walls, land leveling, contour bunding, etc. Large areas could be used for soil and water conservation, which may provide additional irrigation facilities and enable to bring more area under cultivation. In order to overcome the problem of landlessness, the present State Government has been distributing waste land free of cost to the poor and has allotted two acres of waste land to the landless labourers. These lands have unique property rights, which are not transferable. Under the 1st phase of the programme, 7482 landless labourers have received 2 acres of land each.

Source: Project Officer, DRDA, Cuddalore, 2006

4.4. Operational Holdings

Analysis of the data relating to a number of operational holdings of the Cuddalore District during 2004–2005 reveals that there were 2,97,836 land holders. Among them, 95.70 percent of the landholders possessed less than three hectares and 77.79 percent less than one hectare. The number of landholders with holdings of 3.0–7.5 hectares was 11,147 (3.74%). There were 711 (0.24%) landholders who possessed more than 10 hectares. In terms of the area of the operational holdings of the district, there were 2,39,277 hectares. Out of this, 75 percent of the area was constituted by holdings of less than three hectares and 34.69 percent of the area by holdings of less than one hectare. The holdings of 3.0–7.5 hectares accounted for 20.37 percent of the area. The proportion of holdings that were more than 10.0 hectares was only 4.63 percent. All the above data reveal that there is asymmetry in the distribution of land holdings.

Box : 4.7 Present Status of the Water Resources



The Cuddalore district is located at the tail end of the Cauvery Delta which is the main water source for the district. The Cuddalore district has as many as 188 big tanks and 404 small tanks which include Veeranam, Walaja, Perumal Lake and Wellington Lake.

Agriculture is the backbone of the economy providing employment to a majority of the workforce in the district. To understand the present status of the water tanks, FGDs were held with the beneficiaries of the tanks, officials of the departments concerned and water resource experts. The FGDs covered all the blocks of the district, and this brought to focus certain important problems related to maintenance and use of water tanks.

Veeranam (Kattumannarkoil) is the major source of water for the district irrigation. Deepening and repairing of the bunds of the lake were carried out after a long period of time. The depth of the lake has become shallow due to accumulation of silt during floods. Due to this problem, the available water could not be impounded and used in an optimum manner. At the time of floods, it is impossible to regulate the excess water because the lake does not have multi–drainage channel facility. In addition to this, the Veeranam lake is the main source of providing drinking water to the Chennai city through the New Veeranam Project. Unless the lake is deepened, and strengthened the ground water table in the vicinity will go down. Ultimately people will face shortage of water for drinking and irrigation purposes. Under such circumstances, the lake must be strengthened, deepened and protected. Multi–drainage channel facility must be provided and bunding of the lakes should be taken up. If we convert Veeranam as a tourist centre, the lake can be maintained properly from the additional revenue received thereof.

Karkudal lake (Kammapuram Block) Anngramam lake (Annagramam Block), Walaja Lake, Perumal Lake (Kurinjipadi Block) and Pinnaloore lake (Melbhuvanagiri Block) are cases in point for the encroachment of channels and

bunds of the lakes. So the preventing encroachments and strengthening water sources become highly imperative. Most of the small ponds and their source canals are fully and partially encroached. During summer, when the source canals and bunds are dried up, the people who live near the canals and ponds encroach them. This unchecked encroachment entirely disturbs the purpose of the water bodies. We noticed such instances in Aathinarayanapuram at Kurinjipadi block, Nattarmanagalam Village at Kattumannarkoil Block, Nallur source channel at Keerapalayam Block.

Wealthy farmers and socio–politically powerful persons also encroach the water catchments area of the lake and cultivate the same during summer. During the rainy season, these farmers protect their crops by illegally reducing the water–level of the lake, thereby damaging the bunds of the lake. These encroachments involve a lot of social costs.

Hence, it is suggested that such practices should be totally averted. The usage of ground water has increased over the years. Over exploitation of ground water leads to other problems such as salinity. The authorities of the district need to take suitable steps to regulate ground water exploitation. The promotion of awareness about protection of ground water is essential. Surplus water needs to be harvested. Water wastage should be identified and arrested. Creation of new water sources (example Kelamampattu–Panruti Block) is to be made. Establishment of check dams in river will help to sustain the ground water table. For example, a check dam could be constructed at the intersection of Penniyar and Malatar – Annagramam Block. The encroachments of ponds and source channels and lakes create heavy damages during the rainy season. Repair work and rehabilitation of these damages cause expenditure to the district administration. Therefore, ground water protection and removal of encroachments are needed to augment the availability of water in the district. The new Act on protection of water bodies introduced in the State assembly has to be implemented immediately to sustain the water bodies.

Source: Block Level Focus Group Discussion and Project Officer, DRDA, Cuddalore, 2006

4.5. Cropping Pattern and Crops

Paddy (Kuruvai), Paddy (Samba) and pulses are the staple crops grown in the Chidambaram and Kattumannarkoil taluks. Oilseeds also find a place in the cropping pattern of the district mainly during December–March. Millets are grown in the Cuddalore, Panruti and Vridhachalam taluks. Sugarcane also finds a place in the Kattumannarkoil and Vridhachalam taluks.

Paddy is cultivated during the *samba* season (August–January) in all the blocks of the district, while the Mangalur and Nallur blocks raise late samba crops. During the *navarai* season (February–April), paddy is cultivated in the Cuddalore, Annagramam, Panruti, Vridhachalam, Mangalur and Nallur blocks. *Sornavari* (April–July) paddy is cultivated in the Cuddalore, Annagramam, Panruti and Vridhachalam blocks, while Kuruvai (June–July) cultivation is prevalent in the Kurinjipadi, Keerappalayam, Melbhuvanagiri, Parangippettai, Kattumannarkoil, Kumaratchi and Kammapuram blocks. Pulses are being cultivated during December–February in the Cuddalore, Kurinjipadi, Annagramam, Panruti, Melbhuvanagiri, Parangipettai, Kattumannarkoil, Kumaratchi, Vridhachalam, Kammapuram, Mangalore and Nallur blocks. Rice and pulses are popular in the Keerappalayam block. Black gram is cultivated under irrigated condition over an area of about 32,000 hectares and green gram in about 3,500 hectares. The Melbhuvanagiri and Kumaratchi blocks are in the lead in black gram production, and that too under un–irrigated conditions. The Melbhuvanagiri and Kammapuram blocks lead the way in green gram production. Red gram cultivation is only around 665 hectares in the district and the Mangalore block is the vanguard in Red gram production with an area of 588 hectares during 2004–2005.

The District has about 30,000 hectares of sugarcane. Annagramam, Nallur, Kurinjipadi and Vridhachalam play the leading role in terms of sugarcane production. Sugarcane is grown in considerable areas of the Panruti, Cuddalore, Keerapalayam, Kammapuram, Mangalore and Kattumannarkoil blocks. Cotton is also cultivated in the Cuddalore, Annagramam, Panruti, Keerapalayam and Melbhuvanagiri blocks. Groundnut is the major oilseed crop grown almost equally under both irrigated and un–irrigated conditions over a total area of about 20,000 hectares. It is grown in the Cuddalore, Kurinjipadi, Anngramam, Panruti, Keerappalayam, Melbhuvanagiri, Parangipettai, Kattumannarkoil, Kumaratchi and Kammapuram blocks during December–March. It is raised in December–March as well as during April–May in the Vridhachalam block. It is grown in the Mangalore and Nallur blocks during June–July. Mangalore (4462 ha.) and Vridhachalam (3034 ha.) has larger area under un–irrigated groundnut cultivation, whereas the Kurinjipadi block devotes more area (3242 ha.) for irrigated groundnut cultivation. Gingili is another important oilseed crop. Nallur has an area of about 2000 hectares under gingili cultivation, largely under un–irrigated conditions. The Cuddalore and Kurinjipadi blocks have considerable areas under coconut cultivation.

4.6 Irrigation Sources

The irrigation sources and irrigated area has significantly differed in various blocks of the Cuddalore district. The Cuddalore, Virudhachalam,

Annagrammam, Panruti and Mangalore blocks are purely dependant on ground water sources. Kurinjipadi, Melbhuvanagiri, Kumartchi and Kattumannarkoil blocks depend on both river and tank irrigation sources. Table 4.12 explains the major irrigation sources and irrigated area.

Table 4.12 Irrigation Sorces and Irrigaton Area 2005-0

S.No.	BLOCK	No. of Canals	Irrigated Area (in hec)	No. of Tanks	Irrigated Area (in hec)	No. of Deep Bore wells	Irrigated Area (in hec)	Area of Other Sources (in	Total Irrigated Area(in hec)
1	Annagrammam	2 (0.74)	0 (0.00)	18 (3.04)	0 (0.00)	4518 (12.62)	15230 (13.36)	0 (0.00)	15230 (8.42)
2	Cuddalore	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	6185 (17.28)	19477 (17.08)	0 (0.00)	19477 (10.77)
3	Kammapuram	8 (2.96)	1612 (3.29)	36 (6.08)	1364 (17.08)	3375 (9.43)	11163 (9.79)	0 (0.00)	14139 (7.82)
4	Kattumannarkoil	49 (18.15)	7340 (14.98)	16 (2.70)	375 (4.70)	1954 (5.46)	6990 (6.13)	80 (0.82)	14785 (8.18)
5	Keerapalayam	50 (18.52)	8731 (17.82)	1 (0.17)	181 (2.27)	1957 (5.47)	7156 (6.28)	318 (3.25)	16386 (9.06)
6	Kumaratchi	57 (21.11)	9795 (19.99)	1 (0.17)	76 (0.95)	1754 (4.90)	2232 (1.96)	140 (1.43)	12243 (6.77)
7	Kurinjipadi	23 (8.52)	4042 (8.25)	103 (17.40)	4575 (57.28)	3267 (9.13)	12604 (11.06)	0 (0.00)	21221 (11.74)
8	Mangalore	1 (0.37)	88 (0.18)	51 (8.61)	234 (2.93)	1885 (5.27)	2259 (1.98)	7361 75.20	9942 5.50
9	Melbhuvanagiri	35 (12.96)	8034 (16.39)	5 (0.84)	155 (1.94)	2452 (6.85)	5192 (4.55)	98 (1.00)	13479 (7.46)
10	Nallur	6 (2.22)	1029 (2.10)	162 (27.36)	456 (5.71)	2480 (6.93)	9912 (8.69)	1013 (10.35)	12410 (6.86)
11	Panruti	1 (0.37)	90 (0.18)	16 (2.70)	437 (5.47)	3358 (9.38)	8408 (7.37)	0 (0.00)	8935 (4.94)
12	Parangipettai	36 (13.33)	8109 (16.55)	1 (0.17)	134 (1.68)	554 (1.55)	1138 (1.00)	130 (1.33)	9511 (5.26)
13	Virudhachalam	2 (0.74)	136 (0.28)	182 (30.74)	0 (0.00)	2055 (5.74)	12250 (10.74)	648 (6.62)	13034 (7.21)
Total		**270 (100)**	**49006 (100)**	**592 (100)**	**7987 (100)**	**35794 (100)**	**114011 (100)**	**9788 (100)**	**180792 (100)**

Source: Assistant Director of Statistics, Cuddalore, 2006

4.7. Agriculture and Livelihood Strategies

Each crop is grown under different farming situations in the district. For instance, the paddy that is grown in the Chidambaram taluk is different from that grown in the Panruti taluk. Even within one village, a crop is grown under varying farming situations. It may be under un–irrigated or irrigated situation. it may be under fertile soil condition or in unfertile soil situation. As the production problems for a crop or commodity differ strikingly from situation to situation, a location–specific focus is needed for evolving a strategy. Livelihood strategies obviously depend on agriculture strategies for a rural district such as Cuddalore. Some agriculture and livelihood strategies are

evolved and presented for the Cuddalore district based on the data of Department of Agriculture and District Statistical Handbook.

Box: 4.8 Crop Diversification in the Cuddalore District

Ayepettai is a village located thirteen kilometers away from Chidambaram. The village is on the banks of river Vellar with natural entitlement. This village occupies the first place in agriculture because of its natural endowments. The Centre for Rural Development (CRD) of Annamalai University has adopted this village and has initiated several extension programmes. Recently, NABARD has given a State Award for running a 'Best Farmers Club' in the Ayepettai village.

The CRD and the Department of Economics of Annamalai University enlightened the farmers of the village and supported them by all means. On the banks of the river Vellar, watermelon is produced during the *samba* season and is sold at Rs.6 per kg. Drumstick is cultivated both as separate and an inter crop in coconut fields. It is also sold at Rs.6 to 10 per kg. Jasmine flower and the *Kanagambaram* flower are grown in the fields and sold for Rs.40 to 50 per kg. Floral cultivation gives higher returns as compared to other crops. It requires lesser water and involves lesser difficulty in marketing the produce. It is therefore evident that this is a model village to emulate for farmers of other villages.

The farmers suffer at the hands of money lenders in the form of usurious rate of interest, which erodes the incomes of the poor farmers. The Money lenders lend money well in advance to exploit the farmer's helpless situations. Ultimately, the farmers are forced to go for distress sale of their produce. To change this situation, stable price should be fixed through farmer's market (Uzhavar Sandhai). By this way, the life (Human resources) of the farmers could be enriched to a great extent.

Source: Block Level Focus Group Discussion, 2006

A. Appropriateness of Crops and Technologies

Changes in the consumption pattern of the population and demand for certain commodities are a trigger for selecting a crop for cultivation. For instance, red gram is cultivated in 588 hectares of the Mangalore block out of 665 hectares in the district. There is a greater demand for red gram, and so the area under productivity may be increased through appropriate land use planning. Similarly, area under sunflower cultivation is limited in the district. But, demand for sunflower oil is more among educated population for obvious reasons. This also requires proper intervention because sunflower has an established market, suits the soil types of the district and yields well in short duration. Gingili is another important oil seed crop deserving extension efforts in providing leading edge technologies for increasing productivity. With nutritional security as the goal, one has to produce and market fruits and vegetables required not only for the district but also for the consumers elsewhere. The choice may strengthen the fruits and vegetable crops cultivated for decades besides introduction of new crops, perhaps using green house technology. Viewed in this sense, crop diversification is a desideratum. Horticulture crops and *jatropa* cultivation, which are value addition crops, will be a boon to farming community in the years to come. It is one of the growth strategies in the agricultural sector of the district.

B. Water Management Strategy

Paddy, which is hydrophilic by nature, consumes large quantity of irrigation water as it is traditionally grown under flooded condition in the district. It calls for scientific water management based on the requirements during different stages of crop growth. For instance, System of Rice Intensification (SRI), popularly called 'Madagascar Method of Rice Cultivation' is a comprehensive package utilizing less seed, water, chemical fertilizers and pesticides; but this system increases rice production and productivity. This technology recommends water management for creating unsaturated soil condition in the field. During the vegetative growth period, water is applied just to keep the soil moist and not to saturate it with standing water. The field is allowed to dry for several short periods to the point of cracking throughout the vegetative growth. Only a thin layer of water is kept in the field after panicle initiation. Ten to fifteen days prior to harvest, the field is well dried for uniform maturity. This technology may go a long way in conserving water.

It is in the Cuddalore and Annagramam blocks that 30 percent tube wells of the district exist. It calls for establishing new tube wells and for extending the area under tube well irrigation. It may be critical for conserving the quality of ground water and for avoiding seawater intrusion. It may also facilitate use of ground water to the level of replenishing of aquifers. Precision farming and contract farming are to gain popularity among the farmers in future.

Box : 4.9 Present Conditions of the Urban Water Resources in Chidambaram

In this district, Chidambaram municipality has 13 ponds. These ponds were constructed for the purpose of maintaining the quality of drinking water and for protecting the ground water table. Some of the ponds are maintained by the PWD, a few others by the municipality and a few more by the religious board. The ponds have inflow and outflow channels, which are interlinked. These facilities can be clearly located on the Chidambaram municipality map. The ponds and water catchments area of the ponds were encroached by people living in the vicinity of the ponds and who belong to economically and socially backward classes. The encroached ponds were used for the construction of houses. The water catchment areas of the ponds are used for tending cattle and rearing pigs. As a result, the ponds have turned into drainages, which are a vector of spreading diseases and causing environmental degradation. The channels originating in the ponds were also encroached, resulting in the significant shrinking of the length and breadth of the ponds. Further, the un–encroached part of the channels is used as sewages by the neighbouring people.

Concerted efforts are needed to remove the encroachment, rejuvenate the ponds and make them fit for public use. This process of rejuvenation of the water resources will help to recharge the ground water table and prevent the spread of communicable

diseases. Encroachment of channels needs to be averted at all costs. In addition to rejuvenation, strengthening the ponds pisciculture can also be encouraged. It will be a source of income to the poor. The authorities can create awareness about the importance of natural resources and values and benefits they provide to the society. If the Government creates this type of awareness among the people, it will reduce the public expenditure that is incurred on maintaining the water resources. The authority can also create awareness about the importance of water sources through public exhibitions and demonstrations.

Source: Focus Group Discussions and Commissioner, Chidambaram Municipality, 2006

C. Transfer of Technology

Extension is a conduit for cutting–edge technologies to reach the doorsteps of the farming community. Diffusion of technologies for adoption has been done appreciably by the extension system during the green revolution phase and afterwards. Nevertheless, many of the farmers adopted only a part of the technology. Perhaps, the technologies such as improved seeds, pesticides and chemical fertilizers could be made available for enthusiastic adopters. Technologies such as bio–fertilizers, water management, Integrated Nutrition Management and Integrated Pest Management, grading of the produce and many other technologies with less visible impact have not reached the clients to the expected extent. It calls for identification and adoption of critical technologies to enhance the productivity of different crops in the district. In order to achieve sustainability of agricultural production, technologies such as Integrated Nutrition Management and Integrated Pest Management need to be introduced among farmers.

Public extension workers have to deliver technologies to a large population and at the same time cover adoption of recommended technologies over a large area. It is always a question of striking a balance between the two. Data on operational land holdings of the district imply that the extension workers may meet 11,000 farmers (20%) and cover 20 percent of the land holdings (3.0–7.5 ha.) or meet 2,85,000 farmers (96%) and cover 72 percent of the land holdings (<3.0 ha.) in the district. Both the categories of landholders deserve extension services. Nevertheless, an appropriate trade–off is required to achieve efficiency in terms of production and equity. Since yield gaps still exist for various crops, the extension activities need to be further intensified.

D. Marketing Strategy

Access to appropriate markets and market intelligence determines profitability of farmers, especially the resource farmers. In the past, extension service providers focused only on production strategies. The time has come to add extension services for marketing not only locally but also globally. This is

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going to be the major task for development managers. Further, post harvest grading, packing and processing at farm level are essential for effective marketing. Organization of farmers in commodity–oriented groups may be a pre–requisite for achieving effective marketing together with capable, professional leaders. Information materials in mass media together with internet services may become essential for support communication. Since the land and agricultural produce is inelastic, the farmers stand to lose in the event of agricultural surplus. Minimum support price and establishment of Uzhavar Sandhai (Farmers' Market) are appropriate solutions to avoid distress sale of agricultural produce.

E. Employment Strategy

Agricultural operations for different crops in different seasons provide employment only for limited days in a year. Again, gender–wise analysis may reveal disparity in terms of the number of employed days. In order to increase the number of days of employment available to men and women, additional off–farm opportunities may be provided through dairy, poultry, and aquaculture, food processing and rural industries. In the process, rural–based SHGs may also be engaged in order to achieve success. On–farm workers are to be dovetailed with off–farm job opportunities. Strengthening the economic infrastructure will also offer substantial employment avenues to the rural unemployed providing appropriate livelihood strategies.

F. Training Strategy

There is a felt need for training extension personnel of public, private, cooperative and NGO systems for sensitizing them to the new priorities and technologies, besides enabling them to work in teams with clear set goals. The rural people, especially the farm families also need training to face the challenge of shifting from production goals to production–cum–marketing goals in the globalized economy. Trainers may have to be identified meticulously who can also act as facilitators in the process of providing market intelligence as well as marketing. Those who are trained can not only be resourceful but also enterprising.

G. Convergence of Organizations

Government organizations have proved their worth at macro level development, while NGOs have done well at the micro level. In addition, many private and commercial organizations as well as cooperative organizations have demonstrated their visible presence meaningfully. Similarly, there are many R&D establishments for generation of agricultural technology under the Indian Council for Agricultural Research (ICAR) system, State Agricultural University, Annamalai University and private sectors. There is a need to

integrate various sources of technological innovations and extension service providers in order to have synergistic effect. Therefore, development organizations under public sector, private sector, cooperatives and NGOs may come together to provide better technology delivery and extension services for the benefit of the rural people of the Cuddalore district. The Agricultural Technology Management Agency (ATMA) can provide leadership in this direction. This calls for convergence of agencies so that all efforts will be cost effective.

H. Livelihood Strategy

Cuddalore is basically an agrarian district by nature. Hence one should explore all the possible ways of making agriculture a profitable venture. The first opinion in this regard is examining the scope for more appropriate cropping pattern strategy at the block level. A diversified cropping pattern should take into account, both the agronomic and economic factors, which together determine the farm income. The FGD analysis reveals that the Government should provide adequate linkages between production and marketing. This will go a long way in enhancing the income of farmers. Wherever fruits and flower cultivation was prescribed, the farmers have a rich scope to earn a higher income than what they could through conventional paddy cultivation. However, in view of the problems in marketing, much of the potential advantage is lost resulting in the middle men gaining the lion's share. The age–old exploitation of farmers by wholesale merchants through the well familiar methods such as paying advances to begin cultivation and ensuring supply to them at low prices has to be brushed off.

4.8. The Performance of SHG's

The objective of the programme SGSY is to create income–bearing assets to sustain employment, by way of developing micro enterprises, through bank credit and government subsidy. This programme endeavors not only to lift the BPL population from the poverty trap, but also to promote women empowerment in both rural and urban areas. A detailed analysis has been made to assess the performance of SHGs in the various blocks of the district. Table 4.13 focuses on the performance of SHGs in the District. The analysis has been performed based on the number of SHGs formed, the number who have received the revolving fund and the number who have received economic assistance from banks. A very meagre percentage of SHGs received the economic assistance from the banks to develop micro–enterprises, aiming to sustain their income and employment. The Cuddalore, Annagrammam, Kurinchipadi, Panruti, Kattumannarkoil, Keerapalayam and Parangipettai blocks were better performers than the others because they were able to achieve

their targets. The Melbhuvanagiri, Kammapuram, Mangalore, Kumaratchi, Nallur and Virudhachalam blocks fell short of their targets, due to lack of people participation and co–operation.

Table 4.13
Number of SHGs Formed Under SGSY until 31.05.07

S.No.	Blocks	No of SHG Formed	No of SHG 's Received Revolving Fund	Amount (Rs. in Lakhs)	No of SHG 's Received Economic Assistance	Amount (Rs. in Lakhs)
1	Annagrammam	1096	413	41.3	107	109.19
2	Cuddalore	1377	531	53.1	95	112.44
3	Kammapuram	1061	297	29.7	50	46.83
4	Kattumannarkoil	1081	375	37.5	67	96.24
5	Keerapalayam	1188	251	25.1	49	54.63
6	Kumaratchi	1217	234	23.4	33	31.29
7	Kurinjipadi	1362	389	38.9	70	81.87
8	Mangalore	1032	330	33.3	40	41.27
9	Melbhuvanagiri	1019	219	21.9	66	67.91
10	Nallur	1007	199	19.9	20	20.43
11	Panruti	1030	452	45.2	93	103.01
12	Parangipettai	1054	404	40.4	64	63.52
13	Virudhachalam	828	212	21.2	19	21.85
Total		**14352**	**4306**	**430.9**	**773**	**850.47**

Source: Project Officer, DRDA, Cuddalore, 2007

5. Industrial Development

In future, the industrial sector needs to be broad based and the services sector has to take a deeper root in this district. Besides enhanced performance of these sectors, there should be a balance achieved in their performance. Given the diversity, the district needs tailoring programmes to suit regional needs and aspirations. The chart below, presents certain basic information on the industrial scenario prevalent in the Cuddalore district.

Big and moderate industrial Units	29
Registered small units	10398
Total investment	Rs. 5238 lakhs
Total employment	26366 members

Source : District Idustrial Centre, Cuddalore 2006

5.1. Other Areas of Potential Employment–oriented Occupations in the District:

A) Export–oriented Occupations

Export–oriented occupation such as prawn processing, fruits and vegetables processing, meat processing, standardized and processed flowers, polished blue metals are playing a considerable role in increasing the district income.

B) Food Processing Industries

Food processing industries are the vital industries that provide subsidiary employment to the agro–based economy. In the Cuddalore district, food processing industries such as fried cashew nut production, groundnut cake production, nutritional food production, coconut and milk cake production, chips production, groundnut oil production, packed mineral water, drumstick powder production, sour and salt mixed savories production, fruit extracts, pickles, popcorn, fruit drinks production, tender coconut production, milk based by products, processed fish, iodinated salt production, packed dry vegetables, jaggery, and milk can be recommended for promotion in the district.

C) Agro–based Occupation

Agro–based occupation is the backbone of the rural population. In this district, bio–fertilizers production, vermiculture production, wooden residues, silicon extraction from paddy, production of carbonated carbon from paddy shell, rope–based bed sheets production, rope manufacture, handloom, dry coconut production, coconut fiber rope production, and mushroom production are some of the noticeable agro–based production industries. If these occupations are given a still greater impetus and reinforced in the right direction, the production of domestic products is bound to increase in the district.

D) Ayurvedic and Biotech Products

A number of ayurvedic and biotech–based products are produced in the Cuddalore district. Some of the products are neem oil, aloe vera powder, ayurvedic facial powder, ayurvedic shampoo, ayurvedic hair oil, aloe vera extract, kelunelli, bacterial bio fertilizing, extract–based oils, vermiculture–based fertilizers, neem–based pesticides, lemon leave oil and aamanaku oil.

E) Other Industries

In the Cuddalore district, some industries such electronic play doll manufacture, plastic doll manufacture, pharmaceutical industry, garment industry, fast food production, motor vehicle repair work, transportation, library, renting wedding halls and the hotel industry are thriving successfully.

Box : 4.10 Pollution Status in the Cuddalore District

Industries are the major source of pollution of air and surface water bodies. The extent of existing industrialization and its pattern is assessed to determine the extent of water and air pollution in the Cuddalore district. The district has many special and hazardous industries. These are mostly sugar factories, distilleries, chemical industries, ceramic manufactures, pharmaceutical industries and thermal power plant lignite mining. A cluster of ceramic industries is located at Virudhachalam. There are three industrial estates in the district, the details of which are given in the Table below.

Details of Industrial Areas Located in the Cuddalore District

S.No.	Name of the Industrial Area/ Estate/Complex	Location	Area Occupied in Acres	No. of Industries		
				Large	Medium	Small
1.	SIPCOT Industrial Complex	Kudikadu Village, Cuddalore–Chidambaram Road (NH–45A)	518	14	5	8
2.	SIDCO Industrial Estate	SIDCO Industrial Estate, Semmandalam, Cuddalore–Panruti Road.	15.6	—	—	5
3.	SIDCO Industrial Estate, Vadalur	SIDCO Industrial Complex, Vadalur, Cuddalore Taluk, Cuddalore–Trichy Road.	26.2	—	—	4

Source: District Environmental Engineer, Cuddalore, 2006

There are 153 small, 12 medium and 41 large–scale industries in operation with the consent of the Tamil Nadu Pollution Control Board. The major industries are M/s SPIC Ltd., M/s TANFAC Industries Ltd., M/s Asian paints Ltd., M/s Shashun Chemicals & Drugs Ltd., M/s Loyal super fabrics, M/s Tagros chemical India Ltd.,

M/s Clariant chemical Ltd in SIPCOT Industrial Complex, M/s Bayer Sanmar Ltd., M/s. Pinoneer Miyagi Chemicals (p) Limited and M/s. Arkema Peroxides India Private Ltd., E.I.D. Parry India Limited, M/s Chemplast Sanmar Limited (Distillery), Neyveli Lignite Corporation Limited, E.I.D. Parry India Limted (Sugar & Distillery), Shree Ambika Sugars Limited, Thiru Arooran Sugars Limited, and M.R.K. Co–op.Sugar Mill. The Tamil Nadu Pollution Control Board is monitoring the compliance status of the quality of air emission/ambient air quality and liquid effluent quality continuously.

Municipal Solid Waste Handling in the Cuddalore District

Solid wastes or municipal wastes are a major concern and an eye sore in the urban areas. The potential hazard associated with wastes depends on the nature and quantity of the wastes. Unregulated disposal of wastes may affect the quality of groundwater in the area through infiltration of water–soluble substances.

The per capita generation of solid waste differs greatly from town to town. The sources of solid waste generation in the towns are household, street sweepings, commercial areas, markets, offices, industries, hospitals, hotels and restaurants. The details of the quantity of municipal solid waste generated by the municipalities in the district and location of municipal solid waste disposal site are given below:

Status of Solid Waste Generation in the Cuddalore District

S. No.	Name of the Municipality	Total Population	No. of Wards	MSW Generated (MT/d)	% of Collection T/d)	Location of MSW Disposal Site
1.	Cuddalore	1,58,481	45	100	80	Dumped and Stored on land
2.	Nellikuppam	45000	30	20	100	Dumped and Stored on land
3.	Chidambaram	55,960	33	31	96	Dumped and Stored on land
4.	Virudhachalam	59,300	33	25	100	Dumped and Stored on land
5.	Panruti	55,407	33	29	100	Dumped and Stored on land

Source: District Environmental Engineer, Cuddalore, 2006

The quantity of municipal solid waste generated depends on a number of factors such as population, food habits, standard of living, scale of commercial and industrial activities etc. The per capita generation in India is around 350 gm. However, it varies from 500 gm to 200 gm.

Bio Medical Waste

Bio–medical wastes would refer to any waste that is generated during diagnosis, treatment or immunization of human beings or animals or in research activities. It pertains to instruments used in the production or testing of biological and including human anatomical waste, animal waste, microbiology or biotechnology waste, waste

sharps (needles, syringes, scalpels, blades, glass both used and unused), discarded medicines and cytotozic drugs, items contaminated with blood and body fluids (such as cotton, dressing, soiled plaster casts, lines, beddings, etc), disposable tubing's catheters, intravenous set etc., liquid wastes generated from laboratory and washing, cleaning, housekeeping and disinfecting activities, incineration ash and chemical wastes. Bio–medical wastes are hazardous in nature and require special treatment and disposal systems. Exposure to bio–medical wastes can result in disease or injury. The status of bio–medical wastes in the Cuddalore district is depicted in the table below:

Status of Bio–medical Wastes Generation in the Cuddalore District

Health Care Facilities (HCF) Under Schedule VI	Total No.of HCFs	Total No of Beds	Total Quantity of BMW Generated (kg/day)
Hospital & Nursing homes in Town with 500 beds and above	1	950	143
Hospital & Nursing homes in Town with 200 beds and above but less than 500 beds	2	896	134
Hospital & Nursing homes in Town with 30 beds and above but less than 200 beds	5	438	66
Hospitals and Nursing homes with less than 50 beds	111	1358	204

Source: District Environmental Engineer, Cuddalore, 2006

The nearest unit for common treatment and disposal facility for bio medical waste is installed at Chennakuppam, Sirperumbudur Taluk, Kancheepuram District by M/s.Tamil Nadu Waste Management Limited. Fifty–four Private Hospitals (with 522 beds) are located in Cuddalore, Chidambaram, Neyveli has made agreement with the above Common Bio–medical Waste facilitator for handling and disposal of Bio Medical Waste from 18.10.2006 General Hospital owned by M/s. Neyveli Lignite Corporation Limited. Neyveli has a 350–bed strength and is handling and disposing the bio medical waste with the above facility. The hospitals owned by the Government of Tamil Nadu (9Nos. with 1026 beds) are negotiating with the above facility for handling bio medical waste. The hospital with 950 beds at Annamalai Nagar owned by Annamalai University has decided to join the centralized facility at Pudhuchery before the 30th January 2007.

Hazardous Waste

'Hazardous wastes' means any waste which by reason of any of its physical, chemical reactive, toxic, flammable, explosive or corrosive characteristics causes danger or is likely to cause danger to health or environment, whether alone or when in contact with other wastes or substances. "Hazardous wastes" by reason of its chemical or physio–chemical properties or handling, require regulation of generation, collection, treatment, transport, import, storage and disposal. The inventorization of hazardous wastes in the district was undertaken. The 42 number of units are generating hazardous wastes, which are recyclable, incinerable and land fillable. The total land–fillable hazardous waste generated in the Cuddalore district is approximately 2,170.2 T/year. The site selection for common treatment and disposal is under progress. At present, waste is being stored in a secured manner inside the individual units.

Domestic Sewage Load

Significant quantities of pollutants get discharged into the natural systems such as drains, rivers, lakes and water bodies from the towns though surface run–off and domestic wastewater, which may be treated, partially treated or untreated, there by causing pollution in rivers and water bodies. Fecal contamination is still the primary water quality issue in rivers, especially where human and animal wastes are not adequately collected and treated. Although this applies to both rural and urban areas, the situation is more critical in fast–growing cities. Fecal matter affects the use of water for drinking or bathing purpose, and the ecological health of river is completely disrupted. Under certain hydrogeological conditions, unsewered domestic waste (from septic tanks or pit latrines of the ventilated, dry or pour–flush types) can cause severe groundwater contamination by pathogenic bacteria, nitrate and other pollutants. The domestic sewage load from urban and rural areas of the Cuddalore district has been generated based on the urban and rural population in each Taluk and organic loading rate data of WHO for calculation of pollution and waste loads from domestic effluents. The organic loading rate for urban area is 19.7 kg/person/year and that of rural area is 6.9kg/person/year. The Taluk–wise details of wastewater generated in Cuddalore district is given below:

Details of Wastewater Generation in the Cuddalore District

Taluk	Population			Pollution Load		
	Total	Urban	Rural	Urban	Rural	Total
Chidambaram	409047	126448	282599	2491026	1949933	4440959
Cuddalore	505869	223608	282261	4405078	1947601	6352679
Kattumannarkoil	242696	48235	194461	950230	1341781	2292010
Panruti	537027	239241	297786	4713048	2054723	6767771
Thittakudi	227595	38901	188694	766350	1301989	2068338
Virudhachalam	363161	77928	285233	1535182	1968108	3503289

Source: District Environmental Engineer, Cuddalore, 2006

5.2 Raw Materials for Power Generation

Table 4.14 provides the data of Lignite used for power generation in the district. The value stood at Rs.1684.67 crores while the quantity was at 215.66 lakh tones.

Table 4.14
Lignite Used for Generation of Power (2003–2004)

Name of the district	Lignite	Quantity (In tons)	Value (in 000 Rs)
Cuddalore	LIGNITE		
	Mines – 1	10527367	8244850
	Mines – 1 A	3211203	3146536
	Mines – 1	7828117	5455402
	Total	**21566687**	**16846788**

Source: District Statistical Hand Book, Cuddalore, 2006

5.3 Small Scale Industries

In the Cuddalore district, there are 22 small–scale industries. The majority of these industries are cashewnut processing industries, rice mills, automatic motor vehicle shed and match box production. Table 4.15 gives data on the number of small–scale industries in operation in the Cuddalore district.

Table 4.15
Small Scale Industries (2004–2005)

S. No	Particulars of small scale industries	Numbers
1	Sea foods and processing	2
2	Oil extracting mills	5
3	Powder mills	1
4	Rice mills	23
5	Cashew nut removing industries	26
6	Snacks	1
7	Mineral water protection	4
8	Power loom	1
9	Coconut fibre & rope production	3
10	Rupper production	2
11	Packaging units	2
12	Letter covers	2
13	Printing press	7
14	Cosmetic process	2
15	Match box production	24
16	Bricks production	4
17	Die production	4
18	Industrial die production	2
19	Aluminum & brass die production	3
20	Engineering works	1
21	Automatic motor vehicle shed	26
22	Motor mill	1
Total		**146**

Source: DIC, Cuddalore, 2006

5.4 Village Industries

The Khadi and village industries comprise of soap, pot and footwear production. Table 4.16 shows some statistical information on the Khadi and village industries in the Cuddalore district:

Table 4.16
Khadi and Village Industries (2004–2005)

S. No.	Industries	Production (Lakhs)	Sales (Rs. lakhs)
1	Khadi	7.00	51.21
2	Soap	16.77	15.72
3	Pot	1.03	0.88
4	Leather	0.66	0.59

Source: District Statistical Hand Book, Cuddalore, 2006

5.5 Printing Press

There are 161 printing press units in the Cuddalore district, of which 10 are run by the Government. The details are shown in Table 4.17.

Table 4.17
Number of Printing Presses

S. No	District(2004–2005)	Total
1	Govt. Press	10
2	Private Press	151
Total		**161**

Source: Inspector of Factories, Cuddalore, 2006

5.6 Registered industries

In 2004, there were 269 industries that functioned as registered units in the Cuddalore district, of which 206 industries were regularly operational. Table 4.18 shows the statistical information about registered and functioning industries in the Cuddalore district.

Table 4.18
Registered Industries Functioning in the District

S. No	Particulars	Numbers
1	Number of industries registered in 2004	256
2	Increase number of industries in 2004	26
3	Number of sick industries in 2004	13
4	Number of industries registered by end of 2004	269
5	Total number of industries that are functioning	206

Source: Inspector of Factories, Cuddalore, 2006

5.7 Types of Industries

In the Cuddalore district, there are 196 industries falling under 23 types. The auto wing industries, chemical industries, match box industries, cashewnut industries, rice mills and china clay–based industries were predominant with more than 20 units in each. The remaining types of industries had less than 10 units. Table 4.19 shows the various types of industries in the Cuddalore district.

Table 4.19
Industries Functioning by Type (2004—2005)

S. No.	Particulars	Total
1	Cashew nut industries	23
2	Auto wing industries	25
3	China clay based industries	23
4	Brick making industries	4
5	Spinning mills	1
6	Power loom	2
7	Rice mills	23
8	Paper–based production industries	3
9	Printing industries	9
10	Electronic industries	2
11	Milk chilling industries	1
12	Engineering production	3
13	Sugar mill	4
14	Match box production	24
15	Chemical industries	25
16	Power generator	6
17	Tyre retrading	2
18	Coconut fibre wood ropes	3
19	Metal industry	4
20	Aluminum and brass	3
21	Engineering–based production	3
22	Packing industry	2
23	Conveyer–belt industry	1
Total		**196**

Source: Inspector of Factories, Cuddalore, 2006

5.8 Handlooms

Handloom industry is thriving in 22 handloom centres spread over nine Panchayat Unions in the Cuddalore district. They are Naduveerapattu, C.N. Palayam, Vanidpalayam, Pururispattai, Vaakalpattu, Cuddalore old Town, Muthukrishnapuram, Thorappadi, Anguchetipallayam, Kudumiyankuppam, Kurunjipadi, Muthanai, Karanatham, Mangalampettai, Visallur, M.Agaram, Melbhuvanagiri, Kollimalai Kilpathi, Elleri, Yathavarayanpettai, Keerapalayam and Mamangalam. Twelve thousand families are dependent on the weaving industry. Of the total handlooms, 44.7 percent is concentrated in the Kurinjipadi Union. Second, Cuddalore constitutes 25.4 percent and Melbhuvanagiri 15 percent of the total handlooms. Power looms are absent in this district and this is the underlying reason for their poverty. Table 4.20 shows the block–wise distribution of handlooms.

Table 4.20
Distribution of Handlooms by Block (2004–2005)

S. No.	Name of the Block	Families Dependent on Hand Looms	Percentage
1	Annagrammam	556	4.70
2	Cuddalore	2994	25.40
3	Kammapuram	132	1.12
4	Kattumannarkoil	396	3.40
5	Keerapalayam	100	0.85
6	Kumaratchi	0.00	0.00
7	Kurinjipadi	5275	44.70
8	Mangalore	0.00	0.00
9	Melbhuvanagiri	1816	15.40
10	Nallur	0.00	0.00
11	Panruti	349	2.90
12	Parangipettai	0.00	0.00
13	Virudhachalam	179	1.52
Total		**11797**	**100**

Source: Assistant Director of Hand looms, Cuddalore, 2006

5.9 Type and Quality of Production

There are 38 producer associations of production units in the district. They produce cotton, silk and polyester cloths. Details are furnished in Table 4.21.

Table 4.21
Production of Cotton, Silk and Polyester (2004—2005)

Number of Associations	Cotton		Silk		Polyester	
	Lengths (Meter in 100)	Value (Rs. 1000)	Lengths (Meter in 100)	Value (Rs. 1000)	Lengths (Meter in 100)	Value (Rs. 1000)
38	24.79	1313.64	0.34	248.54	0.30	8.46

Source: Assistant Director of Hand looms, Cuddalore, 2006

5.10 Handicrafts

Some families in the Panruti, Virudhachalam and Vadalur townships are engaged in handicrafts. Panruti produces soap and China glass, Virudhachalam is engaged in manufacture of clay doles, whereas Vadalur produces soap products. In Virudhachalam, 1209 handicraft China clay pots were produced. Panruti's Veeraperumanallur made a 528 paper dolls and clay pots. Totally, 10 families get involved in this occupation.

6. Exploitation of Fish Resources in the Cuddalore District

In Cuddalore district, fish farming and aquaculture are thriving well. This district possesses 57.5 km costal area; it is spread over 45 fishing villages. In the Cuddalore and Parangipettai blocks, fish catching is predominant. About 5,000 female members and 10,500 male members are engaged in fishing and its allied activities. Direct and indirect benefits accrue to fishermen. About 26,385 tons of fish of worth Rs.1,69,590 lakhs is caught in the Cuddalore district on a yearly basis. Fishermen use 16,550 small and medium fishing vessels. Fish caught in the Cuddalore district is exported to the parts of the country such as Kerala, Andrapradesh and Karnataka. Fish exporting agencies in Kerala export fish after processing the fish got from Cuddalore. The district authorities are taking measures to increase fish resources by imposing ban on fish catch during the summer and creating cold storage facilities. New techniques of fish catch are being evolved. The social and economic conditions of fishermen are very backward. Disparities between inland and marine fish catch exist.

To increase the economic status of the inland fishermen, the Fisheries Department takes various steps such as augmenting the inland fish resources; promoting culture and introducing the new varieties of fish. These measures will help improve the socio economic status of the fishing community both in the short and long run. Creating **awareness about methods of catching and marketing are likely to ensure sustainable livelihood to the fishermen. It will be appropriate to involve SHGs in fish processing, manufacturing prawn pickles, producing dry fish, marketing the fish products, etc.** They may be given adequate training in this regard. Inland fishermen such as the coastal fishermen must derive benefits so that their income will improve. Pisciculture may be taking up in the Veeranam and Perumal tanks. Prawn culture and bank assistance for pisciculture and introduction of new techniques will go towards improving the socio–economic conditions of the poor fishermen. Sustainability that implies meeting current human needs while preserving environment and resources needed by future generations is to be ensured in the process of pisciculture.

Box : 4.11 Involvement of School Students in Nurturing Fish in Karkudal Panchayat

The Karukudal Panchayat Union middle school students took efforts to nurture fish in paddy field. Students aged 10 to 17 are identified across the country and their interest in science were kindled through the National Children Science Congress 1993. They were trained in pisciculture and to breed fish naturally in paddy fields.

In due course, the use of fertilizers in the paddy field prevented fish being cultured in the fields. Today, it is essential to use fertilizers to increase crop productivity. High use of chemical fertilizers affects the life of fish species. Recently, the fish varieties that are not affected by these fertilizers have been identified and brought to the paddy field for nurturing. Even the Karkudal Panchayat union middle school students cultured fish in approximately 25 cents in paddy fields. The use of fertilizers affects fish breeding. With much experiment on fish breeding, we identified fish varieties such as Catla, Mirukala can cope with the environment. Following this these varieties of fish are bred in the paddy field. They would grow and mature in three months. If this plan worked well, it would be extended to all the farmers and awareness will be created about breeding fish in paddy fields.

Source: Block level Focus Group Discussion & DRDA, Cuddalore, 2006

Box : 4.12 An Overview of Impact of Tsunami Relief and Rehabilitation in the Cuddalore District

The Indian sub–continent has experienced various kinds of natural calamities such as earthquake, flood, cyclone and Tsunami, which is a large, devastating tidal wave caused due to earthquakes in the sea. The severe earthquake in the Sumatra island in Indonesia was followed by the devastating Tsunami. It inflicted severe damage in the coastal districts of the Tamil Nadu. Cuddalore was one of the districts that was severely affected by Tsunami. 26–12–2004 was a dooms day for the Cuddalore district. Due to the Tsunami waves, 57.5 km of the districts coastal area were highly damaged and devastated. It took a heavy toll of living things. The economic infrastructure and household assets were heavily destroyed.

The cultivatable land also had become saline. In the Cuddalore district 51 villages comprising 11,859 families and 99,704 persons were affected. The death toll stood at 285 females, 110 males and 222 children and thousands of people were injured. Besides, many cattle (cow and buffalo–149, sheep and goat 919) were killed and injured. The saline water intrusion affected an agricultural crops area of 317.93 hectares and horticulture crops area of 199.26 hectares. An area of 1592.98 hectare lands had become saline and unfit for agriculture.

Relief Work

Relief work was carried out in a methodical way by the district administration. All the people affected were taken away to a protected area. Dead bodies of human beings and animals were buried with due care. Health care services were pressed into service for the prevention and spread of communicable diseases. Government machinery and NGOs were utilised to their fullest capacity.

Rehabilitation Work

The rehabilitation works of Tsunami may be classified into two sections:

(i) Financial (ii) Others

Financial Help

A sum of Rs.582.99 lakhs was distributed to 11,057 severely affected families, Rs. 239.37 lakhs to 8220 partially affected families and Rs.1204.74 lakhs to 20,070

affected people. Rs. 1 lakh each was disbursed to the families who lost their loved ones and Rs 5,000 was given to 205 injured people. A sum of Rs. 619.54 lakhs was given to repair the 493 fully damaged boats, Rs.102.30 lakhs to the fully damaged *kattumarams*, Rs.100.75 lakhs to the 155 fully damaged mechanized *kattumarams*, Rs. 42 lakhs to the 840 partially damaged *kattumaram*, Rs.53.65 lakhs to the 659 partially damaged mechanised *kattumarams* and Rs.669 lakhs to the fully damaged 6698 fishing nets. A sum of Rs. 17.35 lakhs was given to repair the machines of the boats. Totally, a sum of Rs. 2526.09 lakhs was incurred by the Government towards rehabilitation of the economy.

Other Assistance

Other kinds of assistance, which took the shape of house construction, providing technical education, educational assistance and generation of employment opportunities, were given by the NGOs and people's Welfare Associations. To be precise, sustainable livelihood security was ensured. Evolving forecasting techniques, preparation to face another Tsunami, impetus to rising of mangrove forests, etc. are imperative factors. The district authorities initiated Disaster Management and are always prepared to meet any eventualities in coastal regions in the years to come.

Source: District Revenue Officer, Cuddalore, 2006

7. Conclusion

This chapter dealt with employment, income and poverty in the Cuddalore district. An in–depth analysis shows that the picture of each aspect is rather dim and not at all satisfactory. Preponderance of marginal and non–workers in total population, relatively low per capita income and higher incidence of poverty reflect poorly on the performance of the district economy. Generation of sufficient wage and self–employment, reinvigoration of agriculture and allied activities, broad–basing of manufacturing sector and penetration of service sector etc., will go a long way in increasing income, reducing unemployment and poverty in the long run. All productive measures should be pursued in a synchronized fashion. Economic development should be self sustaining in the district and the varied benefits of development should be equitably distributed.

CHAPTER – V

DEMOGRAPHY, HEALTH AND NUTRITION

CHAPTER – V

DEMOGRAPHY, HEALTH AND NUTRITION

DANIDA HEALTH PROGRAMME

Life Expectancy at Birth (LEB) is one of the indicators of Human Development Index (HDI) against which we can see whether the fruits of economic development have reached the people at the lowest strata of the society. Life Expectancy (LE) is dependent on the health status of the people, which in turn is influenced by a host of factors such as per capita income, economic and social structures, availability of basic amenities etc. Besides LEB, health component levels include fertility, morbidity, mortality and nutritional status of the population. The health status of the people is predicted not only by the outcome of Government policies and programmes but also by the curative and preventive measures taken by the individuals.

This Chapter analyses the demographic changes, vital events such as LE, Crude Birth Rate (CBR), Crude Death Rate (CDR), Maternal Mortality Rate (MMR), Infant Mortality Rate (IMR), under five–year mortality rate and nutritional status of 0–5 years children. It probes into the effectiveness of Government policies and programmes and it also assesses the impact of such programmes.

1. Demographic Trends

The decadal growth rate of population was 7.43 in the Cuddalore district between 1991 and 2001. The district's population in 2001 was 22,85,395 (2.3 million) as per the 2001 population census, of which 11,50,908 were males and 11,34,487 were females. Sixty–seven percentage of the total population was in rural areas and the remaining 33 percentage was in urban areas. The total number of families in the district was 5,03,057 of which 3,49,119 families were in rural areas and 1,53,938 families were in urban areas. The average family size of the district was 4.5; it conforms to the All–India average of 4.5 as per

the 2001 Census. It shows that the implementation of health schemes in Tamil Nadu has been efficacious.

1.1. Crude Birth and Death Rates

The district CBR declined from 20.1 to 17.3, the decrease being 2.8 percent between 2000 and 2005. Among the blocks, Kumaratchi had the lowest CBR of 16.6, while the Mangalore block had the highest CBR of 18.8 in 2005. The Mangalore, Kattumannarkoil and Panruti blocks also had a higher CBR. This indicates that the health schemes should be implemented in these blocks intensively.

Both the morbidity and mortality patterns are crucial indicators of the health status of people. There is a paucity of data on morbidity patterns for the district. Analysis of the health status of the district population is made with reference to the following: birth and death rates, infant mortality rate, fertility rate, proportion of institutional deliveries and sterilizations. The CDR for the district declined from 6.2 to 5.7 between 2000 and 2005. Among the blocks, Cuddalore had the lowest CDR (5/1000) and the Mel Bhuvanagiri block the highest CDR (7/1000) in 2005. This is due to the fact that the Melbhuvanagiri block has high incidence of tuberculoses (T.B) and other health problems.

The CDR decreased from 6.2 to 5.7, the decline being 0.5 percent during 2000 and 2005. Figures (5.1 and 5.2) show the district CBR and CDR. Table 5.1 presents the block–wise CBR and CDR for the district.

Figure 5.1

Crude Birth Rate for the District

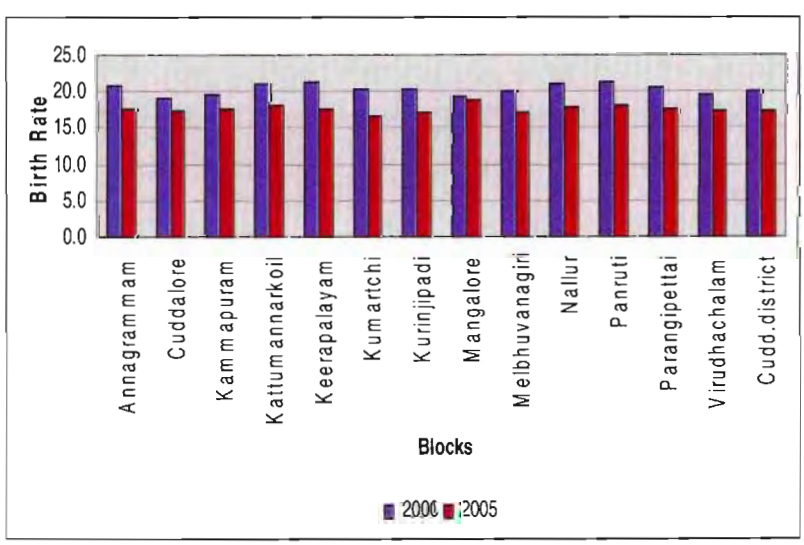


Figure 5.2
Crude Death Rate for the District

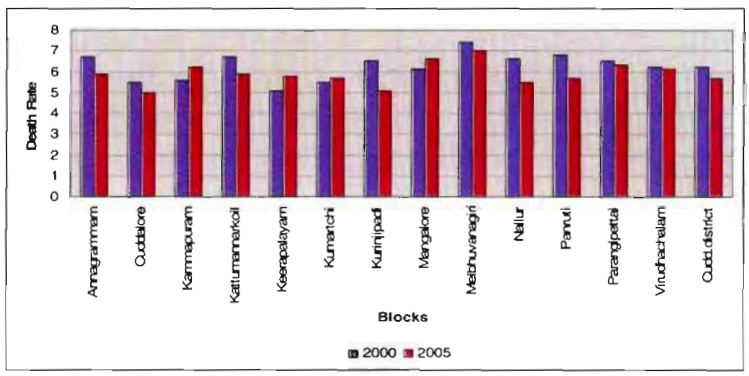


Table 5.1
Crude Birth and Death Rate

S. No.	Block Name	Crude Birth Rate (CBR)		Crude Death Rate (CDR)	
		2000	2005	2000	2005
1	Annagrammam	20.90	17.50	6.70	5.90
2	Cuddalore	19.00	17.40	5.50	5.00
3	Kammapuram	19.60	17.50	5.60	6.20
4	Kattumannarkoil	21.00	18.10	6.70	5.90
5	Keerapalayam	21.20	17.60	5.10	5.80
6	Kumartchi	20.40	16.60	5.50	5.70
7	Kurinjipadi	20.20	17.20	6.50	5.10
8	Mangalore	19.20	18.80	6.10	6.60
9	Melbhuvanagiri	20.00	17.20	7.40	7.00
10	Nallur	21.00	17.80	6.60	5.50
11	Panruti	21.30	18.00	6.80	5.70
12	Parangipettai	20.60	17.60	6.50	6.30
13	Virudhachalam	19.60	17.40	6.20	6.10
Municipality					
14	Chidambaram	18.60	16.70	6.00	5.90
15	Cuddalore	19.40	15.70	6.10	3.70
16	Nellikuppam	22.30	16.00	5.30	4.50
17	Panruti	18.50	16.40	4.60	5.80
18	Virudhachalam	20.10	15.80	6.00	5.90
District		**20.10**	**17.30**	**6.20**	**5.70**

Source: DDHS Cuddalore, 2006

It is important to mention that in 2000, eleven blocks had lower CDR as compared to the State average. At the same time, the CBR in the eight blocks were lower than that of the State average.

1.2. Sex Ratio and Density of Population

The sex ratio for the district was 985 in 2001. The sex ratio for Mangalore, Parangipettai and Keerapalayam blocks exceeded 1000. There has been an improvement in the sex ratio in some of the blocks that have the practice of female infanticide. Focus Group Discussions (FGDs) with stakeholders indicate that there is a sporadic incidence of female infanticide in the district. It has come to notice that there are some illegal abortions too in the community. Particularly the Virudhachalam, Panruti, Keerapalayam and Kammapuram blocks are witnessing female infanticide. Concerning sex–ratio in Municipalities, barring Chidambaram and Nellikuppam, others had an adverse sex ratio.

Table 5.2
Sex Ratio and Population Density (2001)

S. No.	Block / Municipality Name	Sex Ratio	Population Density
1	Annagrammam	992	1018
2	Cuddalore	978	1345
3	Kammapuram	966	515
4	Kattumannarkoil	979	603
5	Keerapalayam	1001	526
6	Kumaratchi	999	539
7	Kurinjipadi	977	383
8	Mangalore	1021	328
9	Melbhuvanagiri	946	695
10	Nallur	989	450
11	Panruti	967	1065
12	Parangipettai	1014	509
13	Virudhachalam	988	550
Municipality			
14	Chidambaram	1026	1170
15	Cuddalore	986	980
16	Nellikuppam	1011	664
17	Panruti	962	1207
18	Virudhachalam	982	443
Average(Urban)		**993**	**893**
Average(Rural)		**984**	**757**
State		**986**	**478**

Source: District Statistical Hand Book, 2006

The Kammapuram, Melbhuvanagiri and Panruti blocks had the lowest sex ratio in the district. The Mangalore and Kurinjipadi blocks had the lowest density of population. The sex ratio of the rural and urban areas of the district was 984 and 993 respectively. The district population density was 757 in 2001

against the State density of 478/sq.km. The population density exceeded the 1000/sq.km. mark in the blocks of Cuddalore, Panruti and Annagrammam and the municipalities of Chidambaram and Panruti.

1.3. Life Expectancy at Birth

LEB is a long–term measure of economic development. It is a sum total of the impact of economic intervention. As per the Sample Registration Survey (SRS), the LEB of Tamil Nadu for 1996–2001 was 65.2 years for males and 67.6 for females. The corresponding figure for the entire country was 62.4 and 63.4. Only Kerala, Punjab and Maharastra were ahead of Tamil Nadu in this regard. District LEB between 2001 and 2005 was 66.7 and 68 years respectively. The male LEB in 2005 was 66 years and the female LEB was 70 years. It is to be noted that females outlive males (Figure 5.3). It is observed that the district LEB (68 years) was higher than that of the State (66 years). Table 5.3 shows the male and female LEB for the district.

Table 5.3
Life Expectancy for Male and Female

S. No.	Year	Male	Female	Total
1	2000	65.10	68.10	66.70
2	2001	65.00	68.10	66.70
3	2002	65.10	68.10	66.80
4	2003	65.10	69.10	67.10
5	2004	65.10	66.00	70.00
6	2005	66.00	70.00	68.00

Source: DDHS Cuddalore, 2006

Figure 5.3
Life Expectancy for Male and Female

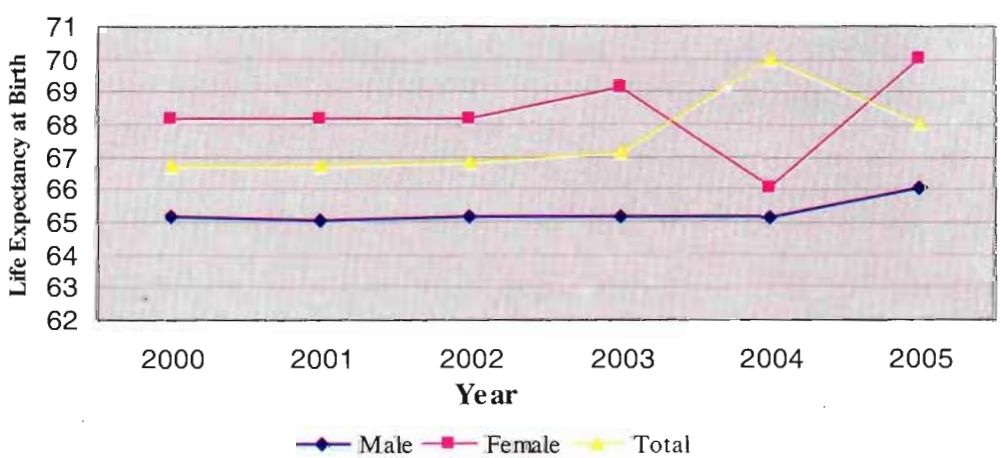


Table 5.4 presents the block–wise LEB in the district. It displays that there were no significant variations in LEB among the blocks. The Cuddalore, Annagrammam, Nallur and Mangalore blocks had an LEB of 68 years, and others had an LEB of 67 years in 2005. The analysis shows that the district was well ahead in the State with respect to LEB. One may notice that the State average cannot reveal the inter–district variations in LEB in the State at all.

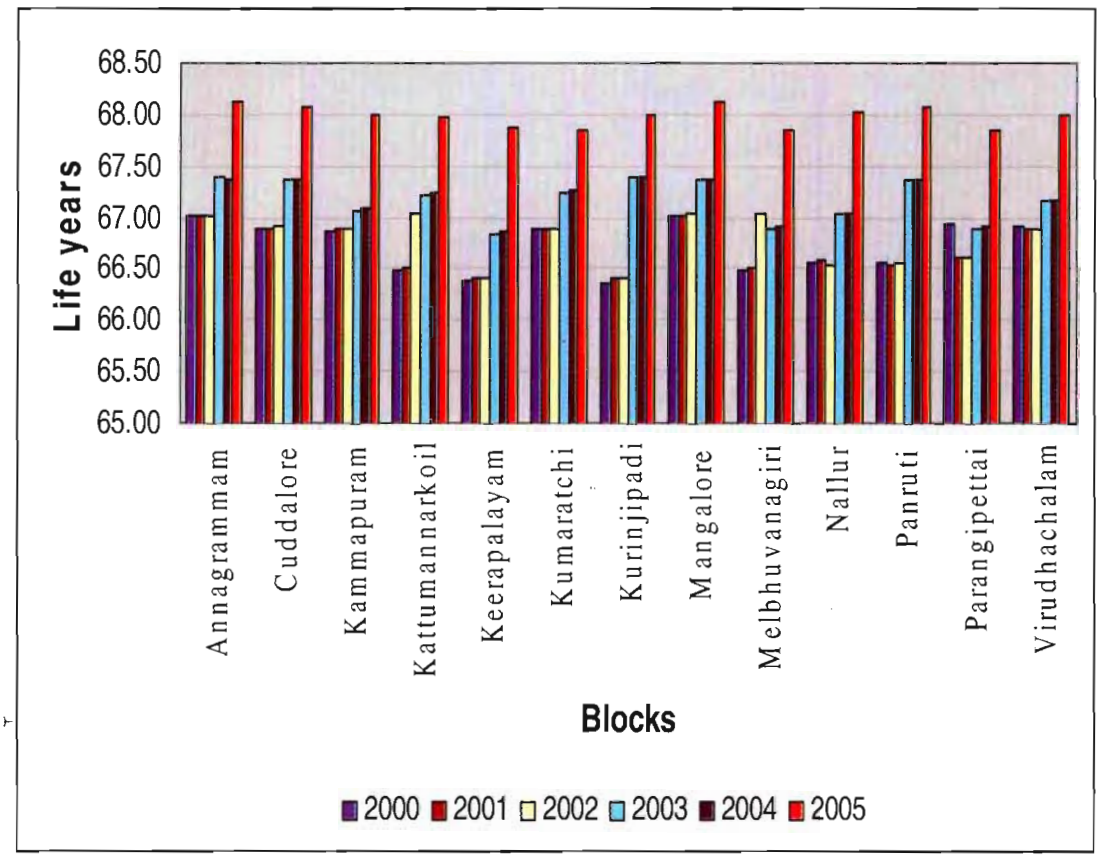
Table 5.4
Life Expectancy by Block : 2000–2005

S. No.	Block	2000	2001	2002	2003	2004	2005
1	Annagrammam	67.01	67.01	67.01	67.38	67.37	68.12
2	Cuddalore	66.90	66.90	66.91	67.37	67.37	68.07
3	Kammapuram	66.87	66.88	66.89	67.06	67.09	68.00
4	Kattumannarkoil	66.49	66.50	67.04	67.22	67.23	67.97
5	Keerapalayam	66.38	66.41	66.41	66.85	66.86	67.88
6	Kumaratchi	66.88	66.89	66.90	67.25	67.26	67.85
7	Kurinjipadi	66.35	66.40	66.40	67.39	67.39	67.99
8	Mangalore	67.01	67.02	67.04	67.36	67.36	68.13
9	Melbhuvanagiri	66.48	66.50	67.04	66.89	66.92	67.85
10	Nallur	66.55	66.58	66.54	67.05	67.05	68.01
11	Panruti	66.56	66.54	66.55	67.37	67.36	68.07
12	Parangipettai	66.95	66.60	66.60	66.88	66.91	67.85
13	Virudhachalam	66.91	66.89	66.90	67.17	67.16	67.99

Source: DDHS, Cuddalore, 2006

Figure 5.4

Block–wise Life Expectancy



1.4 Total Fertility Rate

The total Fertility Rate (TFR) is one of the important indicators against which we can know whether the Cuddalore District has achieved the population stabilization of 2.1. The TFR for the Cuddalore district exhibited a sharp decline from 2.8 in 2000 to 2.3 in 2005, a decline of nearly 22 percent over five years. But it is higher than that of State's TFR (2.0). As compared to the national TFR (3.3), the district TFR was lower (2.3). The Melbhuvanagiri blocks recorded the lowest TFR (1.8) among the blocks. The Mangalore and Nallur blocks registered the highest TFR (4.0) among the blocks. Figure 5.5 and Table 5.5 explain the total fertility rate of blocks. The above analysis underscores the fact that an educational attainment is a conditional factor for reducing TFR, thereby stabilizing the population growth.

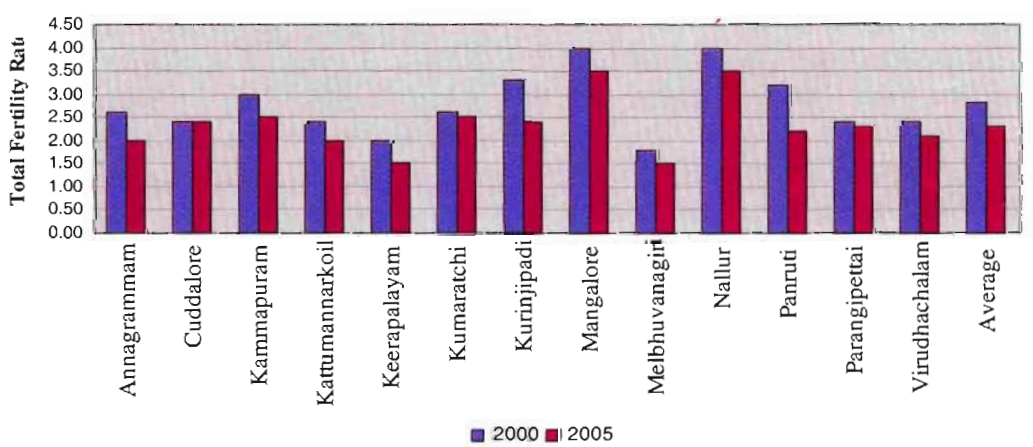
Table 5.5

Total Fertility Rate by Block

S. No	Blocks	Fertility Rate	
		2000	2005
1	Annagrammam	2.60	2.00
2	Cuddalore	2.40	2.40
3	Kammapuram	3.00	2.50
4	Kattumannarkoil	2.40	2.00
5	Keerapalayam	2.00	1.50
6	Kumaratchi	2.60	2.50
7	Kurinjipadi	3.30	2.40
8	Mangalore	4.00	3.50
9	Melbhuvanagiri	1.80	1.50
10	Nallur	4.00	3.50
11	Panruti	3.20	2.20
12	Parangipettai	2.40	2.30
13	Virudhachalam	2.40	2.10
Average		**2.80**	**2.30**

Source: DDHS Cuddalore, 2006

Figure 5.5
Total Fertility Rate by Block



A number of reasons could be attributed to the rapid decline in TFR in the blocks of Cuddalore district. Besides the strong political commitment of successive Governments and the positive influence as a result of the thoughts of the great leader Periyar, many other conducive factors helped the process, such as an integrated transport and communication network, perception about significance of small family and intensive implementation of Information, Education and Communication (IEC) Programme. Other factors that contribute are perceptible economic growth, better health–care facilities, women empowerment and employment, health education, and improved levels of literacy attainments.

2. Family Welfare Measures

A significant decline is noticed in the district TFR and CBR, as discussed above. Birth control measures, mostly sterilization, were a major reason that should be reckoned with. The method of sterilization has changed over the time. Laparoscopic sterilization was preferred during the mid–1980s. Owing to the ineffectiveness of this method, conventional tubectomy is now preferred among women. The average age of acceptance at 30 years in 1982–83 had come down to 26.4 years in 1998–99. A break–up of sterilization data shows that 56.3 percent of the sterilization adopters in 1996 had two or less children. It is interesting to mention that the urban middle class families of the district had one child and while the rural middle class families had two children. It is a remarkable breakthrough in the family welfare sphere in the district. It is worth noting that vasectomy lags behind tubectomy in recent years bringing in the gender element in family planning.

Community participation in the family control measures is not significant as learnt from the FGD. Particularly, the male's role is not up to the mark. In this context, there needs to be much adoption of contraception by men, both temporary and permanent. Currently, the number of vasectomies performed per year in the district is negligible and the use of condoms by males is only confined to urban areas. The Reproductive and Child Health Project (RCHP) Rapid Survey in 12 districts of Tamil Nadu (1998) reports that only 15 percent of males in the sample adopted modern methods of contraception. According to NFHS–2, only 5 percent of the men reported using or having used condoms and a meagre 0.8 percent having undergone sterilization. It is imperative that male participation in the family control measures is essential and creation of adequate health awareness regarding small family norm is also indispensable in the district.

Box : 5.1 Reproductive and Child Health Project Phase –II

The National Rural Health Mission will be implemented through the RCH project. There will be many activities, such as:

- 24 hours delivery–care services in Primary Health Centers, which will be carried out in the second phase of RCH by posting 3 Staff Nurses on a contract basis in PHCs who will work round the clock on shift basis and attend to delivery Services.

- Hiring of Private Anesthetists and Obstetricians for conducting Family Welfare surgeries in PHCs and Emergency Caesarian in Government Hospitals.

- Strengthening of Indian System of Medicine (ISM)–VHN will be trained in using and dispensing ISM drugs.

- Strengthening Fixed Day outreach services with an aim to provide health care services with investigation facilities in village through a team approach and deliver the services through a fixed day programme.

- Establishment of BEMONC Centres (Basic Emergency Obstetric and New Born Care) in each block.

- Establishment of 24 hours Referral Control Room like the police control room will be established in revenue district headquarters for timely transportation of pregnant mothers and new born babies to higher medical institution utilizing the ambulances provided for the purpose. They also intend to organise periodical blood donations campaign, establishment of Family Health Clinics in all main P.H.Cs. Assistants will be posted for the purpose by TANSACS. Janani Suraksha Yojana (JSY) is a 100% centrally sponsored scheme launched by Government of India to reduce Maternal and Infant Mortality by promoting institutional delivery, making available quality care during pregnancy, delivery and post delivery. It is cash assistance of Rs.1000/–per month from the 7th month of pregnancy up to 3 months after delivery, totally Rs.6000/– in 6 installments for all pregnant women and up to two live births and belonging to BPL.

- **Scan Centre Audit**: There is a need to identify the scan centres which are revealing the sex of foetus. In order to discourage the illegal practice, it is proposed to conduct regular audit. Under NRHMP each HSC is provided with Rs. 10,000/– as united fund for meeting essential contingent expenses.

Source : DDHS, Cuddalore, 2006

2.1. Maternal Mortality Rate (MMR)

An in–depth analysis of the reasons for maternal death in Tamil Nadu reveals the fact that a large number of cases are preventable. There are well identifiable direct and indirect obstetric causes for maternal death. Socio–economic and cultural factors and also malnutrition play a crucial role. MMR

is conditioned by patriarchal attitudes and malnutrition. Gender roles are often conditioned by cultural factors. The gap in transport and communication facilities especially in rural areas hardens the delivery of health facilities. Besides, the lack of quality of essential and emergency obstetric services is acting as an impediment to effective health delivery system.

Hemorrhage accounted for nearly 40 percent of all maternal deaths in Tamil Nadu in 1996. This emphasizes the need to create of blood bank in all main PHCs for maternal lives. Other major reasons include pregnancy–induced hypertension and eclampsia, rupturing of the uterus on account of obstructed labour, puerperal sepsis and septicemia. Important indirect obstetric causes include anemia, heart ailment, jaundice and malaria.

The causes for MMR discussed above are equally applicable to the Cuddalore district. In 2000, the Panruti and Kurinjipadi blocks had recorded the highest MMR of 2.7 and 2.6 per thousand respectively. The Parangipettai and Annagrammam blocks had registered the lowest MMR in the same year. It is to be noticed that the Kumartchi and Annagrammam (0.4) blocks had the lowest MMR in 2005. The Mangalore block had recorded the highest MMR (2.1) in the same period. Most of the maternal deaths were due to bleeding, nutritional disorder and non–availability of transport facilities in rural areas particularly in the Mangalore and Nallur blocks in the district. It stresses that the 24–hour blood bank services in the PHC and proper transport facilities are important. This measure would go a long way in reducing the MMR in the district (Box–5.1). Figure 5.6 and Table 5.6 portray the block–wise MMR status in Cuddalore district.

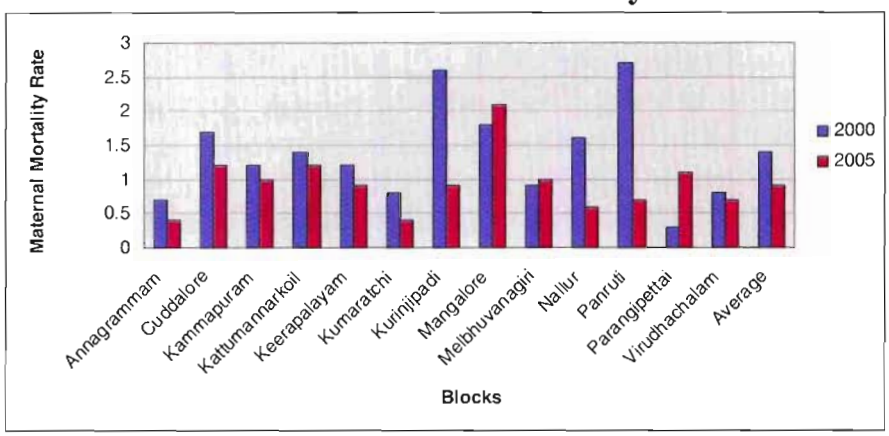
Table 5.6
Maternal Mortality Rate by Block

S. No	Blocks	Maternal Mortality Rate (Per thousand)	
		2000	2005
1	Annagrammam	0.70	0.40
2	Cuddalore	1.70	1.20
3	Kammapuram	1.20	1.00
4	Kattumannarkoil	1.40	1.20
5	Keerapalayam	1.20	0.90
6	Kumaratchi	0.80	0.40
7	Kurinjipadi	2.60	0.90
8	Mangalore	1.80	2.10
9	Melbhuvanagiri	0.90	1.00
10	Nallur	1.60	0.60
11	Panruti	2.70	0.70
12	Parangipettai	0.30	1.10
13	Virudhachalam	0.80	0.70
Average		**1.40**	**0.90**

Source: DDHS Cuddalore, 2006

Figure 5.6

Block–wise Maternal Mortality Rate



Box 5.2 Voice of the Community

- The Cuddalore district may be categorized into three health divisions – Cuddalore, Chidambaram and Vridhachalam. These divisions should have all hi–tech health facilities to improve the health status of the community.
- 24 hours blood bank service is necessary for all the three divisions.
- Ambulance facilities for all the PHCs.
- Filling up of the vacant positions in the posts of medical and paramedical.
- Strengthening of transport facilities in rural areas and
- Enhancement of VHN services.

Source: Focus Group Discussion, 2006

The prevalence of low birth weight (LBW) is a cause for continuing concern. The aim should be to eliminate cases of LBW since it is a liability to the individuals and to the society. In this context, it is not only eradicating maternal malnutrition that is important, but also improving the female literacy and creating health awareness about human reproduction that is essential. Early marriage (age groups of 13 to 15) has been noticed in some parts of the district as well in certain minority communities. These issues have to be explored further to control early marriages for achieving sustainable human reproduction. This is also one of the reasons for LBW. Adolescents with low weight and height coupled with nutritional deficiencies such as anemia is a very important area of concern. It needs to be addressed prudently.

2.2. Institutional Deliveries

The district made rapid strides of progress in increasing the number of institutional deliveries, and this would help reduce the incidence of IMR and

MMR. According to the data provided by the DDHS, the institutional deliveries stood at 85.2 percent and only 14.8 percent were non–institutional deliveries in 2000. This is indeed a commendable change for improving human development. In 2005, institutional deliveries increased to 90.5 percent. Among the blocks, Kammapuram and Mangalore registered 23.3 and 18.9 percent of non–institutional deliveries respectively in 2005. Table 5.7 reflects that the obstetric services are inadequate in these blocks. It is observed that the district average of institutional deliveries is higher than that of the State average.

Table 5.7
Institutional and Non–Institutional Deliveries by Block

S. No	Blocks	Institutional Deliveries %		Non–Institutional Deliveries %	
		2000	2005	2000	2005
1	Annagrammam	94.70	90.60	9.40	5.30
2	Cuddalore	91.30	95.40	8.70	4.60
3	Kammapuram	74.40	76.70	25.60	23.30
4	Kattumannarkoil	95.00	95.80	5.00	4.20
5	Keerapalayam	77.90	89.70	22.10	10.30
6	Kumaratchi	93.50	87.70	6.50	12.30
7	Kurinjipadi	73.50	91.80	26.50	8.20
8	Mangalore	66.40	81.10	33.60	18.90
9	Melbhuvanagiri	85.80	87.80	14.20	13.20
10	Nallur	92.60	92.50	7.40	7.50
11	Panruti	82.80	91.10	17.20	8.90
12	Parangipettai	82.80	96.10	17.20	3.90
13	Virudhachalam	97.20	96.90	2.80	3.10
Average		**85.20**	**90.50**	**14.80**	**9.50**

Source: DDHS Cuddalore, 2006

2.3. Infant Mortality Rate (IMR)

The IMR is a reliable indicator of socio–economic conditions. Improvements in MMR and institutional deliveries have a direct bearing on an economy in reducing the infant mortality rate. The IMR is a sensitive indicator, not just of the state of health, nutrition and caring accessible to infants below one year of age, but also of the general well–being of the community. The IMR for Tamil Nadu and India were the same in 1970 at 125/1000 and 129/1000 respectively. Tamil Nadu's IMR came down much more rapidly than that of

All–India IMR. Tamil Nadu's IMR fell by less than 100 in 1980 itself, while the All–India IMR declined to 114. By the end of the 1980s, the IMR reached 68/1000 for Tamil Nadu (91 for All–India) and by 2000 it was at 51/1000 (68 for All–India). Compared to the State (51/1000) IMR, the district's rural IMR was at 34.3/1000 in 2000. In 2005 the district IMR decreased rapidly than IMR (30.8/1000) in 2000 (Table 5.8).

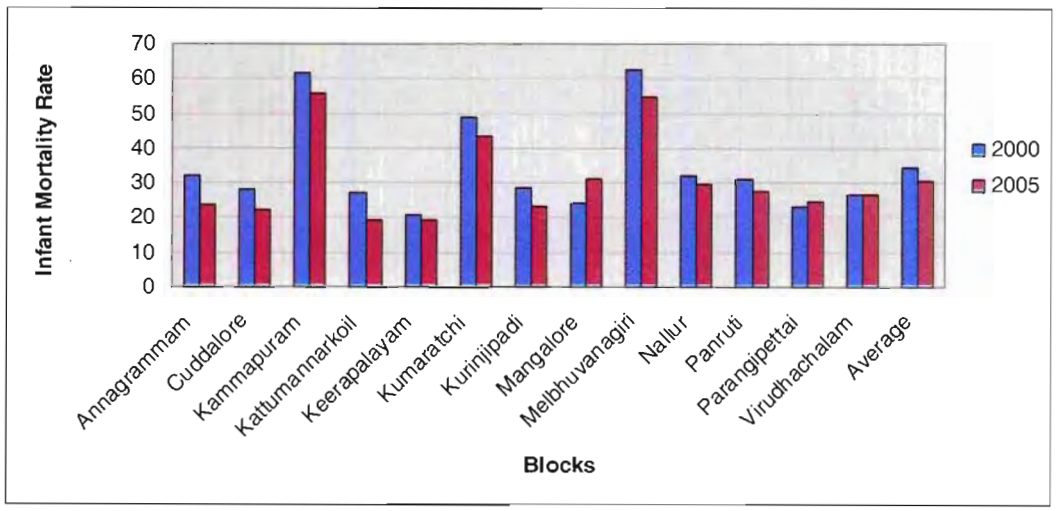
Table 5.8
Infant Mortality Rate by Block

S. No.	Blocks	Infant Mortality Rate	
		2000	2005
1	Annagrammam	31.80	23.80
2	Cuddalore	28.20	22.10
3	Kammapuram	61.50	55.80
4	Kattumannarkoil	27.00	19.20
5	Keerapalayam	20.70	19.00
6	Kumaratchi	48.60	43.60
7	Kurinjipadi	28.70	23.00
8	Mangalore	24.00	31.00
9	Melbhuvanagiri	62.40	54.50
10	Nallur	32.10	29.60
11	Panruti	31.30	27.60
12	Parangipettai	23.40	24.60
13	Virudhachalam	26.80	26.80
Average		**34.30**	**30.80**

Source: DDHS Cuddalore, 2006

Figure 5.7

IMR of Cuddalore District (Rural)



The low IMR is correlated with the good health status of the community. Figure 5.7 shows the trend in IMR for the district. According to the 2005 data, the Kammapuram, Melbhuvanagiri, Kumaratchi and Mangalore blocks recorded higher IMR. However, the Keerapalayam, Kattumannarkoil and Cuddalore blocks registered the lowest IMR as compared to the district and the State IMR. The report emphasizes that the adequate ante–natal and post–natal care are to be initiated for blocks with a high incidence of IMR.

2.4. Medical Reasons for Infant Mortality

The major causes of infant deaths were birth asphyxia (17.7%), low birth weight (14.6%), acute respiratory infection (13%) and pre–maturity (7.1%). The effective implementation of ante–natal and post–natal care is a prerequisite for rural areas. Improvement in female literacy will produce a synergistic impact and a holistic approach is the requisite.

2.5. Female Infanticide

A higher proportion of female infant deaths occur in the neo–natal period due to female infanticide. As per the FGDs held with the stakeholders, it is found that the district has had a considerable number of female infanticides. The district administration has to address this unhealthy practice through a combination of legal action, community mobilization and motivation. The male's mindset should change to view the birth of female child positively. The role of Panchayat Raj Institutions (PRIs), women leaders and SHG members is to be proactive.

Box : 5.3 Female Infanticide (Voice of the Community)

- ✓ There is a significant occurrence of female infanticides in Panruti, Orathur and Chidambaram regions.
- ✓ There have been instances of female infants being thrown in dustbins in the Virudhachalam, Chidambaram and Panruti blocks.
- ✓ Illegal abortions do take place to a significant extent, both in the rural and urban areas.
- ✓ VHN service is not satisfactory and it should be toned up.
- ✓ HSCs require a thorough revamping, wherever they are deficient in service.

Source: Focus Group Discussion, 2006

2.6. Female Foeticide

Female foeticide is closely related to female infanticide. With emergence of hi–tech technology , the identification of the sex of the foetus well in advance has now become possible. The practice of female foeticide exists in many parts of the district. FGDs held with the elected representatives, SHG members and other cross–section of the population clearly indicated that the unhealthy practices of female foeticide are prevalent in the district. This crime is committed with the connivance of the private health providers and other medical personnel. In this regard everyone should be sensitized to value all human beings equally irrespective of sex.

2.7. Still Birth Rate (SBR)

Still birth rate is also one of the important indicators in human development. This occurs principally due to malnutrition of the expectant mothers and their poor health status. If the SBR is prevalent in any region it mirrors the non–availability of obstetric services and low nutritional status of the women population. The SBR of the district was 19.1 in 2000.

Table 5.9
Still Birth Rate by Block

S. No.	Blocks	Still Birth Rate	
		2000	2005
1	Annagrammam	22.00	19.30
2	Cuddalore	16.60	9.40
3	Kammapuram	34.40	27.30
4	Kattumannarkoil	19.50	13.40
5	Keerapalayam	23.00	20.00
6	Kumaratchi	10.80	10.90
7	Kurinjipadi	17.00	13.60
8	Mangalore	10.10	16.50
9	Melbhuvanagiri	12.20	9.50
10	Nallur	21.20	21.70
11	Panruti	14.90	12.60
12	Parangipettai	16.20	19.00
13	Virudhachalam	29.90	25.70
Average		**19.10**	**16.80**

Source: DDHS Cuddalore, 2006

The district SBR was higher than that of the State SBR (16.3). As compared to the All–India SBR (8.7), the district had a higher SBR (more than 50%). It reflects that the female health status, particularly those who are in the reproductive age group is low. In 2005 the district SBR stood at 16.8. There was no much reduction in SBR between 2000 and 2005 (Table 5.9). The Kammapuram, Virudhachalam, Keerapalayam, Annagrammam and Nallur recorded higher SBR than the State average between 2000 and 2005. When compared to the All–India SBR, all blocks had a higher rate of SBR.

2.8. Under–5 Mortality Rate

Under–5 mortality rate is one of the indicators for measuring human development. If the under–5 mortality rate is higher, it will arrest the quality of labour supply in the labour market. In 2000, the under–5 mortality rate of males was 17.9 and females 18.7 in the district. The State under–5 mortality was 60 (combined). The district under–5 mortality declined much more rapidly than the State under–5 mortality rate. The Kammapuram, Parangipettai, Kattumannarkoil, Virudhachalam, Kurinjipadi and Cuddalore blocks registered the highest under–5 mortality rate. It is a negative aspect in human development. In 2005, there was no much reduction between male and female under–5 mortality rate.

Table 5.10
Under–5 Mortality Rate by Block

S. No.	Blocks	2000		2005	
		Male	Female	Male	Female
1	Annagrammam	5.00	0.00	1.00	0.00
2	Cuddalore	35.00	40.00	49.0	56.00
3	Kammapuram	41.07	47.10	31.10	28.90
4	Kattumannarkoil	38.00	25.00	23.00	28.00
5	Keerapalayam	14.00	11.10	10.40	8.70
6	Kumaratchi	1.60	4.70	4.60	1.50
7	Kurinjipadi	31.70	29.80	28.80	27.60
8	Mangalore	1.90	1.20	1.40	0.90
9	Melbhuvanagiri	0.30	0.20	1.50	0.50
10	Nallur	5.20	5.80	22.30	2.40
11	Panruti	12.30	10.80	8.60	9.20
12	Parangipettai	41.70	41.70	38.20	36.20
13	Virudhachalam	35.70	30.60	27.60	24.60
Average		**17.90**	**18.70**	**15.60**	**17.20**

Source: DDHS Cuddalore, 2006

3. Importance of Higher Nutritional Status

In many developing economies, including India, nutrient absorption and utilization by the body is less because of the presence of frequent infection episodes such as diarrhea and upper and lower respiratory infections. Infection and poor nutritional status are interdependent and hence mutually reinforce each other. Thus, the term nutritional status is used to describe an outcome of several biomedical processes, interacting over time. Even when mortality is controlled, the nutritional status may not improve. Education, Information and Communication (IEC) regarding the significance of nutrition can go a long way in bringing about long–term changes in behaviour and recognition by parents of the importance of nutrition for their children.

Vadakku Malur, Kurinjipadi Block – Community participation in the Nutritional Programme, 2006

3.1. Nutrition Status and Trends

Anthropometric measurements, such as weight and height, are always an outcome of both heredity and environment in which children grow. It is seen that differences in the socio–economic status affects the growth of children. Thus, when more deprived is the population (in terms of access to nutrients, infection loads, hygiene and even care and attention) greater is its adverse impact upon the height and weight outcomes.

The National Nutrition Monitoring Bureau (NNMB) data shows high percentages of children in India below five as under weight, stunted and wasted. The Child development programme data for rural children from the Tamil Nadu Integrated Nutrition Programme (TINP) shows a high percentage of under–weight children among focus groups in the 1980s and 1990s. In Tamil Nadu around 46.6 percent of children below five years are under weight. The percentage is higher in rural areas (52.1%) as compared to urban areas (37.3%)

as per 1992–93 data. While this is better than the All–India status of 53%, Cuddalore district deviates from this level.

Surakuppam, Panruti Block– Grade–III Malnutrition Baby, 2006

3.2. Weights–for–Age

Depending upon the classification system used (Gomez, Standard Deviation SD)[1] for defining the various degrees of malnutrition, the actual percentages of children classified as normal, mild malnutrition (Grade–I), moderate malnutrition (Grade–II) and severe malnutrition (Grade III & IV) vary. Irrespective of classification, the conclusion is that around half or more of children in the 1–5 years age group in India are under weight. Correspondingly, the share of children severely malnourished more than halved from 15 to 6.2 percent. The same trend is observed at the State level as well. Compared to All–India and Tamil Nadu, the nutritional status level in the Cuddalore district is also on the same level. Table 5.11 shows that the 0–3 year (block–wise) children's nutritional status. In 2000, the rural 0–3 years children's normal status was 46.8 percent and in 2005 it was 52.6 percent. The mild malnutrition (Grade–I) was 40.8 percent and 41.6 percent in 2000 and 2005 respectively.

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[1] **Gomez Classification (4 Grades) :**

> = 90% of reference weight – for – age : Normal
75–90% of reference weight – for – age : mild malnutrition (Grade–I)
60–75% of reference weight – for – age : moderate mal nutrition (Grade –II)
< 60% of reference weight – for – age : Severe mal nutrition (Grade–III & IV)

Table 5.11
Nutritional Status of 0–3 Years Children by Block

S. No.	Blocks	2000 (%)				2005 (%)			
		Normal	Grade I	Grade II	Grade III & IV	Normal	Grade I	Grade II	Grade III & IV
1	Annagrammam	50.10	38.40	5.60	5.90	62.40	30.10	7.40	0.10
2	Cuddalore	45.10	40.80	14.00	1.00	52.40	40.80	5.80	0.10
3	Kammapuram	43.10	44.30	12.50	0.10	53.50	44.40	2.00	0.10
4	Kattumannarkoil	46.20	45.10	8.50	0.20	60.50	34.20	5.00	0.30
5	Keerapalayam	41.00	44.60	14.10	0.30	48.40	45.80	5.70	0.10
6	Kumaratchi	40.10	42.00	17.60	0.30	50.80	41.10	8.00	0.10
7	Kurinjipadi	39.10	48.30	11.90	0.70	47.80	46.90	5.20	0.10
8	Mangalore	53.00	32.50	14.50	–	42.60	52.00	5.40	–
9	Melbhuvanagiri	46.40	42.10	11.20	0.30	67.50	27.30	5.00	0.20
10	Nallur	47.10	34.80	18.10	–	45.20	50.50	4.20	–
11	Panruti	48.70	43.00	8.10	0.20	57.00	40.00	2.90	0.10
12	Parangipettai	49.10	45.50	5.30	0.10	49.30	44.20	6.50	–
13	Virudhachalam	53.00	32.40	14.50	0.10	46.50	44.00	8.20	0.30
Average		**46.80**	**40.80**	**12.10**	**0.30**	**52.60**	**41.60**	**5.50**	**0.30**

Source: Project Officer, ICDS, Cuddalore, 2006

3.3 Severe Malnutrition

The moderate malnutrition (Grade–II) was 12.1 percent in 2000 and it came down to 5.5 percent in 2005. It is a gratifying development in Cuddalore district. There was no much variation in grade III and IV malnutrition in the district. In 2000, the Viruddhachalam (53%), Mangalore (53%), Annagrammam (50%) and Parangipettai (49%) recorded the highest normal nutritional status of 0–3 children. However, the Kurinjipadi (39%), Kumaratchi (40%), Keerapalayam (41%) and Kammapuram (43%) blocks registered the lowest normal nutritional status. According to the 2000 data, the Mangalore, Virudhachalam and Nallur blocks registered the lowest grade–I under nutrition, but the Parangipettai, Kurinjipadi and Kattumannarkoil blocks recorded the highest grade–I malnutrition. The grade–II (moderate malnutrition) was higher in Nallur (18%) and Kumaratchi (17.6%) blocks, while Annagrammam and Parangipettai blocks registered the lowest grade–II malnutrition. The grade III and IV malnutrition was higher in Annagrammam block (5%). There was a remarkable improvement in the nutritional status in 2005.

The Table 5.12 brings to focus the Nutritional Status of 3–5 years children in the rural areas of the district. The normal nutritional status was higher in Kurinjipadi (54%), Virudhachalam (51%) and Annagrammam (51%) blocks in 2000. Kammapuram (24%), Kattumannarkoil (30%) and Panruti (31%) blocks recorded the lowest normal nutritional status. These blocks require a big nutritional intervention. Grade–I malnutrition was higher in Parangipettai (50%), Keerapalayam (45%), Melbhuvanagiri (43%) and Virudhachalam (43%) blocks. The Mangalore block registered the lowest (35%) grade–I malnutrition and the remaining blocks lie in between these

ranges. The grade–II malnutrition was higher in Kammapuram, Panruti, Kattumannarkoil and Annagrammam blocks. This kind of low nutritional status is the major cause for under–5 mortality in our society. Special focus on to these blocks in terms of nutritional intervention is necessary. It is gratifying to note that all blocks showed laudable improvement in nutritional status in 2005.

Table 5.12
Nutritional Status of 3–5 Years Children by Block

S. No.	Blocks	2000 (%)				2005 (%)			
		Normal	Grade I	Grade II	Grade III & IV	Normal	Grade I	Grade II	Grade III & IV
1	Annagrammam	50.92	27.70	21.40	0.00	58.22	36.25	5.50	0.00
2	Cuddalore	40.37	38.96	14.10	5.86	51.41	32.52	16.10	0.00
3	Kammapuram	23.96	36.39	46.00	0.06	42.25	53.22	5.90	0.00
4	Kattumannarkoil	30.34	36.03	29.40	4.30	62.34	27.15	10.30	0.17
5	Keerapalayam	48.33	45.35	6.30	0.07	60.18	35.35	4.30	0.21
6	Kumaratchi	46.53	38.47	15.00	0.00	54.12	34.37	11.50	0.00
7	Kurinjipadi	54.38	41.84	3.80	0.00	64.50	32.91	2.60	0.00
8	Mangalore	47.96	35.35	16.70	0.00	54.55	3188	13.60	0.00
9	Melbhuvanagiri	48.74	43.08	8.20	0.00	43.92	44.08	12.00	0.00
10	Nallur	45.21	38.04	16.70	0.03	46.10	50.09	3.80	0.00
11	Panruti	30.97	38.18	30.90	0.00	37.44	36.59	26.00	0.00
12	Parangipettai	45.09	49.97	4.90	0.00	36.63	36.48	26.90	0.00
13	Virudhachalam	50.68	42.94	6.00	0.43	50.60	42.94	6.10	0.28
Average		**44.22**	**39.54**	**16.00**	**0.63**	**50.53**	**38.55**	**11.00**	**0.05**

Source: Project Officer, ICDS, Cuddalore, 2006

Figures 5.8 and 5.9 display the nutritional status in the rural areas. The nutritional status of 0–3 years children was very low in 2003. Acute drought might be the reason for the lower nutritional status during this period. The district recorded good improvement in the nutritional status both in the rural and urban areas.

Figure 5.8

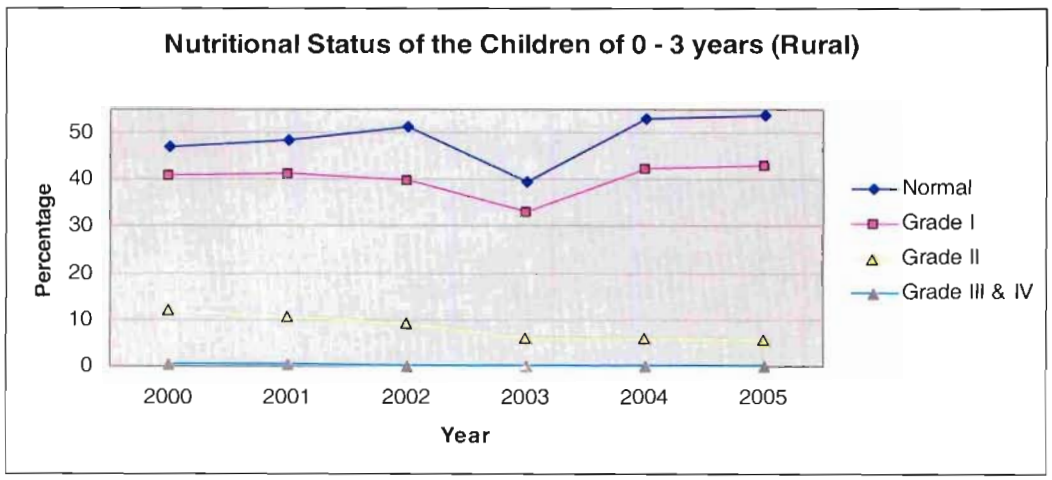
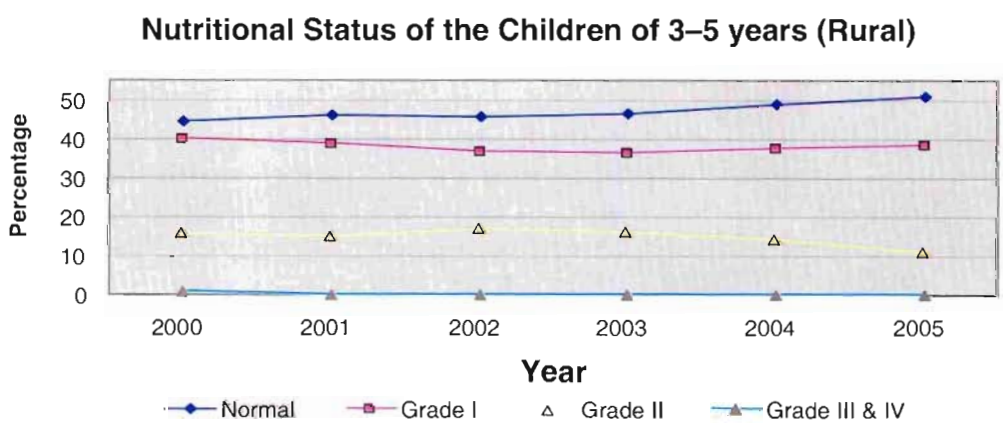


Figure 5.9



Among the municipalities, Chidambaram recorded the highest normal nutritional status (50%), whereas Virudhachalam municipality registered the lowest normal nutritional status in 2000. In 2005, all municipalities performed well in terms of nutritional status. With respect to the 3–5 years children's nutritional status, Virudhachalam notched up the lowest normal nutritional status. In 2005, all municipalities fared better than in 2000. Figures 5.10 and 5.11 show the 0–3 and 3–5 years children's nutritional status of urban population. Immediate attention is necessary for all municipalities for 3–5 years children with respect to nutritional intervention.

Table 5.13

Nutritional Status of 0–3 Years Children by Municipality

S. No.	Municipality	2000 (%)				2005 (%)			
		Normal	Grade – I	Grade – II	Grade –III & IV	Normal	Grade – I	Grade – II	Grade –III & IV
1	Chidambaram	49.75	35.05	15.07	0.12	51.24	36.97	11.66	0.12
2	Cuddalore	45.18	39.52	15.24	0.12	69.99	28.12	1.83	0.06
3	Nellikkupam	NA	NA	NA	NA	54.50	39.84	2.22	0.00
4	Panruti	48.83	39.80	11.37	0.00	52.74	40.18	6.83	0.24
5	Virudhachalam	38.66	51.50	9.84	0.00	58.92	34.05	7.02	0.00
Average		**45.36**	**40.82**	**13.76**	**0.08**	**61.36**	**33.29**	**4.95**	**0.08**

Source: Project Officer, ICDS, Cuddalore, 2006
NA = Not Available

Box : 5.4 Nutritional Status of 0–3 Years Children

The box 5.4 explained the Nutritional status of 0–3 years children. The percentage of malnutritional children has been reducing from 12.1% (2000) to 5.5% at (2005). It is as a result of effective implementation of the children nutritional programme of the Tamil Nadu government. Through the scheme malnourished children get additional grains (50 gram) per day, and this plays a vital role to diminish the extent of malnourishment in the Cuddalore district.

Source: Project Officer, ICDS, Cuddalore, 2006

Figure 5.10

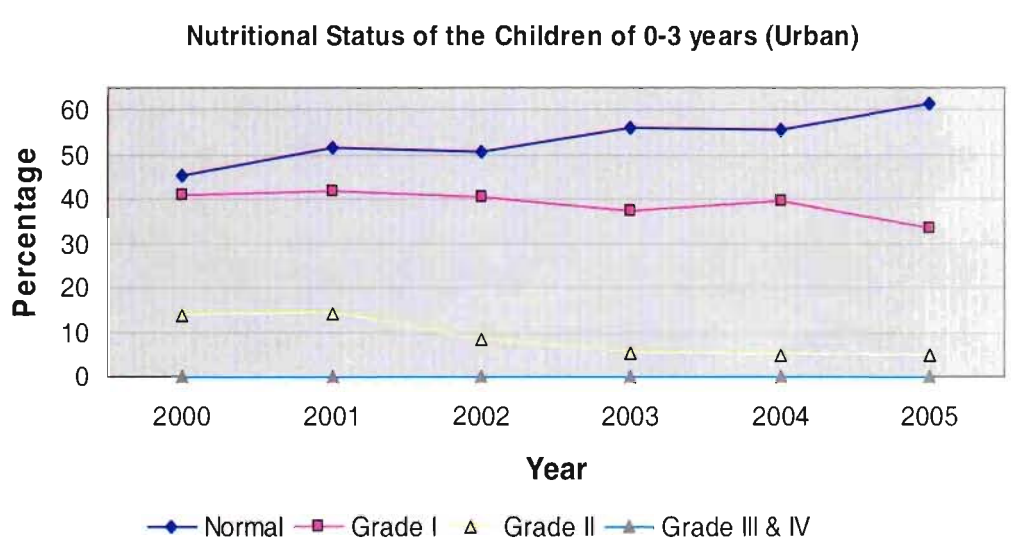


Figure 5.11

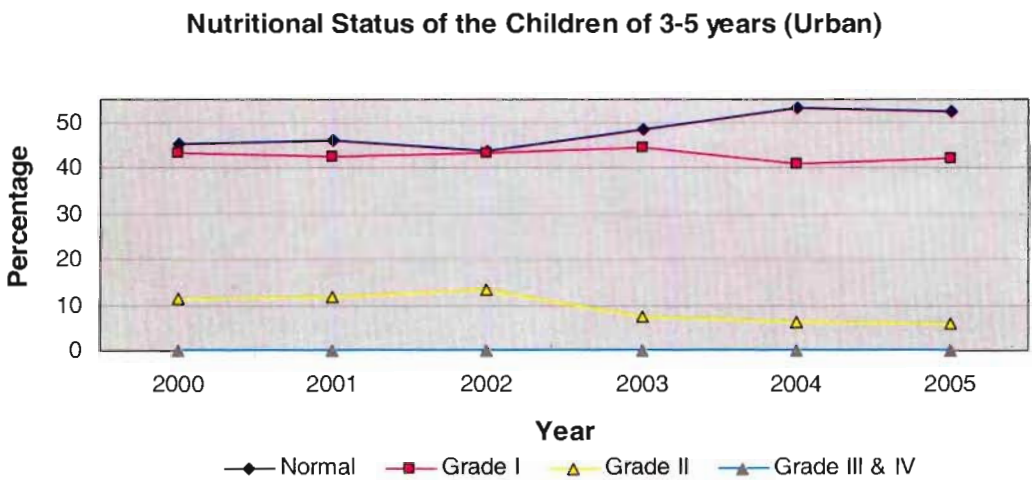


Table 5.14
Nutritional Status of 3–5 Years Children by Municipality

S. No.	Municipality	2000 (%)				2005 (%)			
		Normal	Grade – I	Grade – II	Grade – III & IV	Normal	Grade – I	Grade – II	Grade – III & IV
1	Chidambaram	47.33	42.29	10.37	0.00	47.50	45.96	6.53	0.00
2	Cuddalore	45.53	42.24	12.17	0.063	54.70	41.25	4.03	0.02
3	Nellikkupam	0.00	0.00	0.00	0.00	54.79	45.21	0.00	0.00
4	Panruti	45.09	43.61	11.30	0.00	48.30	44.36	7.28	0.00
5	Virudhachalam	41.47	47.89	10.64	0.00	53.39	37.48	9.24	0.00
Average		**45.11**	**43.34**	**11.52**	**0.033**	**52.29**	**41.95**	**5.76**	**0.02**

Source: Project Officer, ICDS, Cuddalore, 2006

Box : 5.5 The Noon Meal Programme

Launched on 1st July 1982, Tamil Nadu witnessed the beginning of the largest phased expansions of midday feeding through the Noon Meal Programme (NMP). This is a major nutrition programme. There are 1612 noon meal centers in the district. Around 1807 noon meal workers are catering to the nutritional requirements of children. According to the 2005 data provided by the district Project Officer (ICDS), 95747 children come under 0–3 years and 57,265 children come under 3–5 years are availing this facility in rural areas. The 0–3 years children numbering 11,126, and 3–5 years numbering 10,268 benefit from the programme in urban areas. Cooked rice, vegetables and greens are being provided to below 5 years children through this programme. Weekly thrice boiled egg, potato, green gram and bengal gram are provided to the children. It is one of the flagship programmes of the State Government for human development in Tamil Nadu. It was replicated by the Government of India in the 1990s.

Source: Project Officer, ICDS Cuddalore, 2006

Venganur, Mangalore Block – SSA Nursery School, 2006

Box : 5.6 Community Expectation in Noon Meal Programme

- Better rice to be supplied
- Food quantity is low at times.
- Hygienic preparation is needed.
- The quantity of vegetables should be enhanced.
- New building for Noon Meal Centres.
- Higher preference for finance and basic amenities.

Source: Project Officer, ICDS Cuddalore, 2006

Box : 5.7 Provision of Curry Leaf & Drumstick Leaf Powder in the Noon Meal Programme

On November 13th 2003, provision of Curry Leaf and Drumstick Leaf Powder Programme was launched to eliminate vitamin A deficiency and iron deficiency in the 0–5 years children. The programme is implemented in six selected districts – Cuddalore, Thiruvallur, Kanchipuram, Thiruvannamalai, Theni and Perambalur districts. In a week, for five days, curry leaf (or) drumstick leaf powder (2 gram/child) is given to 0–5 years children. This programme is being implemented in the Cuddalore and Kurinjipadi blocks.

This programme is critical to reduce the vitamin–A and iron deficiency in the 0–5 years children population. Nearly 286 noon meal centres are catering to 8250 0–5 years children. In 2003–2004, five members suffered due to night blindness, 26 members due to lance problem and 35 members due to pi–dots in the eyes. After implementation of this programme, these problems came down drastically in 2005–2006. This programme would enhance the human development.

Source: Project Officer, ICDS Cuddalore, 2006

Venganur, Mangalore Block – SSA Nursery School, 2006

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- New building for Noon Meal Centres.
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Source: Project Officer, ICDS Cuddalore, 2006

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Source: Project Officer, ICDS Cuddalore, 2006

Box : 5.8 Rashtrya Sam Vikas Yojana

The Rashtrya Sam Vikas Yojana scheme was started in December 2004 in the district. The major objective of the programme is to eliminate malnutrition from the 6–36 months children. Through this programme, one bread/10g and Aavin milk powder per day is provided to all children. The bread and Aavin Milk Powder are purchased from L.N.Puram SHG Bakery unit and Villupuram Dairy respectively. After the implementation of this programme, nearly 98 children were totally free from malnutrition. Through this scheme, health education (Information, Education and Communication) was also provided to the mothers, regarding how to feed and how to provide health care to the children. This programme will definitely add to the enhancement of human development.

Source: Project Officer, ICDS, Cuddalore, 2006

4. Public Distribution System (PDS)

The PDS system is a nutrition–based intervention. Tamil Nadu's PDS aims at price stability and attempts to make available few selected articles of mass consumption, particularly to vulnerable sections of the society at reasonable prices. It is a tool to enrich human development. There are 6,78,905 family cards in the Cuddalore district. Under the Antyodaya Anna Yojana (AAY) programme, there are 81,436 cards. There are 5,72,038 rice cards and 23,800 sugar cards and 868 police cards issued in the district. Rice, wheat, sugar, edible oil, maida, pulses and kerosene are being distributed through the PDS system. The present State government is also distributing rice at 2 Rs/kg. It will be beneficial to human growth and development because the reduction in price makes rice more affordable by the poor.

Box : 5.9 Public Distribution System

The PDS was introduced in 1960 to protect the poor people from starvation deaths, stabilize the prices of food grains and improve the status of the poor. Food shortage in the 1960s was the main reason for the introduction of the PDS system. Now it provides social safety net to the poor.

Based on the number of cards, the allotment has been made to all PDS shops. The PDS shops in the Cuddalore district ensure that all customers possess cards. Thus, the number of cards and quantity of allotment has increased over the time in the Cuddalore district.

Distribution of food grains is maintained through the 1279 fair price shops in the Cuddalore district. (1111 fulltime and 158 part–time and 10 Women Self Help

Group Fair Price Shops). This ensures food security. Loss of food grain in ware houses, quality degradation, under weight selling of food grains in black market, having two cards in the case of transfer, joint families having multiple cards, etc., are some of the problems faced by the PDS. As shelf life of rice is very short, the quality of rice suffers in the event of long storage period. Consumers want distribution of food grains in correct time and in correct quantity. In rural areas rice in PDS is available throughout the year since allotment is made to each shop based on the requirement and according to the number of family cards attached.

Antyodaya Anna Yojana (AAY)

AAY beneficiaries identified with reference to the BPL list available with the Commissioners and the list placed before the Gramma Sabha, Council of Municipalities/Town Panchayat Councils are to get approved. Such beneficiaries are given with 35 PDS rice at Rs.2 per Kg.

Source: DSO, Cuddalore, 2006

Box : 5.10 Adulteration and Food Contamination

Based on the 1954 and 1955 adulteration and food contamination Act, food adulteration refers to contamination of food item, adulteration with inferior materials and inferior quality. Wrong labeling also comes under the heading of food adulteration. In 2006, a new Act was introduced for controlling food adulteration.

Generally, milk product, food colorings, packaged drinking water, ready mix, prepared food and fast foods are considered as major items for adulteration and contamination. Now, the number of road side tea stalls, open canteens and moving fast food stalls has increased rapidly. Economically and socially vulnerable groups consume from these outlets. These types of stalls are the major sources of food adulteration and contamination; so it needs a special attention with respect to regular food inspection and maintaining quality, failing which it will drastically affect the human health. So the awareness, knowledge about food adulteration and continuous inspection may reduce food adulteration practices.

Source: Commissioner, Cuddalore Municipality and Focus Group Discussion, 2006

Water and Sanitation

Water and sanitation have a direct bearing on nutrition. With a growing population, there is mounting pressure to provide water supply and sanitation facilities on a sustained basis. Provision of these basic facilities is also crucial for achieving the goal of "Health for all." Specific attention is being given to assessing the availability and accessibility of drinking water and sanitation facilities. The goal is set at supplying 40 litres per capita per day (LPCD) in rural areas. It is noticed that water is a major source of infection for most of the communicable diseases. Open defecation is a threat to fragile ecology and environment. In this context, provision of safe drinking water and its maintenance, drainage facilities and latrine facilities assume much significance. The World Bank has assessed that 30 million life years are lost per annum due to water borne diseases. Acute Diarrhea Disease (ADD) is a major cause for adult mortality in India.

As per the 2001 Census, the total number of households stood at 5,03,057 in the district. Of these, only 28.16 percent households had water supply connection within the house. The remaining 71.84 percent depend on other sources such as public tap, hand pump, municipality water supply and private taps. The 16.34 percent of the households had water connections within the house in rural sides. However, in urban areas, nearly 54.94 percent of them had connections within the households. According to the 1991 Census, 73.23 percent of the total population had protected water supply facilities. After implementation of the Rajiv Gandhi National Drinking Water Supply programme, there is a phenomenal improvement in the water supply in rural and urban areas.

Box : 5.11 Status of Urban Solid Waste Management

Increasing population, growing urbanization, migration from rural to urban area and development of trade and business are the main causes for the increasing quantity of solid waste. This gives rise to pollution and environmental degradation. The accumulation of solid waste is acute in urban areas compared to rural areas. In this context we have to analyse the solid waste management status of the municipalities in the district. The district is having five municipalities viz Cuddalore, Nellikuppam, Panruti, Chidambaram and Virudhachalam.

To assess the effectiveness of tackling the problem of urban solid waste management, FGDs were carried out along with experts of solid waste management and people who live in urban areas. These discussions revealed the various types of challenges prevailing in urban solid waste management. The challenges are

insufficient land for dumping solid waste, accumulation of plastic waste and inadequate personnel for collecting and dumping waste. Among the municipalities, Cuddalore is a selection grade municipality and it is located in the head quarters of the district. In this municipality, the staff strength does not suffice to manage solid waste. This thwarts the waste degradation process. Due to e population growth, emerging new houses and business transactions, the quantity of solid waste has increased in Cuddalore. The usage of plastic bags and cups is unavoidable in the urban area. Due to this usage, the quantity of plastic waste has increased and it is hindering the process of waste biodegradation. The Cuddalore municipality attempts to segregate the wastes as bio degradable and non biodegradable with the help of SHGs. This is a unique practice introduced by the municipality. If this practice is successful, this model may be emulated by other regions with people's participation.

The Panruti municipality is located near the Cuddalore municipality. This municipality has earned the name as dust–free municipality, which reveals efficient solid waste management. Now the municipality is facing shortage of land for treating solid waste. The Virudhachalam municipality faces the problem of lack of adequate staff for collecting and dumping waste. Due to paucity of staff, the wastes were dumped at the corners of the streets and market areas. This is a major threat to environment and sanitation. The accumulation of waste in residential area will cause communicable and non communicable diseases. In Chidambaram municipality, the dimension of solid waste management problem is totally different from that of other municipalities. Accumulation of plastic waste is a burning problem in the Chidambaram municipality. In residential areas, the wastes consist of both plastic and biodegradable wastes. It is difficult to segregate as non–biodegradable and biodegradable solid waste. Since the Nellikuppam municipality doesn't have a strong financial firepower, the municipality is facing severe problems on many fronts.

Accumulation of Plastic Wastage

Accumulation of plastic waste is common in all the municipalities. The usage of plastic bags has aggravated the problem in all municipalities. The district authority must come forward to reduce the production of plastic items and evolve a new recycling method in order to reduce plastic wastage. If the government imposes a ban on plastic production and use, the problem of plastic wastage can be reduced to a certain extent. Another common problem posing a threat to all the municipalities is the increasing pig population. Pig rearing does not incur any cost but yields good remuneration. The pig population creates a negative externality. Although they help to clean the environment, they are the principal source for spreading communicable and non–communicable diseases and are a threat to the healthy environment. The district authorities must take suitable measures to overcome the twin problems of solid waste management and pig menace. With respect to disposal of solid waste management, there is a choice of landfill (process of burying large amounts of waste material) or incineration (process of burning the waste until it is completely destroyed by using high temperature). Besides, there should be a public–private partnership in disposal of solid waste.

Source: Commissioners of all Municipalities, 2006

Table 5.15
Drinking Water Facilities in Rural and Urban Households

S. No.	District / State	Total Number of Households	Drinking Water Facilities Inside the Households	Percentage	Total Rural Households	Drinking Water Facilities Inside the Households (Rural)	Percentage	Total Number of Urban Households	Drinking Water Facilities Inside the Households (Urban)	Percentage
1	Cuddalore	503057	141661	28.16	349119	57079	16.34	153938	84582	54.94
2	Tamil Nadu	14173626	3835317	27.05	8274790	989175	11.95	5898836	2846142	48.24

Source: Census of India, 2001

The availability of toilets and bathroom is also one of the important indicators for privacy and human development. As per the 2001 Census, only 25 percent of the total households had bathroom facilities in their houses, while the remaining 75 percent of the households did not have these facilities in their houses. Eleven percent of the households had this in rural areas and 57.22 percent in the urban areas. Compared to the State average (40%), the district had a lesser (25%) average. It suggests that the creation of awareness about importance of bathroom facilities is imperative.

Table 5.16
Bathroom Facilities in Rural and Urban Households

S. No.	District / State	Total Number of Households	Bathroom Facilities' Households	Percentage	Total Rural Households	Bathroom Facilities' Households (Rural)	Percentage	Total Number of Urban Households	Bathroom Facilities' Households (Urban)	Percentage
1	Cuddalore	503057	125273	24.90	349119	37196	10.65	153938	88077	57.22
2	TamilNadu	14173626	5653502	39.89	8274790	1735533	20.97	5898836	3917969	66.42

Source: Census of India, 2001

Rural sanitation influences human development. The goal is to cover at least 75 percent of rural population with access to sanitation facilities by the end of the 10th Five Year Plan. Toilet facilities were only in 26 percent of the households in the district according to the 2001 Census. The remaining 74 percent of the households had open defecation in the common places of the villages. These households create a lot of negative externalities. Only 22 percent of them had toilet facilities in the rural and 58 percent in urban areas (2001). In order to prevent defecation in open areas, concerted effort is required to disseminate knowledge and create awareness among people on sanitation and its impact on their health and environment.

Table 5.17
Latrine Facilities in Rural and Urban Households

S.No.	District / State	Total Number of Households	Latrine Facilities not Available Households	Percentage	Total Rural Households	Latrine Facilities not Available Households (Rural)	Percentage	Total Urban Households	Latrine facilities not Available Households (Urban)	Percentage
1	Cuddalore	503057	371790	73.90	349119	3068867	87.89	153938	64923	42.17
2	Tamil Nadu	14173626	9190806	64.84	8274790	7086871	85.64	5898836	2103935	35.66

Source: Census of India, 2001

There is a major link between water, sanitation and health status of a place. Drainage management is a prerequisite for a healthy life. If it is not adequately provided and properly maintained, it will spread communicable diseases such as malaria, dengue fever, filaria, and chinkunguniya. According to the 2001 Census, only 20 percent of the households had open drainage facilities in the district; 18.41 percent and 23 percent were in rural and urban areas respectively.

Table 5.18
Open Drainage Facilities in Rural and Urban Households

S.No.	District / State	Total Number of Households	Open Drainage Facilities Households	Percentage	Total Rural Households	Open Drainage Facilities Households (Rural)	Percentage	Total Urban Households	Open Drainage Facilities Households (Urban)	Percentage
1	Cuddalore	503057	99341	17.74	349119	64287	18.41	153938	35054	22.77
2	Tamil Nadu	14173626	4000944	28.22	8274790	1909171	23.07	5899936	2091773	35.46

Source: Census of India, 2001

If closed drainage facilities are available, it will reduce the outbreak of communicable diseases. Only 12.45 percent of households had the closed drainage facility in the district. As per the 2001 Census, around 3.6 percent of households had this facility in rural areas. However it was 32.43 percent in urban areas. When compared to the State, the district had lesser facilities. It is suggested that proper drainage management scheme is urgently needed both in the urban and rural areas of the Cuddalore District.

Table 5.19
Closed Drainage Facilities in Rural and Urban Households

S.No.	Name	Total Number of Households	Closed Drainage Facilities Households	Percentage	Total Rural Households	Closed Drainage Facilities Households (Rural)	Percentage	Total Urban Households	Closed Drainage Facilities Households (Urban)	Percentage
1	Cuddalore	503057	62666	12.45	34919	12740	3.64	153938	49926	32.43
2	Tamil Nadu	14173626	2392257	16.88	8274790	354499	4.28	5898836	2038758	34.56

Source: Census of India, 2001

Box : 5.12 Underground Drainage system in the Chidambaram municipality – An Overview

Increasing population, urbanization and rising trade business transactions result in increased quantum of solid waste and liquid waste in urban areas. Developed countries use the underground drainage system. The underground drainage system would help the authority to regulate the waste water and solid waste thereby checking the outbreak of communicable diseases. For the first time in the State of Tamil Nadu, the Underground Drainage Scheme was implemented in 1967 only at the Chidambaram and Kumbakonam towns. In the Chidambaram municipality, this underground drainage system has been maintained through many divisions. This system is having 4365 drainage connections and its annual maintenance cost comes to Rs.2,00,000. At present, the underground drainage system is facing multi–dimensional problems.

In the beginning, the drainage connection pipe size was only 6 inches, which was sufficient to the then population size. The quantum of sewage water increased manifold due to migration of people from rural and urban area, and performing social ceremonies in the growth centres. Therefore, the minimum pipe size is not adequate to carry the quantum of sewage. Due to the overload, drainage pipes got blocked and developed cracks. Leakages occurred on the road sides of the Chidambaram town and flooded on the road. This was bound to cause environmental and health problems to the residents of the town. The Chidambaram municipality also caters to the needs of surrounding villages. This town has many marriage halls to perform social ceremonies. All these factors cause discharge of larger quantity of sewage water.

Sewage water is pumped through three pumping stations. The sewage water treatment plant is located in Manalur and the oxide method of sewage water treatment is used. However, the sewage water is not treated in a scientific manner. Most water gets stagnated in the treatment plant and this generates a number of communicable diseases and environmental degradation in the surrounding areas. In the long run, water stagnation in a particular area will create point pollution and affect the ground water quality also.

Underground drainage system is suitable for sewage water management and a fragile environment. Construction of underground drainage system must be done in such a manner, foreseeing the population growth and urbanization. At present the Chidambaram municipality has prepared a blue print for the construction of new sewage water treatment plant and underground drainage system. If the Chidambaram municipality collects user charges for sewage water connection, the amount collected will enable the municipality to construct and maintain the underground drainage system in an effective manner. The Cuddalore municipality has also proposed to construct an underground drainage system very soon.

Source: Municipal Commissioner, Chidambaram and Focus Group Discussion, 2006

6. Utilization of Health Services – Public and Private

In health care system, there is an over emphasis on curing illness rather than preventing it. It results in huge costs in medical treatment later. There has been an impressive growth in health infrastructure and personnel under public healthcare system. The district health sector now has around 110 public and 297 private doctors including various types of specialists and around 721 paramedical personnel. With the focus on primary health care services over the last two decades, there has been a significant expansion of PHCs and HSCs.

In rural area, women turn to public health facility to a larger extent than men, while the reverse is true in urban areas. Public health facilities in rural Tamil Nadu must reach the women folk all the more. For treatment of in–patients, greater public–private sector partnership is needed. The NSS (1997 & 1998) data suggest that the poor in Tamil Nadu went for public facility than for private sectors for hospitalization. For the lowest income quintile, 72 percent of in–patient days were in public health facilities, and it was just 27 percent for the higher income groups. The upper income group tends to spend significantly more, under hospitalized care than the poor. As a result, the well–to–do utilize more of public health care facilities than the poor in terms of total in–patient days. The district headquarters hospital is located in the Cuddalore town. There are eight Government Hospitals (GHs) in the district with 1214 beddings. All GHs are urban based. PHCs are catering for health care needs of rural community.

Box : 5.13 Premature Mortality Rate

- Higher mortality occurred before 60 years in the district (life expectancy 65 years).
- Heart attack is the major cause for premature mortality.
- Road Traffic Accident (RTA) is the second cause for premature mortality.
- Poisoning is the third cause for premature maturity.
- The average mortality per year was 5803 in 2002–2005, 3017 male and 2786 female mortality respectively per annum.
- Premature Mortality Rate (PMR) was 2.6/1000 in 2000–2005.
- Intensive health education is essential.

Source : DDHS Cuddalore, 2006

6.1. Primary Health Centre

Primary Health Centers (PHC) cater to large sections of the rural population for minor and common ailments. Almost 35 million out–patients are treated in all PHCs annually. There are 50 PHCs and 319 HSCs functioning in the district. The bed–to–population ratio of the district is 1/8805, and the doctor–to–population ratio is 1/20922 in the rural area. In the urban side, per–doctor–to population ratio is 1/22141 and per–bed–to population ratio 1/2223. It reveals that health care system is skewed in between rural and urban areas. There are 110 doctors working in the PHC system.

Building (space) shortage poses a major problem in the rural health services. The Kammapuram PHC is not in good shape. Immediate steps should be taken to revamp it. Based on the in–depth field visits by the research team, it was found out that most of HSCs are damaged and locked. The defunct HSCs are to be activated.

Box 5.14 DANIDA Health Programme

DANIDA Health programme was started in 2000 in the district. It is one of the vital programmes for rural health care. Through this programme, one gas stove and two gas cylinders were given to Village Health Nurses (VHNs), for those who attended more child births in the HSCs. Two wheeler training was given to VHNs for enhancing the rural health services. After the training, two wheeler loan was given to all VHNs. This is a good programme tailored to enhance the rural health services.

Source : DDHS Cuddalore, 2006

Two Wheeler Training for VHN and Distribution of Two Wheelers, 2006

Box 5.15 HIV/AIDS Health Camp

Through the RCH programme, the special RTI/STI clinics were launched in Naduveerapattu, Vadalur, Managalampettai and Sethiyathoppu PHCs. From 2000 onwards, more than 20 clinics are functioning smoothly in this district. The main objective of this programme is to create HIV/AIDS awareness among the community. It is very beneficial to the rural population. Under this programme, minor operations are done with help of RCH funds.

Source: DDHS Cuddalore, 2006

Box : 5.16 Voice of the Programme Officers

- Space shortage in all PHCs.
- HSCs should be constructed in locations to facilitate access to all.
- Drug shortages in the HSCs to be overcome.
- Hi–tech facilities for all main PHCs.
- Self–medication should be prevented through proper health education.
- Banning of advertisement for drugs.
- First aid training for panchayat assistants.

Source: DDHS, Cuddalore, 2006

Box : 5.17 Ambulance for Emergency Health care

With help of the RCH programme, the scheme provides one ambulance to all main PHCs. Shortly this programme will be implemented in the district. This kind of service will reduce the premature mortality and improve the rural health status of the community. It will reduce the cost of treatment and time.

Source: DDHS Cuddalore, 2006

Box : 5.18 Cleft Lip and Cleft Palate Free District

The cleft lip survey was conducted by DDHS in 2002–2003 in the district. It was found that there were 3238 male and 22702 female children had this cleft lip problem. Based on the DDHS's recommendation, operations were carried out for all children. At present no one has this kind of problem. The Cuddalore District Collector reported to the Chief Minister that this district is totally free from cleft lip and cleft palate problem. This survey is the first of its kind in the State.

Source: DDHS, Cuddalore, 2006

Box 5.19 Health Watch Programme

Health Watch is a phone and web–based disease surveillance network that allows officials to submit disease reports and respond quickly to reported outbreaks. This system makes it possible for system users (health workers, program managers and government health officials) to rapidly communicate and share real–time information on detected cases and disease out breaks. Health officials use any phone or internet connected device to periodically report number of cases with different symptoms based on the Integrated Disease Surveillance Project (IDSP) format. In turn, government officials receive all reported information in time. This allows them to respond immediately to disease outbreaks and facilitates communication and information sharing among different levels of the health system. Officials can also use the system analytical tools to assess epidemiological trends and coordinate strategic medium and long–term public health interventions.

Source: DDHS, Cuddalore, 2006

7. Private Health Sector

In India, more than three–fourths of the expenditure on health care is incurred privately. It is thus clear that the private sector is a major player in the country's health care system. The private sector is the major provider of out–patient care in all the major States according to data from the 52nd round of the NSS pertaining to the reference year 1995–96. This is true for both rural and urban areas. There are 171 small and medium private health care providers in the district. About 347 doctors are providing health care service through these institutions. There are 353 medical shops available for the need of the community. Due to competition in provision of high quality health services, costs have gone up rapidly in private hospitals.

The Raja Muthiah Medical College and Hospital is an institution for promoting human development. The hospital was established in 1985 over 75.75 acres of land. The Raja Muthiah Medical College Hospital has 6,52,000 sq.ft. floor area and offers basic as well as specialized services to various sections of the population from Cuddalore and adjacent districts of Perambalur, Nagapattinam and Villupuram. The hospital has bed strength of 1210 in its 26 divisions. The hospital renders its services with experienced, reputed and dedicated team of 200 doctors, 156 resident doctors and 274 postgraduate resident doctors.

The hospital has 10 major and 2 centrally air–conditioned Emergency operation theatres with modern gadgets, C–arm, operating microscopes, laparoscopes and endoscopes. A centrally air–conditioned intensive care unit with 19 beds caters to the patients who need acute care. The Labour Ward is

also centrally air–conditioned. A helical whole body CT Scan, color Doppler with Ultra sonogram, Color Doppler with Trans–esophageal Echo, Stress Echo, Ambulatory BP Monitor, Holter Recorder with analyzer and Treadmill are also available in the hospital.

The hospital treats about 2000 out–patients everyday and 1000 in–patients. About 14,485 scheduled surgeries and 5885 emergency surgeries are performed every year. Besides, the in–patients get free treatment and free diet. A nominal fee is collected from the patients only for a limited number of special investigations and operations. For the poor and the destitute, all the treatment is rendered free of cost. The hospital has rest–rooms for the relatives and friends of the patients; it also has a canteen to cater to their needs.

The emergency department that has recently been reorganized comparing surgical ward, medical ward and trauma ward offers round–the–clock service to the community. The department has modern and sophisticated resuscitation facilities with an exclusive operation theatre, particularly for the accident victims who require emergency orthopedic and/or neurosurgical treatment. The division of general medicine has bed strength of 180 for its six units, which provide treatment for almost all diseases. The famous cardiac division of the hospital offers treatment to all kinds of heart ailments. The emergency cardiac unit has a coronary care unit with five beds and offers treatment round the clock. A Rapid Access Chest Pain Clinic, the first of its kind in the country, with the support of Rajah Muthiah Heart Foundation, established two years ago offers immediate treatment for those suffering from heart attack.

The maternity ward of the hospital is very popular in the Cuddalore district. The ward has bed strength of 180 in its six units. With all the sophisticated equipment available, reputed doctors provide excellent attention on pregnant women. In a year, about 5500 women deliver in this hospital. After the delivery, the babies are given the best care by the division of Pediatrics, which has bed strength of 150 with Newborn Intensive Care Unit and pediatric intensive care unit. Besides providing treatment to those who come to the hospital, the hospital has established an Urban Health Centre, which is open for 24 hours a day in the heart of Chidambaram town, and is doing yeoman service to the people. The division of Community Medicine has adopted three Primary Health Centres, one each at B. Mutlur, Orathoor and Vadalur in the district, and a Rural Health Centre at Pichavaram to look after the health care needs of the rural community and to expose the students to the primary health care needs.

8. Special Vertical Health Programmes

Certain vertical health programmes, particularly HIV/AIDS control programme, TB control programme, Leprosy eradication programme, Malaria control programme and filariasis control programme, are being successfully implemented in the district.

8.1. HIV/AIDS Control Programme

In the Cuddalore district, the VCTC (Voluntary Counseling and Training Centre) was started in January 2002. Till date about 5446 persons were tested and counseled, out of which 509 were HIV positive. The prevention of parent–to–child transmission programme was started in June 2003. So far, around 10,132 women were tested and 41 were found positive. Twenty–two mothers and babies were given Nevirapine (NVP) injections to prevent transmission from parent to child. Ninety–two persons are taking Anti–retro Viral (ARV) treatment for HIV from this hospital. There is a network of +ve group functioning in this district. It consists of 494 persons living with HIV and AIDS (PLHA). It is called CD+ network. They engage themselves in livelihood development programmes and in counseling and also in helping people to get ARV treatment in a feasible manner. All the services are now integrated and functioning as ICTC – Integrated Counseling and Testing Centre (VCTC / PPTCT / Blood Safety / STD / HIV / TB / ART / Nutrition). The ICTC is functioning in all Government hospitals and is now extended to all Primary Health Centers.

8.2. Tuberculosis Control Programme

Revised National Tuberculosis Control Programme (RNTCP) was implemented in the Cuddalore district from 06.02.1999 under the guidance and supervision of both the Central and State Governments. It is a World Bank Aided Project. The Cuddalore district with a population of 23.96 lakhs (projected for 2006) was divided into five TB units. Twenty–three designated Microscopy Centres were established. Each TB unit is manned by a Medical Officer, supported by a Senior Treatment Supervisor and a Senior Tuberculosis Laboratory Supervisor. All of them are trained in RNTCP by the Tuberculosis Research Centre, Chennai.

8.3. Infrastructure Facilities Provided Under RNTCP and Present Status of Implementation in Cuddalore District

- In RNTCP, a District TB Control Society under the Chairmanship of District Collector was established.
- Civil works for upgradation of five drug Stores and 23 Designated Microscopy Centers have been undertaken with a view to improving infrastructure facilities in Government Medical Institution.
- Eighteen contractual staffs were appointed by the District TB control Society, Cuddalore.
- Adequate quantity of drugs in the form of Patient wise Boxes is supplied by the Central Govt. Patient–wise Box contains Anti–TB drug for full course of treatment for a patient.
- All the Medical and Para–medical staff serving in the Medical Institutions in Cuddalore District were trained in RNTCP.
- The Government Hospital at NLC Ltd had been functioning as a Designated Microscopic Centre under RNTCP since 06.02.1999.
- A full–pledged "TB Cell" under RNTCP and 11 private practitioners are involved in RNTCP. It has been proposed to involve "Krishna Hospital", Cuddalore, which is a private Nursing Home, as a Directly Observed Treatment (DOT) Centre in RNTCP from 24.05.2006.
- To strengthen the HIV–TB Co–ordination, treat HIV–TB patients and to avert worsening of TB epidemic due to MDR–TB (Multi Drug Resistant–TB) and HIV–TB. ICTC has been established in all Government Hospitals and Block PHCs by TANSAC in Cuddalore district.

All the Government Hospitals and Primary Health Centers in the Cuddalore District are offering TB investigations and drugs at free of cost to all the TB patients. The TB case–detection is to be improved by strengthening the involvement of NGOs and private practitioners, etc.

8.4. National Leprosy Eradication Programme (NLEP)

The National Leprosy Eradication Programme (NLEP) was launched in 1955 in Tamil Nadu. At the time of inception, the Dapzone medicine was used for treatment, but from September 1990 onwards, Multi Drug Treatment (MDT) was introduced. There has been a remarkable improvement in the treatment and recovery of leprosy patients. This programme is being implemented through 50 PHCs in rural areas, 7 Government Hospitals, 3 municipality dispensaries, NLC Hospital and Rajah Muthiah Medical College Hospital. Special leprosy identification camp also was conducted in all the blocks. Through leprosy prevention association, blankets and MCR footwear were distributed to the affected patients. The total number of MDT patients was 46,715 and the total number of treated patient was 38,325 (free from disease). At present, the number of patients is 159 in the district. The district leprosy prevalence rate in 1990 was 69.9/10,000. The prevalence rate was brought down rapidly from 11.9/10,000 in 1997 to 0.66/10,000 in 2006. Leprosy will be totally eradicated in the district shortly.

8.5. Malaria Control Programme

The National Malaria Eradication Programme (NMEP) was launched in Tamil Nadu in 1953. Following its perceived success, the National Malaria Eradication Programme was launched in 1958–59. Malaria was completely eradicated before the 1990s in the Cuddalore district. But there are some sporadic imported cases in the coastal regions. The district health sector has taken appropriate steps to eradicate the disease even among the imported cases. Two kinds of surveys (active surveillance and passive surveillance) were done to identify the cases. From those who are affected with fever, blood smear slides were collected, and tested in the laboratories. If there are any positive cases, they are treated with appropriate medicines. Experienced block health supervisors, health workers and village health nurses were involved in this programme. This is an important programme to reduce incidence of malaria in the district.

8.6. Filariasis Control Programme

Intensive Filariasis Control Programme was launched in the Cuddalore district in 1996. Cuddalore was the first district to celebrate the National Filariasis Day in 1996. According to World Health Organisation (WHO) guidance DEC (Diethylcarbamazine) tablets are distributed every year to the entire population. Through this programme the microfilaria infection has been reduced rapidly. All health workers and anganwadi workers are involved in this programme. Filariasis would be eradicated in the district in the near future. Health workers are involved to eradicate brain fever, dengue and chinkunguniya and other vector borne diseases.

9. Suggestions

This Chapter reveals both the strengths and weaknesses of the health care delivery system in the Cuddalore district. The positive features are increasing Life Expectancy at Birth and declining Birth Rate, Death Rate, IMR, and MMR. On the negative side, the following are observed: overemphasis on curative treatment rather than preventive treatment, uneven distribution of health infrastructure, high incidence of infanticide, still births, low couple protection rate, morbidity patterns, etc. Equitable reliance on private and public health care services is needed. For attaining the goal, the performance of public health care institution is to be on par with that of the private section. To attain this, the functioning of PHC, HSC, etc., is to be streamlined and they should render quality health care services at affordable costs. Then the poor can have easy access to them.

The various measures to be taken on the health care front are listed below:

- The Melbhuvanagiri, Kumartchi, Kammapuram, Nallur, and Mangalore blocks are poor performers in health care services. Priority in terms of higher financial outlay is suggested.
- Higher order birth has been recorded in the Mangalore and Nallur blocks.
- TFR should be brought down from 2.3 to 1.5 by 2010.
- Life expectancy needs to be raised from the present level of 66 to 80 by the next decade through acceleration in economic growth in district.
- Awareness about family control programmes to be increased.
- PHC and HSC systems should be revamped.
- Enhancing the rural literacy rate.
- Regulatory and monitoring mechanism for private health system to be initiated.
- Pro–active Public–Private participation in the public health system.
- Introduction of E–Governance in the administration system is essential. It will eliminate red–tapeism, data management problems, time constraints and so on.
- Provision of potable water to the community.

- Vector–borne diseases such as malaria and filarial, water–borne disease like ADD, Hepatitis, Jaundice and Communicable diseases like TB, and leprosy to be fully eradicated.
- Awareness about HIV and AIDS to be improved.
- Periodical camps under the 'Varummun Kappom Thittam' to create public awareness about taking preventive treatment to be conducted. This scheme aims at providing a comprehensive health check–up and education to rural and urban people.
- The district to be made a malnutrition free one.
- Scarce resources to be allocated choosing important and competing priorities.
- Equal access to quality services in health and education to be provided.

CHAPTER – VI

CONTOURS OF LITERACY AND EDUCATION

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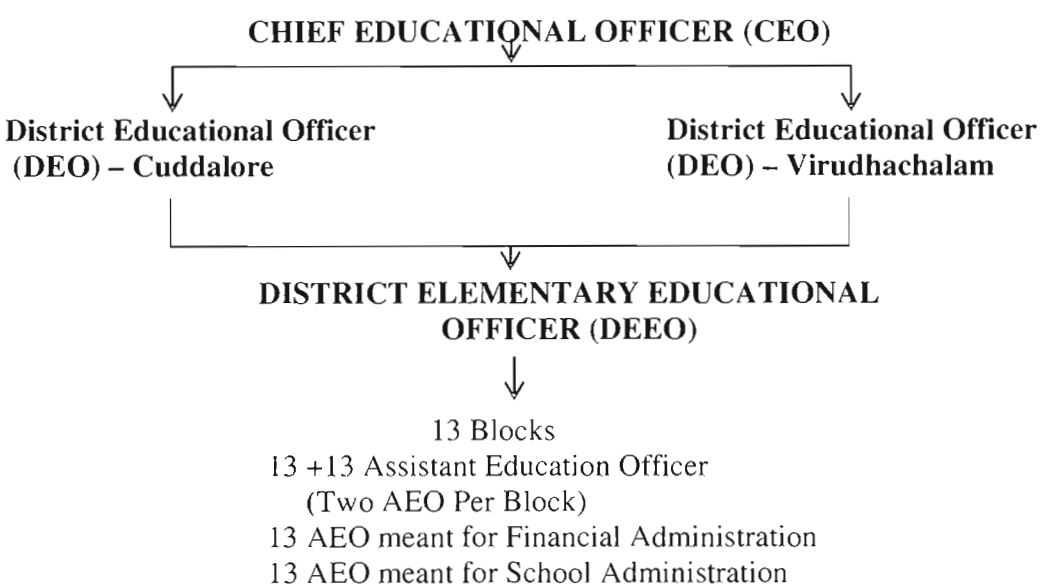
CONTOURS OF LITERACY AND EDUCATION

Education is the sovereign remedy for all social evils and for the eradication of poverty and unemployment. It acts as a social leveler. Education is a crucial component determining the level of the Human Development Index (HDI) in the district. The distinguishing feature of education is that it is the key to economic development, which in turn influences the quality of labour and educational attainments.

Aspects such as organizational structure, literacy rate, disparities in literacy attainments, level of implementation of educational programmes and their impact on the people, etc., are discussed at length in this chapter. The Cuddalore town is at the hub of the educational district. The Chart below depicts the organizational structure of the educational district.

CUDDALORE EDUCATION DISTRICT



The organizational structure of Cuddalore district differs from that of other departments. The functioning of other departments is coterminous with 13 panchayat unions and 5 Municipalities, whereas the Educational district of Cuddalore is bifurcated into two divisions – Cuddalore and Virudhachalam. The divisions do not signify any distinction between rural and urban areas.

The primary and middle schools are under the control of the District Primary Education Officer with the Head Quarters at Cuddalore. The network of Nursery schools and a Science Mobile Laboratory are under his control. The Inspector of Matriculation schools, Cuddalore has jurisdiction over Private schools located in three districts. However, the Chief Educational Officer, Cuddalore takes charge of conducting SSLC and Higher Secondary examinations in these Matriculation and Private schools.

1. Network of Educational Institutions

Table 6.1 shows that the district has a total of 1834 schools. Of these the nursery and primary schools accounted for a lion's share of 68.54 percent. It is heartening to note that there is a wide network of primary schools and each village has one primary school within a radius of one kilo meter in order to attain the goal of "Universalisation of Primary Education" and "Education for All".

Table 6.1
Total Number of Schools in the Cuddalore District – 2005

S. No	Category of Schools	Total
1.	Pre – Primary on Palwadis	109
2.	Primary Schools	1148
3.	Middle Schools	282
4.	High Schools	158
5.	Higher Secondary School	137
Total		**1834**

Source: Assistant Director, Department of statistics, Cuddalore District, 2006

There are 1884 institutions including higher, technical and medical educational institutions. The 76–year old Annamalai University is located in this district. There are eight Arts and Science Colleges functioning in the district. Thus, the district is quite endowed with a good network of educational institutions.

Table 6.2
Educational Institutions – 2005

S. No	Category of Institution	Total
1.	University	1
2.	Arts & Science Colleges	8
3.	Medical Colleges	1
4.	Engineering Colleges	4
5.	Agricultural College	1
6.	Special Education institution Music College Ceramic Technical Institute	 2 1
7.	Pre–Primary on Balwadis	109
8.	Primary Schools	1148
9.	Middle Schools	158
10.	High Schools	282
11.	Higher Secondary School	137
12.	Teacher Training Institute	9
13.	Polytechnic	8
14.	Industrial Training Institute	15
Total		**1884**

Source: Assistant Director Department of statistics, Cuddalore District, 2006

2. Literacy Attainments

Table 6.3 reveals that the aggregate literacy rate for the district stood at 71 percent as against the State value of 73.5 percent. The Cuddalore district occupied the 20th place among 30 districts in the State. For females, the literacy rate was as low as 60.3 percent. Apart from the disparity in the gender literacy rate, vast variations are being noticed across the panchayat unions. High literacy attainments were found in the blocks of Keerapalayam (81.56%), Kattumannarkoil (74.33%), Cuddalore (73.64%), Mangalore (71.26%) Virudhachalam (70.21%), Nallur (76.29%), Parangipettai (70.75%), and Panruti (72.94%). However, the blocks of Annagrammam (68.77%), Kumaratchi (65.93%), Kurinjipadi (57.42%), Melbhuvanagiri (61.89%) and Kammapuram (67.36%) recorded the lowest literacy rates in the district. The low literacy rate in the Mangalore block is attributed to the concentration of the SC population in the block. Since these blocks are economically and socially backward, a concerted approach is needed to improve the literacy rates in these three blocks viz. Melbhuvanagiri, Kurinjipadi, and Kumaratchi. As the female literacy rate contributes significantly to birth control and economic development, the district authorities need to focus all their efforts to increase substantially the female literacy rate. The Department should assign top priority to this task. Table 6.3 presents the issues and challenges in the 13 blocks.

Table 6-3

Literate Population in the Cuddalore District by Block (2001)

S. No.	Name of the Block	Population			Literates			% of Literacy		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	Annagrammam	86757	86041	172798	60227	43730	103957	79.60	57.91	68.77
2	Cuddalore	174412	170589	345001	128127	100939	229066	83.55	67.22	73.64
3	Kammapuram	72132	69696	141828	50850	32326	83176	81.09	53.20	67.36
4	Kattumannarkoil	65154	63791	128945	48103	36059	84162	84.17	64.30	74.33
5	Keerapalayam	54061	53313	107374	38240	27599	65839	88.85	74.35	81.56
6	Kumaratchi	92667	93430	186097	72345	61186	133531	77.62	54.05	65.93
7	Kurinjipadi	102419	100094	202513	69141	47345	116486	71.23	44.01	57.42
8	Mangalore	72579	74079	146658	44955	28617	73572	82.39	60.00	71.26
9	Melbhuvanagiri	53355	50467	105822	38569	27760	66329	75.42	48.29	61.89
10	Nallur	67819	67076	134895	44680	28438	73118	84.82	63.51	76.29
11	Panruti	164010	158574	322584	121189	87886	209075	82.56	63.50	72.94
12	Parangipettai	61332	62173	123505	43935	34445	78380	82.06	59.38	70.75
13	Virudhachalam	84211	83164	167375	60365	43432	103797	81.18	59.14	70.21
	***District**	**1150908**	**1132487**	**2285395**	**820726**	**599762**	**1420488**	**81.60**	**60.30**	**71.00**
	State	**31400909**	**31004770**	**62405679**	**22809662**	**17714883**	**40524545**	**82.42**	**64.43**	**73.45**

Source: Census of India, 2001.

Note:*District Administration maintained the Educational Statistics without any classification of Rural and Urban and they furnished information in terms of 13 blocks (rural + urban). This portrays the district's performance of educational status. This pattern has been followed in the whole analysis.

3. Gender Gap in Literacy Rates

The gap between the male and female literacy rates mirrors the extent to which the fruits of development have reached the people at the bottom strata of the society. Seen block–wise, the gap was 21.3 percentiles. The blocks with wide gender gap are Annagrammam (21.68%), Kammapuram (27.90%), Kumaratchi (23.56%), Kurinjipadi (27.21%), Mangalore (22.38%), Melbhuvanagiri (27.14%), Nallur (21.31%), Parangipettai (22.68%), and Virudhachalam (22.04%). The blocks of Kammapuram, Nallur and Mangalore are economically backward. Weaving is the principal occupation in Kurinjipadi block. It is known that high incidence of poverty and its related issues engender the issues relating to low literacy attainments.

The gap was lower in blocks of Cuddalore (16.34%), Keerapalayam (14.49). It is observed that the gender gap is quite high in literacy rates in a few blocks. The relative performance is contrastingly poor as compared to districts like Kannayakumari. This warrants attention of the policy makers from a remedial perspective.

Table 6.4
Gender Gap in Literacy among Male and Female by Block (2001)

S. No	Name of the Block	Total	Male	Female	Gender gap
1	Annagrammam	68.77	79.60	57.91	21.68
2	Cuddalore	73.64	83.55	67.22	16.34
3	Kammapuram	67.36	81.09	53.20	27.90
4	Kattumannarkoil	74.33	84.17	64.30	19.87
5	Keerapalayam	81.56	88.85	74.35	14.49
6	Kumaratchi	65.93	77.62	54.05	23.56
7	Kurinjipadi	57.42	71.23	44.01	27.21
8	Mangalore	71.26	82.39	60.00	22.38
9	Melbhuvanagiri	61.89	75.42	48.29	27.14
10	Nallur	76.29	84.82	63.51	21.31
11	Panruti	72.94	82.56	63.50	19.05
12	Parangipettai	70.75	82.06	59.38	22.68
13	Virudhachalam	70.21	81.18	59.14	22.04
	Total	**71.00**	**81.60**	**60.30**	**21.30**
	State	**73.45**	**82.42**	**64.43**	**17.99**
	India	**64.8**	**75.2**	**53.6**	**21.6**

Source: Census of India, 2001.

3.1 Enrolment (1–8 Std) by Class and Caste 2005–2006

Table 6.5 has explained the details of caste wise and class wise distribution of students enrolled in 1–8 standards. Of the total students, OBC and SC categories students are very high in number (OBC: 58.37 %, SC: 34.20 %). This reflects the composition of the people live in the district. The rest of the categories were marginal in number (ST: 1.48 %, General Category: 3.39 % and Minorities: 2.56 %). Analysis of block wise classification shows that equal performance was obvious in regard to enrolment of male and female students. Of late, the situation seems to explain the advancement in effective implementation of government educational programmes.

Table 6.5
Enrolment by Class and Caste 2005 –2006 (1–8 Std)

S. No	Block	General		SC		ST		OBC		Minority		Total Enrolment	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1	Annagrammam	94 (1.36)	62 (0.98)	5712 (8.38)	5599 (8.58)	147 (4.92)	141 (5.07)	6846 (5.90)	6734 (6.03)	13 (0.25)	15 (0.32)	12812 (6.42)	12551 (6.58)
2	Cuddalore	1105 (16.01)	1047 (16.57)	6897 (10.12)	7026 (10.76)	331 (11.08)	315 (11.32)	19052 (16.41)	18672 (16.72)	15 (0.28)	0 (0.00)	27400 (13.74)	27060 (14.19)
3	Kammapuram	101 (1.46)	84 (1.33)	4067 (5.97)	3812 (5.84)	236 (7.90)	264 (9.49)	6506 (5.60)	6655 (5.96)	416 (7.86)	289 (6.16)	11326 (5.68)	11104 (5.82)
4	Kattumannarkoil	537 (7.78)	521 (8.24)	4770 (7.00)	4239 (6.49)	145 (4.85)	143 (5.14)	6687 (5.76)	5930 (5.31)	385 (7.28)	296 (6.31)	12524 (6.28)	11129 (5.83)
5	Keerapalayam	85 (1.23)	95 (1.50)	4563 (6.69)	4207 (6.44)	78 (2.61)	72 (2.59)	4411 (3.80)	3945 (3.53)	0 (0.00)	0 (0.00)	9137 (4.58)	8319 (4.36)
6	Kumaratchi	724 (10.49)	715 (11.32)	5442 (7.98(	5275 (8.08)	151 (5.05)	159 (5.71)	9977 (8.59)	9710 (8.70)	2228 (42.10)	2183 (46.51)	18522 (9.29)	18042 (9.46)
7	Kurinjipadi	216 (3.13)	192 (3.04)	6486 (9.52)	5964 (9.13)	318 (10.64)	216 (7.76)	9854 (8.49)	9098 (8.15)	217 (4.10)	168 (3.58)	17091 (8.57)	15638 (8.20)
8	Mangalore	84 (1.22)	71 (1.12)	6071 (8.91)	5830 (8.93)	140 (4.69)	149 (5.35)	5792 (4.99)	5664 (5.07)	39 (0.74)	21 (0.45)	12126 (6.08)	11735 (6.15)
9	Melbhuvanagiri	126 (1.83)	86 (1.36)	3522 (5.17)	3435 (5.26)	109 (3.65)	113 (4.06)	5536 (4.77)	5039 (4.51)	99 (1.87)	95 (2.02)	9392 (4.71)	8768 (4.60)
10	Nallur	887 (12.86)	765 (12.11)	5220 (7.66)	5112 (7.83)	141 (4.72)	156 (5.61)	4843 (4.17)	4752 (4.26)	91 (1.72)	119 (2.54)	11182 (5.61)	10904 (5.72)
11	Panruti	2277 (33.00)	2019 (31.95)	7147 (10.49)	6895 (10.56)	259 (8.67)	226 (8.12)	20317 (17.50)	19625 (17.58)	1001 (18.92)	819 (17.45)	31001 (15.54)	29584 (15.51)
12	Parangipettai	235 (3.41)	228 (3.61)	2883 (4.23)	2853 (4.37)	666 (22.29)	582 (20.91)	6472 (5.57)	6668 (5.97)	164 (3.10)	186 (3.96)	10420 (5.22)	10517 (5.51)
13	Virudhachalam	429 (6.22)	434 (6.87)	5384 (7.90)	5041 (7.72)	267 (8.94)	247 (8.88)	9822 (8.46)	9170 (8.21)	624 (11.79)	503 (10.72)	16526 (8.29)	15395 (8.07)
District		6900 (100)	6319 (100)	68164 (100)	65288 (100)	2988 (100)	2783 (100)	116115 (100)	111662 (100)	5292 (100)	4694 (100)	199459 (100)	190746 (100)
		13219 (3.39)		**133452 (34.20)**		**5771 (1.48)**		**227777 (58.37)**		**9986 (2.56)**		**390205 (100.00)**	

Source: Chief Educational Officer, Cuddalore, 2006
Note: Figures in parentheses represent the percentages of respective total

3.2 Cuddalore Educational District Caste Wise and Class Wise Distribution of Students (9–12 Students)

Table 6.6 has clearly depicted the details of caste wise and class wise distribution of students of higher secondary schools. Of the total, 64.98% students belong to other backward class (OBC) category and 28.42% of students come under the category of SC. Analysis of block wise classification shows that the Keerapalayam, Parangipettai and Kammapuram lag far behind in male student enrolment. On other hand, such an adverse performance was conspicuous with regard to the enrolment of girls in the blocks of Keerapalayam, Kammapuram and Nallur. Recently, the situation has improved due to the effective implementation of government educational programmes.

Table 6.6
Cuddalore Educational District Caste–wise and Class–wise Distribution of Students (9–12 Students) 2005–06

S. No	Block	General		SC		ST		OBC		Minority		Total Enrolment	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1	Annagrammam	23 (1.27)	27 (1.65)	1383 (7.97)	1606 (10.15)	2 (0.37)	0 (0.00)	1910 (5.09)	2280 (5.95)	8 (0.43)	12 (0.89)	3326 (5.62)	3925 (6.81)
2	Cuddalore	738 (40.64)	485 (29.68)	2114 (12.18)	2166 (13.68)	77 (14.23)	132 (26.29)	6646 (17.70)	7368 (19.22)	0 (0.00)	0 (0.00)	9575 (16.19)	10151 (17.61)
3	Kammapuram	10 (0.55)	10 (0.61)	428 (2.47)	307 (1.94)	100 (18.48)	76 (15.14)	1408 (3.75)	984 (2.57)	213 (11.37)	96 97.14)	2159 (3.65)	1473 (2.56)
4	Kattumannarkoil	53 (2.92)	61 (3.73)	1491 (8.59)	1096 (6.92)	30 (5.55)	30 (5.98)	2376 (6.33)	1897 (4.95)	153 (8.17)	78 (5.80)	4103 (6.94)	3162 (5.48)
5	Keerapalayam	0 (0.00)	1 (0.06)	945 (5.44)	712 (4.50)	1 (0.18)	2 (0.40)	727 (1.94)	469 (1.22)	0 (0.00)	0 (0.00)	1673 (2.83)	1184 (2.05)
6	Kumaratchi	157 (8.65)	150 (9.18)	2249 (12.96)	1852 (11.70)	10 (1.85)	19 (3.78)	4188 (11.15)	3952 (10.31)	804 (42.93)	614 (45.65)	7408 (12.53)	6587 (11.43)
7	Kurinjipadi	36 (1.98)	39 (2.39)	1272 (7.33)	996 (6.29)	9 (1.66)	19 (3.78)	3079 (8.20)	2964 (7.73)	73 (3.90)	33 (2.45)	4469 (7.56)	4051 (7.03)
8	Mangalore	6 (0.33)	2 (0.12)	1617 (9.32)	1281 (8.09)	1 (0.18)	0 (0.00)	1770 (4.71)	1684 (4.39)	9 (0.48)	1 (0.07)	3403 (5.75)	2968 (5.15)
9	Melbhuvanagiri	11 (0.61)	11 (0.67)	870 (5.01)	787 (4.97)	30 (5.55)	14 (2.79)	2020 (5.38)	2100 (5.48)	19 (1.01)	52 (3.87)	2950 (4.99)	2964 (5.14)
10	Nallur	76 (4.19)	57 (3.49)	985 (5.67)	864 (5.46)	13 (2.40)	8 (1.59)	1396 (3.72)	1096 (2.86)	30 (1.60)	28 (2.08)	2500 (4.23)	2053 (3.56)
11	Panruti	601 (33.09)	655 (40.09)	2078 (11.97)	2357 (14.89)	213 (39.37)	162 (32.27)	7270 (19.36)	8559 (22.32)	223 (11.91)	178 (13.23)	10385 (17.56)	11911 (20.66)
12	Parangipettai	31 (1.71)	36 (2.20)	337 (1.94)	556 (3.51)	21 (3.88)	15 (2.99)	1329 (3.54)	1959 (5.11)	0 (0.00)	0 (0.00)	1718 (2.91)	2566 (4.45)
13	Virudhachalam	74 (4.07)	100 (6.12)	1589 (9.15)	1248 (7.88)	34 (6.28)	25 (4.98)	3431 (9.14)	3028 (7.90)	341 (18.21)	253 (18.81)	5469 (9.25)	4654 (8.07)
District		1816 (100)	1634 (100)	17358 (100)	15828 (100)	541 (100)	502 (100)	37550 (100)	38340 (100)	1873 (100)	1345 (100)	59138 (100)	57649 (100)
		3450 (2.95)		**33186 (28.42)**		**1043 (0.89)**		**75890 (64.98)**		**3218 (2.76)**		**116787 (100)**	

Source: Chief Educational Officer, Cuddalore, 2006

Note: Figures in parentheses represent the percentages of respective total.

4. Gender Gap in the Literacy Rate for SC/ST Population

In order to achieve a balanced and inclusive growth, necessitates that all social groups are expected to perform equally well in literacy attainment. Achieving symmetry in the literacy rates among SC, ST and the other communities will ensure enhanced perception of the vulnerable sections of the population and thereby their effective participation in developmental activities. The literacy rate for the SC population stood at 69.8 percent. Literacy rate for male and female was at 73.1 percent and 66.5 percent respectively. The gender gap was only 6.6 percent. Concerning the literacy rate for ST population, it stood at 68.7 percent for males and 56.3 percent for females, the gender gap being 12.4 percent.

Block–wise analysis shows that the literacy rate was at 23.00 percent in Panruti and 58 percent in Mangalore. These blocks registered the lowest literacy rates among the ST population. The gender gap was 25 percent in Annagrammam and 16.4 percent in Melbhuvanagiri. The higher gender gap in these two blocks might be due to the fact that the educational concessions have not been availed of effectively to make any positive impact on the literacy rate. In other blocks, the gender gap exists moderately. It is relevant to point out that the female literacy was found lower in those areas where the people were dependent on weaving and agriculture for their livelihood. Table 6.7 portrays the data for SC and ST population and gender gap.

The extremely low literacy rate (female literacy rate of 21.2) in the Panruti Block was because it was quite common for girl children in the age group of 5–15 years to be fully involved in domestic household work in their homes while the adult members of the households were engaged in farm work. Only during the recent years because of the active government schemes, the younger generation is being motivated to enroll themselves in the primary schools.

Table 6.7

Literacy Among Schedule Caste and Schedule Tribe and Gender Gap (2001)

S. No	Name of the Block	SC			Gender Literacy Gap	ST			Gender Literacy Gap
		Male	Female	Total		Male	Female	Total	
1	Annagrammam	78.00	53.80	65.90	24.20	76.00	51.00	64.00	25.00
2	Cuddalore	79.40	75.30	77.40	4.10	76.60	62.00	70.00	14.60
3	Kammapuram	76.40	71.30	73.90	5.10	73.30	60.00	67.00	13.30
4	Kattumannarkoil	77.80	73.70	75.80	4.10	74.60	61.00	68.00	13.60
5	Keerapalayam	79.00	75.00	77.00	4.00	75.00	60.00	68.00	15.00
6	Kumaratchi	80.70	77.30	79.00	3.40	77.00	62.00	70.00	15.00
7	Kurinjipadi	77.80	74.50	76.20	3.30	73.20	61.00	67.00	12.20
8	Mangalore	66.00	61.20	63.60	4.80	61.30	54.00	58.00	7.30
9	Melbhuvanagiri	79.00	76.70	77.90	2.30	76.40	60.00	68.00	16.40
10	Nallur	67.00	64.40	65.70	2.60	61.90	60.00	61.00	1.90
11	Panruti	41.10	21.20	31.10	19.90	26.20	19.00	23.00	7.20
12	Parangipettai	74.80	71.70	73.30	3.10	71.40	61.00	66.00	10.40
13	Virudhachalam	73.60	68.50	71.10	5.10	70.50	61.00	66.00	9.50
District		**73.12**	**66.51**	**69.84**	**6.62**	**68.72**	**56.31**	**62.77**	**12.42**

Source: Census of India, 2001

5. Literacy Rates for Children in the 5–14 Age Group

The Education Department focuses its attention on mainstreaming the children below 5–14 years in education, in their formative stage itself. In this regard, the Government is adopting a number of approaches. As far as Tamil Nadu is concerned, the Government is following a policy of promoting all pupils in the first five standards. This policy is a gateway to the future development of children. It is noteworthy that there is 100 percent enrolment in primary education owing to the multi–pronged approach adopted on many fronts and inducements given to children in the form of offering a number of concessions and financial assistances.

The literacy rate for children in the 5–14 age group was 99 percent, considering all the blocks together. Despite the fact that some of the blocks were backward in some respect, they exhibited an impressive literacy rates i.e., nearly 100 percent literacy.

Table 6.8

Educational Status of Children in 5–14 Years Age Group (2005)

S. No.	Name of the Block	School Going Children	Illiterate %	School Going Children %
1	Annagrammam	18221	0.016	99.98
2	Cuddalore	28556	0.011	99.98
3	Kammapuram	19498	0.010	99.99
4	Kattumannarkoil	14346	0.021	99.99
5	Keerapalayam	10932	0.037	99.96
6	Kumaratchi	20436	0.015	99.98
7	Kurinjipadi	31009	0.013	99.98
8	Mangalore	16849	0.018	99.98
9	Melbhuvanagiri	11620	0.017	99.98
10	Nallur	17412	0.017	99.98
11	Panruti	19830	0.015	99.98
12	Parangipettai	15812	0.019	99.98
13	Virudhachalam	22033	0.014	99.98
District		**246554**	**0.016**	**99.98**

Source: Chief Educational Officer, Cuddalore, 2006

6. Improvement in the Enrolment Rate in Primary Education

The enrolment rate is quite encouraging in primary education in all the blocks owing to the effective implementation of Sarva Shiksha Abhiyan (SSA)

whose objective is the Universalisation of Primary Education through cent percent enrolment. The goal of the Education Department is to achieve 100 percent enrolment in primary education. In consonance with the Department's objectives and goals, the enrolment rate in the Cuddalore district was at 99.98 percent. During 2002, the enrolment rate was only 91 percent in Kammapuram and 95.5 percent in Mangalore. Their enrolment rate exceeded 99.1 percent during 2004. Impetus and financial assistance extended by the government have been very significant in this regard.

Table 6.9

Trend in Gross – Enrolment Ratio in Primary Education (2005)

S. No.	Name of the Block	Male			Female			Total		
		2002	2003	2004	2002	2003	2004	2002	2003	2004
1	Annagrammam	84.00	98.00	99.40	86.00	97.00	99.40.	85.00	97.50	99.40
2	Cuddalore	97.00	99.00	99.30	98.00	97.00	99.40	97.50	98.00	99.40
3	Kammapuram	91.00	95.00	98.70	91.00	93.00	99.40	91.00	94.00	99.10
4	Kattumannarkoil	95.00	96.00	98.60	96.00	95.00	99.00	95.50	96.50	98.80
5	Keerapalayam	96.00	98.00	98.70	97.00	97.00	99.10	96.50	97.50	98.90
6	Kumaratchi	98.00	99.00	98.60	97.00	98.00	98.60	97.50	98.50	98.60
7	Kurinjipadi	95.00	96.00	99.40	93.00	94.00	98.90	94.00	95.00	99.10
8	Mangalore	97.00	99.00	99.10	96.00	96.00	99.10	96.50	97.50	99.10
9	Melbhuvanagiri	95.00	97.00	99.40	96.00	95.00	99.40	95.50	96.00	99.40
10	Nallur	98.00	99.00	99.40	97.00	98.00	99.40	97.50	98.50	99.40
11	Panruti	97.00	98.00	99.30	96.00	95.00	99.40	96.50	96.50	99.30
12	Parangipettai	98.00	99.00	99.10	97.00	98.00	99.10	97.50	98.50	99.10
13	Virudhachalam	97.00	98.00	99.10	97.00	98.00	99.00	97.00	98.00	99.00
District		**95.00**	**97.90**	**99.10**	**95.20**	**96.20**	**99.20**	**95.20**	**97.10**	**99.10**
State		**98.77**	**98.96**	**98.98**	**98.54**	**98.89**	**98.94**	**98.66**	**98.93**	**98.96**

Source: Chief Educational Officer, Cuddalore, 2006

7. Improvement in the Enrolment Rate in Middle Schools

Enrolment in middle schools assumes much significance because they are stepping stones to high schools and higher secondary education. Commendable changes have occurred in the middle schools level. In all those areas where weaving is predominant, the enrolment is lower due to poverty and the low income. In addition, the enrolment is found lower in those regions where there is the prevalence of child labour and non–farm employment. The enrolment increased from 94 percent to 99 percent during 2002–2005 due to public intervention. Viewed block wise, the enrolment was 86 percent in Keerapalayam, 93 percents in Kattumannarkoil and Mangalore during 2002. The literacy rate in these blocks improved to 97.5 percent, 98.75 percent and 97.5 percent respectively during 2005. It shows that the enrolment rate in Middle Schools had gone up owing to implementation of the SSA.

Table 6.10
Trend in Middle School Education by Block (2002–2005)

S. No.	Name of the Block	Middle Level			
		2002	2003	2004	2005
1	Annagrammam	90.00	93.00	96.00	97.25
3	Cuddalore	98.00	98.00	99.00	99.60
4	Kammapuram	96.00	97.00	98.00	98.75
5	Kattumannarkoil	93.00	98.00	98.00	98.75
6	Keerapalayam	86.00	93.00	97.00	97.50
7	Kumaratchi	96.00	98.00	99.00	99.15
8	Kurinjipadi	94.00	94.00	97.00	97.70
9	Mangalore	93.00	94.00	97.00	97.50
2	Melbhuvanagiri	100.00	100.00	99.00	99.15
10	Nallur	98.00	99.00	98.00	98.70
11	Panruti	95.00	97.00	97.00	97.75
12	Parangipettai	97.00	97.00	99.00	99.40
13	Virudhachalam	96.00	97.00	98.00	99.00
District		94.00	96.00	98.00	99.00
State		93.62	95.40	94.37	97.89

Source: Chief Educational Officer, Cuddalore, 2006

8. Educational Concessions and Policy Interventions

The government is supplying free books and note books to students studying 6–12 standards. Table 6.11 highlights the scheme of free supply of books and notebooks during 2004–06.

Table 6.11
Supply of Free Books in the Cuddalore District – (2004–06)

S. No	STD	Total (in numbers)
1	VI	46649
2	VII	45078
3	VIII	44429
4	IX	47242
5	X	39926
6	XI	17975
7	XII	16527

Source: Chief Educational Officer, Cuddalore, 2006

In the Tsunami hit areas, the Government supplied free books and notebooks twice and this is worthy of mention.

Box : 6.1 Stagnation in Enrolment

Stagnation in enrolment is noticed in the blocks of Mangalore, Nallur, Panruti and Parangipettai. As per the findings of some empirical studies, Muslim population is concentrated in Parangipettai. Students aged above 16 are inclined go to foreign countries such as Saudi Arabia and Malaysia in search of jobs. This affects enrolment of pupils in Middle schools. Mangalore and Nallur are economically backward blocks in the districts. In the event of occurrence of droughts people migrate to other areas. This migratory behaviour acts as an impediment to enrolment in Middle Schools.

Source: Focus Group Discussion, 2006

8.1 Free Bus Passes

With a view to giving a fillip to enrolment and retention, free bus passes were issued and this is a great boon to the students hailing from poor families.

8.2 Free Supply of Bicycles to +2 Students

In order to reduce the incidence of dropout rate and to promote pursuance of education free bicycles were supplied to all +2 students of Government Schools. This has had a tremendous positive impact on promoting education particularly among girls. The detail of the distribution of bicycles to the students is given in the Table 6.12.

Table 6.12
Supply of Free Cycles (2004–2006)

S. No	STD	Target Group	Total Number
1	XI STD	Boys & Girls	23,238
2	XII STD	Boys & Girls	13,059
Total			36,297

Source: Chief Educational Officer, Cuddalore, 2006

8.3 Computer Education

The State is getting transformed into a knowledge society because of the penetration of Information Technology. Computer education is a high priority issue on the development agenda. The computer education has been introduced even at the stage of secondary and higher secondary stage of education. In the Cuddalore district, 42 out of 158 Government Higher secondary Schools and 29 out of 137 Government–aided Higher Secondary Schools have facilities for computer education. The government may introduce computer education to all children, in a short period of time.

Source: Chief Educational Officer, Cuddalore, 2006

Table 6.13
No. of Schools Participating in Computer Education (2005)

S. No.	Category of Schools	10th Std	11th Std	12th Std
1	Govt. High Schools	0	0	0
2	Govt. Hr. Sec. Schools	0	42 (58.34)	42 (58.34)
3	Aided High Schools	15 (31.92)	0	0
4	Aided Hr. Sec. Schools	29 (61.70)	29 (40.28)	29 (40.28)
5	Private Schools	3 (6.38)	1 (1.38)	1 (1.38)
Total		47 (100.00)	72 (100.00)	72 (100.00)

Source: Chief Educational Officer, Cuddalore, 2006

9. Incidence of Dropout

9.1 Primary Education – 2002–2005

When children dropout from school, it implies a waste of human resources from the economy's point of view for it affects the future earnings of individuals. The effectiveness of the education is reflected by a higher retention rate. Dropouts in primary education have a higher opportunity cost for the State. The dropout rate is therefore analysed from the level of primary education to that of high secondary education. This analysis helps identify the factors impeding the continuity of education. The incidence of drop out percent in 2002 fell from 7.39 to 1.88 percent in 2005 in the Cuddalore district. The respective figures for males were 7.64 percent and 2.11 percent whereas for female they stood at 7.14 percent and 1.66 percent. Table 6.14 shows that the problem of school dropouts seems to be insignificant.

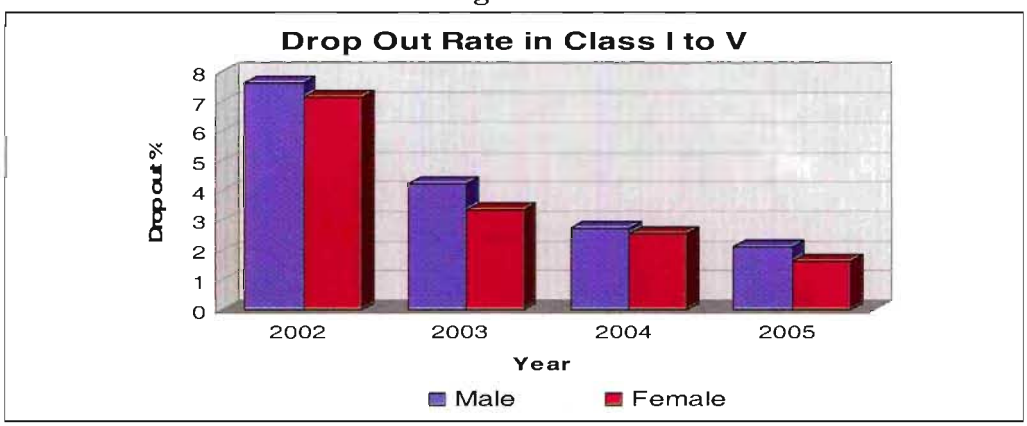
Table 6.14
Drop Out Rates in Classes I to V (2002–2005)

S. No.	Name of the Block	In Percentage											
		Male				Female				Total			
		2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
1	Annagrammam	2.00	2.00	1.40	4.20	2.00	2.00	1.20	2.70	2.00	2.00	1.30	3.45
2	Cuddalore	3.00	2.00	2.15	0.19	1.00	2.00	1.89	0.37	2.00	2.00	2.02	0.28
3	Kammapuram	12.00	8.00	1.97	0.70	13.00	2.00	1.25	0.70	12.50	5.00	1.61	0.70
4	Kattumannarkoil	4.00	3.00	2.50	2.30	4.00	3.00	2.30	1.80	4.00	3.00	2.4	2.05
5	Keerapalayam	12.00	3.00	2.97	0.80	10.00	2.00	1.35	2.30	11.00	2.50	2.16	1.55
6	Kumaratchi	9.00	6.00	5.17	4.70	9.00	5.00	4.59	3.30	9.00	5.50	4.88	4.00
7	Kurinjipadi	11.00	6.00	4.95	3.20	13.00	4.00	5.79	2.80	12.00	5.00	5.37	3.00
8	Mangalore	6.00	5.00	3.70	0.60	4.00	3.00	2.14	0.90	5.00	4.00	2.92	0.75
9	Melbhuvanagiri	12.00	6.00	2.00	1.90	10.00	6.00	2.00	1.00	11.00	6.00	2.00	1.45
10	Nallur	2.00	1.00	2.30	0.10	1.00	1.00	2.50	0.40	1.50	1.00	2.40	0.25
11	Panruti	10.00	3.00	2.20	2.70	9.00	4.00	2.80	2.10	9.50	3.50	2.50	2.40
12	Parangipettai	11.00	9.00	3.12	3.70	13.00	8.00	3.80	3.50	12.00	8.50	3.46	3.60
13	Virudhachalam	3.00	1.00	1.24	0.20	3.00	2.00	1.50	0.30	3.00	1.50	1.37	0.25
	District	**7.64**	**4.23**	**2.74**	**2.11**	**7.14**	**3.38**	**2.55**	**1.66**	**7.39**	**3.54**	**2.46**	**1.88**
	State				**3.85**				**3.77**	**12**	**8**	**6**	**3.81**

Source: Chief Educational Officer, Cuddalore, 2006

A block–wise analysis of dropout students shows that it stood at 12 percent for boys in Melbhuvanagiri, Kammapuram and Keerapalayam, and 11 percent in Kurinjipadi and Parangipettai during 2002. For girls, it was 13 percent in Kammapuram, Kurinjipadi and Parangipettai and 10 percent in Melbhuvanagiri and Keerapalayam. Due to the extension of a host of educational concessions and financial assistance, drop out rates fell substantially in 2005. They stood at 1.9 percent in Melbhuvanagiri, 0.7 percent in Kammapuram, 6.8 percent in Keerapalayam, 3.2 percent in Kurinjipadi for boys. For girls it was 0.7 percent in Kammapuram, 2.8 percent in Kurinjipadi, 3.5 percent in Parangipettai, 1.0 percent in Melbhuvanagiri and 2.3 percent in Keerapalayam. The dropout rate in all the blocks has been on the decrease.

Figure 6.1



9.2 Drop out Rate in Middle Schools 2002–2005

The dropout in Middle Schools had come down from 10.7 percent in 2002 to 7.64 percent in 2005. For the males it was 12 percent and 7.3 percent and for females it was 9.4 percent and 8.06 percent respectively. It speaks well of the efforts towards retaining the children in schools. The dropout rates register significant differences across various blocks. The incidence of dropout for boys and girls in some blocks is found higher, as shown in Table 6.15.

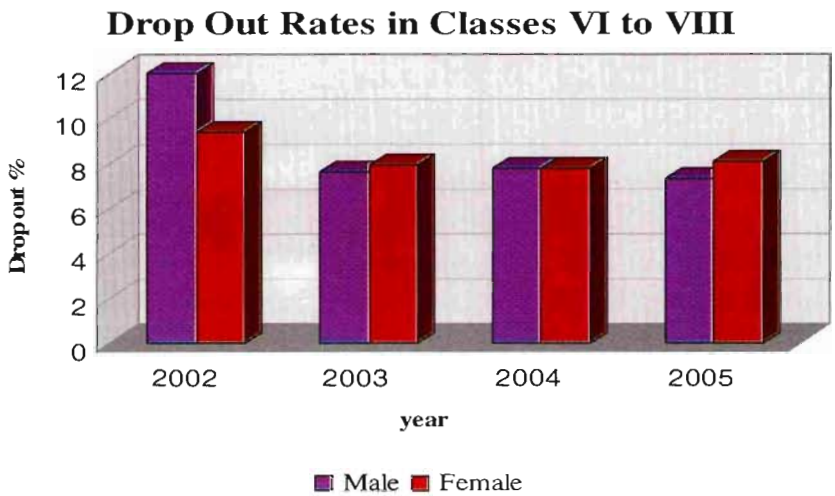
Table 6.15
Drop Out Rates in Classes VI to VIII (2002–2005)

S. No.	Name of the Block	In percentage											
		Boys				Girls				Total			
		2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
1	Annagrammam	10.00	7.00	6.69	10.71	6.00	7.00	7.33	10.6	8.00	7.00	7.01	10.64
2	Cuddalore	3.00	4.00	5.59	4.95	2.00	4.00	6.47	5.73	2.50	4.00	6.03	5.34
3	Kammapuram	8.00	7.00	15.31	7.45	9.00	7.00	6.51	7.26	8.50	7.00	10.91	7.36
4	Kattumannarkoil	13.00	12.00	9.98	8.94	11.00	13.00	10.30	9.74	12.00	12.5	10.14	9.34
5	Keerapalayam	12.00	9.00	8.89	6.96	11.00	7.00	9.73	7.05	11.50	8.00	9.31	7.01
6	Kumaratchi	20.00	7.00	9.01	5.22	12.00	11.00	10.6	9.92	160	9.00	9.82	7.57
7	Kurinjipadi	8.00	9.00	5.38	11.02	10.00	7.00	5.96	11.50	9.00	8.00	5.67	11.26
8	Mangalore	21.00	13.00	9.26	9.06	14.00	14.00	10.30	8.30	17.50	13.50	9.80	8.68
9	Melbhuvanagiri	8.00	13.00	7.45	6.96	11.00	7.00	8.19	6.59	9.50	10.00	7.82	6.77
10	Nallur	10.00	9.00	10.98	4.48	7.00	7.00	11.80	4.07	8.50	8.00	11.37	4.27
11	Panruti	16.00	6.00	11.98	8.59	12.00	14.00	12.60	8.64	14.00	10.00	12.31	8.62
12	Parangipettai	14.00	8.00	1.50	11.13	14.00	6.00	1.94	9.59	14.00	7.00	1.72	10.36
13	Virudhachalam	11.00	3.00	6.98	2.96	7.00	7.00	8.04	6.25	9.00	5.00	7.51	4.61
District		**12.00**	**7.60**	**7.80**	**7.30**	**9.40**	**7.90**	**7.80**	**8.06**	**10.70**	**7.80**	**7.80**	**7.64**
State					**8.05**				**7.07**	**13**	**10**	**9**	**7.58**

Source: Chief Educational Officer, Cuddalore, 2006

In Middle Schools the dropout rate was found to be higher in the blocks of Panruti, Mangalore and Kumartchi in 2005. The same trend continues at the district level. It goes to emphasise the fact that concerted efforts have to be made by the Education Department. They should check whether all the educational concessions have reached the target groups and identify the factors that lead to higher incidence of dropout in Middle Schools.

Figure 6.2



9.3 Incidence of Dropout in High School 2001–2005

A snapshot view of Table 6.16 shows that the incidence of dropout came down for both boys and girls during 2001–2006.

Table 6.16

Trend in Drop out in 6–10 Standards (2001–2006)

S. No.	Year	Male	Female	Total
1	2001–2002	2728	293	3021
2	2002–2003	2651	285	2936
3	2003–2004	2600	303	2903
4	2004–2005	2574	276	2850
5	2005–2006	2523	270	2793

Source: Chief Educational Officer, Cuddalore, 2006

9.4 Trend in the Incidence of Drop out in Higher Secondary Education (2001–2006)

The incidence of dropout in higher secondary education was found to be lower as compared to that in High Schools. In all, the dropouts have come down from 8339 to 7568 during the period of last five years. The dropout for males had marginally come down from 4649 in 2001–2002 to 4219 in 2005–2006. A similar trend can be seen in the case of females in the Cuddalore district. It shows the achievement of District Administration for controlling the dropouts from the schools.

Table 6.17

Trend in Drop Out in 11–12 Standard (2001–2006)

S. No	Year	Male	Female	Total (in numbers)
1	2001–2002	4649	3690	8339
2	2002–2003	4434	3520	7954
3	2003–2004	4391	3485	7876
4	2004–2005	4305	3417	7722
5	2005–2006	4219	3349	7568

Source: Chief Educational Officer, Cuddalore, 2006

Box : 6.2 Continuing Education Scheme

In HDI, the literacy rate assumes a top priority for development. The Continuing Education Scheme which is a follow–up programme of the *Arivoli Iyyakkam*, is being operated in the district for the benefit of illiterates, amateurs and primary level of educated youths. This scheme aims at improving their livelihood through basic education.

Aim of the Programme

- ✓ A permanent learning centre for illiterate and new literates.
- ✓ Target between 15 and 35 age group of population.
- ✓ The learners are able to learn a life–oriented education.
- ✓ Specific focus for weaker sections of the society.
- ✓ Learning of life–related small trade callings.
- ✓ Inculcate the reading habit through initiating libraries.
- ✓ Cultural education, interaction, small family norm, importance of environment and gender equality are the main focus of this programme.

Source: Chief Educational Officer, Cuddalore, 2006

10. Scholastic Performance

10.1 Pass Percentage in SSLC and +2 Examinations

The pass percentage is another acid test of the performance of a school. The pass percentage of a school is influenced by factors, such as infrastructure, quality and effectiveness of pedagogic involvement, hostel facilities, valuation

methods for examinations, conducive atmosphere both in school and in the home, etc. A look at the pass percentage of SSLC and +2 examinations shows a mixed trend during 2001–2006. These percentages are average and camouflage the inter–school performances. The performance of private schools and matriculation schools is better than that of Government schools. It emphasizes that the standard of Government and aided schools is to be improved and made equitable on par with private schools.

Table 6.18
S.S.L.C and Higher Secondary Pass Percentage in the Cuddalore District (2001–2006) in percent

S. No	STD	2001–02	2002–03	2003–04	2004–05	2005–06
1	10 Std	56	72	66	68	70
2	12 Std	76	63	66	70	65

Source: Chief Educational Officer, Cuddalore, 2006

Box : 6.3 Neyveli Lignite Corporation and Cuddalore District Development

Neyveli Lignite Corporation (NLC) is the leading and biggest lignite mining and lignite–based power generating company in India. It is located in Neyveli 197 kilometres south of Chennai and seventy kilometres west of Pondicherry. NLC is a public sector company, owned and operated by the Government of India.

NLC has gained recognition for its outstanding contribution in the economic, social and environmental spheres for the empowerment and development of the local community and for the betterment of society. Ever since its inception, the NLC has been taking initiatives in the fields of peripheral development, education, access to drinking water, medical and health care, roads, women empowerment, afforestation and environment preservation, service to disable persons, mentally and physically challenged, sports and heritage preservation.

Details of Schools at Neyveli–2006 (in Nos.)

S. No.	Block	Primary School	Middles Schools	High Schools	Hr.Sec Schools	Total
1	Neyveli	9	11	3	3	26

Source : District Educational Officer, 2006

Enrolment 5 + Children at Neyveli–2006 (in Nos.)

S. No.	Block	5 + Age group Population	Enrolment in Govt (All types schools)	Enrolment in Govt Aided Schools	Enrolled in Private Schools	Yet to be Enrolled
1.	Neyveli	1463	615	504	337	7

Source : District Educational Officer, 2006

Dropouts Identified for Mainstreaming at Neyveli –2006 (in Nos)

S.No	Block	Yet be enrolled	Group 1	Group 2	Total
1.	Neyveli	60	8	27	35

Source : Neyveli Ligiite Corporation, 2006.

The Cuddalore district is agrarian by nature. There is a lack of well established industrial units. Those who failed in the school examinations end up as weavers or agricultural labourers. Of late, the first generation has come forward to receive higher education. This signifies the success of the educational system. However, the school authorities need to bestow more attention to improve the pass percentage of all categories of schools so that the goal of equitable education can be attained. Further, an alternative stream of skill oriented education by starting community colleges can be thought of by the government.

Box : 6.4 Community College

The introduction of community colleges in the Cuddalore district will help generate employment opportunities, utilizing the youth power and locally available resources. These community colleges are completely different from the other colleges, in the sense they intend to give an equal opportunity to even those who failed in $10^{th}/8^{th}$ standard, illiterate farmers, rural artisans and women to enrich their economic status through skill–oriented training.

The universities and leading colleges in various regions are expected to nurture and promote such colleges in their respective areas. Since the community colleges courses are dependent on the local needs and commensurate with the available local resources, every effort shall be made to maintain the desired flexibility. An illustrative list of trade callings in which programmes can be offered are (a) Carpentry (b) Fitting and Plumbing (c) Shorthand & Typing (d) Dressmaking & Embroidery (e) Fashion Designing (f) Fabric Painting (g) Cookery (h) LMV Driving (i) Computer Applications (j) Preservation of Fruits & Vegetables (k) House Wiring (l) Welding & Fabrication (m) Auto Mechanic (Scooter/Motorcycle) (n) Household Appliances Repair (o) Soft Toys Making.

Source: District Level Focus Group Discussion, 2006

10.2 Achievement in Primary and Middle Schools

The Cuddalore district is economically backward because of the fact that the main stay of people is agriculture for livelihood. This source of livelihood is often disturbed by the frequent occurrence of cyclones. The December 26, 2004 Tsunami left a trail of destruction in the Cuddalore district. Despite all these problems, the district made some strides of achievement in educational fronts under the Kasturiba Gandhi Girls Education Programme. Education Centers are functioning in backward blocks of Mangalore, Nallur and Panruti in collaboration with the NGOs.

The dropouts aged below 15 are chosen, taught lessons up to 10^{th} standard within 3 years in residential schools and prepared for the innovative final examinations. This approach is to be extended to other regions of the district. Residential hostels can be run regularly to mainstream the dropout children especially during the months of October to March. Participation of

parents is indispensable to enable their ward to join mainstream education. Narikuravar and Vettaikaran families are residing in Lalpuram regions. The children of these families are encouraged to get enrolled in Government Schools. They have been prevented from loitering in unhygienic areas and engaged in low status jobs. Since an array of concessions and financial assistance were extended, the children of these families have come forward to grab educational opportunities. For physically handicapped children, special classes are being run in middle schools and teachers pay special attention to studies. Special schools are being run for the blind and the mentally retarded by the NGOs.

11. Infrastructure in Primary Schools

For each village having a population of 300, one primary school is being established within a radius of 1 Km. If no such school is available, school–going aged children are collected and taught by one teacher.

12. New Approach for Strengthening Formal Education

The number of schools has been increasing in villages and hamlets and correspondingly the number of pupils enrolled has also gone up. Teaching techniques are simplified and pupils are motivated to learn with involvement. They are sensitized to the economic development setting in which they reside. In order to improve education proactive measures have been taken under the Sarva Siksha Abhiyan programme. The drops out children are being encouraged to continue the education in order to attain 100 percent literacy among students, especially girls. In rural higher secondary schools, special class rooms, laboratory, computers, drinking water and toilet facilities are augmented and upgraded. The syllabus is streamlined. Training is imparted to teachers for capacity building.

13. Sarva Shiksha Abhiyan (SSA)

The SSA is one of the flagship programmes of the Government of India. Capacity building, strengthening of infrastructure, hike in fund allocation and offering of financial assistances, etc., are salient features of this scheme. The implementation of this scheme in the Cuddalore district is discussed below.

Box: 6.5 SSA Scheme : A Positive Approach in Educational Development

Sarva Sikkisha Abiyan or 'Education for All' is a comprehensive scheme for achieving all of our goals in education. It aims to fulfill our objectives within a stipulated period without any discrimination.

Objectives of the Scheme

- Enrolment of all eligible children in schools.
- Cent percent achievement in Primary, Upper primary Education to all.
- Assured quality and life–oriented education
- Removal of all disparities through educational attainment
- Before 2010 cent percent reduction in dropouts and achievement of education for all.

Special Efforts of the Scheme

- An action plan of cent percent achievement free education to every child below 14 years.
- Assured delivery of quality and quarantined education.
- Achievement of social justice through educational attainment.
- Village panchayats, rural educational committee and Parent Teacher Association own responsibility in improving the Primary Education.
- Central, State and local governments have a significant role to play in this scheme.
- Particularly, the State government has a specific role to implement and achieve long–term goals in education through this scheme.

District Elementary Education Plan Through SSA Scheme (DEEP)

The important element of SSA Scheme is "The District Elementary Education Plan" (DEEP). It plans to give a responsible role to the Village Panchayat, Rural Education Committee, Parent Teacher Association and Self–Help Group at every village to take part in implanting and administration of Primary schools.

In the same way, they may be represented in the village, block and district level educational administration. They may also take part in preparation of district educational perspective plan and annual plan for a successful implementation of primary education through out the district.

Source: CEO, Cuddalore, 2006

13.1 Universalisation of Primary Education

To attain the goal of 'Education for All', one primary school in each village has been established. A primary school is first established within a radius of one km, and then it is upgraded into a middle school.

Source: CEO, Cuddalore, 2006

13.2 Capacity – Building for Teachers

In order to enhance the quality of teaching and hone the teaching skills, a Block Resource Centre is being established in each block. For learning the effective teaching methods and sharing of experiences, there are 172 Teacher Resource Federations functioning in the Cuddalore District. Of these, only five are located in urban centers.

Table 6.19
Improved Infrastructure Facilities (2001–2005)

S. No.	Details of Infrastructure	2001–2002	2002–2003	2003–2004	2004–2005
1.	Teacher Training centre	0	0	20	20
2.	Two class room	0	30	40	0
3.	Three class room	2	3	18	0
4.	Up graded middle school Building	0	0	0	40
5.	Additional class rooms	0	0	0	144
6.	Toilet	8	38	60	70
7.	Drinking water	16	36	50	60

Source: Chief Educational Officer, Cuddalore, 2006

As seen in the Table 6.19, there were tangible improvements in the infrastructure in the district during 2004–05. It facilitates the upgradation of primary into middle schools. Increased availability of class rooms, toilets and water is being noticed.

13.3 Efforts to Mainstream Dropout Students

In order to bring the dropout students into formal education, special classes are being conducted during off–farm seasons.

13.4 Implementation of Educational Concessions

With a view of improving the quality of education, free text books and note books are being supplied and teaching methods are being evaluated.

13.5 Care of Nursery of Schools

A Census was conducted to identify children below 6 years in urban and rural areas. Adequate care was taken for their welfare. Teachers of primary schools, Anganwadis and staff of Health Department are involved in motivating them to get enrolled. Female children are given a special focus.

13.6 Educational Opportunities for SC/ST Students

Special schemes are being implemented in those areas where the SC/ST population is predominant. Further, special training, life–related education and vocational education receive due attention, in order to encourage the students to pursue their studies with interest.

13.7 Education for the Physically Handicapped

Due to the concerted efforts made, the number of the physically challenged enrolled during the last four years increased. Participation of NGOs and parents in this endeavour is commendable.

13.8 Special Fund for Schools

Additional funds are being allotted to augment basic facilities in schools such as almairah, chairs, tables, black boards and teaching aids, etc.

13.9 Special Fund for Improving Teaching

Utilizing the special funds, teaching aids and equipments are provided in class rooms to improve the quality of teaching.

13.10 Fund For Maintenance and Repair of Dilapidated Buildings

For doing repair works, and manning the assets, special funds are being utilised. Also, they help meet the bills on new power connections.

Source: CEO, Cuddalore, 2006

13.11 New Initiatives taken Under SSA

Vocational training was imparted to girls in 2005–06. Sewing machines were provided to a batch of 60 schools, and training on tailoring was given by qualified craft teachers. The Village Education Committee procures raw materials for the training. There is also a revolving fund built up by selling the clothes. This lends sustainability to the new initiatives made.

13.12 New Initiatives for Nursery Schools

Quality of 750 Anganwadi centres in the district was upgraded in three phases. Game items and educational tools and accessories were bought. An incentive amount of Rs. 50 and Rs. 20 was paid to teaching staff and assistants respectively. Besides, 30 additional centres were opened.

13.13 Welfare of ST and SC Population

During 2005–2006, four special initiatives were made–backward students were identified and special training was imparted for 3 months, a sum of Rs. 5 was spent for each student every month and free excursions were arranged for 60 students. In all, 810 students benefited from the initiatives in 2005.

Vocational training was imparted to SC/ST students. One thousand students were selected at the district level. At the regional level, training on repairing TV, bicycle, electric motors and plumping, etc., was given to 80 students. Career–related training was given to SC/ST students. At the regional level, 119 students were selected and given career training for three days. A sum of Rs.300 was spent for each student–Rs.150 to purchase of essential items and Rs.150 to meet the cost of boarding and lodging. The training classes covered 15 topics such as motivation, decision–making, abandonment of shyness, fearlessness, aloofness and time management, etc.

13.14 Girls Education

The goal of the SSA is to realize cent percent enrolment in primary education. The focus of the programme is on enrolment, retention, etc.

Source: CEO, Cuddalore, 2006

Box : 6.6 School Education Programme – Cuddalore District

The Directorate of Teachers Education, Research and Training Institution, UNICEF and Tamil Nadu AIDS Control Society are jointly conducting a special educational programme, which is known as school AIDS Education programme in all government and metric High and Higher Secondary Schools for five days in a year. The awareness programme has been organized through group discussions, Quiz, Question Box, Drama and one act play. Moreover, AIDS Awareness campaigns and Human Chain programmes have been organized through the students. Since 2000–2001, the Government of Tamil Nadu has been organizing many of these AIDS Awareness programmes using school students, which has a great impact on parents and the public. The best performing schools and students are rewarded with cash awards and certificates. Awareness building of this kind of programme is very effective in addressing health hazards.

Source: Chief Educational Officer, Cuddalore, 2006

14. The National Girls Education Programme

Under this scheme, three centres were selected at Nallur, Mangalore and Panruti, in view of poor female literacy and high gender gap. Ten model cluster schools were chosen in these blocks in order to implement the scheme with provision for building besides recurring grants for purchasing learning equipments, vocational training, and administrative expenses. For those students studying in 1st to 8th standards, Rs.150 is being paid to each one to purchase stationery items.

For creating awareness among people, aggressive awareness campaigns, sports events, eloquence competition are being conducted. Each cluster centre is provided with a computer.

15. Kasturiba Gandhi Girls Education Programme

Under this programme drop out girls in the age group of 12–14 years are covered in Kasturiba Gandhi Palika Vidyalaya residential schools spread over three divisions. Adari in the Mangalore block, Pennadam in the Nallur block and one centre in Panruti have these schools. Fifty girl students got enrolled in each school. For each girl, a recurring amount of Rs.50 per month is paid as an incentive amount. Part–time and full–time teachers are working in these schools. The girls are trained in various trades, vocation, computing, etc. Free text books, blankets and pillows are provided to them. Medical inspection is made to assess their health status. Physical training is given during evenings. Modern cooking gadgets are supplied to the school. The beneficiaries expressed their satisfaction that the residential schools are a great boon to the drop out girls.

Source: CEO, Cuddalore, 2006

16. People's Expectations – Basic Facts

Inadequate teachers in Government school pose a constraint. The district is facing acute shortage of qualified teachers. Tables 6.20 and 6.21 reveal the fact that needs the immediate attention of the government.

Table 6.20
No of Primary Schools (2001–2005)

S. No.	Primary School	Year				
		2001	2002	2003	2004	2005
1.	Panchayat of union schools	845	844	824	813	770
2.	Private school	182	182	182	182	182
Total		1027	1026	1006	995	952

Source: Chief Educational Officer, Cuddalore, 2006

Table 6.21
Availability of Teachers in Government Primary Schools (2001–2005)

S.No.	No of Teacher	Year				
		2001	2002	2003	2004	2005
1	One Teacher	No	No	No	No	No
2	Two Teachers	520	503	541	521	544
3	Male	1725	1756	1658	1590	1249
4	Female	2286	2374	2080	2241	2095

Source: Chief Educational Officer, Cuddalore, 2006

The availability of toilets with water in Primary Schools is given in the Table 6.22. The toilet and water facilities have improved during the five years (2001–05). However, there is a need to reach 100 percent performance immediately on a priority basis.

Table 6.22
Availability of Toilet with Water in Primary Schools 2001–2005)

S. No.	Detail	Year				
		2001	2002	2003	2004	2005
1.	Schools with Toilet	534	560	628	618	626
2.	Toilets with water	523	579	520	628	608

Source: Chief Educational Officer, Cuddalore, 2006

Most primary schools are run as one–teacher institutions even two or three teachers are on roll. This discourages the local people for preferring these schools. This challenge should be adequately addressed by the district authorities. The CEO, Cuddalore should ensure that the government school teachers are as many in number as in private schools and thereby improve the teacher–student ratio. Otherwise, Government schools will not withstand the stiff competition of the private schools. Infrastructure has been strengthened and basic facilities augmented. Though the Government is keen on improving the quality of education, the number of union schools and teaching staff strength in Government schools are showing a downward trend. The trend needs to be reversed.

Table 6.23
Number of Middle Schools (2001–2005)

S. No	Type of School	Year				
		2001	2002	2003	2004	2005
1.	Govt. Middle Schools	137	135	156	172	216
2.	Private Middle Schools	66	66	66	62	62
Total		**203**	**201**	**222**	**234**	**278**

Source: Chief Educational Officer, Cuddalore, 2006

Juxtaposing the figures of the tables 6.23 and 6.24, it could be concluded that the availability of toilets is not adequate in the middle schools too.

Table 6.24
Availability of Toilets in Government Middle Schools (2001–2005)

S. No.	Detail	Year				
		2001	2002	2003	2004	2005
1	Availability of Toilet	135	146	150	152	159
2	Water Facility	128	137	145	150	178

Source: Chief Educational Officer, Cuddalore, 2006

16.1 Middle Schools – People's Suggestions to Tone up Performance of Government Schools:

- The cross–section of the people suggested the following;
- Staff strength to be adequately increased; BT assistants should be posted in middle schools.
- Adequate class rooms, separate toilet rooms for boys and girls and construction of compound walls are needed.
- All free concessions should be extended without procedural delay.
- Students should be exposed to computer education.
- Common examination should be conducted for middle schools at the district level.
- Vacant positions should be filled up.
- Parent–Teacher Associations to be strengthened.

16.2 People's Views About Pass Percentage in SSLC and +2 Examinations

Government high schools and higher secondary schools are concentrated in rural areas. The pass percentage in these schools had not exceeded 70 percent. One–fourth of the students used to fail the examinations. It is a cause for concern. As a result the failed students are forced to join the pool of unemployed in the poverty–stricken Cuddalore district. Compared to other districts, the number of minority institutions is quite few. People's mindset and their perception about education need a change in the positive direction.

The uniforms supplied should fit the students properly. The timing of schools should be staggered to the advantages of the students hailing from underprivileged families. The scheme of free supply of bicycles is to be extended up to the 8th standard to reduce the incidence of drop out. Electricity is to be provided to all classes. The strengthening of infrastructure is further to be enhanced under the SSA.

Table 6.25
Schools with Play Ground in the Cuddalore District (2005–2006)

S. No.	Type of School	Year	No. of Schools (in numbers)	Schools with Play Grounds (in numbers)
1.	Govt. High Schools	2005–2006	73	21
2.	Govt. Hr. Sec. Schools	2005–2006	53	38
3.	Govt. Aided High Schools	2005–2006	17	17
4	Govt. Aided Hr. Sec. schools	2005–2006	29	29
5	Private Schools	2005–2006	6	6
6	A.D. Welfare Schools	2005–2006	10	4
7	Social Welfare Schools	2005–2006	1	0
8	Municipal schools	2005–2006	3	0

Source: Chief Educational Officer, Cuddalore, 2006

Table below shows the toilet facilities in Girls schools and Co–Educational schools. Since the students strength, number of toilets, toilets size differ significantly among the schools, it is expected that toilet facilities may be created on par with the needs of the schools.

Table 6.26
Schools with Toilets Facilities for Girls with Water Facility

S. No.	Girl School	Co–Education Schools	Total	Toilets for Girls
1	30	143	173	380

Source: Chief Educational Officer, Cuddalore, 2006

It is suggested that the Government may adopt a School in each panchayat union, to be the model for others; facilities such as class room, teaching equipment, laboratory, computer centre, library and infrastructure are to be adequately provided in these schools. This approach will increase the confidence of the people in Government schools.

Box : 6.7 Role of the Annamalai University in Promoting Education

The Annamalai University, renowned as a seat of learning is a 76–year old institution. Through time, its role has been expanding in educational sphere in the Cuddalore district. Its presence in the Cuddalore District assumes much significance. It has become a hub of research activities for students from all over the world. This university is an umbrella institution having Arts and Science, Linguistics, Engineering, Medicine, Dentistry, Agriculture, Directorate of Distance Education, etc. About 1.50 lakh students are receiving education here.

This university has also Marine Biology Research Centres, Biology Research Centres, Science, Arts, Linguistics and Agriculture Research Centres. Research activities are being carried in collaboration with countries such as Japan, USA, etc. Apart from teaching and research, the extension activities–Adult Education, Rural Development Centre, Welfare scheme, Social Services, Blood Donors Clubs, AIDS Awareness campaigns and Yoga centres, etc are the outreach activities of the university. The teaching staff and students participated in "Mass Literacy Campaign – 1990", which was a landmark in the history of the University. The Continuing Adult Education Centres are still in operation.

The Economics Department of this University houses the Rural Development Centre intended for extension, education and research activities. This Centre covers 42 villages in its vicinity. Activities such as vocational training, new farming techniques, and job–oriented training are being carried out by this Centre. By adopting "Lab to Land approach" this Centre is propagating new best farming practices. The contribution of the University to Human Development is immense and worthy of receiving international acclaim.

Source: The Registrar, Annamalai University, 2006

17. Policy Recommendations

This chapter probes into the contours of literacy and education and brings to light the strengths and weaknesses of the educational system. Low educational attainment is one of the reasons why the Cuddalore district is at the bottom rung of the DHDI and GDI ladder. Massive attack on illiteracy is to be mounted in backward blocks. In order to improve the quality of education, infrastructural facilities are to be improved at all levels and vacant posts are to be filled up. The Education department should ensure that the scholastic performance of Government schools is leveled up on a par with that of private schools. People should be educated to be aware of the opportunities open to them by institutions such as the Annamalai University. To put it in a nut shell, there is sufficient scope for educational improvement in this district. A few directions for improving the present educational system point towards the following facilities are listed below:

- One teacher for each class in primary schools.
- Provision of toilets with water.

- Physical education, moral instruction and personal hygiene and sanitation to be imparted at primary education.
- Quality nutritious midday meal prepared and distributed through common kitchens.
- Improvement in teaching methods.
- Vocational training in primary stage of education.
- Environmental education.
- Exposure to afforestation activities.
- Promotional opportunities for those working in local Government schools.
- Deployment of watchman and sweepers in primary schools.
- Education on first aid.
- Reorientation of the educational policies that promote learning and ensure that the students gain a scientific bent of mind.

In executing the educational programmes, a number of positive steps have been taken. However, there are problems in translating the plans into action, particularly from the angle of achieving Human Development goals at the sub–district levels. Sound infrastructural facility is needed for the sustainability of efforts for educational development, and positive achievements should attune to cent percent enrolment, reduction in withdrawal from schools and provision of social and economic assistance to school–going population. Hence the District Administration should focus on issues relating to appointment of number of teachers as per requirement of primary education norm and availability of infrastructural facilities in consonance with the student strength.

CHAPTER VII

CHALLENGES AHEAD AND ROAD MAP FOR ACHIEVING HUMAN DEVELOPMENT

CHAPTER – VII

CHALLENGES AHEAD AND ROAD MAP FOR ACHIEVING HUMAN DEVELOPMENT

The previous chapters of the Report have explained the status of human development in terms of income, employment, health and education. They have also portrayed the challenges addressed by the District Administration in implementing various developmental schemes. In prosecuting this district level study on human development, we have attempted to gather and integrate the block level information on the three areas of concern: Health, Education and Livelihood. In particular, we have tried to probe into the main programme areas with respect to education, health and nutrition and to integrate the information with the well being of the poor and marginalized population, including women. The intention has been to identify the hurdles in implementing the programmes from a policy perspective. The whole exercise is basically oriented towards improving the efficiency of the present human development programmes in operation. In addition to making suggestions for sustaining such programmes, the report has explored some new directions and administrative measures to strategize Human Development programmes to yield the intended results.

The various vulnerabilities of the district underscore the point that the district is badly in need of major developmental interventions. The district economy is to be put on a fast track. The report reiterates the need for adopting a location–specific approach to development. The synergistic relationship among the dimensions of poverty, education, health, nutrition and sanitation, provides a scope for the administration to adopt a synchronized mode approach. The ultimate focus should be on the ultra–poor and marginalized section of the people who should receive the benefit they deserve in any development intervention. Likewise the backward regions should occupy a centre stage in development planning. As times are hard for the unemployed, the problems of unemployment and the consequent poverty must be tackled effectively. The district authorities have to adopt a holistic approach, prepare a shelf of projects well in advance and implement them on a priority basis. All development activities require additional fund allocation for the district in future by reason of the district's low ranking in District Human Development Index (DHDI) and District Gender Development Index (DGDI).

The suggestions made here cover all sectors – agriculture, industry and services. The focus groups are the poorest of the poor and target areas are backward blocks and villages. The suggested thrust areas of action are delineated below:

Agriculture

The basic source of livelihood in the district is agriculture. Quite conspicuously, the agricultural occupation is afflicted by all ills traditionally attributed to this lagging sector. Marginalization of landholdings and low agricultural productivity coupled with lack of significant value addition to the products explain the high incidence of poverty in agriculture. The report makes concrete suggestions towards crop diversification at the block level, besides outlining suggestions for waste land development activities and optimal water management strategies. Should agriculture be developed into a profitable endeavor, the report contends the following.

Crop diversification should receive the highest priority in the district development and the report suggests a conscious switch over to horticultural and floricultural crops wherever possible. For achieving sustainability in agriculture, the report recommends giving a further impetus to the establishment of *Uzhavar Sandai* in urban areas, besides strengthening the extension activities all the more. Two conspicuous issues namely the need for diversification of crops and limitation of middleman can be solved only in the long run.

In certain pockets of the Cuddalore district, it has been observed that the farmers who introduced various innovative practices to diversify their crops from food to horticulture have reaped a sizeable profit. The agricultural department of the district may propagate the need for crop diversification with still greater zeal. This much needed intervention will go to strengthen the livelihood strategy of the majority. One observes with concern that the prevalence of interlocking factor markets in the rural area of the district has paved the way for a wide price spread, giving maximum returns only to the middleman. This issue requires a multi–pronged approach to deal with it.

The Cuddalore district has remained an agricultural district through centuries. Hence any fluctuations witnessed in the agriculture sector, would make a remarkable impact on the district development for it is a prime contributor to the district's GDP. It necessitates making a separate block–wise analysis, to know the agricultural performance of the District from a policy angle. It is evident that the nature of agricultural activities differs among the blocks, due to the extent and nature of endowment of various natural resources in various blocks. The Cuddalore block depends absolutely on ground water and on the Pennai river water and seasonal rainfall.

In the Kattumannarkoil and Chidambaram taluks, agriculturists are the beneficiaries of the river Cauvery. The Panruti and Annagrammam blocks have some ground water potential and they are engaged in horticultural activities, particularly in cashew cultivation. The Vridhachalam and Kammapuram blocks depend on rainfall and groundwater–based cultivation. These blocks register significant differences among themselves in their crop intensity, productivity and cultivation methods. Total cropped areas, average rainfall and total irrigated area are the major factors which determine the agricultural production and growth.

The agricultural performance places the Kurinjipadi, Cuddalore, Keerapalayam and Melbhuvanagiri blocks as best performers. In the Kurinjipadi block, there are multiple sources of irrigation facilities available i.e., Neyveli Lignite Corporation (NLC) water, Perumal tank and easily accessible ground water. This has facilitated a substantial rise in the total cropped and irrigated areas. These blocks have a rich potential for introducing innovative practices to enhance their agricultural yield. The Cuddalore block enjoys three major sources of irrigation viz,. ground water, seasonal river water and rainfall, which have helped in better utilization of the available land resources.

Kumaratchi and Kattumannarkoil lie in the Cauvery delta cultivation. In these blocks, the Cauvery water is the main source for irrigation. Since these blocks are situated in the tail end area of the Cauvery Delta Region, there is a good deal of uncertainty in cultivating the lands. Furthermore, the cultivators purely depend on the Cauvery water. Parangipettai is located in the coastal plain of the Cuddalore district, and it has a sandy geological structure. This structure imposes a restriction on the agricultural activities and, the farmers cultivate paddy and some short–term crops relying heavily on rainfall. In the light of the observations above, it may be suggested that the district agricultural department may strengthen the ongoing agricultural programmes further. They may tap the water resource potential available in a better fashion while exploring the possibility of diversification of crops in different blocks.

The Annagrammam, Mangalore, Parangipetti and Panruti blocks have a lesser extent of irrigated area with lower rainfall recorded, as compared to other blocks. The Panruti and Annagrammam blocks are situated close to each other and share a number of common features, although the Annagrammam block has a larger irrigated area than the Panruti block. The major crops of these blocks are commercial and cashewnut is the predominant crop. It is found that these blocks have further scope to introduce horticultural and vegetable crops. The Virudhachalam and Kammapuram blocks are completely dependent on rainfall and ground water. The Mangalore and Nallur blocks are dry blocks of the district. The lack of ground water potential is a stumbling block in these places in bringing all lands under cultivation. Creation of additional water–harvesting structures and introducing water conservation practices, such as sprinkler irrigation, may be introduced to utilize of the available lands fully.

The discussion in the previous paragraphs leads us to make a few suggestions, which are detailed below. Although these involve projects with a long gestation period, it is high time that the initiatives already made in these directions are interpreted all the more and pursued with greater rigour and within a specific time frame.

i. Sensitizing farmers to technological progress in agricultural engineering;
ii. Participatory irrigation management;
iii. Adoption of seed replacement for all crops;
iv. Education on balanced use of fertilizers;
v. Fillip to organic farming, biotechnology and use of bio fertilizers;
vi. Bridging the yield gap for all crops;
vii. Raising the yield rates for all crops;
viii. Using the high yielding varieties for all crops;
ix. Improvement in post harvest technology;
x. Adequate flow of credit to agricultural sector;
xi. Rejuvenation of the co–operative movement;
xii. Conservation of existing water sources with public – private sector partnership; and
xiii. Boost to animal husbandry activities.

All these centre on raising the public outlay on agriculture.

Water Bodies

The Cuddalore district has 592 water tanks, which include 188 big tanks and 404 small tanks. Most of the tank's bunds, catchments area and source channels are encroached by the people due to their political / social / economic powers. The situation warrants clearing all encroachments without any bias. Further, it is needed for enhancing more funds are needed for the renovation of existing tanks and for increasing their storage capacity. To sustain the water bodies, common guidelines have to be introduced along with the stakeholder's participation; these guidelines have to be implemented and strictly monitored by the District Administration.

Waste Land Development

The spectrum of land distribution is very high in this district. The district has an area of 59,270 hectares fallow land. The Central Government initiated various waste land development programmes (NWDP, CWDP and IWDP) to conserve the available land resources in a better way. The State Government has launched another innovative programme to distribute the waste land to the landless labourers. This programme intends to minimize the expenses of the government and utilize the fallow lands, within the short period. These programmes have to be monitored continuously for achieving their intended objectives.

Industrial sector

The district may turn towards industrial development, not as any substitute to agriculture, but as a supplementary source of livelihood. But it is a glaring fact that there is dearth of small, medium and large–scale industries in the district. With such a poor industrial base, the urban poverty arises as the extension of rural poverty. The district is marked by low per capita income, resulting in low purchasing power. A few specific suggestions of the report are:

i. Broad–basing the manufacturing sector with vibrancy.
ii. Identifying tiny and small–scale industrial units by the District Industrial Centre in consonance with the availability of raw materials.
iii. Ensuring an adequate flow of bank finance.
iv. Effectively implementing the Prime Minister's Rozgar Yojana programme.
v. Choosing units with high employment content.

Further, there is the need for the strengthening of economic infrastructure such as roads, railways, ports, etc. Conducting feasibility studies for new industries and a conscious attempt to locate industrial units in the rural areas are also suggested. It is observed that community colleges may be instituted to impart productive skills to all categories of people and for training potential and growing entrepreneurs.

Given its natural endowments, there are a few export oriented industries such as prawn processing, fruits and vegetables processing, meat processing, fresh flowers and polished blue metals, in the district. Promotion of these industries would help enhance the income and employment opportunities considerably.

Of late, the Food Processing Industry has emerged as a rich earner, high potential factor for development. It lays its emphasis on value addition to agricultural productions. The existing food processing industries of oil, fruit drinks, tender coconut, and fish can be promoted further to increase the volume of production.

Employment Generation

According to the 2001 Census, 13.12 lakh people were not engaged in any employment in Cuddalore. The failure and drop out rate at school level is very high. The rate of dropout rises with the level of classes. In this context, it is suggested that a district level Community College may be brought into existence, with the purpose of imparting skills and knowledge to the local population to take up small and micro-level enterprises. The proposed community college will cater to the needs of the district population and create additional employment opportunities. Further, if we utilize the unproductive human resources in a productive way, it is said that the crime rate too will come down. The employment guarantee scheme has been put into operation providing 100 days of assured employment. It is expected that the creation of employment will serve to promote the Common Property Resources (CPRs). The employment guarantee is just the minimum protection provided for livelihood. The precise objective of the programme is that the participants should be encouraged to mobilize their own resources and thereby engage themselves in production and marketing activities.

Education

Delving into the educational sector, the Cuddalore district presents itself as a place of all divides warranting equity and a more inclusive growth in all programmes. There is a high incidence of girls dropping out from schools which in major part, explains the gap in literacy rate between men and women. It is also observed that the SC and ST population lags strikingly behind others in literacy. Another glaring problem addressed is the dearth of skilled manpower which is a prerequisite for drawing up industrial planning for the district. As suggested earlier, skill and job oriented education may be imparted through community colleges. This will help strategize the government programmes to be centered on Human Development.

The report observes that the SSA is a step in the right direction and it functions very effectively. The FGDs have brought to focus the imperative need for improving the quality of education. The suggestions of stake holders are that the government should arrange for periodical training and refresher courses for teachers and effective monitoring of the working of various educational schemes. In addition, there has been a suggestion towards promoting partnerships between government school teachers and parents to ensure accountability in the working of educational institutions.

Analysis of Block–wise Literacy Performance

Literacy is one of the factors determining human development. UNDP conceptualized and incorporated this as one of the indicators for assessing human development. In drawing up the block wise educational performance, the literacy data produced by the Census of India has been used. It was observed that Keerapalayam (81.56%), Kattumannarkoil (74.33%), Cuddalore (73.64%), Mangalore (71.26%) Virudhachalam (70.21%), Nallur (76.29%), Parangipettai (70.75%), and Panruti (72.94%) were the blocks that achieved a high literacy rate. In these blocks, the male literacy rate, female literacy rate and literacy gap fared comparatively better than those in the remaining blocks. However, we notice a gender gap in literacy and a noticeable drop out rate in these blocks.

Annagrammam (68.77%), Kumaratchi (65.93%), Kurinjipadi (57.42%), Melbhuvanagiri (61.89%) and Kammapuram (67.36%) are the low literacy blocks in the district. In these blocks, the drop out rates (1–5 Std: Annagrammam 3.45%, Kurinjipadi 3.0%, 6–8 Std: Annagrammam 10.64%, Kurinjipadi 11.26%) and literacy gap are significantly high. The State government has introduced various innovative programmes to address these issues. It is suggested that as the real causes of the gender gap and high drop–out rate are likely to vary among the regions, the District Administration may launch their programmes on a need basis, after assessing the ground realities in each region. Giving priority to SSA and enhancing the financial allocation to the programme and creating awareness to students and parents, will go a long way to enhance the level of performance of the programmes.

Block–wise SHG's Performance

An attempt has been made to analyze the performance of SHGs in the various blocks of the district. The analysis comprises 'number *of SHGs formed'*, *'number of SHG received revolving fund'* and *'number of SHGs received economic assistance'* from banks. The Cuddalore, Annagrammam, Kurinjipadi, Panruti, Kattumannarkoil, Keerapalayam and Parangipettai blocks were better performers than others as they reached their targets. The Melbhuvanagiri, Kammapuram, Mangalore, Kumartchi; Nallur and Virudhachalam blocks fell short of their targets, due to lack of people participation and co–operation. Further, the existing NGOs pay greater attention to the developed blocks rather than the less–developed blocks of the district. It is suggested that DRDA may initiate further steps to make the SHGs serve with their real spirit and help motivate them to develop micro enterprises.

Eradication of Poverty

The SHGs have already become a force to reckon with. There are many wage and self–employment programmes available to the members. However, special efforts are needed for proper targeting of the poor under various employment schemes. Their effective functioning must be ensured through the flow of micro finance. Micro finance should not be too small or too narrow in coverage but sufficiently large and broad based enough to make the enterprises viable. In addition, they should aim at asset accumulation and employment generation for sustained growth and poverty eradication. Also, there is a need for continuous monitoring of the assets created by the schemes. The programmes should ensure generation of employment opportunities for the unemployed people including fisherman throughout the year.

Block–wise analysis of Rural Poverty

The Tamil Nadu Human Development Report–2003 has classified the districts into three categories on the basis of their magnitude of poverty, namely as those with high incidence of poverty (above 40%), moderate incidence of poverty (30–40%) and low incidence of poverty (below 30%). It has been recorded that the Cuddalore district lies in the high poverty category in the State. At present, the Cuddalore district (rural 32.12%, urban 40.95%) has a significant proportion of the BPL population.

The incidence of poverty does not vary significant among various blocks and it hovers around the overall average (32.12). However, one can perceive a better placement of rural areas, if we go by the figures of poverty rank depicted above. The Government has introduced a new methodology for identifying BPL households. However, one can testify to the infallibility of the methodology. Of late, the new World Bank funded project on "Vazhunthu Kattuvom", the State Government has introduced another unique methodology, called "social mapping" for identifying the BPL population. The administration may ensure itself of the appropriateness of the new methodology and apply it to assess the magnitude of BPL households.

Health and Nutrition

Health and Nutrition are interdependent factors for human development. Based on the health and nutrition data analysis, it is observed that there is an imbalance in the vital rates of health development indicators between rural and urban areas. The incidence of IMR, infanticide and foeticide requires policy attention. An equitable distribution of health amenities, particularly in the rural health system is warranted. Hi–tech facilities for all main PHCs, (X–ray, Hi–tech Lab, Blood Bank, Scan, etc) may be provided for improving the quality of healthcare services. Conduct of periodic health camps for primary and secondary school children and for general public would remove many health

risks. The report suggests revamping of all additional PHCs and HSCs to ensure effective delivery mechanism. Further, a better emphasis has to be laid on preventive care for rural population. This necessitates intensive implementation of ICDS. Children's welfare should receive a top priority that ensures adequate and timely nutritional support. Besides mainstreaming all the male and female dropout children in educational system, it is necessary to bestow special care for physically and mentally challenged children and orphaned children.

Block–wise Health Performance

Block–wise health performance portrays the block level health care attainment and the development of health infrastructure. On the basis of performance, the blocks were grouped into three categories. They are: best health performance blocks: (Keerapalayam, Kumartchi, Kurinjipadi and Melbhuvanagiri), moderate health performance blocks (Annagrammam, Panruti, Kattumannarkoil, Nallur, Kammapuram and Cuddalore) and low health performance blocks (Virudhachalam, Parangipettai, and Mangalore). The best performance blocks have fared well in respect of certain vital indicators chosen for the analysis. The moderate and low performing blocks registered the problems of high death rate, low institutional delivery and high incidence IMR, MMR, SBR and a high incidence of malnutrition. Promotion of greater awareness about child nutrition, child and mother care, implementation of Anganwadi programmes and creation of essential health care infrastructure will surely help them significantly to improve their health attainments.

Crimes Against Women

The office of the Superintendent of Police of the District furnished the details of the crimes, which took place during the last five years (2001–2005). It is observed that crime rate against women has come down in the district. However, the cases of reported sexual harassment and dowry death rate have increased. It is observed from the discussion with stakeholders that there are a number of cases of violence against women that were not reported to the police and they were all resolved at the local level. Over the years, the women literacy rate increased significantly. However, the performance registered a gender gap. This problem prevails even in employment. The Governments, Private Sectors, Self–Help Groups and other agencies have to come forward and works together to empower the women folk through education and employment which will help foster the development of the district.

Environment and Ecology

The report has revealed that in view of increasing population, growing urbanization and rural/urban migration and commensurate development of trade and business, there has been a heavy rise in the pollution and environmental degradation. The solid waste management particularly in urban areas poses an acute problem. From the FGDs, it could be learnt that the level

of awareness of the general public and the municipal/district administration was of a high order. In fact, sufficient initiatives have already been made by the local government to address the problem. However, given its vast dimension, it is felt that the corrective measures must be strengthened all the more in every direction. The report has made a number of constructive suggestions to improve upon the existing practice of solid waste management. In particular, it has recommended the public private partnership for this task. As water, sanitation and health status are intertwined, the report has made suggestions for the improvement of better drainage management. In order to improve the ecology of the region, it has been suggested that mangrove plantation in coastal regions could be encouraged besides setting up of water harvesting structure.

Solid Waste Management

The present situation warrants managing the solid and liquid waste produced both in urban and rural areas. They can introduce some good practices followed by advanced nations viz, identifying disposal land, land preparation, putting polythene layers and land filling with a sand to control smoke. These practices surely will control the ground water pollution, which is one of the point sources of pollution. The existing sewage water treatment practice of oxidization should be given up and the common effluent treatment plant to be introduced in all the five municipalities.

Housing Condition

The status of housing condition could be observed from the 2001 Census, which is an additional feature portrayed in our decennial Census. In the rural areas of the district, 42.73 percent of them live in single room houses and 22.55 percent of them live in houses even without a room (thatched ones). Similarly, 36 percent of the urban households are residing at single–room houses and 13.40 percent of them are residing in the thatched houses. It shows their lower economic status in rural as well as in urban areas. In urban areas, the poverty stricken groups were forced to live in environmentally fragile locations and they live there with a high risk. It has been noticed that the existing water and power supply to these places are not enough. The marginalized populations of this district, who live in thatched houses (83,872), enjoy the benefits of a novel scheme of 'free power supply', introduced by the State Government. As per the 2001 Census, 36 percent of rural household are yet to get safe drinking water, 88 percent of the rural household are yet to get toilet facility and 26 percent of the rural households are yet to get electricity connection. These facilities may be provided through public private mix, which ensures the participation and maintenance of the same.

Development of Scheduled Caste Population

In the Cuddalore District, the SC population constitutes 27.76 percent of the total population. Of these, 81 per cent of them live in villages and the rest 19 percent live in towns (2001 Census). It is evident that this community has been left out of the mainstream development process. However, in recent decades, some gradual upliftment has taken place, owing to the various developmental programmes launched. However, the administration may attempt to implement these programmes with a greater resolve, adhering to the guidelines of the Government strictly. This will surely render the expected benefits to the targeted population in a much better manner.

Panchayat Raj

The functioning of three–tier Panchayat Raj System in this district witnesses lack of consensus of opinion among Presidents, Vice–Presidents and Ward Members. A similar scene obtains in the functioning of the District Panchayat Union Council. The lack of co–operation and misunderstanding among the functionaries has far–reaching adverse consequences. These have resulted in passing the resolutions and executing the works with inordinate delay. It is observed that all these outcomes may be attributed to the widely prevalent caste conflicts, corruptive election practices, lack of collective action and lack of social audit. These issues have to be identified and addressed at the local levels, achieving somehow the co–operation and willing participation of the people. This requires proper conceptualization of the task ahead and a total involvement on the part of district administration to act effectively.

E– Governance

The Panruti Municipality introduced E–Governance in their administration, which facilitated to execute all the works without any delay, thereby enabling them to monitor their progress effectively. This helped significantly to reduce the administrative cost and corruption besides enabling the quick delivery service to people. This model can be emulated by the other regions of the district as well. The rest of the municipalities and block level administrations which have introduced computers at various levels, may accord a still greater priority to complete the process of computerization. This will definitely help the governance manifold in terms of both the quantity and quality of the work turned out.

Abbreviations

AAY	Antyodaya Anna Yojana
ADD	Acute Diarrhoea Disease
AIDS	Acquired Immune deficiency Syndrome
ATMA	Agricultural Technology Management Agency
BDO	Block Development Officer
BPL	Below Poverty Line
CBR	Crude Birth Rate
CDR	Crude Death Rate
CEO	Chief Education Officer
CRD	Centre for Rural Development
CWDP	Comprehensive Water Shed Development Programme
DANIDA	Danish International Development Assistance
DDHS	Deputy Director of Health Services
DEC	Diethylcarbamazine
DEEP	District Elementary Education Plan
DHDR	District Human Development Report
DOT	Directly Observed Treatment
DRDA	District Rural Development Agency
FGD	Focus Group Discussion
GDI	Gender Development Index
GDP	Gross Domestic Product
GH	Government Hospital
HDI	Human Development Index
HDR	Human Development Report
HIV	Human Immune deficiency Virus
HSC	Health Sub Centre
ICDS	Integrated Child Development Service Scheme
ICTC	Integrated counseling and Testing Centre
IEC	Information Education and Communication
IWDP	Integrated Waste Land Development Programme
JSY	Janani Suraksha Yojana
LBW	Low Birth Rate
LEB	Life Expectancy at Birth
MDT	Multi Drug Treatment
MMR	Maternal Mortality Rate
NFHS	National Family Health Survey
NGO	Non-Governmental Organisation
NLC	Neyveli Lignite Corporation
NLEP	National Leprosy Eradication Programme
NMEP	National Malaria Eradication Programme
NMP	Noon Meal Programme
NREGP	National Rural Employment Guarantee Programme
NSS	National Sample Survey
NWDPRA	National Water Shed Development Programme for Rain fed Areas
ORT	Oral Dehydration Therapy
PDS	Public Distribution System
PHC	Primary Health Centre

PMR	Premature Mortality Rate
PPP	Purchasing Power Parity
PRI	Panchayat Raj Institution
PTR	Pupil Teacher Ratio
RCHP	Reproductive and Child Health Project
RNTCP	Revised National Tuberculosis Control Programme
RTA	Road Traffic Accident
SBR	Still Birth Rate
SDP	State Domestic Product
SGSY	Swaranajayanthi Gram Swarozagar Yojana
SHG	Self Help Groups
SPC	State Planning Commission
SSA	Sarva Shiksha Abhiyan
TFR	Total Fertility Rate
TINP	Tamil Nadu Integrated Nutrition Programme
UNDP	United Nations Development Programme
VCTC	Voluntary Counseling and Testing Centre
VHN	Village Health Nurse
WHO	World Health Organisation

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