HUMAN DEVELOPMENT REPORT

Tiruvannamalai District

State Planning Commission

UNDP India

Union Planning Commission

TIRUVANNAMALAI

DISTRICT HUMAN DEVELOPMENT REPORT 2007

DISTRICT ADMINISTRATION, TIRUVANNAMALAI

&

STATE PLANNING COMMISSION, TAMIL NADU

in association with

DHAN Foundation, Madurai

Prof.M.Naganathan, M.A.,M.L.,Ph.D.D.Litt.
Vice-Chairman

STATE PLANNING COMMISSION
"EZHILAGAM"
CHEPAUK, CHENNAI 600 005.
Tel. No: 2858 5705
FAX : 044 - 28528563
E.Mail. : vcspc@tn.nic.in

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 Tiruvannamalai 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 researchers of the DHAN Foundation.

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 Tiruvannamalai will form a milestone in the overall planning and development of the state of Tamil Nadu.

(M.NAGANATHAN) 26.02.2009

Dr.K.Arulmozhi, I.A.S.,
Member-Secretary

Tel. No. :28545460
FAX : 044 – 2854 5485
STATE PLANNING COMMISSION,
"EZHILAGAM"
CHEPAUK, CHENNAI 600 005.

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.

3.8.2009

(K.ARULMOZHI)

Dr. M. RAJENDRAN, I.A.S.,
Collector and District Magistrate,
Tiruvannamalai – 606 604.

Office: 233333
Resi: 233366
Fax:04175- 232222

FOREWORD

Human Development is about people, about expanding the choices to live full, creative lives with freedom and dignity. Human Development Reports are being prepared to bring people at the Core of development and to make them feel that the development should be for the people and by the people.

The State Planning Commission has come forward to prepare DHDR in five districts and Tiruvannamalai is one among them. The DHAN Foundation, Madurai has prepared the District Human Development Report for Tiruvannamalai District under UNDP-UPC assisted project Strengthening State Plans for Human Development. It has prepared the report by Collecting information from Statistical Department and other line departments, by making visits to the villages and holding discussions with senior officials at the District level. The observations made by the State Level Steering Committee chaired by the Chief Secretary have also been incorporated in the report.

The report reveals that Tiruvannamalai District has fared well in certain areas like Reduction in maternal mortality Rate, child labour, wages, etc. This report not only serves as summary of the human development scenario in Tiruvannamalai District but also seeks explanations as to why the district has fared well in certain areas and not in others.

Convergence of services of all development departments will result in overall development of this District, which will eliminate sectoral imbalance and regional disparities within the district. In this context I wish to reiterate the words of HENRY FORD that

" Coming together is a beginning!

Keeping together is progress ! and

Working together is success"

It is my firm conviction that a sincere and serious study of the report will pave way for all development department officials to consolidate the strength, weed out the weakness, capitalise the opportunities and to thrash out the threats while planning for overall development of Tiruvannamalai district.

(M. Rajendran)

Contents

List of Figures

List of Tables

Introduction

The human development concept evolved in the 1980s in response to the increasing emphasis on economic growth as a measure of development. It places human beings at the core of development and emphasizes that peoples' development is an end in itself and not a means for development. Central to human development are participation, especially of the vulnerable sections in the process of change and equity in development gains.

Human development is about people, about expanding the choices to live full, creative lives with freedom and dignity. Economic growth, increased trade and investment, technological advance – are all very important. But they are means, not ends. Fundamental to expanding human choices is building human capabilities: the range of things that people can be. The most basic capabilities for human development are living a long and healthy life, being educated, having a decent standard of living and enjoying political and civil freedoms to participate in the life of one's community[1].

UNDP's Global Human Development Report, published annually since 1990, initiated and have continued to help drive the evolution of the concept of human development. By putting people at the centre of development, by emphasizing that development is of the people, for the people and should be carried out by the people, the HDRs have offered ground-breaking analysis on a wide range of issues. Beginning with Global HDR in 1990, more than 550 Global, Regional, National and State level HDRs have been prepared. They have served as main vehicles for bringing the human development agenda closer to the people. The state of Tamil Nadu has also come out with its human development report in the year 2003. The state HDR has comprehensively analyzed inter-district disparities in human development attainment. It is a natural corollary that district level human development reports (DHDR) be prepared to gain the deeper understanding of the issues at the district level. The 73rd and 74th Constitutional Amendment Acts mandates the preparation of district level plans. Preparation of DHDR will give an opportunity for preparing district plans from a human development perspective. Another major premise for preparing DHDR is Millennium Development Goals (MDGs) set by UN General Assembly in 2000. DHDR will help to monitor the progress of achievements pertaining to MDGs. The DHDR would analyze the status of human development attainment and the key human development challenges faced at district level with a special focus on efficiency at delivery systems and financial allocations. Tamil Nadu government has come forward to pilot DHDR in five districts and Tiruvannamalai is one among them.

DHDR in Tiruvannamalai was initiated by the district administration and State Planning Commission through a visioning workshop involving various stake holders in the district. It has also constituted DHDR committee which has line departments, NGOs and other stake holders as

[1] UNDP 2003, Human Development 2003 – Millennium Development Goals: A Compact Among Nations to End human Poverty, OUP, New York

members. To assist the district administration the DHAN Foundation was nominated as Associated Institution.

DHDR of Tiruvannamalai deals extensively on the factors specific to Tiruvannamalai's human development achievements and constraints. This report not only serves as a summary of the human development scenario in Tiruvannamalai but also seeks explanations as to why the district has fared well in certain areas and not in others. Factors contributing to human development are disaggregated and analyzed at the sub-district level with a view to understand the regional disparities and reasons behind them. The report also highlights the policy interventions that are required to correct such imbalances. Data from Census of India 1991 and 2001, Department of Economics and Statistics, Chennai, line departments and various studies about the district were mostly relied upon. The report is limited by inadequate availability of data particularly regarding blocks in the districts.

The report is organized into six chapters. The first chapter introduces the reader to various features of Tiruvannamalai district. The subsequent chapters analyze in detail various important aspects in the district like employment, income, poverty situation, agriculture, demography, health, nutrition, sanitation, literacy, education, infrastructure and social vulnerability. The report ends with summary and way forward. We hope that Tiruvannamalai HDR will become an important tool in planning for growth, social justice and equity in the district.

Chapter I
Tiruvannamalai – A Profile

1.1 Introduction

Tiruvannamalai is one of the northern districts of Tamil Nadu with Vellore, part of Chengalpattu and South Arcot districts as northern, southern and western boundaries. This district comprises Tiruvannamalai, Chengam, Polur, Arni, Cheyyar and Vandavasi taluks. It came into existence on 30th September 1989 after the bifurcation of North Arcot district. The district lies between 11.55^0 and 13.15^0 North latitude and 78.20^0 to 79.50^0 East longitude. It is mostly comprised of plain lands except for the Eastern Ghats in the north-western part of the district and small hills in Polur and Chengam taluks. Palar, Cheyyar and Pennaiyar are the rivers running through this district. They are seasonal in nature and there is no perennial river in the district. This chapter presents an overview of historical, physical and economic facets of the district and places it in an appropriate context in relation to human development. It would help in better understanding of various issues taken up in following chapters.

1.2 History

In the Sangam age, the region was part of Aruva Nadu. Later it became part of Thondai Mandalam. It has passed through the hands of various rulers like Pallava, Chola, Rashtrakuta, Vijayanagara, Maratha, Nawabs, French and the British. During Chola dynasty this district was ruled by Sambuvarayas with Padavedu near Arni as head quarters. They were known for quick, efficient and able administration. Originally this district was part of North Arcot, which got its name as it was carved out of northern part Subah of Arcot lying north of Palar river. During 1901-11, North Arcot was bifurcated and the new Chittoor district (now in Andhra Pradesh) was formed. After many changes, there were four revenue divisions with thirteen taluks during 1971. In 1989, the present Tiruvannamalai district was formed with Cheyyar and Tiruvannamalai revenue divisions with Tiruvannamalai as the district capital.

1.3 Religious Importance

The name 'Tiruvannamalai' instantaneously brings to mind the picture of Karthigai Deepam to many, as this festival is well known throughout Southern India. Every year, lakhs of devotees visit this district during the festival. Among the five 'Panchalinga Sivasthalams', 'Agnilingam' is present in Tiruvannamalai. According to the religious story, Lord Siva took the form of 'Jyothi' (light) here to solve the dispute between Lord Brahma and Lord Vishnu. It is one of the sthalams (holy place) quoted in various Puranas. Girivalam, meaning going around the Annamalai Hill once in every month during Pournami (full moon day) is very famous in this district. Due to the religious importance of Annamalai temple in Tiruvannamalai, religious tourism has been one of the major income sources for the district.

1.4 Physical Features

The total geographical area of the district is 6191 sq. km. (ranks eleventh among the districts) comprising the Revenue Divisions of Tiruvannamalai and Cheyyar. The district has six taluks, eighteen blocks including tribal block of Jawadhu Hills and 860 villages. One sixth area of the district is covered by reserve forest and hills which are the parts of Eastern Ghats. The Javadis are the loftiest mountains of the region. They cover the north-western portion of Chengam taluk and the western part of Polur taluk. The general elevation of Jawadhu Hills is 2500 ft. with peaks rising upto 4200 ft. in some parts. Other important peaks of the district are Tiruvannamalai (2668 ft.) and Kalasagiri (2743 ft.). The general slope of the region is from west to east.

The soil is mostly of red ferruginous variety, both sandy and loamy with black clay. Black soil is mostly found in the neighbourhood of the rivers of Palar, Pennaiyar and Cheyyar. Red series of sand is predominant in Tiruvannamalai and Vandavasi taluk. Pirrohotite is said to be available in Polur. Black and multi-coloured marvel stones are available in plenty in the regions of Chengam and Vandavasi. These were made use of by the Sambuvarayas in the past, to exhibit their architectural skills.

The general climate of the district is tropical. The district receives rainfall from North East and South West monsoons. The North East monsoon is somewhat stronger except in the southern taluks of Cheyyar and Vandavasi. The average rainfall during 1995-2004 in this district was 1040 mm. Palar, Cheyyar and Pennaiyar are the rivers running through this district. At Sathanur, about 30 km west of Tiruvannamalai, a dam has been constructed across the Pennaiyar river. About 21000 hectares are irrigated through 106 channels from these three rivers. There are about 1900 irrigation tanks in the district.

1.5 Demography

The total population of the district in 2001 was 2186125 comprising 1095859 men and 1090266 women. The density of the population was 353 per sq. km. Tiruvannamalai stands 15th in population among the districts in Tamil Nadu in 2001. The percentage share of SC social group was 21.4 per cent and that of ST social group was 3.33 per cent in 2001. There were eight blocks with considerable number of SC population and two blocks with considerable number of ST population. In the district, the sex ratio of overall population was 995 and 0-6 age group was 948.

1.6 Agriculture

The majority of the population in the district derives their livelihood from activities related to agriculture and livestock rearing. Wells and tanks are the major sources of irrigation. Taluks like Tiruvannamalai, Cheyyar, Polur and Vandavasi enjoy better irrigation facilities. Nearly 50 per cent of Net Cropped Area of this district depends mainly on rainfall. The major crops grown in the district are paddy, groundnut, pulses and sugarcane. The area under major crops and their production have been declining in the recent years. The district is known as 'paddy importing but rice exporting district' because of the presence of numerous paddy processing units (rice mills) in the district. The contribution from the

primary sector to district Net Domestic Product has been declining over the years but the share of workers depending on this sector to total workers has not declined much.

1.7 Animal Husbandry

The district had 497929 cattle, 198118 sheep, 150141 goats and 252314 poultry in 2005. The district is the leader of white revolution among the districts of Tamil Nadu. The production of milk is approximately 2.33 lakh litres per day in both flash and lean seasons. Two cooperative milk-chilling plants are in operation at Tiruvannamalai and Anakavur besides three private milk-chilling plants. The number of sheep and goats has come down drastically in the last one and a half decade.

1.8 Industries

Before bifurcation North Arcot district gained a fair momentum regarding industries during the 70s and 80s from special measures taken by the Government, consequent on its being declared as backward district. But after the bifurcation, almost all the industrial areas in North Arcot district fell in Vellore district except the silk industries in Arni. Currently SLS cotton Spinning Mills in Arni is the only major industry besides sugar mills in Anakkavur, Polur and Tiruvannamalai. However, medium and small scale industries as well as cottage industries such as modern rice mills, weaving factories, cotton, silk and mat weaving, coir manufacturing and beedi manufacturing are flourishing here. Arni is known for affordable silk saris throughout India.

1.9 Transport and Communication

The Tiruvannamalai district is not much connected with rail routes except for a 93 km. meter gauge route between Katpadi and Villupuram segment. It is utilized for both passenger and goods transportation. The district enjoys a road network of 1600 km. length of various kinds of roads. The district has two head Post Offices, 81 sub-offices, 441 branch Post Offices besides 1 telegraph office. There were two telephone divisions and 66348 telephone connections in the district by 2004-05.

1.10 Income

The Net Domestic Product (NDP) of the district at constant prices (1993-94) was Rs. 1841 crores by 2001-02. The contribution of primary, secondary and tertiary sectors to NDP was 31 per cent, 19 per cent and 50 per cent, respectively in the same year. Tertiary sector has remained as the main source of growth in the district since last one decade. The annual growth rate of NDP of the district (4.64%) was lower than the state (5.43%). The per capita NDP of the district was Rs. 8067 which was lower than the state by 35 per cent.

1.11 Human Development Situation of the District

Performance of Tiruvannamalai on various dimensions of human development was poor both absolutely and relatively when compared to other districts in Tamil Nadu. In terms of literacy, Tiruvannamalai had only 68.22 per cent literacy rate in 2001 when compared to 73.47 per cent in the state. The female literacy rate was only 56.3 per cent when compared to 64.6 per cent in the state. The per capita NDP of the district was Rs. 8067 which was lower than the state by 35 per cent in

2001-02. Tiruvannamalai stood at seventeenth rank among the districts of Tamil Nadu with a poverty level of 42.15 per cent by 1993-94. It had also performed poorly in terms of safe drinking water availability and toilet availability. The share of married females in the age group of 15-19 years was 25.3 per cent among the total married females in 1991. Due to these reasons, the Tamil Nadu Human Development Report 2003 identified Tiruvannamalai district as one of the bottom five districts in the state in terms of Human Development Index (HDI) and also Gender Development Index (GDI). The district administration had taken various sectoral initiatives to improve the human development situation in the district and it is important to understand the progress in human development condition in the recent years and the current challenges.

Chapter II

Employment, Income, Poverty and Agriculture

It is a well known fact that employment, income and poverty are interrelated and they have significant influence over human development. So analyzing changes pertaining to these aspects is very important to understand what is happening regarding human development. The serious development issue India (and Tamil Nadu) is facing that the decline in share of the primary sector in national income is not being accompanied by a significant shift in the share of primary sector employment to secondary and tertiary sectors. The other specific development pattern is tertiary sector taking over secondary sector in terms of growth rate and total contribution. This being the general trend, this chapter undertakes a detailed analysis of the employment, income and poverty situation in the district and structural changes which had taken place in the recent past. Further, because a major section of the population of Tiruvannamalai is depending on agriculture, a detailed analysis is undertaken to understand the sectoral situation.

2.1 Employment

2.1.1 Size of the workforce and work participation rates in Tiruvannamalai :

The working population in Tiruvannamalai was 10.64 lakhs in 2001, an increase of approximately 1.32 lakhs over 9.32 lakhs in 1991. It is observed that the growth of working population (14%) was considerably higher than that of overall population growth (7%) in the same period. So the Work Participation Rate (WPR) also increased from 45.64 to 48.71 per cent during the same period. The increase in WPR was witnessed both in rural and urban areas. This is significant because there was a slight decline in the WPR between 1981 and 1991. But the increase in total workers between 1991 and 2001 was mainly due to phenomenal increase in marginal workers. In fact, the number of main workers had come down by 52490 and this was particularly so in the case of rural areas. This indicates high degree of casualisation of work force in rural areas and this could have adverse influence on income and poverty and so on human development. This trend is in the opposite direction to what happened between 1981 and 1991. Between 1981 and 1991 the proportion of marginal workers came down.

Table 2.1: Total Workers and Non Workers in Tiruvannamalai District

Category	Total Workers		Total			Rural			Urban		
	1991	2001	1981	1991	2001	1981	1991	2001	1981	1991	2001
	1000s		%			%			%		
Workers	932.4	1065	45.95	45.64	48.70	47.95	47.79	51.80	30.68	29.72	34.94
Main	882.4	823	41.88	43.19	37.96	43.46	45.07	39.59	29.79	29.27	30.73
Marginal	50	234.9	4.07	2.45	10.74	4.49	2.72	12.21	0.89	0.45	4.21
Non Workers	1111	1121	54.05	54.36	51.29	52.05	52.21	48.20	69.32	70.28	65.06
Population	2043	2186	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Census of India

The Work Participation Rate (WPR) in rural areas was significantly more than that of urban areas by 16.86 per cent in 2001. Though rate of increase in WPR of females was better than that of males in

2001-02. Tiruvannamalai stood at seventeenth rank among the districts of Tamil Nadu with a poverty level of 42.15 per cent by 1993-94. It had also performed poorly in terms of safe drinking water availability and toilet availability. The share of married females in the age group of 15-19 years was 25.3 per cent among the total married females in 1991. Due to these reasons, the Tamil Nadu Human Development Report 2003 identified Tiruvannamalai district as one of the bottom five districts in the state in terms of Human Development Index (HDI) and also Gender Development Index (GDI). The district administration had taken various sectoral initiatives to improve the human development situation in the district and it is important to understand the progress in human development condition in the recent years and the current challenges.

Chapter II

Employment, Income, Poverty and Agriculture

It is a well known fact that employment, income and poverty are interrelated and they have significant influence over human development. So analyzing changes pertaining to these aspects is very important to understand what is happening regarding human development. The serious development issue India (and Tamil Nadu) is facing that the decline in share of the primary sector in national income is not being accompanied by a significant shift in the share of primary sector employment to secondary and tertiary sectors. The other specific development pattern is tertiary sector taking over secondary sector in terms of growth rate and total contribution. This being the general trend, this chapter undertakes a detailed analysis of the employment, income and poverty situation in the district and structural changes which had taken place in the recent past. Further, because a major section of the population of Tiruvannamalai is depending on agriculture, a detailed analysis is undertaken to understand the sectoral situation.

2.1 Employment

2.1.1 Size of the workforce and work participation rates in Tiruvannamalai :

The working population in Tiruvannamalai was 10.64 lakhs in 2001, an increase of approximately 1.32 lakhs over 9.32 lakhs in 1991. It is observed that the growth of working population (14%) was considerably higher than that of overall population growth (7%) in the same period. So the Work Participation Rate (WPR) also increased from 45.64 to 48.71 per cent during the same period. The increase in WPR was witnessed both in rural and urban areas. This is significant because there was a slight decline in the WPR between 1981 and 1991. But the increase in total workers between 1991 and 2001 was mainly due to phenomenal increase in marginal workers. In fact, the number of main workers had come down by 52490 and this was particularly so in the case of rural areas. This indicates high degree of casualisation of work force in rural areas and this could have adverse influence on income and poverty and so on human development. This trend is in the opposite direction to what happened between 1981 and 1991. Between 1981 and 1991 the proportion of marginal workers came down.

Table 2.1: Total Workers and Non Workers in Tiruvannamalai District

Category	Total Workers		Total			Rural			Urban		
	1991	2001	1981	1991	2001	1981	1991	2001	1981	1991	2001
	1000s		%			%			%		
Workers	932.4	1065	45.95	45.64	48.70	47.95	47.79	51.80	30.68	29.72	34.94
Main	882.4	823	41.88	43.19	37.96	43.46	45.07	39.59	29.79	29.27	30.73
Marginal	50	234.9	4.07	2.45	10.74	4.49	2.72	12.21	0.89	0.45	4.21
Non Workers	1111	1121	54.05	54.36	51.29	52.05	52.21	48.20	69.32	70.28	65.06
Population	2043	2186	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Census of India

The Work Participation Rate (WPR) in rural areas was significantly more than that of urban areas by 16.86 per cent in 2001. Though rate of increase in WPR of females was better than that of males in

both rural and urban areas, still male WPR remained higher than that of females. The economic significance of improvement in female WPR was not much as it was in marginal workers category this improvement had happened.

Table 2.2: WPR and Number of Workers in Tiruvannamalai

Category	WPR (%)			Workers (in lakhs)	
	1991	2001	Change	1991	2001
Rural					
Male	56.11	58.79	2.68	5.09	5.26
Female	39.33	44.75	5.42	3.51	3.98
Persons	47.79	51.80	4.01	8.6	9.25
Urban					
Male	49.29	53.24	3.95	0.6	1.06
Female	9.77	16.68	6.91	0.12	0.33
Persons	29.72	34.94	5.22	0.72	1.40
Total					
Male	55.3	57.78	2.48	5.69	6.33
Female	35.82	39.59	3.77	3.62	4.32
Persons	45.64	48.71	3.07	9.32	10.64
Tamil Nadu	**43.31**	**44.67**	1.36	**242**	**278**
India	**37.46**	**39.13**	1.67		**4025.12**

Source: Census of India

It is observed from the table that the percentage shares of agricultural labourers as well as cultivators to total workers had marginally decreased in the year 2001 than 1991. But still their share in main workers was more than 70 per cent indicating that agriculture still remained as the prime livelihood in the district. Though the per cent share of cultivators in Tiruvannamalai had decreased marginally, it was still much higher than that of the state. On the contrary, the other workers category witnessed increase in number as well as in percentage share of main workers. But still its per cent share of total workers was much lower than that of the state.

Table 2.3: Industrial Classification of Workers in Tiruvannamalai

Category	Sex	Tiruvannamalai, 1991		Tiruvannamalai, 2001		Tamil Nadu, 2001	
		Total	Percentage	Total	Percentage	Total	Percentage
Cultivators	M	259384	45.54	226221	35.73	3262489	18.02
	F	84597	23.31	119215	27.62	1853550	18.96
	P	**343981**	36.89	**345436**	**32.44**	**5116039**	**18.35**
Agricultural Labour	M	155924	27.38	179456	28.34	4256360	23.52
	F	201193	55.45	244118	56.56	4381270	44.81
	P	**357117**	38.30	**423574**	**39.78**	**8637630**	**30.98**
HHI & Other Workers	M	154271	27.09	227489	35.93	10581548	58.46
	F	77063	21.24	68284	15.82	3543065	36.24
	P	231334	24.81	295773	27.78	14124613	50.67
Total	M	569579	100	633166	100	18100397	100
	F	362853	100	431617	100	9777885	100
	P	932432	100	1064783	100	27878282	100

Source: Census of India
WPR: Work Participation Rate
HHI: Household Industry Workers

The number of female cultivators had increased significantly while the number of male farmers had declined significantly, indicating the trend towards the feminization of agriculture profession. This may be due to the high level of migration of male cultivators to urban areas outside the district for livelihood.

Peculiarly, most of the increase in HHI & Other Workers was through increase in male workers and in fact, there was a decline in the actual number of female workers in this category. It is known that education is one of the main instruments for getting employment in this category. That being the case, significant decline in female per cent share could be due to their lack of education entitlement. There is no specific data on unemployment and under employment and so they are not discussed here.

2.1.2 Block-wise Work Participation Rate (WPR)

It is observed that WPR had increased during 1991–2001 in most of the blocks in the district and it had slightly declined in Tiruvannamalai block. The increase in WPR was very significant in Thandrampet (18%), Chengam and Cheyyar. The highest WPR was observed in the block of Thandrampet in 2001. On the other hand, the lowest WPR was observed in the block of Tiruvannamalai. The trend towards casualisation of workforce found at the district level was also found in most of the blocks except Thandrampet. The highest and the lowest percentages of main workers to total workers in 2001 were observed in the blocks of Thandrampet (97.68%) and West Arni (77.02%), respectively.

Male WPR was comparatively higher than the female WPR in the district and the gap had narrowed between 1991 and 2001. There had been a slight increase in male WPR between 1991 and 2001 in most of the blocks except in Tiruvannamalai where it had declined by 7.65 per cent. The increase in female WPR was witnessed in most of the blocks except Vandavasi and it was remarkable in Pernamallur, Kilpennathur and Chengam. The lowest female WPR was witnessed in Tiruvannamalai block. Further, the share of main workers to total workers had declined for both the sexes. But, the change in the share of main workers to total workers was comparatively higher in case of females than the males in most of the blocks. So it may be concluded that the casualisation of work force in case females was more than that of males.

The table on industrial classification of main workers in different blocks exhibits that percentage share of agricultural labourers was comparatively higher than that of cultivators. It is further observed from the same table that percentage of cultivators to total workers had declined in all the blocks except in the block of Vandavasi during 1991-2001. The rate of decline was much higher in the block of Thandrampet. The rate of decrease in cultivators as well as agricultural labourers in the block of Thandrampet was higher than any other block. In this block, the shifting to the other workers category from the cultivators as well as agricultural labourers was very high. Data need to be verified to validate this inference. In some of the blocks, the share of agricultural labourers in total main workers had increased during 1991-2001.

2.1.3 Registration and Placement in Employment Exchange

Educated unemployed persons are on the increase in the district, partly due to the education system for not adequately catering to the actual demand in the job market and partly due to lack of opportunities. This can be seen from the table below; considerable candidates had registered in the five employment exchanges in the district. Males out number females by a large margin as the inequality in higher education can be expected to reflect here. Social group wise analysis shows that while SC social group's share was closer to that of its share in population, ST social groups share was very poor (just 1 % against 3.33 %). Between the years 1998 and 2004, 5170 candidates were placed through the employment exchanges in various jobs.

Table 2.4: Details of Registration in Employment Exchange

Category	Male	Female	Total	Male	Female	Share in total
	No.			%		%
All	73566	41592	115158	63.9	36.1	100
SC	17511	9756	27567	63.5	36.5	24
ST	908	334	1242	73	27	1

Source: District Employment Office, Tiruvannamalai

The National Rural Employment Guarantee Scheme

The National Rural Employment Guarantee Act came into force on 2nd February of 2006. To operationalise the Act, The National Rural Employment Guarantee Scheme (NREGS) was launched in 200 districts throughout the nation. Tiruvannamalai is one of the six selected districts in Tamil Nadu for this scheme. The major objectives of NREGS are,

- To enhance livelihood security in rural areas
- To generate productive assets
- To protect the environment
- To empower rural women
- To reduce rural urban migration and
- To foster social equity

This Act guarantees at least 100 days of employment per year to the rural citizen. The person who wants to work must reside within the boundaries of Panchayat and should register his/her name in his panchayat to get the identity card. That person will receive a job card after verification from the panchayat within fifteen days. The beneficiary should be compulsorily provided the job, as otherwise he is eligible to receive unemployment compensation. The minimum wages for this programme is Rs.80/-. But according to efficiency and work the wages may be subjected to change.

As on 31st July, 2006 there were 225841 persons registered (more than 41% of total households) under this scheme. Among them 220116 had received job cards and about 13602 persons (8500 were women) were employed. A total sum of Rs 75.64 crore was allotted for 2006. The type of works taken up under this scheme include formation of new roads, digging new ponds and renovation of water bodies like ponds, kulam, kuttais, ooranies, canal, irrigation tanks, etc.

The Fact Finding Team of TN-FORCES identified the following problems, which need to be addressed by the implementers.

- **Disparity in wage rate between males and females in some areas**: Only 40 Rupees was paid as wage per day to the female workers in the Chengam block.
- **Late Payment of Wages**: In the Tiruvannamalai District, in two Village Panchayats where works had started, the payment of wages was not done within stipulated 15 days.
- **Lack of Transparency and Social Audit**: In the Tiruvannamalai District, the names of the registered people or those who had been issued job cards were not publicly shared or read out.
- Villagers were not aware of the full details of the NREGS. Job card holders also did not get employment as per the norms of the NREGS.
- Job cards were not issued to all the eligible persons.
- **Low payment of wage**: Only Rs. 70 is paid instead of Rs. 80 in some of the villages.
- Lack of Supervision during work in progress.
- Unemployment allowance was not paid generally.
- No Notice Board was available.

2.1.4 Child Labour

The survey results for incidence of child labour in the distinct of Tiruvannamalai during March 2003 show that there were 1436 child labours in this district within the age group of 5 to 14 years. The percentage share of child labour of this district to the state was 2.04 which was lower than the adjoining districts like Dharampuri (14.39%) and Salem (11.30%). The majority of the child labours belonged to the age group of 9-14 years. Household survey in 2005 indicated that there were 1275 child labour in the district with the majority of them hailing from the blocks Jawadhu Hills (410), Tiruvannamalai (166) and Chengam (108). Indus project, an exclusive project to address this serious social issue was initiated recently. This aims at bringing back the child labourers into the education system through Transition Education Centres (TEC). Under this project, 32 TECs were opened in the district.

Table 2.5: Incidence of Child Labour in Tiruvannamalai District

	5 to 8 years	9 to 14 years	Total	Percentage to State total
Tiruvannamalai	62	1374	1436	2.04
Tamil Nadu	7700	62644	70344	100.00

Source: Sarva Shiksha Abhiyan- Survey (in March 2003) (Commissioner of Labour)

2.2 Income

The table below indicates that the district Net Domestic Product at constant prices had grown at a lower rate than that of the state between 1993-94 and 2001-02. So its contribution to the state had marginally come down in the same period. Considering that the population and number of workers had grown approximately by 7 and 14 percent points respectively, it is cause for serious concern. The growth of per capita income is bound to be lower than that of the NDP as reflected in the Table 2.7. Further, it can be seen that the per capita income in the district of Tiruvannamalai was lower than that of the state by 58 per cent. Over the years, the gap between the district and the state in terms of per capita income, though fluctuating, had more or less above 50 per cent.

Table 2.6: Net Domestic Product at Constant (1993-94) Prices (Rs. in Lakhs)

Year	Tamil Nadu	Tiruvannamalai	
		Total	Share to State Net Domestic Product (%)
1993-94	5164329	124121	2.40
1994-95	5794317	139489	2.41
1995-96	5986121	138963	2.32
1996-97	6231570	145285	2.33
1997-98	6782225	172074	2.54
1998-99	7050517	170894	2.42
1999-2000	7476679	165876	2.22
2000-01	8058994	178038	2.21
2001-02	7937660	184144	2.32
Growth Rate	**5.43**	**4.64**	–

Source: Department of Economics and Statistics, Go TN

Table 2.7: Per-capita Net Domestic Product at Constant (1993-94) Prices (in Rs.)

Year	Tiruvannamalai	Tamil Nadu
1993-94	5885	8955
1994-95	6537	9932
1995-96	6441	10147
1996-97	6662	10451
1997-98	7811	11260
1998-99	7682	11592
1999-2000	7389	12181
2000-01	7862	13017
2001-02	8067	12717
Growth rate	**3.66**	**4.45**

Source: Department of Economics and Statistics, GoTN

As more than 70 per cent of work force depends on agriculture, analyzing the changes in wage over years would help in understanding the income situation of major section of families. The comparison is made with neighbouring districts like Vellore, Dharmapuri and Salem as they are more comparable with Tiruvannamalai than other districts. Comparison with Coimbatore is made as it is considered to indicate potential which the district can aim for. For transplanting and weeding, only women labour is considered. Among the various types of agricultural activities, the district had kept pace with the neighbouring districts in the case of reaping/harvesting and other agricultural works. But regarding the predominant agricultural activities namely ploughing, sowing, plucking seedlings, transplanting and weeding, the district was far behind than other neighbouring districts. The difference was very high with respect to the Coimbatore district. But even with the neighbouring districts the difference is quite considerable. Poor growth of wages indicates inadequate productivity, stagnation or decline in production, inadequate alternative employment opportunities and inadequate mobility of labour. This inference goes well with the findings of analysis of employment situation in the district.

Table 2.8: Percentage Increase of Wages for Different Categories in 2000-01 Over the base year (1993-94)

District	Plough-men	Sowers & Pluckers of Seedlings		Transplanters & Weeders	Reapers & Harvesters		Other Agricultural Labourers	
		Men	Women	Women	Men	Women	Men	Women
Change in wages								
Base Period Wages	21.51	21.62	14.06	13.29	25.55	17.53	26.61	15.03
Tiruvannamalai	56.05	46.5	25.05	23.85	67.22	42.31	71.85	39.06
Percentage change in wages								
Tiruvannamalai	261	215	178	179	263	241	270	260
Vellore	338	214	203	185	208	199	201	185
Dharmapuri	458	253	225	232	211	188	243	210
Salem	558	278	255	267	263	241	270	260
Coimbatore	684	316	277	282	280	229	258	240

Source: (1) Annual Statistical Abstract of TN 2000-2001 (pages 166-167) (DoES) (2) Qtly. Stats. Abstract; (3) Monthly Reports of DoES on TN Economy

Consumption expenditure is highly related to income and in many cases it is a better indicator than income to understand the well being of the population. As it is known that averages like per capita income will not show the inequality within the district, population falling under various levels of monthly per capita expenditure is analyzed below.

Table 2.9: Monthly per Capita Expenditure (1993-1994)

Monthly Per Capita Expenditure	Rural		Urban		Combined	
	Tiruvannamalai	Tamil Nadu	Tiruvannamalai	Tamil Nadu	Tiruvannamalai	Tamil Nadu
0 to 300	87.04	70.82	53.36	39.43	84.03	61.76
300 to 500	9.18	22.62	39.94	35.58	11.93	26.36
500 to 800	2.07	4.83	6.68	17.13	2.48	8.38
800 to 1000	0.31	0.85	0.00	3.49	0.28	1.61
1000 to 2000	0.18	0.65	0.02	3.95	0.17	1.60
2000+	1.21	0.24	0.00	0.42	1.11	0.30
Total	100.00	100.00	100.00	100.00	100.00	100.00
Gini Index		27	33.1	31.7	32.17	28.32

Source: NSS data from DoES / TNHDR (for 1993-94) & NSSO/ DoES data on Consumption Exp. in slabs of Rs. 50(for 1993-94 & 1999-2000)

It is found that inequality in Tiruvannamalai was much more than that of Tamil Nadu. This was the case both in rural and urban areas, particularly so in urban areas. The Gini Index also reflects the same. So, low per capita income along with higher levels of inequality indicates that poverty would be higher in this district and so the negative consequences on human development.

The table on sector-wise contribution to total NDP at the constant prices reveals that the tertiary sector has become the primary vehicle of growth for the district from 1995-96 onwards. By 2002-03 more than half of the income of the district was from tertiary sector. But the contribution of primary sector to the total Net Domestic Product had decreased between 1993-94 and 2002-03 in the district as well as in Tamil Nadu. But the decline had been very drastic (23.71%) in the district when compared to that of the state (11.49). It is a surprising fact that though the inhabitants of the district see Tiruvannamalai as a district depending predominantly on agriculture, it is not so in terms of income. It was observed earlier that by 2001 more than 70 per cent of the workers were engaged in agriculture either as cultivator or agricultural labourer in the district. This in combination with drastic decline in the share of primary sector to district NDP indicates that the per capita income of the more than 70 percent of the work force had come down either absolutely (at constant prices) or both absolutely and relatively when compared their counterpart in other sectors. This would have serious consequences on poverty and the well being of the families depending on them and on human development. Reasons for this phenomenon need to be explored in depth to bring about policy changes and design interventions. Urgent and large-scale measures with necessary policy changes are needed to address this serious issue.

The contribution of the secondary sector had increased by 6.55 percent in the district in the same period while that of the state had declined by 2.35 per cent. The contribution of tertiary sector to the NDP had increased over the years both in the district and in the state and they were more or less on par in this respect. Detailed analysis is needed to understand which are the entities involved in this

sector and who are the beneficiaries of this growth. It is also to be explored that how much religious tourism in and around Tiruvannamalai town contributes for that. Then we can understand whether the whole district is benefited from this growth or it is restricted to only few pockets. In another way, it can be explored how this growth engine can be made to benefit a wider section of the population.

Table 2.10: Sector-wise Contribution to Total Net Domestic Product at 93-94 Prices (in %)

Year	Primary		Secondary		Tertiary	
	Tiruvannamalai	Tamil Nadu	Tiruvannamalai	Tamil Nadu	Tiruvannamalai	Tamil Nadu
1993-94	43.67	26.24	17.86	32.16	38.47	41.60
1994-95	41.19	26.10	19.51	32.73	39.30	41.17
1995-96	36.26	21.90	21.94	34.85	41.80	43.25
1996-97	35.28	20.81	20.49	33.24	44.23	45.95
1997-98	39.39	20.82	18.32	31.14	42.29	48.04
1998-99	35.59	21.89	18.85	29.19	45.54	48.92
1999-2000	27.35	19.52	22.26	30.69	50.39	49.79
2000-01	27.26	18.96	21.96	30.83	50.79	50.21
2001-02	31.46	19.57	18.61	27.68	49.93	52.75
2002-03	19.96	14.75	23.31	29.81	56.73	55.44

Source: DoES, Tamil Nadu

2.3 Poverty

District-wise poverty estimates show that the percentage of population living below poverty line (BPL) had decreased in the period between 1993-94 and 1999-2000. The decline in poverty percentage was sharper in the urban areas than that of rural areas and the gap between both of them got narrowed from 8.24 to 1.16 per cent. The percentage of BPL population in this district was nearly double than that of the state and the gap between state and the district had widened from 10.49 to 17.26 per cent in the same period. The difference between state and the district is wider in the urban areas than in the rural areas. The general notion that rural areas are poorer than urban areas since urban areas are characterized by more earning opportunities is not the case as for as Tiruvannamalai is concerned. Tiruvannamalai had fallen from 17th rank to 19th in the state in the same period indicating that it had performed relatively poor than other districts.

Table 2.11: District-wise Poverty Estimates (BPL Population)

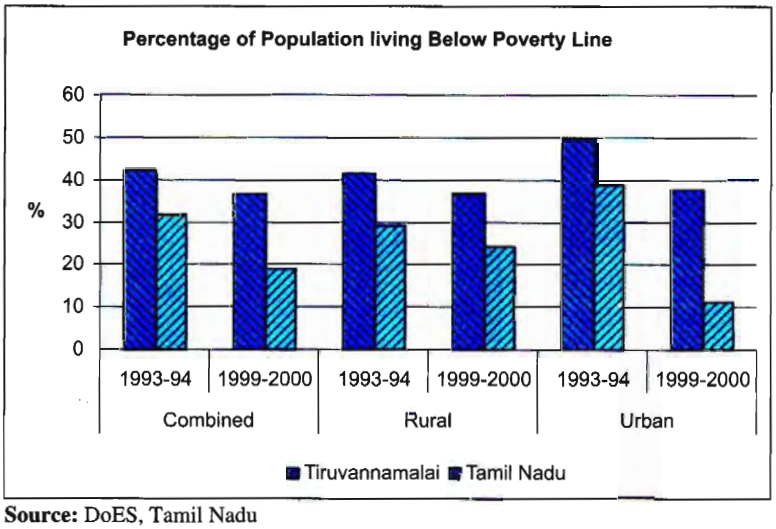
Dist./State	Combined		Rural		Urban	
	1993-94	1999-2000	1993-94	1999-2000	1993-94	1999-2000
Tiruvannamalai						
No.	823634	775313	736936	706700	86698	68613
Per cent	42.15	36.44	41.41	36.34	49.68	37.5
Tamil Nadu						
No.	17052134	11334388	11200960	6855171	5851174	4479217
Per cent	31.66	19.18	28.93	24.3	38.63	11.3

Source: DoES, Tamil Nadu

There were 145463 families living Below Poverty Line (BPL) in the district of Tiruvannamalai in the year of 1999. The largest number of BPL families lived in the block of Tiruvannamalai (14517)

followed by Polur (10362) and Chengam (10014). It is further observed from the table that maximum percentage of SC BPL families to total BPL families is observed in the block of Chengam (40.14%) followed by Arni (39.48%). Except these two blocks, the other blocks showing more than 30% SC BPL families to total BPL families are Thurinjapuram, Kalasapakkam, Pudupalayam, Thandrampet, Cheyyar, Anakkavur, Vembakkam, Thellar and Pernamallur. The share of SC BPL families to the total BPL families in the district (30 %) is more than that of their share in the population (21.39 %).

Fig. 2.1



Source: DoES, Tamil Nadu

The share of ST BPL families to the total BPL families in the district was 6.02 per cent which was much higher than that of ST population to total population in 2001 (3.33%). As expected, the maximum share of ST BPL families was observed in the block of Jawadhu Hills (95.55%).

Table 2.12: Number of BPL Families and Share of SC/ST in the Blocks of Tiruvannamalai, 1999

Sl. No.	Blocks	Total	Share (%)		
			SC	ST	Others
1	Tiruvannamalai	**14517**	28.22	6.32	65.45
2	Kilpennathur	**8022**	29.52	5.56	64.92
3	Thurinjapuram	**7383**	31.04	2.64	66.31
4	Polur	**10362**	24.35	0.93	74.72
5	Kalasapakkam	**8795**	37.62	1.96	60.42
6	Chetpet	**8287**	17.14	0.59	82.27
7	Chengam	**10014**	40.14	3.85	56.00
8	Pudupalayam	**5991**	37.51	3.37	59.12
9	Thandrampet	**9494**	32.05	8.37	59.57
10	Jawadhu Hills	**3958**	1.82	95.55	2.63
11	Cheyyar	**7479**	35.71	5.16	59.13
12	Anakkavur	**5668**	34.07	3.55	62.39
13	Vembakkam	**7527**	30.70	0.93	68.37
14	Vandavasi	**7878**	32.85	5.98	61.17
15	Thellar	**8400**	32.20	4.88	62.92
16	Pernamallur	**7186**	26.70	2.18	71.11
17	Arni	**7318**	39.48	0.00	60.52
18	West Arni	**7184**	22.19	0.39	77.42
	Total	**145463**	**30.25**	**6.02**	**63.73**

Source: District Rural Development Agency, Tiruvannamalai, Form-10 District Abstract, As per G.O.No.78 RD (IRDP - I) Dept. Dated: 21.04.99

A simple analysis was made using the data on BPL families and population with the assumptions that the family size was uniform across the blocks and there was linear growth in population. It indicated that the bottom five blocks in Tiruvannamalai district in terms of level of poverty were Jawadhu Hills, Thellar, Chetpet, Kalasapakkam and Pernamallur in the order of declining incidence of poverty. This result does not match the conventional understanding that blocks having a higher proportion of SC families are the blocks with high incidence of poverty. Chetpet is a case in point. The analysis based on the share of SC population in the total population and share of SC families in the total BPL families indicate the need for analysis at the level of sub-sections of SC social group rather than taking them as a unit. As for Jawadhu Hills, the presence of poor ST families is the primary reason for the high incidence of poverty in the whole block.

2.3.1 Growth and Poverty Reduction

In the earlier section on income, we discussed that the NDP of the state had grown annually by 5.43 per cent while that of the district had grown by 4.64 per cent between 1993-94 and 2001-02. But the poverty reduced by 12.48 per cent in the state when compared to 5.71 per cent in the district between 1993-94 and 1999-2000. When the difference in growth rate was only 1.17 percent, the difference in poverty reduction was 6.77 per cent. Even after accounting for the difference in the reference period, the difference between the state and district on this aspect is very significant. Within Tiruvannamalai while the poverty got reduced by 12.18 per cent in urban areas, in the rural areas, it was only 5.07 per cent. This raises the question of why growth is pro-poor in some region and why not in other regions. Various studies on economic development in India have indicated that difference in initial conditions of farm and non-farm economy accounts for this difference in poverty reduction (Ravallion and Datt, 2002). Non farm economic growth which was witnessed in the district was less effective in reducing poverty due to poorer initial conditions in terms of rural development (in both absolute terms and relative to urban areas), human resources and land distribution. The role played by literacy amongst the initial condition is particularly notable in relation to prospects of pro-poor growth.

***Vaazhndhu Kattuvom* Project**

The overall goal of this World Bank funded project is to reduce rural poverty with special focus on the poorest of the poor, through support for productive activities and investments, using the Community-driven Development (CDD) approach. This project builds on the earlier SHG-based schemes.

The specific objectives of the project are to improve the livelihoods and empower the rural poor (particularly women and other disadvantaged groups) through:

a. Developing and strengthening pro-poor local institutions/groups (including village panchayats);
b. Building skills and capacities of the poor; and
c. Financing productive demand-driven sub-project investments.

The key features of the project are

- Community-driven development approach to poverty alleviation
- Shift in focus from group formation to livelihoods
- Sustained technical support to SHGs (on skill development, marketing and technology)
- Higher investment per family – Rs.28,000 (Rs.14000/- from project and equal amount from bank linkage)
- Focuses primarily on poor women and disadvantaged sections like disabled, widows, destitute, etc. and
- Promote higher level economic activities and federations for sustainability.

The Vaazhndhu Kattuvom Project is going to be implemented in the four blocks of the district namely Chengam (44 villages), Jawadhu Hills (11 villages), Pudupalayam (37 villages) and Vandavasi (61 villages). The project has a target to cover 36910 persons from 78531 families in the district. The work has already been started in Pudupalayam.

2.4 Agriculture

It was observed earlier that the share of primary sector, which in the case of Tiruvannamalai means mainly agriculture and livestock rearing, had come down, but the workforce depending on the primary sector had remained more or less the same. Further, production growth had not kept pace with that of the population growth. This has two kinds of implications, one regarding decline in income of the people depending on agriculture and the other is decline in food security. These two issues have serious ramifications like increased migration and malnutrition; they in turn can have serious consequences on human development. So it calls for detailed analysis of agriculture to understand the nature of the issues and chart a way forward.

2.4.1 Land Use

The trend analysis of land use indicates that there had been a wide fluctuation in the net area sown in the district and so in the current fallows. As ensuring cultivation is the primary step to increase income to the cultivators and agricultural labourers, specific reasons need to be found for the fluctuation in net sown area and necessary action to be taken to increase it to the potential level. The action plan of the agriculture department for the year 2005-06 rightly aimed at increasing net sown area. This has to be achieved particularly through reducing current fallows which in some years was alarmingly high. Increasing need of land for non agricultural use for various development purposes need to be kept in mind while designing interventions for increasing the net sown area.

Table 2.13: Land Use Statistics in Tiruvannamalai District

Sl. No.	Item	1990-91	2002-03	2003-04	2004-05
1	Total Geographical Area	631205	631205	631205	631205
2	Forest	153318	153318	153318	153318
3	Barren and Uncultivable land	21813	22179	21179	21179
4	Land put to non agricultural use	89800	94072	103518	103659
5	Cultivable Waste	13375	15145	15458	15458
6	Permanent Pastures and other grazing lands	3361	3759	4022	4022
7	Land under groves and miscellaneous tree crops	9137	7930	8237	8237
8	Current fallows	107035	151769	72872	54979
9	Other than current fallows	30431	34541	34455	34455
10	Net Area Sown	202935	148492	218146	235903
11	Area Sown more than once		37290	41451	53472
12	Gross Area Sown		185782	259597	289375

Source: Census, 1991 for 1990-91 information & Action Plan for 2005-06 for 2002-03 information, Joint Director of Agriculture, Tiruvannamalai, District Statistical book, 2004-05

2.4.2 Land Holding Structure

In the district 74 per cent of the total farmers were marginal farmers cultivating only 35 percent of the total area. Small farmers accounted for another 14.67 percent and they owned 25 per cent of the total area. The next category which owned a sizable area of land was semi medium farmers. The district followed the same pattern as that of the state but the semi medium type of farmers were more in number and owned more proportion of land than that of the state. A lot depends on what happens in the lands of these three categories of farmers.

Table 2.14: Land Holding Structure under Different Size Classes

Size Classes	Share in total holdings		Share in total area operated		Average size of holding	
	TVM	Tamil Nadu	TVM	Tamil Nadu	TVM	Tamil Nadu
Marginal	74.02	**74.28**	34.98	**30.27**	0.38	**0.37**
Small	14.67	**15.4**	24.89	**23.57**	1.37	**1.4**
Semi Medium	10.03	**7.5**	30.94	**22.22**	2.49	**2.7**
Medium	1.21	**2.49**	8.16	**15.54**	5.44	**5.68**
Large	0.06	**0.33**	1.03	**8.41**	14.19	**23.37**
All Sizes	100	**100**	100	**100**	0.81	**0.91**

Source: Mission on Rainfed Agricultural Development in Tamil Nadu, Tamil Nadu Agricultural University, Coimbatore

TVM: Tiruvannamalai

2.4.1 Land Use

The trend analysis of land use indicates that there had been a wide fluctuation in the net area sown in the district and so in the current fallows. As ensuring cultivation is the primary step to increase income to the cultivators and agricultural labourers, specific reasons need to be found for the fluctuation in net sown area and necessary action to be taken to increase it to the potential level. The action plan of the agriculture department for the year 2005-06 rightly aimed at increasing net sown area. This has to be achieved particularly through reducing current fallows which in some years was alarmingly high. Increasing need of land for non agricultural use for various development purposes need to be kept in mind while designing interventions for increasing the net sown area.

Table 2.13: Land Use Statistics in Tiruvannamalai District

Sl. No.	Item	1990-91	2002-03	2003-04	2004-05
1	Total Geographical Area	631205	631205	631205	631205
2	Forest	153318	153318	153318	153318
3	Barren and Uncultivable land	21813	22179	21179	21179
4	Land put to non agricultural use	89800	94072	103518	103659
5	Cultivable Waste	13375	15145	15458	15458
6	Permanent Pastures and other grazing lands	3361	3759	4022	4022
7	Land under groves and miscellaneous tree crops	9137	7930	8237	8237
8	Current fallows	107035	151769	72872	54979
9	Other than current fallows	30431	34541	34455	34455
10	Net Area Sown	202935	148492	218146	235903
11	Area Sown more than once		37290	41451	53472
12	Gross Area Sown		185782	259597	289375

Source: Census, 1991 for 1990-91 information & Action Plan for 2005-06 for 2002-03 information, Joint Director of Agriculture, Tiruvannamalai, District Statistical book, 2004-05

2.4.2 Land Holding Structure

In the district 74 per cent of the total farmers were marginal farmers cultivating only 35 percent of the total area. Small farmers accounted for another 14.67 percent and they owned 25 per cent of the total area. The next category which owned a sizable area of land was semi medium farmers. The district followed the same pattern as that of the state but the semi medium type of farmers were more in number and owned more proportion of land than that of the state. A lot depends on what happens in the lands of these three categories of farmers.

Table 2.14: Land Holding Structure under Different Size Classes

Size Classes	Share in total holdings		Share in total area operated		Average size of holding	
	TVM	Tamil Nadu	TVM	Tamil Nadu	TVM	Tamil Nadu
Marginal	74.02	**74.28**	34.98	**30.27**	0.38	**0.37**
Small	14.67	**15.4**	24.89	**23.57**	1.37	**1.4**
Semi Medium	10.03	**7.5**	30.94	**22.22**	2.49	**2.7**
Medium	1.21	**2.49**	8.16	**15.54**	5.44	**5.68**
Large	0.06	**0.33**	1.03	**8.41**	14.19	**23.37**
All Sizes	100	**100**	100	**100**	0.81	**0.91**

Source: Mission on Rainfed Agricultural Development in Tamil Nadu, Tamil Nadu Agricultural University, Coimbatore

TVM: Tiruvannamalai

2.4.3 Irrigation Infrastructure

The average annual rainfall in the district is 1040 mm. Wells and tanks are the major source of irrigation except for some pockets irrigated by canal system. Number of electric pump sets per ha of NSA in the district of Tiruvannamalai was much better than that of the state. This was also reflected in the irrigation intensity and in cropping intensity. So this district is well endowed in terms of water availability and irrigation infrastructure. This means that major part of production can be stabilized if other factors are attended to. Then the major source of production instability is from rainfed cultivation. About 41 per cent of area fall under rainfed category in the district and considering the fact that the variation in rainfall is as high as 32.59 per cent, there is considerable variation in the production of rainfed crops.

Fig. 2.2

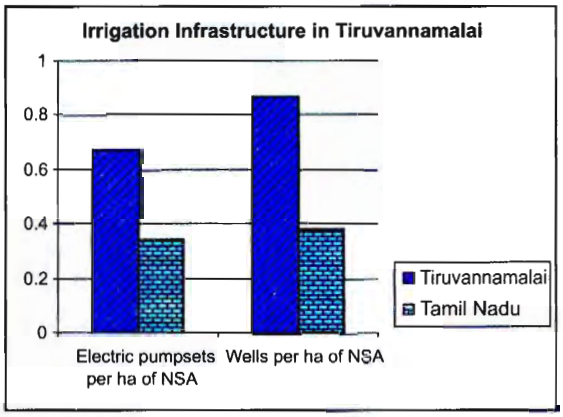
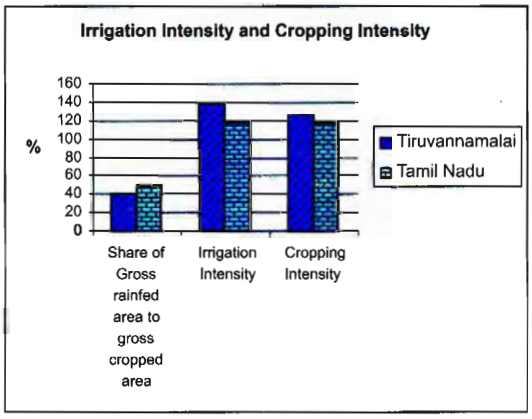


Fig. 2.3



Source: Mission on Rainfed Agricultural Development in Tamil Nadu, Tamil Nadu Agricultural University, Coimbatore. The data pertains to the period 2001-02 to 2003-04

2.4.4 Financial Infrastructure

Population served per bank branch in Tiruvannamalai district was nearly double to that of state indicating that there is need for more number of branches. Furthermore, it is observed that the per capita deposit as well as credit were very meager when compared to the state[1] . On the other hand, the district fared well in terms of percentage of rural bank branches to total branches and percentage of agricultural advance to total advance. Taking into account the wider presence of SHGs in rural areas and routing of bank loans through them, financial infrastructure can be taken as reaching closer to the desired level. As the irrigation and financial infrastructure are comparatively better, the reasons for poor performance of agriculture need to be found elsewhere.

[1] Though this comparison is slightly out of the mark because Tamil Nadu and Tiruvannamalai are very much different in terms of nature of banking operation. Banking operation in Tamil Nadu could be wider in nature in terms of ability of clients and portfolios. Tiruvannamalai is still predominantly a rural district and agriculture would be the major portfolio. Still the inference can be taken as valid to a large extent.

2.4.1 Land Use

The trend analysis of land use indicates that there had been a wide fluctuation in the net area sown in the district and so in the current fallows. As ensuring cultivation is the primary step to increase income to the cultivators and agricultural labourers, specific reasons need to be found for the fluctuation in net sown area and necessary action to be taken to increase it to the potential level. The action plan of the agriculture department for the year 2005-06 rightly aimed at increasing net sown area. This has to be achieved particularly through reducing current fallows which in some years was alarmingly high. Increasing need of land for non agricultural use for various development purposes need to be kept in mind while designing interventions for increasing the net sown area.

Table 2.13: Land Use Statistics in Tiruvannamalai District

Sl. No.	Item	1990-91	2002-03	2003-04	2004-05
1	Total Geographical Area	631205	631205	631205	631205
2	Forest	153318	153318	153318	153318
3	Barren and Uncultivable land	21813	22179	21179	21179
4	Land put to non agricultural use	89800	94072	103518	103659
5	Cultivable Waste	13375	15145	15458	15458
6	Permanent Pastures and other grazing lands	3361	3759	4022	4022
7	Land under groves and miscellaneous tree crops	9137	7930	8237	8237
8	Current fallows	107035	151769	72872	54979
9	Other than current fallows	30431	34541	34455	34455
10	Net Area Sown	202935	148492	218146	235903
11	Area Sown more than once		37290	41451	53472
12	Gross Area Sown		185782	259597	289375

Source: Census, 1991 for 1990-91 information & Action Plan for 2005-06 for 2002-03 information, Joint Director of Agriculture, Tiruvannamalai, District Statistical book, 2004-05

2.4.2 Land Holding Structure

In the district 74 per cent of the total farmers were marginal farmers cultivating only 35 percent of the total area. Small farmers accounted for another 14.67 percent and they owned 25 per cent of the total area. The next category which owned a sizable area of land was semi medium farmers. The district followed the same pattern as that of the state but the semi medium type of farmers were more in number and owned more proportion of land than that of the state. A lot depends on what happens in the lands of these three categories of farmers.

Table 2.14: Land Holding Structure under Different Size Classes

Size Classes	Share in total holdings		Share in total area operated		Average size of holding	
	TVM	Tamil Nadu	TVM	Tamil Nadu	TVM	Tamil Nadu
Marginal	74.02	**74.28**	34.98	**30.27**	0.38	**0.37**
Small	14.67	**15.4**	24.89	**23.57**	1.37	**1.4**
Semi Medium	10.03	**7.5**	30.94	**22.22**	2.49	**2.7**
Medium	1.21	**2.49**	8.16	**15.54**	5.44	**5.68**
Large	0.06	**0.33**	1.03	**8.41**	14.19	**23.37**
All Sizes	100	**100**	100	**100**	0.81	**0.91**

Source: Mission on Rainfed Agricultural Development in Tamil Nadu, Tamil Nadu Agricultural University, Coimbatore

TVM: Tiruvannamalai

Table 2.15: Indicators of Banking Development in Tiruvannamalai District

Items	Tiruvannamalai	Tamil Nadu
Population served per bank office	22537	13119
Per capita deposits (Rs.)	3536	243119
Per capita credit (Rs.)	2049	142754
Percentage of rural bank branches to total branches	60.2	36.48
Agriculture advance (Rs. Crores)	240.19	9932.5
Percentage of Agricultural advance to total advance	53.85	11.87

Source: Mission on Rainfed Agricultural Development in Tamil Nadu, Tamil Nadu Agricultural University, Coimbatore

2.4.5 Trend in cultivation of major crops

This district had witnessed a very significant increase in the productivity of major crops in the 60s. 70s and 80s as depicted in the Table 2.16 on yield trend, as it was the cradle of green revolution in Tamil Nadu. But this Table 2.16 also indicates that there has been a stagnation in yield from 90's onwards. Analysis of changes in crop production in the last 10 years reveals that production of paddy, pulses and sugarcane had been declining rapidly. In the case of paddy, it was due to not maintaining the sharp rise in area and production between 1995-96 and 1998-99 and steep fall in area cultivated till 2004-05 with the exception being 2001-02. In the case of pulses, it was due to the sharp decline in the area cultivated from 1995-96 onwards. In the case of sugarcane it was due to sharp fall in the area after 2001-02. For rest of the three categories of crops viz. millets, oilseeds and cotton, no particular trend was observed. The coefficient of variation (CV) analysis indicates that all the crops except oilseeds had witnessed instability in terms of production during recent time. Cotton had experienced higher variability than other crops. From the interaction with officials it was found that the trend towards diversifying from agriculture to horticulture in terms tree crops, vegetables, flower crops and herbal crops was also not very much visible in the district except in few pockets.

Fig. 2.4

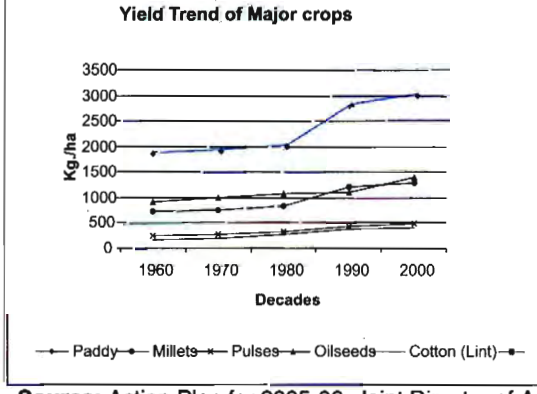
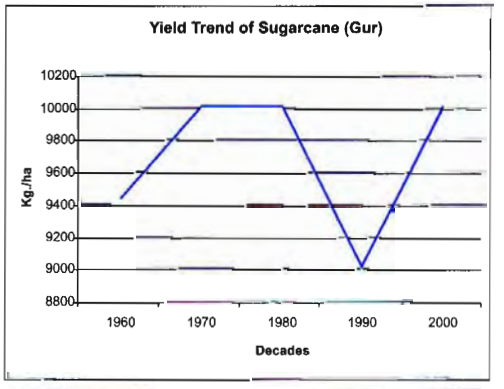


Fig. 2.5



Source: Action Plan for 2005-06, Joint Director of Agriculture, Tiruvannamalai

Table 2.16: Production of Major Crops in Tiruvannamalai District, 1995-96 to 2003-04

Crop	Growth Rate	Average (L. MT.)	CV (%)	Comment
Paddy	-11.39	2.94	41.21	Declining significantly
Millets	No Trend	0.32	46.01	No Change
Pulses	-13.34	0.17	53.34	Declining significantly, Variable
Oilseeds	No Trend	1.64	26.53	Stable than others
Cotton	No Trend	0.03	199.84	Highly Variable
Sugarcane	-19.62	1.96	56.71	Declining significantly, Variable

Source: Action Plan for 2005-06, Joint Director of Agriculture, Tiruvannamalai
CV Coefficient of Variation LMT Lakh Metric Tonne

From the yield gap table, it is observed that yield gaps are present with most of the crops grown in this district. The highest gap in yield is observed in case of Cumbu (32.50%) followed by paddy, black gram, green gram and groundnut each of them having more than 23 per cent yield gap. So there is a lot of scope for increasing production from the existing area itself.

Table 2.17: Yield Gap of Major Crops in the District of Tiruvannamalai

Sl. No	Crop	Potential Yield (Kg/ha.)	Average Yield (Kg/ha.)	Yield Gap (Kg/ha.)	Yield Gap (%)
1	**Paddy**	4200	3200	1000	23.81
2	**Millets**				
	Cholam	900	700	200	22.22
	Cumbu	2000	1350	650	32.50
	Ragi	1700	1600	100	5.88
	Thenai	450	400	50	11.11
	Varagu	950	900	50	5.26
	Samai	1170	1160	10	0.85
	Maize & Other Millets	2000	1700	300	15.00
3	**Pulses**				
	Blackgram	650	500	150	23.08
	Greengram	650	500	150	23.08
	Redgram	750	600	150	20.00
	Horsegram	425	400	25	5.88
	Cowpea	275	250	25	9.09
	Mochai & Other Pulses	270	250	20	7.41
4	**Oilseeds**				
	Groundnut	1950	1500	450	23.08
	Gingelly	750	677	73	9.73
	Sunflower	1400	1300	100	7.14
5	**Cotton (Lint)**	500	400	100	20.00
6	**Sugarcane (Gur)**	11000	10000	1000	9.09

Source: Action Plan for 2005-06, Joint Director of Agriculture, Tiruvannamalai

2.4.6 Block-wise Analysis on Agriculture

Block-wise analysis of land use indicates that current fallow was very high in 2003-04 in Vandavasi, Polur, Pernamallur, West Arni, Kalasapakkam, Thellar and Thurinjapuram. Other fallow land proportion was significantly high in Chetpet, Kalasapakkam and Polur. If these lands were brought to cultivation by tackling the factors resulting in fallow, then the production can be significantly improved. Besides this, increasing fallow land is an indicator of reduction in interest in agriculture and also faith in it as a viable livelihood. So there is a need for interventions that ensure income security of farmers.

Table 2.18: Block-wise Agriculture Details in Tiruvannamalai District, 2003-04

Blocks	Current fallows	Other fallow lands	Share of irrigated area to Net Sown Area	Cropping Intensity
Anakkavur	15.69	6.29	50.73	145
Arni	5.43	7.46	63.85	123
Arni (West)	25.08	5.01	62.90	126
Chengam	1.20	4.64	NA	118
Chetpet	7.13	9.05	28.76	120
Cheyyar	4.76	8.90	52.82	116
Jawadhu Hills	3.25	1.09	28.88	154
Kalasapakkam	23.02	10.50	16.37	104
Kilpennathur	19.18	2.23	58.60	185
Polur	35.68	11.16	50.28	228
Pernamallur	25.91	6.16	26.15	113
Pudupalayam	13.75	0.62	80.89	103
Thandrampet	7.29	4.98	59.32	111
Thellar	22.60	2.72	46.57	111
Thurinjapuram	22.60	1.02	56.11	108
Tiruvannamalai	14.75	0.98	58.80	133
Vembakkam	11.99	8.71	65.91	123
Wandiwash	37.21	3.02	NA	117

Source: Block Statistical Handbook

As in some of the blocks like Jawadhu Hills and Pernamallur, there is a high proportion of rainfed areas. Special focus needs to be given to take specific interventions to improve the production in these areas.

It is observed from the Table 2.18 of cropping intensity of the blocks of Tiruvannamalai district that the block of Polur had the highest cropping intensity among all the blocks to the tune of 228 per cent. None of the block other than this block had crossed the 200 per cent cropping intensity in this district. The high cropping intensity in the block of Polur may be attributed to the flow of water received by this block from Jawadhu Hills. The next block with the second highest cropping intensity was Kilpennathur (185%). The other blocks showing higher value of cropping intensity were Anakkavur (145%) and Tiruvannamalai (133%). The lowest cropping intensity among the blocks was found in the block of Pudupalayam (103%) followed by Kalasapakkam (104%), Thurinjapuram (108%), Thandrampet (111%) and Thellar (111%). Given the irrigation water availability in the blocks of this district, if conscious efforts were taken to increase water use efficiency, cropping intensity can be considerably increased.

2.5 Summary and Conclusion

Work Participation Rate (WPR) increased from 45.64 to 48.71 per cent between 1991 and 2001 in the district. The increase in WPR was witnessed both in rural and urban areas. This is significant because there was a slight decline in the WPR between 1981 and 1991. But the increase in total workers between 1991 and 2001 was mainly due to the phenomenal increase in marginal workers category. In fact, the number of main workers had come down by 52490 and this was particularly so in rural areas. The WPR in rural areas was significantly more than that of urban areas in 2001. WPR of males was

more than that of females. The percentage shares of agricultural labourers as well as cultivators to total workers was more than 70 per cent in 2001 indicating that agriculture still remained as the prime livelihood in the district.

The district Net Domestic Product at constant prices had grown at a lower rate than that of the state between 1993-94 and 2001-02. Further, the per capita income in the district of Tiruvannamalai was lower than that of the state by 58 per cent. Inequality in Tiruvannamalai district was much more than that of Tamil Nadu.

Sector-wise contribution to total NDP at the constant prices revealed that the tertiary sector has become the primary vehicle of growth for the district from 1995-96 onwards. By 2002-03 more than half of the income of the district was from the tertiary sector. But the contribution of primary sector to the total Net Domestic Product had decreased between 1993-94 and 2002-03 in the district as well as in Tamil Nadu. But the decline had been very drastic (23.71%) in the district when compared to that of the state (11.49%). The contribution of the secondary sector had increased by 6.55 percent in the district in the same period while that of the state had declined by 2.35 per cent.

District-wise poverty estimates show that the percentage of population living below poverty line (BPL) had decreased in the period between 1993-94 and 1999-2000. The percentage of BPL population in this district was nearly double than that of the state and the gap between state and the district had widened from 10.49 to 17.26 per cent in the same period. The share of ST BPL families to the total BPL families in the district was more than that of its share in total population. The maximum share of ST BPL families was observed in the block of Jawadhu Hills (95.55%).

The major issues faced by the district pertaining to employment, income and poverty situation are;

- Stagnation in employment in the main workers category
- Casualisation of work force particularly female work force
- High level of underemployment as more than 70 per cent work force was involved in agriculture
- Presence of child labour in the work force
- Lower annual growth of Net Domestic Product (NDP) when compared to the state
- Higher level of inequality in consumption relative to that of the state
- Drastic decline in share of primary sector to district NDP without significant decline in work force depending on primary sector
- Lower growth of wages pertaining to major agricultural activities when compared to neighbouring districts
- Lower level of poverty reduction when compared to the state
- Lower level of poverty reduction in rural areas as compared to urban areas
- High incidence of poverty in most parts of the district

The rate of poverty reduction had worsened particularly between 1991 and 2001 when compared to the earlier decade.

Most of the issues mentioned above are systemic in nature and so require systemic corrections. Recent introduction of National Employment Guarantee Scheme in the district is a step in the right direction. But it is not a complete solution. Broadly the solution lies in regenerating the rural economy through large-scale improvements in farm and non-farm livelihoods. Specific thrust should be given on the following:

- Reversing the declining trend in agriculture and make it a vehicle for growth[2].
- Building on the success story on dairy and extend the same to sheep and goats rearing.
- Integrating the rural markets in the district with booming urban markets in a systematic way through creating necessary infrastructure.
- Targeted livelihood enhancement measures for the poor and vulnerable communities in the various parts of the district. The *Vaazhndhu Kattuvom* Scheme is a step in the right direction.
- Significant enhancement of the human resources and transport and communication infrastructure particularly in the rural areas.
- Making the fast growing tertiary sector more pro-poor
- Increasing the dynamism of secondary sector through initiatives like modernizing handlooms in Arni.

Further analysis at the block level is needed to understand specific regional causes for the above mentioned issues. From the policy angle, there is a need for understanding which policy cause these issues and which counter them. Consequence of these above mentioned issues on various dimensions of human development also need to be analyzed and documented. There is a need for putting in place a monitoring system at the district level to monitor changes in WPR, income and poverty situation at micro level, particularly with reference to various social groups, age group and gender. An exclusive study on tertiary sector in the district is to be taken up to understand the reasons for its remarkable growth and to explore ways for making it pro-poor.

A large section of population depends on agriculture for their livelihood in the district. The share of marginal and small farmers in the district is around 90 per cent and their share in the area cultivated is around 54 per cent. Tanks and wells were the primary sources of irrigation. Though depletion of the ground water is at an alarming level in some parts, the district is in a relatively better position regarding ground water than many other districts. The area under irrigation is increasing very slowly. Around 41 per cent of the gross cropped area is cultivated with rained crops. Cheyyar river is one of the important irrigation sources in the northern part of the district. The performance in agriculture of the northern part of the district is better than the southern part because of better rainfall and irrigation availability. Major crops in the district are paddy, groundnut, millets, pulses and sugarcane. Few new

[2] Detailed analysis and suggestions on agriculture is attempted in the following section.

initiatives were also taken up in this district. Contact Farming has been introduced in this district particularly for two crops, Coleus and Jatropha, but on a small scale (1000 acres each). Drip irrigation, Systemic Rice Intensification (SRI) and pit method of sugarcane cultivation has been introduced among the farmers. This district is known as the "rice exporting and paddy importing one" since a large number of rice mills is situated here.

But the overall picture is one of stagnation and decline. The net area sown has fluctuated very much with the current fallow increasing over time. The production of most of the major crops in the district had declined in the last 10 years particularly due to decline in area. Yield has stabilized and the improvement in the last 10 years had been very marginal. This is the case in spite of very large yield gaps. Cotton production had been fluctuating very much. The decline in area under crops does not seem to be replaced with horticultural crops like trees, vegetables or flower crops. The variation in production of rainfed crops was very high due to vagaries of monsoon. Farmers often get non-remunerative prices for their produce. There has been large scale migration of male workforce to nearby large cities.

The main reasons for such a situation were,

- Inadequate application of technologies
- Inadequate availability of good quality seeds and seeds of new varieties
- High variation in rainfall pattern
- Inadequate water use efficiency and inadequate adoption of technologies for the same
- Poor maintenance of irrigation tanks
- Irrational use of chemical inputs
- Inadequately capitalizing the marketing opportunities in the nearby Chennai and Bangalore
- Inadequate infrastructure and institutional mechanisms for capitalizing the marketing opportunities.

There is an urgent need for a shift away from **'crop focus'** to **'livelihood focus'** by all the actors involved in promoting agriculture in the district. Farming system approach needs to be followed. The twin focus should be **ensuring food security and income security**, in an ecological way. Again to ensure food security for the cultivators, the main focus needs to be on self provision through own cultivation, as it only ensures healthy food. Under the farming system approach, the district needs to be divided into various typologies based on soil, climate and irrigation availability and existing viable farming systems practiced by the successful farmers in each typology need to be understood. Based on the inputs from university and relevant bodies other viable livelihood options have to be found for each typology. All the actors need to focus on taking these two kinds of viable farming system options to a large scale through various institutional arrangements. Within the farming system framework the major focus need to be on the following.

- Optimal use of land resources. For this, computerization of land records and making land transactions transparent need to be taken up on an urgent basis.
- Optimal use of water resources to double the water use efficiency. Renovation of irrigation tanks to be given priority.
- Exclusive focus and implementation set up for promoting various interventions in dryland farming instead of clubbing it as one of the hundreds of activities.
- Diversification into livestock rearing and horticulture. Livestock rearing is very much promising if the past success of dairy in the district and assured and regular remuneration from livestock rearing are considered.
- Growing for the market. Identifying and bringing in crops like maize which has the advantages of large-scale market demand, assured remuneration and ecologically better in terms of low water requirement. For this institutional mechanisms like contract farming can be facilitated with necessary regulation.
- Creation of marketing infrastructure for capitalizing marketing opportunities like warehouses and cool chambers, wherever possible through public-private participation (PPP). Direct marketing with grading and standardization need to be given focus. The existing marketing infrastructure like regulated markets needs to be made functional to achieve their purpose.
- Establishing efficient and practical insurance mechanism particularly for rainfed crops, if possible through PPP.
- Following group approach rather than individual farmer approach.
- Establishing price support mechanism not only for paddy but also other crops like pulses and oilseeds.
- Creation of infrastructure for weather forecasting.

The current mode of segmented implementation of various activities through various departments is in principle only, and practice does not go well with the farming system approach. For operationalising farming system approach with focus on the above areas, the implementation set up need to be broadly restructured to ensure integrated, one stop service delivery and support to the farmers. The current Project Implementation Agency (PIA) model practiced for watershed projects like Restructured NWDPRA hold promise to achieve this. The specialized discipline-wise support can be given through the PIAs by various relevant bodies.

Chapter III

Demography, Health, Nutrition and Sanitation

WHO has defined health 'as a state of complete physical, mental and social well being and not merely the absence of disease and infirmity' Life expectancy is the indicator used for calculating HDI, as it is expected to capture the overall health status of the population. But life expectancy is an outcome of nutrition, health, sanitation and availability of basic services like drinking water facilities. In health, particularly fertility, morbidity and mortality aspects have a great influence on life expectancy. Further fertility, morbidity and mortality have a significant influence on the demographic trends of the population and they in turn can influence human development. Nutrition, health, sanitation and availability of basic services depend largely on the social development in terms of literacy and awareness and provision of services by public and private entities and to an extent on thrust given by the Government through various programmes.

This chapter documents the demographic, health and nutrition status of Tiruvannamalai district. It analyses the trends in demographic, health and nutritional indicators in the district, the effectiveness of government policies and programs and role that social norms and culture play in influencing health outcomes. The district is compared with state to know its relative status. The district is compared with the adjacent districts Vellore and Dharmapuri and also with Kanniyakumari wherever needed. Tiruvannamalai was separated from Vellore in 1989 and so there is more possibility of each district achieving what the other has achieved. So comparison with Vellore would help in better understanding of relative status of Tiruvannamalai. Dharmapuri again being an adjacent district offers a similar comparison. Kanniyakumari being a model district in terms of social development with a per capita income closer to that of Tiruvannamalai serves as the bench mark for the district in terms of potential level of human development it should aim for. The data from Census of India, Vital Event Survey and concerned departments have been extensively relied upon for analysis. While analyzing, it was found that there were considerable data constraints. The Tiruvannamalai district is divided into two Health Unit Districts (HUD) and one HUD is using calendar year and another is using financial year for data consolidation. So the data from two HUD's could not be consolidated. Further the data from two HUD's are presented mostly as absolute numbers but not as percentages which made it difficult to compare.

3.1 Demographic Trends and Health Indicators

Demographic trends indicate broader changes that are happening in the population characteristics, which have either positive or negative influence over human development. For example, the phase of demographic transition witnessed in the district indicates on the one hand the challenges to be met for ensuring human development and on the other hand, the general well being of the population. That way, it has both input and outcome implications. Sex ratio is another such case. This section focuses on those demographic indicators which have significant influence on human development and on their relationship with health indicators.

3.2 Population and Demographic Transition

3.2.1 Growth of population

An analysis of the decennial growth of population in the district from 1971 to 2001 shows that total population grew much slower than the state. The difference in growth rate between state and the district has widened over time and it was very sharp between 1991 and 2001. In fact the population growth rate of the district (7.01%) between 1991 and 2001 was lower than that of Kerala (9.42 %), which is considered to be one of the model regions even among the South Asian countries. Further exploration is necessary to understand the reasons for this phenomenon as Tiruvannamalai can not be compared with Kerala in terms of education and social awareness. The female population has grown at a marginally higher rate than that of males indicating an environment favoring females.

The share of SC population has declined marginally between 1991 and 2001and it was 21.39 percent in 2001. The ST population has grown at more than double the growth rate of overall district population. As it is generally considered that high growth rate of population is due to lack of awareness and education and economic backwardness, ST households can be said to be in that stage. Even then their share in the total population has increased only by 0.29 percent due to their low share in the total population.

It was also observed that while urban population has grown at a very high rate, the rural population has declined. This was due to conversion of many rural areas into urban ones in the district. This indicates that the urbanization trend has set in the district. The density of the population in the district remained much lower than that of the state and most of the other districts.

Table 3.1: Decadal Changes in Population

Details	Tiruvannamalai			Tamil Nadu
	1971 to 1981	1981 to 1991	1991 to 2001	1991 to 2001
Population	17.15	14.4	7.01	11.72
Male			6.39	10.96
Female			7.64	12.5
SC			6.65	10.69
ST			17.23	13.43
Rural			-0.82	-5.06
Urban			66.78	44.06

Source: Census of India

Table 3.2: Demographic Profile of Tiruvannamalai

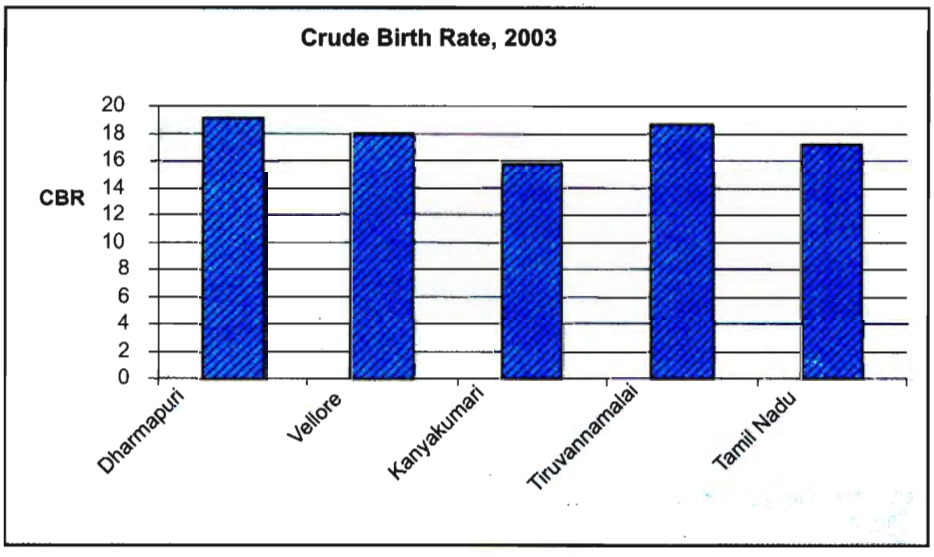
Details	Tiruvannamalai		Tamil Nadu	
	1991	2001	1991	2001
Population	2042979	2186125	55858955	62405679
Share of SC	21.46	21.39	19.18	23.79
Share of ST	3.04	3.33	1.03	1.04
Density of population	330	353	429	480

Source: Census of India

3.2.2 Crude Birth Rate

The CBR in the district has declined higher than that of the state. Between 1998 and 2003, the district CBR declined from 19.9 to 18.6 (a decline of nearly 6.5%) while for the state it declined from 19.2 to 17.8 (7.3 %). Rural-urban difference in CBR in 1998 was 1.8 for the district and it was 2.9 for the state. Male female difference in CBR was 1 in the district in 1998 and it was 0.9 for the state. The CBR of Tiruvannamalai was lower than that of Dharmapuri district but marginally higher than that of Vellore district and significantly higher than that of Kanniyakumari district. CBR estimated for the district from 2001 census by Gulmoto and Rajan (2002) was lower than the estimates from Vital Event Survey. Estimation of CBR from census 2001 indicated that CBR of Tiruvannamalai (17.7) was marginally higher than that of the state (17.2). As per both the estimates, the district has surpassed goal for 2000 (21) set by National Health Policy. Sustained efforts are needed to reach the goal for 2007 (15) set by the State Tenth Plan Document.

Fig. 3.1

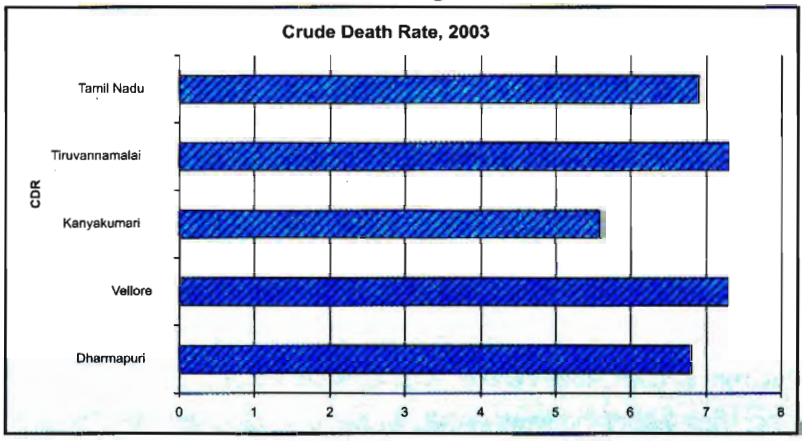


Source: *VES 2003 (TN Annual Plan 04-05 pages 232, 233)*

3.2.3 Crude Death Rate

The district CDR has declined at a faster rate from 8.5 to 7.3 between 1998 and 2003 than that of the state but still it was greater than that of the state. The variations between rural and urban CDR was similar in the state (2.7) and the district (2.6) in 1998. However, the district urban and rural CDR were higher than the respective state CDR in 1998. The CDR of the district was same as the district of Vellore (7.3) and it was higher than that of Kanniyakumari (5.6) and Dharmapuri (6.8). As per the Vital Event Survey, the district has surpassed goal for 2000 (9) set by National Health Policy. Sustained efforts are needed to reach the goal for 2007 (6) set by the State Tenth Plan Document.

Fig. 3.2



Source: *VES 2003 (TN Annual Plan 04-05 pages 232, 233)*

Goals for Health Attainment Indicators

Indicators	Position in 2002		Goals by 2000[1]	Goals by 2007[2]
	All India	Tamil Nadu		
Crude Birth Rate (per 1000 population)	25.0	18.5	21.0	15
Crude Death rate (per 1000 population)	8.1	7.7	9.0	6.0
Infant Mortality Rate (per 1000 live births)	64.0	44.0	60	28
Maternal Mortality Rate (per 1000 live births)	4.00	1.3	Below 2	Below 1
Total Fertility Rate (1999)	3.2	2.0	2.0	1.5
Life Expectancy at Birth (2001-2006) (Years)				
Male	64.11	67.00	64	70
Female	65.43	69.75		
Babies Birth Weight with less than 2.5 Kgs. (%)	30.0	17.6	10	15
Couple Protection Rate (%)	46.2	50.2	60	65
Natural Growth Rate	1.69	1.08	1.2	Below 1

Source: Family Welfare Department and State's Tenth Plan (2002-07) Document

[1]National Health Policy; [2]State Tenth Plan

3.2.4 Total Fertility Rate (TFR)

Estimation of TFR from Census 2001 data by Gulmoto and Rajan (2002) indicated that TFR of Tiruvannamalai (2.1) was considerably higher than that of state (1.8). The district TFR was lower than that of Dharmapuri (2.6) but higher than that of Vellore (1.9) and Kanniyakumari (1.6) districts. The significant aspect is that the district has achieved the replacement level of fertility (2.1 children per quality women). But it is to be noted that much of the decline in TFR had been achieved by the decline in child bearing of older women and not that of young women. DLHS-2002 indicated that the age specific fertility in the younger age groups 20-24 and 25-29 were 0.161 and 0.102, respectively. So the achievement regarding TFR may be due to sterilization and not due to change in social attitude towards woman. The available data indicates that the district has not reached the goal for 2000 (2) set by National Health Policy. Sustained efforts are needed to achieve that goal.

3.2.5 Migration

Migration has significant impacts on population and it is very much so in Tiruvannamalai as there is a large exodus of labour to nearby cities like Bangalore and Chennai. As data is available only for in migration, it is presented here. From the table it is obvious that there was very significant level of intra-district migration followed by inter-district migration. As in the state, female migrants were more than that of male migrants. Female migration was on account of the families moved or due to marriage and males migration was either due to the family having moved and/or for employment. Further analysis needs to be made to understand the impacts of migration like urban stress, increase in slums, shelter and environment problems.

In terms of population growth in-migrants would not have made significant difference in Tiruvannamalai, as they constituted only 3 per cent of the population. To understand whether out-migrants have significant impact on population levels, estimate of out-migrants is needed. Understanding the purpose of migration, particularly that of migration for livelihoods would help in understanding its human development implications.

Table 3.3: Status of Inmigrants in Tiruvannamalai, 2001

Particulars	Persons	Males	Females
Total Population	2,186,125	1,095,859	1,090,266
Born in India	2,182,744	1,094,138	1,088,606
Within the state of enumeration	2,178,180	1,092,614	1,085,566
Born in the place of enumeration	1,894,683	1,011,857	882,826
Born elsewhere in the district of enumeration	223,541	64,491	159,050
Born in other districts of the state	59,956	16,266	43,690
States in India beyond the state of enumeration	4,564	1,524	3,040

Source: Census of India, 2001

3.2.6 Fertility Transition

The conventional theory of fertility transition states that progressive regions go through different phases namely maximum fertility phase, fertility decline phase and finally into stabilization or replacement level of population. On the one hand reaching this level itself is an indicator of human development and on the other this level of population offers congenial environment for attainment of other dimensions of human development. In South India, Kerala and Tamil Nadu has reached replacement level of population. The above discussed indicators point to the fact that Tiruvannamalai district has also achieved the replacement level of fertility like that of Tamil Nadu state through moving towards leveling- off of the birth rate, death rate and natural growth of population. Tiruvannamalai experience of demographic transition validates the finding of the study by Abhiman Das (2001) that economic variables, are found to be less important than social uplift of women, especially in respect of female education and age at marriage[3]. He also found that the threshold of female literacy for a faster decline in fertility in India is about 43 per cent; once that level is achieved the fertility rate will register a faster decline towards the stability of the population. Female literacy has crossed this threshold level in all the blocks except in Jawadhu Hills. An outcome of the improved female literacy is high levels of awareness of women about contraception and 58 per cent of contraceptive prevalence rate in the district. Focused intervention to improve female literacy is the key to continue the positive trend in demographic transition.

Abhiman Das also argued that problems associated with the population change could be specific to the district. So, further exploration is necessary to find the specific reasons for demographic change in Tiruvannamalai District for district level planning and action.

The areas for concern regarding fertility transition are high percentage of girls marrying before legal age of 18 years and considerable proportion of high order births. The corresponding figures for the district as per DLHS-2002 are 25 per cent and 34.2 per cent respectively. Both these aspects have future consequences like high incidence of maternal mortality, infant mortality, still births, low birth weight etc. As these are results of social attitudes, particularly towards women, concerted action in terms of awareness in education, is essential to change this situation.

3.2.7 Population and Demographic Transition in the Blocks

A wide variation in the rates of decadal growth in population between 1991 and 2001 was observed across the blocks in the district of Tiruvannamalai. Chetpet, Kilpennathur and Cheyyar experienced negative growth rate. Next in line, Anakkavur, Kalasapakkam, Pudupalayam and Pernamallur experienced very low level of growth (less than 3.5 %). Though low decadal growth can be taken as a positive trend, further exploration is required to know the role of specific reasons like out-migration for the same. Out of the nine blocks which experienced higher growth rate, six blocks fell in the urban category and three in the rural category. This reflects the overall trend in the district that population

[3] He observed that female literacy is found to be the second most dominant factor to characterize the fertility transition in India after age at marriage. Urbanisation is the third most important variable in the selection and specification process.

growth was high in urbanized blocks (both new and old). Jawadhu Hills experienced a very high growth rate of 31.25 per cent and so resulted in growth rate of ST population in the district.

It is difficult to infer much from the data on decadal growth of SC and ST population. Taking only 8 blocks with above 25000 SC population in 1991 it was found that population has declined in Kilpennathur significantly and Thellar had only 0.37 per cent decadal growth. SC population decadal growth was more than that of the over all growth rate only in Chengam and Cheyyar. In other blocks it was lower than that of the district. Further block level analysis is necessary to understand why there was a decline in the SC population in Kilpennathur and high SC growth rate was observed in Chengam. Jawadhu Hills and Thandrampet were only considered for analyzing sub-district change in ST population as they had more than 10000 ST population in 1991. It was found that ST population grew at a very high rate in Jawadhu Hills. This was in line with very high total population growth in the block and total ST population growth in the district.

Table 3.4: Decadal Changes in the Population of Blocks in Tiruvannamalai District, 2001

Blocks	Decadal Change in Population, 1991-2001		
	ALL	SC	ST
Anakkavur	0.57	4.59	-2.81
Arni	9.73	45.03	33.20
Arni (West)	9.68	4.78	31.89
Chengam	10.96	15.32	11.28
Chetpet	-1.07	-12.93	-70.82
Cheyyar	5.16	9.05	-5.19
Jawadhu Hills	31.25	8.14	27.56
Kalasapakkam	2.34	3.01	315.71
Kilpennathur	-0.02	-4.00	43.69
Pernamallur	3.51	11.33	30.80
Polur	9.32	13.12	-80.71
Pudupalayam	2.84	2.44	-48.04
Thandrampet	9.99	7.46	10.74
Thellar	-0.86	0.37	-6.35
Thurinjapuram	9.28	7.75	22.29
Tiruvannamalai	11.99	9.34	31.73
Vandavasi	7.50	7.20	31.19
Vembakkam	7.03	6.12	-29.48
District	7.01	6.65	17.23

Source: Census of India, 1991 and 2001 as cited in SSA Report, 2006- 07, Tiruvannamalai District

3.2.8 CBR and CDR in the Blocks

As per the available data, in 2003, only two blocks, Pernamallur and Arni, had CBR less than 17, while in 2005, it has been increased to seven blocks including other five blocks, Thellar, Cheyyar, West Arni, Jamanamarathur and Vembakkam. On the contrary, the CBR of Tiruvannamalai, Thandrampet and Chengam blocks remained above 19 in both the years. On the whole, the CBR of Cheyyar HUD was comparatively lesser than that of Tiurvannmalai HUD. Taking 2003 as the year for comparing between the blocks and the district it was found that all the 10 blocks in Tiruvannamalai HUD had CBR above that of the district.

As per the available data, the CDR for the block of Jamunamarathur was very low in 2005 which could be due to low reporting. The death rate was the highest in Kalasapakkam (8.15) followed by Pernamallur, Chengam, Pudupalayam and Anakkavur. Overall, the CDR of each block was higher in 2005 as compared to 2003 except in Thandrampet and Vembakkam. This could be because of the improvements in the vital event reporting process. However, the blocks in Cheyyar HUD had lower CDR than Tiruvannamalai HUD with the exception of Jamunamarathur. CDR less than 6 was observed in Thellar, Cheyyar and Arni.

Table 3.5: Block-wise CBR and CDR in Tiruvannamalai District, 2002-2005

Blocks	CBR		CDR	
	2003	2005	2003	2005
Tiruvannamalai HUD				
Tiruvannamalai	19.07	19.2	5.93	6.89
Thandrampet	19.04	19.13	6.53	6.02
Chengam	19.37	19.35	6.14	7.55
Pudupalayam	18.94	18.17	5.64	7.54
Jamunamarathur[4]	20.88	16.63	4.21	2.92
Chetpet	19.24	17.88	6.75	6.85
Polur	18.85	17.76	5.46	6.93
Kalasapakkam	19.46	18.87	7.57	8.15
Thurinjapuram	18.84	18.17	6.26	7.39
Kilpennathur	19.11	18.35	5.73	6.25
Rural Total	19.16	18.54	6.14	6.87
Tiruvannamalai Mpty.	NA	15.64	NA	4.5
TMV HUD Total	NA	18.26	NA	6.61
Cheyyar HUD				
West Arni	17.47	16.6	3.37	6.5
Arni	16.88	16.7	5.38	5.9
Pernamallur	16.8	15.2	6.44	8
Vembakkam	17.53	16.8	6.96	6.4
Cheyyar	17.53	16.6	5.09	5.2
Anakkavur	18.63	17.7	7.14	7.4
Vandavasi	18.68	17.5	4.74	6.3
Thellar	18.13	14.5	5.03	5.2
Rural Total	17.7	16.5	5.48	6.3
Cheyyar HUD Total	NA	NA		
Tamil Nadu*	19.3	16.5	7.9	7.4
India	25.8	23.8	8.5	7.6

Source: Deputy Director of Health Services, Tiruvannamalai HUD and Cheyyar HUD
*Department of Public Health and Preventive Medicine.

3.2.9 Fertility Transition in the Blocks

As there is no data on TFR at the block level, it is difficult to say the phase of fertility transition witnessed in the blocks. But as the CBR of five blocks were lower than that of the state in 2003 and decadal growth of population between 1991 and 2001 of 16 out of 18 blocks were lower than that of state it can be taken that most of the blocks have achieved replacement level of fertility and some of

[4] Read as Jawadhu Hills.

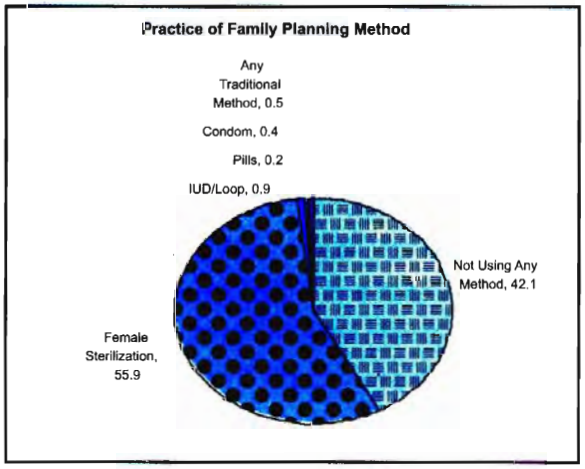
them were in the threshold. This in turn means they could offer an environment congenial for human development. However, here too the role of out-migration needs to be properly accounted to validate the above inference.

But Tiruvannamalai and Jawadhu Hills were the exceptions to the above-mentioned trend. Being an urban commercial centre and district headquarters, urban areas of Tiruvannamalai block were experiencing a very high growth rate. It can be assumed that population would continue to grow even in the near future as the process of urbanization is in the initial stage. But Jawadhu Hills was really an outlier in this respect. It was far away from population stabilization levels as indicated by high CBR (20.88) in 2003 and high decadal growth of population. Here also the findings of Abhiman Das (2002) holds good. The female literacy rate in Jawadhu Hills was only 26.22 per cent in 2001 and has not crossed the threshold level of 43 per cent needed for fertility reduction. So here too focused interventions to improve female literacy and improving awareness of women are the key to address the issue. Further exploration is necessary to understand the other important reasons and take necessary population control measures in this block.

3.2.10 Family Planning Measures

Significant decline in the district's TFR and CBR had been due to many socio economic reasons as mentioned earlier. Birth control measures, particularly sterilization are one of the other important reasons for the same. District Level Health Survey- RCH project (DLHS) in 2002 indicated that all the sampled women in the district were aware of at least one modern method of contraception and 15 per cent of husbands were aware of No Scalpel Vasectomy (NSV). The contraceptive prevalence rate was 58.1 per cent, with 57.6 percent adopting modern methods and less than one percent (0.5 per cent) using traditional methods. Among them 56 per cent underwent female sterilization and there was no male sterilization. Among those who used temporary methods, condom and IUD were less than one percent (0.4 per cent and 0.9 per cent respectively). This is in contrast with that of the data from Health department which indicated that IUD was practiced more or less on par with sterilization. The total unmet need for family planning among currently married women was 14 per cent of which ten per cent for limiting and only four per cent for spacing, implicating a low demand for temporary methods.

Fig. 3.3



Source: DLHS-RCH, 2002

Presence of only female sterilization and no male sterilization in the district raises gender-related questions about the population policy. More participation of men in both temporary and permanent methods of contraception is needed.

DLHS, 2002 found that while the induced abortion was about 2 per cent of the total number of pregnancies, spontaneous abortion was about 4.9 per cent. Though the overall level of spontaneous abortion was low, it was more for younger women in the age 15-19 years (8 %) and 20-24 years (6%). This positive status can be attributed to the Reproductive and Child Health (RCH) Project implemented in the district as improved medical termination of pregnancy (MTP) services and reduction in pregnancy wastage are its main goals. A limited number of illegal abortions were reported in few blocks as major proportion of that type of abortion goes unrecorded. Safety of this kind of abortions is highly questionable.

3.2.11 Sex Ratio

Sex ratio is a widely used indicator of gender discrimination as it captures various facets of discrimination against women like lack of bargaining power, lack of education and health investment, lack of asset ownership, etc. Many studies have provided evidence that it is excessive female mortality before birth, in infancy, and in childhood, which mainly account for the imbalance in sex ratios. Given this, it is perhaps more apt a problem of missing girls than missing women, as popularized by Sen. Broad interrelated factors that create a situation where sons are preferred and daughters suffer discrimination and neglect are: Patrilineal patterns of inheritance, exogamous lineage system of women, existence of the dowry system, sons providing old age support to parents and not daughters, sons alone can perform the funeral rituals of the parents, increasing proportion of small families and raising cost of upbringing particularly that of education. By nature males exceed females in numbers at the time of birth and it is believed that somewhere around 943-952 female births take place per 1000 males, which is later offset by a naturally higher level of mortality for males. In regions which are characterized by lack of discrimination against women, the sex ratio is around 1050. But in most of the Asian countries it is less than 1000. Thus the most serious contemporary concern is the elevated female death rates due to gender discrimination, which offsets the natural lower mortality of females. Economic development does not necessarily solve this issue and in some cases, sex ratio had declined with the economic improvement. So in the following section, analysis of sex ratios is attempted for the district.

Sex ratio of the district was higher than that of the state both during 1991 and 2001. This indicates that the difference between male and female was lower in the district than in the state. Sex ratio in the district had improved by 12 points between 1991 and 2001 indicating that there is further narrowing of difference between male and female. The sex ratio of urban areas was considerably better than that of rural areas in 2001. The sex ratio of SC population was higher than that of total population in the district. So it can be inferred that the difference between male and female was less in urban areas and in SC population. Here too, the ST population was an exception. The sex ratio of ST population was

considerably lower than that of the district indicating that disadvantaged condition of female when compared to male in this social group. The inferences from improvement in sex ratio observed in the district need to be tempered with role of out-migration in improving sex ratio.

Table 3.6: Sex Ratio in Tiruvannamalai District

Details	Sex ratio				
	All age groups			0 - 6 age group	
	1981	1991	2001	1991	2001
India	934	927	933		927
State	977	974	987	948	942
District					
All	979	983	995	964	948
Rural		984	993		944
Urban		981	1003		964
SC		979	1002		
ST		952	970		

Source: Census of India

Sex ratio of 0-6 years age group in the district had declined from 964 to 948 between 1991 and 2001 indicating a move towards reversal in the trend favouring boys. In this age group, sex ratio in urban areas was favoring girls fairly well than that of the rural areas. Further exploration is essential to understand whether the sex ratio at birth or at infancy had declined or at what specific age girls' death in the age group of 0 to 6 had increased. If the decline is at birth then it is obvious that it was due to sex selective abortion. If it is at the early neo natal stage it could be female infanticide. A study by Venkatesh Athreya and Sheela Rani Chunkath (2000) documented the practice of female infanticide in the district. Interestingly, this practice has been relatively new unlike in other districts known for it.

Further, age-group-wise analysis of sex-ratio in the year 2001 indicated that the sex ratio of the district was little a higher in each 5 years age group from 0-19 and a little more higher in each 5 year age of 30-69 than the state. This indicated that the sex ratio was favouring female more in the district than the state throughout these age groups.

The sex ratio of the state for the 20-24 age group indicated that for every 1000 males, there were 19 more females while the district had 35 less and this may be attributed to maternal mortality or migration. This again indicates that either the female deaths or the female out migration may be higher in this age group in the Tiruvannamalai district. The 50-69 age group sex ratio was favouring females in the district and in the state indicating that more males die in this age group. However the district was experiencing higher male deaths than that of the state.

The sex-ratios in most of the blocks in the year of 2001 had improved over that of 1991 except in Anakkavur. The increase was exceptional in Kilpennathur (33) and Chetpet (28). They were followed by Cheyyar, Pernamallur and Thandrampet. As many as eight blocks were exhibiting more than 1000 sex ratio in the year of 2001. The highest sex ratio was observed in the block of Pernamallur while the lowest was in the block of Jawadhu Hills.

Table 3.7: Age Group-wise Sex Ratios, 2001

Age Group	TAMIL NADU		Tiruvannamalai	
	Population Share	Sex Ratio	Population Share	Sex Ratio
0-4	**8.17**	946	**8.44**	950
5-9	**8.97**	948	**9.81**	954
10-14	**9.63**	948	**10.68**	959
15-19	**9.91**	972	**10.50**	973
20-24	**9.30**	1,019	**9.08**	965
25-29	**9.16**	1,093	**8.38**	1,060
30-34	**7.51**	1,000	**6.53**	1,057
35-39	**7.88**	1,052	**7.43**	1,126
40-44	**6.07**	914	**5.64**	923
45-49	**5.79**	959	**5.69**	979
50-54	**4.51**	939	**4.34**	978
55-59	**3.58**	1,026	**3.68**	1,094
60-64	**3.28**	1,011	**3.45**	1,050
65-69	**2.20**	1,072	**2.39**	1,090
70-74	**1.65**	982	**1.77**	956
75-79	**0.80**	905	**0.87**	832
80+	**0.89**	1,040	**0.90**	935
Age not stated	**0.69**	917	**0.43**	919
All ages	**100**	987	**100**	995

Source: Census of India, 2001

Table 3.8: Block wise and Social Group wise Sex Ratio in Tiruvannamalai

Blocks	All		SC		ST	
	Sex Ratio	Change Over 1991	Sex Ratio	Change Over 1991	Sex Ratio	Change Over 1991
Anakkavur	997	-4	980	-3	1060	50
Arni	1004	12	1028	33	982	-10
Arni (West)	1011	4	1052	30	1094	78
Chengam	972	11	984	24	1050	76
Chetpet	1018	28	1037	39	932	-59
Cheyyar	1007	19	1004	29	958	-42
Jawadhu Hills	942	13	1029	161	942	7
Kalasapakkam	989	13	978	12	948	-91
Kilpennathur	1015	33	1020	47	1037	92
Pernamallur	1022	22	1015	14	1047	118
Polur	1005	5	1018	-5	1138	183
Pudupalayam	983	1	999	22	986	-7
Thandrampet	985	20	998	36	989	40
Thellar	988	2	1011	21	1018	47
Thurinjapuram	990	18	1014	46	924	-33
Tiruvannamalai	983	8	996	12	1004	43
Vandavasi	997	10	979	10	1014	-34
Vembakkam	993	6	982	22	1011	45
District	995	12	1002	23	970	18

Source: Census of India for 1991

Census of India for 2001 as cited in Sarva Siksha Abhiyan Report, 2006-07, Tiruvannamalai District

The sex ratio of SC population in all the eight blocks, which had more than 25000 SC population by 1991 had improved. Among them Cheyyar, Kilpennathur and Thellar had sex ratio more than that of district SC population indicating a better position of women when compared to men in the SC community in these blocks.

Though improvement in sex ratios can be generally taken as improvement of positions of women with respect to men in the block or social group, the role of migration need to be identified. Migration might have played a big role in blocks where there was very high improvement in sex ratios between 1991 and 2001. Taking only Jawadhu Hills and Thandrampet blocks for consideration it was found that the sex ratio increased by 40 points in Thandrampet while in Jawadhu Hills it was only 7. Both the blocks had sex ratios lower than that of the district there by indicating relatively disadvantaged status of women with reference to men in that social group.

3.2.12 Slum Population

Slum population has become synonymous to that of poor and so analyzing the status of slum population is very much essential. It is found that the percentage of estimated slum population to the urban population in the district of Tiruvannamalai had decreased from 25 per cent to 16 per cent. This is mainly because many rural areas in 1991 had become urban in 2001.

Table 3.9: Estimated Slum Population in Tiruvannamalai District

Years	Items	Tiruvannamalai	Tamil Nadu
1991	Urban Population	242928	19079562
	Identified Slum Population	60732	4769390
	Percentage	25.00	25.00
2001	Urban Population	400549	27241553
	Estimated Slum Population	65490	4949704
	Percentage	16.35	18.17
Percentage of Decadal Change of Slum Population: 1991-2001		**7.83**	**3.78**

Source: 1. TNSCB [DoES's Compendium of Environment Stats. 2000-page 265] for years 1981, 1991 (2). Slum Demography of Census 2001.

In that sense, decadal change in slum population (8%), which was double that of the state is not significant because the base slum population in Tamil Nadu in 1991 was incomparably higher than that of the district. The highest slum population in the district was found in the town of Tiruvannamalai. There it had increased from 0.96 per cent in 1991 to 20.64 per cent of total population of the town in 2001. The increase in share of slum population to the town population, the situation in Arni was less dramatic from 4.19 per cent in 1991 to 7.18 per cent in 2001.

3.3 Mortality and Morbidity

3.3.1 Mortality

Mortality level is an important indicator of the status of health in a region and it influences significantly the life expectancy at birth. Trend in CBR is discussed in the earlier section. As maternal mortality and infant mortality are the major causes for mortality and they reflect the socio-economic conditions better they are taken for analysis.

3.3.2 Life Expectancy at Birth (LEB)

Life expectancy at birth of Tiruvannamalai district (66.57 years) was trailing behind that of the state (66.74 years) in 1996 by a small margin. LEB of Tiruvannamalai was better than that of the adjacent Vellore and Dharmapuri districts and it was far below than that of Kanniyakumari. There had been considerable improvement between 1996 and 2001 in the district and by 2001 the LEB of males was 67 years and that of females was 70 years. Matching with the biological norm, female LEB was higher than that of the males in the district as it was the case in the state and the country. As per the available data the district has surpassed goal for 2000 (64 years) set by National Health Policy. Sustained efforts are needed to reach the goal for 2007 (70 years) set by the State Tenth Plan Document.

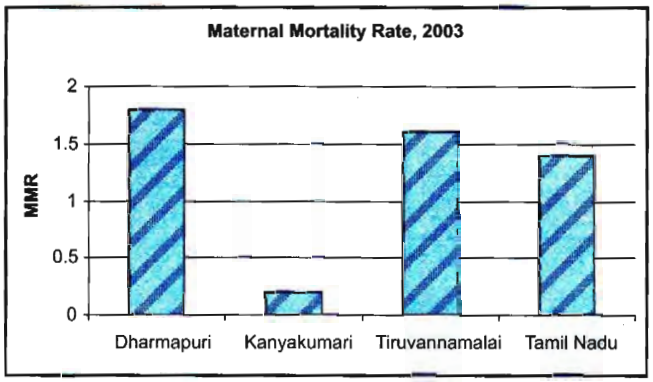
LEB has imperfect association with health and its improvement cannot be taken as improvement in general health situation. LEB is a composite indicator and outcome of mortality pattern of different age groups. So analyzing the improvement in LEB without considering how such improvement came about might hide serious issues pertinent to human development. Karkal (1995) observed that improvement in life expectancy in various parts of India was because of increase in survival of the young and improved survival chances for those in old ages and not because of the overall improvement in all the age groups. She inferred that there was progressive erosion of the quality of human resources in view of the expanding pool of sub-standard survivors due to continuing poverty, under nutrition and insanitation. So further analysis based on data is needed to give a better picture of the life expectance of the district.

3.3.3 Maternal Mortality Rate

Maternal Mortality Rate (MMR) is a comprehensive measure indicating many aspects like the status of women in the society, availability of antenatal, hospital and medical services and remoteness. MMR of Tiruvannamalai (1.4) was slightly lower than the state level (1.5) in 1998. The district fared better than Dharmapuri and but lower than Vellore in 1998. The MMR had slightly increased and reached 1.6 during 2003 in the district. This is surprising given the fact that the RCH project was in operation in that period and primary purpose of RCH is safe motherhood. MMR of the district was significantly higher than that of Kanniyakumari (0.20) but lower than Dhramapuri (1.80) in 2003. In general, the district has low MMR. This significant achievement of the district, like demographic transition, indicates primacy of social development factors rather than economic factors. Analysis of the causes of maternal death indicates that most of them were preventable. The major factors resulting in maternal death include lack of transport and communication facilities, delay in accessing proper

health facilities and the lack off and/or poor quality of essential and emergency obstetric services. Among the medical causes Pregnancy Induced Hypertension (PIH) and Post Partum Haemorrhage (PPH) followed by heart disease accounted for most of the deaths in Tiruvannamalai HUD in the year 2004-05. These causes are preventable by proper ANC and provision of facility-based care. In general, one fifth of all maternal deaths occur after the onset of an obstetric emergency, on way to an appropriate facility capable of providing emergency care. Further, as haemorraging accounts for considerable proportion of maternal death, adequate quantities of blood supply in time is crucial for reducing it. These clearly highlight the need for better access to 24 hour facility-based emergency obstetric and neonatal care. As per VES, the district has surpassed goal for 2000 (below 2) set by National Health Policy. Sustained efforts are needed to reach the goal for 2007 (below1) set by the State Tenth Plan Document.

Fig. 3.4



Source: VES 2003

Maternal mortality is a result of social causes more than the above-mentioned physical and medical causes. Early marriage is one of the important social causes. A girl requires at least 6 years before she is physically matured to bear the burden of pregnancy.. Physical immaturity of mother also affects growth and development of the children and explains the reason high incidence of maternal mortality, morbidity and low birth weight babies. DLHS 2002 found that more than one fourth of the girls in rural areas and 16 per cent in urban areas got married before attaining the age of 18 years i.e., below the minimum legal age for marriage.

Reproductive and Child Health Project (RCH)

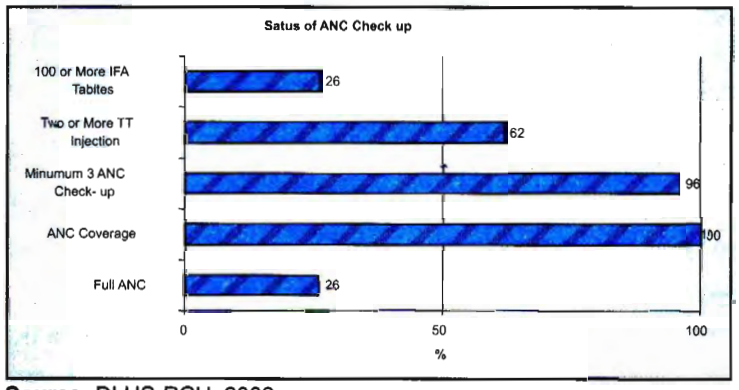
The RCH project is the nationally coordinated project being implemented with external assistance from World Bank, European Commission (EC), UNICEF and other bilateral donors. In Tiruvannamalai district, the State Implementation Plan (SIP), a state level component of RCH project is being implemented and it is in the second phase of operation. The general objectives of the project include empowering the community to demand better health services and improving substantially the performance of the health care delivery system. The SIP focuses on promotion of institutional deliveries and effective provision of emergency and essential obstetric care at block PHCs through a paramedic oriented model. The project supplies drug kits to village heath nurses, medicines and hospital equipments to PHCs and also undertakes minor civil works in PHCs/HSCs/District hospitals. Awareness generation on reproductive and child health and training to female field health functionaries on mobility and communication skills are also part of the project mandate. The project has IEC component to mobiles and motivate the community around the issue of reproductive health.

3.3.4 Ante-natal Care (ANC)

Maternal death can be addressed proactively if proper ante natal care is ensured. It is particularly so in Tiruvannamalai as PIH accounted for significant share of maternal deaths. Safe mother hood being the core purpose of RCH project much focus was given for ante natal care. Full ANC means providing three ANC checkups, at least one T.T. and 100 and more iron folic acid (IFA) tablets. Available data indicated that the percentage of ANC registration was quite high in both Tiruvannamalai HUD and Cheyyar HUD. Of the total number of registrations, early registrations formed the major share. In the same way T.T. injection was given to more than 90 per cent of the registered mothers.

DLHS, 2002 found that all the 221 pregnant women surveyed had received antenatal care. Among them 62 per cent received from Government health facility and 45 per cent from private health facility. Among the ANC receivers, 96 per cent had a minimum of 3 ANC checkups, 62 per cent had two or more T.T. injections and 26 per cent received 100 or more IFA tablets during pregnancy. Overall 26 per cent received full ANC package.

Fig. 3.5



Source: DLHS-RCH, 2002

Available data indicated that all the blocks more or less reflected the high performance status of the district in terms of percentage of registration and T.T. injection in the year 2004. So was the case with early registration except Jamnamarathur. In Chengam, Pudupalayam and Chetpet the T.T. injection coverage was less than 90 per cent. The over all high performance of the district in terms of ANC can be attributed to the RCH project.

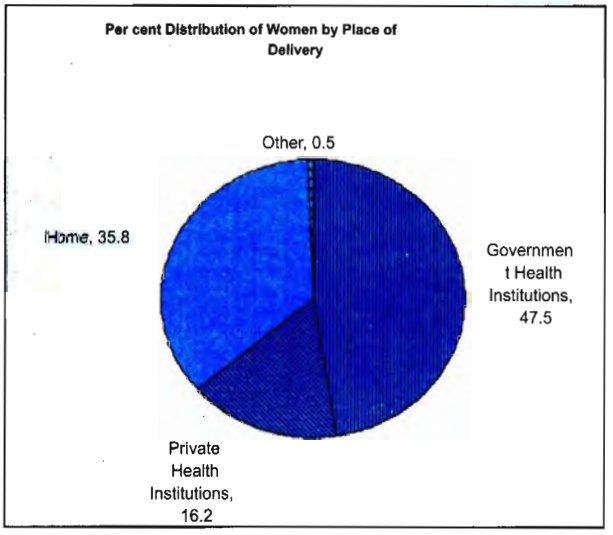
3.3.5 Place of Deliveries

Institutional deliveries are considered to be safer than domicile deliveries. Maternal mortality can be reduced if the share of institutional deliveries is improved. Available data indicated that 85.6 per cent of the total deliveries was taking place in government or private institutions in 2004-05 in Tiruvannamalai HUD and domicile deliveries share was 14.4 per cent. In Cheyyar HUD, share of institutional deliveries was 95% in 2004-05 with only 5% domiciliary deliveries. The data related with Cheyyar HUD on T.T. administration and place of deliveries need to be verified as the figures were very high. Ever after accounting for some over estimation, it can be said that the share of institutional

deliveries had very significantly improved in 2004 when compared to just 51 percent institutional deliveries in 1998-99.

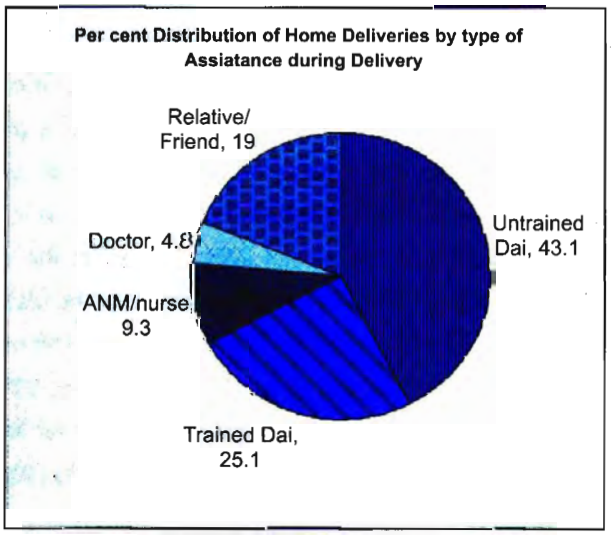
But DLHS, 2002 gives a different picture. It found that the overall share of institutional deliveries was about 64 per cent with a wide disparity between urban (94 %) and rural (60 %) areas. Home deliveries were 36 per cent. Including the 39 per cent of the home deliveries attended either by doctor or by trained dai/nurse/ANM, the share of safe deliveries was 78 per cent. Still this was a significant improvement over the 1998-99 status.

Fig. 3.6



Source: DLHS-RCH, 2002

Fig. 3.7



Source: DLHS-RCH, 2002

The available data indicated that there were many differences among the blocks regarding the share of domicile deliveries. In 2004-05 the share of domicile deliveries was ranging from 4 to 19.1 in all the blocks except Jamanamarathur (47.7 %) and Tiruvannamalai (23 %). Home deliveries were below 10 per cent in the blocks of Chetpet, Kalasapakkam and Thurinjapuram. On the whole, the proportions of home deliveries in Tiruvannamalai HUD were low in each block. The proportions of home deliveries in Cheyyar HUD was considerably lower than that of Tiruvannamalai HUD and so data for this HUD need to be verified.

Table 3.10: Rural, Urban and Sex-wise IMR, SBR & MMR of Tiruvannamalai District

		Tiruvannamalai		Tamil Nadu	
		1998*	2003**	1998*	2003**
IMR	Rural	43.6		49.8	
	Urban	25.7		22	
	Male	37.5		40.1	
	Female	46.3		46.9	
	Combined	41.7	29.3	43.4	30.1
SBR	Rural	11.9		18.4	
	Urban	5.9		9.5	
	Male	9.7		16.3	
	Female	13.1		16.4	
	Combined	11.3	14.6	16.3	15.5
MMR	Rural	1.5		1.6	
	Urban	0		1.2	
	Combined	1.4	1.6	1.5	1.4

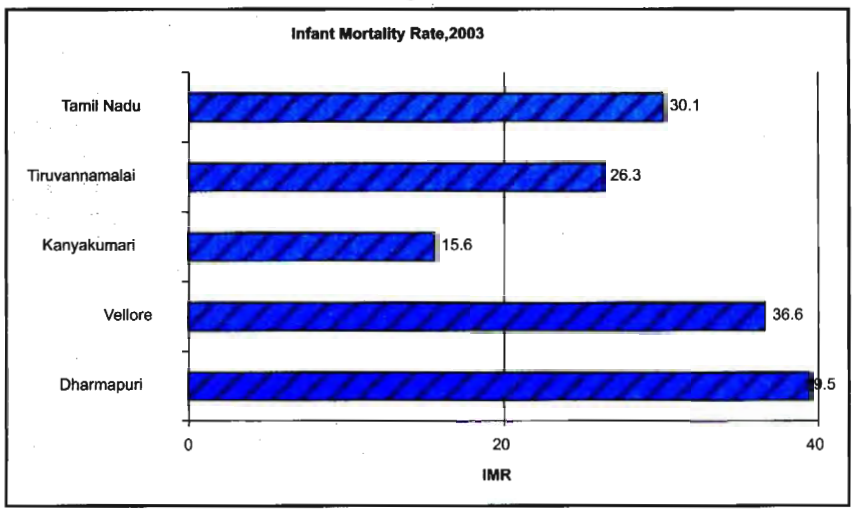
Source: **SRS/ VES-DANIDA TN Area Health Care Project 1998*

***VES 2003*

3.3.6 Infant Mortality Rate

IMR is considered as a core indicator of human development because it reflects not just the state of health, nutrition and caring accessible to infants below one year of age, but also of the general well being of society. Improvements in the above-mentioned indicators such as MMR, ANC, institutional deliveries, etc. have a positive impact on Infant Mortality Rate (IMR). This inference is validated by the data on IMR. Between 1998 and 2003, the district IMR declined at the rate of 12.4 per cent and reached 29.3 in 2003. The district had lower IMR (29.3) than that of the state (30.1) by the year 2003. It also performed better than the adjacent districts Vellore (36.6) and Dharmapuri (39.5). But the IMR of Kanniyakumari (15.6) was far lower than that of the district. The rural IMR was considerably higher than urban IMR. In the same way, female IMR was considerably higher than that of male IMR. The district has achieved the goal set by the National Health Policy for 2000 (60) and the State Tenth Plan Document for 2007 (28).

Fig. 3.8



Source: VES 2003, Tamil Nadu

IMR of Tiruvannamalai and Cheyyar HUD (24.1 & 26.2, respectively) as per the data provide by the HUDs was much lower than the IMR status found by the VES 2003 (29.3) which may be due to under reporting of infants' deaths by the system. The available data indicated that there were many variations among the blocks. Blocks with IMR less than 20 during 2004 were Chetpet, Polur, Cheyyar, West Arni and Vandavasi. Chengam, Pudupalayam, Pernamallur, Vembakkam and Anakkavur had IMR more than 30 in the same year. The blocks, Pernamallur, Vembakkam and Anakkavur are remote and the transport facilities in these blocks are not well developed. This situation could have led to higher numbers of infant deaths in these blocks.

3.3.7 Early, Late and Post Neo-natal Deaths

Disaggregating IMR into its early neonatal, late neonatal and post neonatal components indicated that about 50% of the infant deaths fell in the early neonatal category in 2003, 2004 and 2005 in Tiruvannamalai district (both HUDs). Also it was observed that the number of female children dying within 7 days was more than the males in all the years in Tiruvannamalai HUD. So was the case of total infant death. The same pattern was observed in most of the blocks.

Table 3.11: Early, Late and Post Neo-natal Deaths in Tiruvannamalai & Cheyyar HUD

Days	Tiruvannamalai HUD									Cheyyar HUD		
	2003			2004			2005			2002-03	2003-04	2004-05
	M	F	T	M	F	T	M	F	T	T	T	T
0-7	123	160	283	121	176	297	120	177	297	212	185	175
8-28	48	64	112	37	51	88	36	44	80	56	51	44
29-365	79	96	175	106	91	197	88	104	192	126	116	82
0-365	250	320	570	264	318	582	244	325	569	394	352	301

Source: Deputy Director of Health, Tiruvannamalai & Cheyyar HUD

3.3.8 Still Birth and Perinatal Mortality

Still birth rate and perinatal mortality rate were hovering around 25 and 37 in Tiruvannmalai HUD in the years 2003 and 2004.

Table 3.12: Still Birth Rate, Perinatal Mortality Rate in Tiruvannamalai HUD

Events	Sex	Tiruvannamalai HUD	
		2003	2004
Still Birth	M	25.16	24.63
	F	22.84	26.8
	T	24.03	25.68
Perinatal Deaths	M	35	34
	F	36	42
	T	36	38

Source: Deputy Director of Health, Tiruvannamalai HUD

The major medical causes for infant deaths in Tiruvannamalai HUD in 2004 were asphyxia, low birth weight, prematurity and congenital heart diseases. Except congenital heart disease, all other causes occurred more frequently during early neonatal period. So it can be concluded that antenatal care and high quality care of new borns are very essential to reduce infant deaths. The former will help to reduce infant deaths due to prematurity and low birth weight and the latter will help in reducing infant deaths due to birth asphyxia. Though the ANC check up was 100 percent in the district, more qualitative improvement is needed to address the above-mentioned issues. Further, strengthening comprehensive emergency obstetric and neonatal care through better access to 24 hour facility-based care is needed. Necessary investment need to be made either by Government or through public private partnership.

3.3.9 Under Five Children Death

Under five children death was considerably lower than that of infant death again indicating that addressing infant mortality particularly early neo natal mortality is the key to address the issue of death of high numbers of children.

Table 3.13: Under Five Children Deaths in Cheyyar HUD

Event	Sex	2002-03	2003-04	2004-05
Under 5 Children Deaths (1-5 years of age)	M	34	31	NA
	F	32	27	NA
	T	66	58	NA

Source: Deputy Director of Health, Cheyyar HUD

3.3.10 Low Birth Weight (LBW)

Birth weights are significant in as much as they set the pattern for future growth of a person. Earlier it was stated that in Tiruvannamalai low birth weight was one of the major reasons for infant mortality. It is also positively related with the prevalence of diseases like diarrhoea. Research studies have shown that higher incidence of diabetes and cardiac problems reported in India are rooted among the survivors of LBW babies. The survivors among LBW babies form lager proportion of the school drop outs and poor performers of productive roles (Karkal 1995). As data is not available for Tiruvannamalai HUD, data regarding Cheyyar HUD is presented. In Cheyyar HUD, percentage of children born with LBW ranged from 10.3 per cent to 13 per cent in the years 2001-02 to 2003-04. In the same period, children born with very low birth weight (>2000 g.) ranged from 1.7 per cent to 2 per cent. Low birth weights are mainly due to low health and education investment made on women since childhood. The health and nutrition status of adolescent girls has a significant influence over LBW. Further health and nutrition attention during ante natal period also has significant influence over LBW. So improving the next generation of girl children is the only way to address LBW. With economic and social development health and nutrition status of women improves. But this process could be very long and depends on various other factors. So direct intervention by State is necessary. The available data indicates that the district has not reached the goal for 2000 (10%) set by National Health Policy. Sustained efforts are needed to achieve that goal.

Table 3.14: Sex-wise Low Birth Weight (< 2500g) Children in Cheyyar HUD

Year	Sex	LBW (<2500 g.)	
		No.	Percentage
2001-02	M	1032	13.26
	F	908	12.90
	T	1940	13.09
2002-03	M	761	10.76
	F	835	12.05
	T	1596	11.40
2003-04	M	714	10.49
	F	664	10.05
	T	1378	10.28

Source: Deputy Director of Health, Cheyyar HUD

3.4 Morbidity

Another important parameter of the health of the population is its morbidity status. Morbidity is an outcome of various factors like nutrition, sanitation, health awareness and proactiveness of health machinery to address various illnesses. Besides conventional diseases some non-conventional diseases (NCD) are also on the rise in the district mainly due to change in food habits and life style. In general, the current health system attaches more importance to killer diseases than crippling and disabling diseases. It is even likely that the prolonged social, economic and individual burdens imposed by the second kind of diseases may be heavier than those of the killing diseases. Burden of

diseases is measured in units of disability adjusted life years. Due to lack of such data, only status of some of the important diseases in the district is dealt here. DLHS, 2002 found that prevalence rate (per 100000 population) of complete blindness was 202, partial blindness was 3771 and tuberculosis was 407.

3 4 1 AIDS

Table 3.15: Cumulative AIDS Cases (Reported up to May 2003)

Sex	Tiruvannamalai		Tamil Nadu
	No.	Percentage	
Male	646	3.00	21530
Female	209	2.91	7178
Total	**855**	**2.98**	**28708**

Source: Statistical Handbook of TN 2003 (page 253) – [from TN State AIDS Control Society]

About 3 per cent of the total AIDS cases prevalent in Tamil Nadu were identified in Tiruvannamalai district upto May 2003. The proportion of cases was similar for males and females. The study by Shakti Vahini for Assessing Vulnerabilities for HIV/AIDS and Trafficking found that in Tiruvannamalai prevalence of both HIV and trafficking was high. The study found that the vulnerability for HIV and trafficking was also high. So proactive measures need to be taken to address this situation.

District Blindness Control Society has been established in 1991 for the implementation of National Programme for Control of Blindness at the district level. The main objective of the society is to achieve the maximum reduction in avoidable blindness in the district through optimal utilization of available resources. The society is responsible for planning, implementing and monitoring all the blindness control activities in the district under overall guidance of the State/Central Organization. The society organizes free eye camps in different government hospitals. Expenditure for organizing eye camps are met by the society including supply of drugs, follow up etc. The society has the aim to achieve the goal of '**100 per cent matured cataract free district**'. The two main activities are cataract operation and free eye camps. The society has given permissions to some NGO's to conduct free eye camps in the District. The necessary financial support is also extended to these organizations for the same. Voluntary organizations like Lions Clubs, Rotary Clubs and certain other registered societies have joined with the society to make publicity for the camps.

3.4.2 Leprosy

The prevalence rate of leprosy in Tamil Nadu was 2.2 in 2002 and the corresponding district figure was 5.7 indicating that Tiruvannamalai is one of the high incidence locations. The available data indicated that the prevalence rate in Tiruvannamalai district declined significantly from 2003-04 onwards reaching 1.8 in 2003-04 and below 1 in 2004-05. This is a significant achievement for the leprosy eradication programme in the district. With some more focused efforts, the district can achieve the goals set by National Health Policy 2002 to eliminate leprosy 2005.

Table 3.16: Trend in Leprosy Cases in Tiruvannamalai District

Year	Total Cases detected	Cured	Prevalence Rate per 10000 pop	Female
2000-01	2992	3487	4.8	495
2001-02	1092	2992	4.8	476
2002-03	1297	1996	5.7	365
2003-04	1147		1.8	386
2004-05	566	755	0.9	177

Source: Health Department, Tiruvannamalai

3.4.3 Malaria and Filaria

DLHS 2002 found that malaria prevalence rate was 70 indicating that the district enjoyed low malaria incidence. Even during the recent large scale occurrence of chikungunya no cases were reported in the district. The data from Cheyyar HUD also confirmed this status. Similar was the situation in regard to filaria in the district.

The District TB Centre, Tiruvannamalai started functioning from 1999. Currently there are 95 implementing centres, 11 X - Ray centres, 71 Microscopic centres and 13 Referral centres in Tiruvannamalai. Various Health institutions at different levels are involved in TB Programme.

The National TB Control Programme (RNTCP) was running in this District till Oct' 1999 on recommendation by the Government of Tamil Nadu. The District TB Programme has been changed to National TB Control Programme. The methodology of treating the TB cases is by DOTS (Directly observed Treatment Short Course) method. For the implementation of this programme, the DGHS, New Delhi sanctioned Rs. 35.80 lakhs for this district. The major objectives of this programme are to achieve the TB cure rate at 85 per cent and TB cases detection rate at 70 per cent. Around 80 per cent of health staffs have completed the training for the implementation of this programme.

3.5 Nutritional Status and Its Relationship to Health

In many countries, including India, nutrient absorption and utilization by the body is less efficiently carried out because of the presence of frequent infectious episodes like diarrhea and upper and lower respiratory infection. Infection causes nutrition status to deteriorate; at the same time under nutrition decreases resistance to infection – a synergistic relationship. Thus, 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 and communication regarding the importance of nutrition can go a long way in bringing about long-term changes in attitudes and recognition by parents of the importance of nutrition for their children. Given the fact that Tamil Nadu is known for effectiveness of its nutrition programmes, this district is also expected to perform similarly. There are three major kinds of malnutrition features among children.

They are underweight, stunted and wasted. As there is no data on stunted and wasted status in the district, only underweight status is presented here.

3.5.1 Weight for Age

The TINP programme data indicated that Tiruvannamalai was one of the bottom five districts in terms of weight for age by 1999. In fact, between 1996 and 99, it moved from the 7th rank to the 14th rank indicating poor performance in relation to other districts. Analysis of ICDS data indicated that weight for age status had improved considerably between 1996 and 2001 both in the case of moderately malnourished and severely malnourished. The district had performed considerably lower than that of Kanniyakumari district and moderately lower than that of Vellore district regarding weight for age of children. When compared to Dharmapuri district it had fared well regarding moderate malnourishment status. But Dharmapuri had fared well regarding severe malnourishment status. The ICDS data for the year 2005 indicated that the district had further progressed in addressing malnourishment issue. Only 3.3 per cent of the children were found to be in the moderately malnourished (Grade II) category and only 0.6 per cent was found in the severely malnourished category (Grade III & IV) in this district.

Of the eighteen blocks of Tiruvannamalai district, only four blocks had less than 95% of children in the Normal plus Grade I category (Chetpet, Thurinjapuram, Jawadhu Hills & Anakkavur).

Table 3.17: Nutritional Status of Children in Age-group 0-36 Months in Tiruvannamalai District, 2005

Nutritional Grades	No	Percentage
No of Children	98904	
No of Children Weighted	96276	
Normal	63027	65.5
Grade I	29158	30.3
Grade II	3188	3.3
Grade III & IV	60	0.06

Source: WB ICDS, Tiruvannamalai

Indian Academy of Paediatrics (5 grades) - >80% of reference wt for age: Normal; 71-80 %: Grade I malnutrition; 61-70%: Grade II malnutrition; 51-60 %: Grade III malnutrition; ≤50%: Gr. IV malnutrition

Objectives for Tenth Plan on Nutrition

- Making Tamil Nadu a malnutrition free State
- Increased focus on prevention of malnutrition rather than its management.
- Bringing out a policy on nutrition, **"Tamil Nadu State Nutrition Policy"**
- Strengthening the quality, reach and effectiveness of inputs for children, pregnant/lactating women and elderly.
- Increased focus on the health and nutritional status of adolescent girls.
- Combating hunger through the continued provision of nutritious noon meals to identified vulnerable sections.
- Continued coverage of the aged poor and other pensioners under noon meals for social security.
- Promotion of overall development of the young pre-school child.
- Introducing a whole Life Cycle Nutrition Security approach by revamping existing schemes and integrating WB-ICDS III, General ICDS and the NMP.

Interventions in the Tenth Plan

- General ICDS
- World Bank Assisted ICDS III
- Noon Meal Programme
- Pradhan Mantri Gramodaya Yojana
- Kishori Shakti Yojana
- UDISHA Training.

Major Nutrition Interventions for 'Malnutrition Free State'

i. Promoting Behavioural Change Communication
   - Family Counseling & Follow up for all families with pregnant women and children under three years
   - Local community education on key family health and nutrition practices
   - Mass media campaign on long term sustained basis

ii. Curative health care improved at village level in Government and private health facilities

iii. Social marketing of iodised salt, Iron and Folic Acid and Vitamin A supplements, nutritious food mixes and other low cost vitamin/mineral premixes

iv. School-based interventions including water, sanitation and health care facilities, health and nutrition education on key family practices and life skills training

v. Revamping of Public Distribution System to enable
   - management by women's Self Help groups
   - diversify the food items available
   - ensure constant supply of necessary nutrients in adequate quantities for poor families

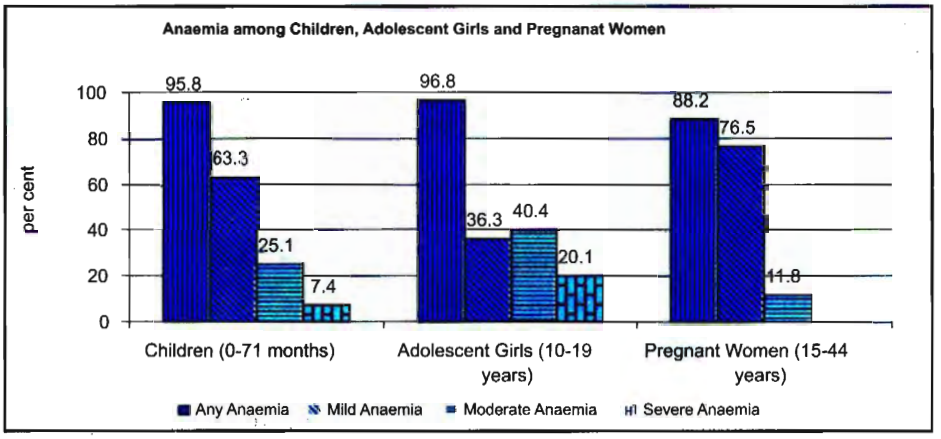
vi. Revamping of existing direct nutrition programmes to enable management by women's Self Help Groups and /or Local Bodies.

But DLHS 2002 found that 46 per cent of the children below 6 years of age were underweight and 21 per cent were severely underweight. This indicates that more attention is needed to address the issue.

3.5.2 Anaemia

Children in the age of 6-24 months are most vulnerable to anemia and it can result in impaired cognitive performance, behavioral and motor development coordination, language development and scholastic achievement, besides increasing morbidity from infectious diseases. DLHS 2002 found that 96 per cent of the children were anemic. Among them 7 per cent had severe anaemia and 25 per cent had moderate anaemia. Rural children were more anaemic than urban children. There was no difference in the prevalence of anaemia in terms of sex, standard of living and age. Adolescent girls need an optimum level of haemoglobin to prepare themselves fit for child bearing in course of time. Anaemia would hinder this process. About 97 per cent of adolescent girls (10 to 19 years) were anaemic. Among them 20 per cent were severely anaemic and 40 per cent were moderately anaemic. Considerable level of anaemia among adolescent girls was found irrespective of socio-economic and demographic background. Anaemia among pregnant women results in increased risk of premature delivery and low birth weight. About 88 per cent pregnant women were anaemic. Among them 12 per cent had moderate anaemia. This data goes well with the data provided by MCH monthly report.

Fig. 3.9



Source: DLHS-RCH, 2002

Table 3.18: Prevalence of Anaemia in Tiruvannamalai

Age Groups		Tiruvannamalai	Tamil Nadu
Women	**Any Anaemia**	66.4	51.7
	Severe Anaemia	23.2	11.8
Adolescent Girls		78.1	61.4
Children under 5 years		100	73.2

Source: Form 9- MCH Monthly Report (Dept. Public Health & Preventive Medicine, GoTN

Prevalence of anaemia among women was found to be 66.4 per cent for Tiruvannamalai district in the year 2003-04 which was very high as compared to state level of 51.7 per cent. Almost one fourth (23.2%) were found to be severely anemic, while the state figure was only 11.8. The prevalence of anaemia among adolescent girls was 78.1 per cent against the state level prevalence of 61.4 per cent. The prevalence of anaemia among under 5 children in Tiruvannamalai district was 100 per cent while the state level was at 73.2 per cent.

Both the data sets indicate that anaemia was a major problem in the district. The prevalence of anaemia in the district was far above than the goals for 2007 set by Tamil Nadu state namely 40 per cent for adolescent girls and 50 per cent for children below three years and pregnant women. Large scale initiative is needed to address this issue in a comprehensive manner. State has been providing IFA tablets to address the issue. The data on the same is given below. According to the data, above 95 per cent of the girls were covered under this programme in both the years. The same level of coverage was observed in most of the blocks.

Table 3.19: Distribution of IFA tablets to Adolescent Girls under Anaemia Control Programme in Tiruvannamalai HUD: 2004 & 2005

Year	Target	Average per Week
2004	95763	92195
2005	181368	172433

Source: Deputy Director of Health, Tiruvannamalai HUD

3.6 State Provisioning of Direct Nutrition Services

3.6.1 Noon Meal Programme

The noon meal programme was originally started to combat hunger and to encourage parents to send their children to school. It had a very positive impact on school enrolment and attendance. Later, serious attempts were made by the Government of Tamil Nadu to combine provision of food with other services such as health care, immunization, growth monitoring, pre and post-natal care for women and care for old people. This has been done through programmes like ICDS and TINP. There has been a significant shift in policy focus from hunger to nutrition in Tamil Nadu. This was reflected in the policy for Malnutrition Free Tamil Nadu brought by Tamil Nadu Government by 2002-03. The available data indicated that more than 45000 children had been covered under Noon Meal Programme (NMP) of ICDS of Tiruvannamalai district in the year 2005. Though old age pension beneficiaries and pregnant women were also supposed to be covered, their coverage was very meager.

Table 3.20: Details of Beneficiaries of Noon Meal Programme in Tiruvannamalai District

	2003	2004	2005
Children Received Noon Meal	39086	44071	45874
OAP Received Noon Meal	29	NA	5

Source: WB ICDS–Tiruvannamalai District

3.6.2 Free Rice Scheme – ICDS

It is very crucial to improve the health and nutrition status of women starting from childhood to motherhood for reducing LBW and pregnancy complication. The free rice scheme of ICDS attempts to do the same. The weight gain is also periodically monitored. The table given below indicates the average number of beneficiaries per quarter in the district.

Table 3.21: Status of Free Rice Distribution in Tiruvannamalai District

Category	Average No of Beneficiaries per quarter
11-14 Yrs Adolescent Girls	43062
15-19 Yrs Adolescent Girls	9549
ANC/PNC	1788

Source: WB ICDS (February 2005 to January 2006), Tiruvannamalai

3.6.3 Public Distribution System

Though PDS primarily aims at food security and price stability, its contribution to nutrition particularly to vulnerable section cannot be overstated. It is discussed in detail in Chapter on Infrastructure.

3.6.4 Provision of Vitamin A Supplement and IFA Tablets

An oral dose of Vitamin A supplement is given once in six months for reduction of risk of night blindness among children aged 6 months to 5 years. DLHS 2002 found that only 37 per cent of the children were given at least one oral dose of Vitamin A supplement. Just 8 per cent of children had received IFA tablets. This indicated the need for operational mechanism similar to that of immunization for provision of Vitamin A and IFA tablets. In the recent years health department had tried its hands on campaign approach for provision of Vitamin A supplement to children and post natal lactating mothers. The achievement was in terms of coverage was substantial in both the HUDs It is recorded in Cheyyar HUD that above 1.5 lakh children in the age group of 6 months to 5 years had been administered with Vitamin A solution during the financial years 2001-02 to 2004-05. In Tiruvannamalai HUD, three days campaign in the year of 2005 covered 121081 with 61936 males and 59145 females against the targeted number of under 5 children 125835 with 67411 males and 58424 females. Three days campaign on Post Natal Lactating Mothers during 2005 covered 12674 mothers in Tiruvannamalai HUD and the overall achievement percentage to the targeted mothers was 96. Each block covered more than 95 per cent of the targeted number of mothers.

3.7 Non-nutritional Factors and their Impact on Nutrition and Health

There are many non-nutritional factors besides direct nutrient uptake that has significant influence on improving the nutritional status. They are improved water supply, improved sanitation, reduction in infections, universal immunization etc. Decisions on nutrient uptake are with individual households and would vary depending on various factors. But many of the non nutritional factors require very little effort on the part of individual household. Most of these factors are under the purview of the State and

hence comparatively easier to control. Inter sectoral coordination between the departments dealing with water, hygiene, sanitation and health is crucial for the prevention of diseases, especially water borne diseases. The recent chikungunya out spread is a case in point. An analysis of the impact of health promoting factors on the health status of the population is presented here.

3.7.1 Water and Sanitation

Water and sanitation has significant impact on nutrition and provision of these basic facilities is also crucial for achieving the goal of health for all. Experience in mortality of the developed countries shows that over two third of the decline in morality in these countries was achieved before modern medicine became available. This decline was mainly achieved because of improvements in the environmental sanitation and personal hygiene. These changes reduced the incidence of infectious and parasitic diseases, especially those that were caused by polluted water supply and food. It is observed that incidence of diarrhoea cases is less among those using own wells are piped water at home. Further 80 per cent of all diseases and sicknesses are water-borne and water-related. Hence, specific attention is given to assessing the availability and accessibility of drinking water and sanitation facilities. The data from 2001 Census, TWAD and DRDA are mostly relied upon.

3.7.2 Water Supply

An analysis of acute diarrhoeal disease cases in Tamil Nadu revealed that higher percentage was reported in Tiruvannamalai mainly due to low percentage of households with water sources within premises. So it is essential to look at the current situation of safe water availability. In 2001, only 21.9 percent households in Tiruvannamalai had access to drinking water in their premises (WP). This situation was not uniform across the district. While in Arni 36.7 per cent of households WP water supply, in Vandavasi it was only 14.8 per cent. Tiruvannamalai district fared lower than the state in this aspect. About 12.1 per cent of households were getting water supply far away from their home. This indicates the additional burden women were facing in those households. Here also there was variation across the district. Cheyyar had only 8.5 per cent households getting their drinking water away from their home. But in Chengam it was 14.4 per cent. The district and the state were on par regarding this aspect.

There was a wide variation between rural and urban areas regarding availability of drinking water within premises. While in rural areas 15.7 per cent households had access to drinking water within premises, 53.4 per cent households in urban areas had such access. The general notion is that the proportion of households accessing water away from home would be lower in urban areas than in rural areas. But interestingly, in Tiruvannamalai, more proportion of urban households were getting their drinking water away from home than their rural counterparts. Three of the six taluks reflected the same status. Sudden urban growth in most of these areas could have been the reason for this. Tap remains as the major source of drinking water followed by hand pump and tube wells.

As for the number of habitations having access to water supply there had been a significant improvement in Tiruvannamalai district. Habitations under fully covered status improved from 2000 in

1991 to 3260 by 2004-05. By March 2005, 605 habitations were having partial access to water supply. These 605 habitations were expected to be fully covered by 2007-08. Concerted efforts are needed to drastically reduce households accessing drinking water away from their home and to considerably increase the proportion of households having drinking water within premises category.

Table 3.22: Status of Drinking Water Availability Based on Location in Tiruvannamalai District

District/Taluk/ State	All			Rural			Urban		
	WP	NP	Away	WP	NP	Away	WP	NP	Away
Tiruvannamalai	21.90	65.97	12.14	15.72	72.32	11.96	53.44	33.52	13.05
Taluk									
Arni	36.72	53.33	9.95	30.20	60.43	9.37	56.47	31.82	11.71
Cheyyar	24.42	67.08	8.50	20.30	70.79	8.90	55.32	39.19	5.49
Vandavasi	14.77	73.32	11.91	10.50	78.35	11.16	49.70	32.26	18.04
Polur	18.30	68.50	13.19	13.78	73.49	12.73	49.41	34.17	16.42
Chengam	15.34	70.26	14.39	13.55	72.05	14.39	36.91	48.70	14.39
Tiruvannamalai	25.37	61.43	13.20	12.26	74.42	13.32	57.59	29.49	12.92
Tamil Nadu	**27.06**	**60.82**	**12.12**	**11.95**	**74.72**	**13.32**	**48.25**	**41.32**	**10.43**

Source: Census of India, 2001

WP : Within Premises NP : Near Premises

Table 3.23: Details of Source of Drinking Water in Tiruvannamalai District

Region		Tap	Tube-well/ Hand-pump	Well	Other
Tiruvannamalai	Rural	68.29	19.03	11.00	1.68
Tamil Nadu		60.48	24.81	11.34	3.37
Tiruvannamalai	Urban	78.36	12.51	6.65	2.47
Tamil Nadu		65.40	20.51	9.61	4.47
Tiruvannamalai	Combined	69.94	17.96	10.29	1.81
Tamil Nadu		62.53	23.02	10.62	3.83

Source: Census of India, 2001

Sanitation is not only important for health and nutrition, it is also important to ensure dignity and privacy of rural women. One cannot overstate the embarrassing situation rural women face due to non-availability of toilets. The percentage of population having access to sanitation facilities had increased from less than 9 per cent to 16.5 per cent in Tiruvannamalai district between 1991 and 2001. Still the sanitation facility in the district was far below than the state (35.2%). Even within the district, Arni and Tiruvannamalai had about 25 per cent of the households having access to sanitation facilities. This was due to the presence of a large number of urban population.

Table 3.24: Details of Toilets and Drainage Facilities in Tiruvannamalai District

District/Taluk/ State	No latrine	Drainage type		
		Closed	Open	No drainage
Tiruvannamalai District	**83.5**	**7.9**	**24.3**	**67.8**
Taluk				
Arni	73.9	14.5	27.0	58.5
Cheyyar	85.8	5.7	28.2	66.1
Vandavasi	87.4	5.3	21.6	73.1
Polur	86.3	6.3	24.0	69.7
Chengam	89.6	4.4	19.4	76.2
Tiruvannamalai	77.3	12.0	26.2	61.8
Tamil Nadu	**64.8**	**16.9**	**28.2**	**54.9**

Source: Census of India, 2001

Concerted efforts have been put by the district administration to construct rural toilets under various government schemes. But these programmes were not very successful due to lack of water facilities. Another major reason was lack of importance given to toilets by rural population. In the recent years, the emphasis is on provision of quality community toilets with water facilities to women. Under total sanitation campaign 37 Integrated Women Sanitation Complex (IWSC) were built at the rate of two per block. Women SHG's are expected to manage this infrastructure.

Drainage is another major aspect of sanitation. Closed drainage is much better than open or no drainage in terms of sanitation. But in Tiruvannamalai district, only 7.9 per cent of the households had closed drainage during 2001. Across the district, only in Arni and in Tiruvannamalai, more than 12 per cent of the households had closed drainage. In all other taluks, the share of households having closed drainage was low. Like the sanitation infrastructure in individual households, common sanitation infrastructure was also poorly developed in the district. Underground sewerage system was poorly developed even in the municipalities.

The above discussion makes it clear that making available drinking water within premises and facilitating good drainage system both at home and streets needs to be taken up on a priority basis by the district administration. Making available proper underground sewerage system through public investment will also significantly improve the drainage system at home through private investment. Unlike other non nutritional factors sanitation at home depends largely on awareness and preference. So education is the long-term solution to ensure significant levels of toilet usage in the district. Utilization of toilets is a good indicator of sanitation situation than that of availability of toilets and in future, the data collection should be on that basis.

3.8 Utilization of Health Services

The district's health infrastructure was lower than that of the state when the population per doctor and population per bed were considered. But considering the norm of one primary health centre (PHC) for per 30000 population the current number of PHC (81) is adequate. The increase in number of PHCs

from 35 to 81 in the last fifteen years is a significant step in creation of basic health infrastructure in the district. Across the blocks there was lot of variation in the population served per PHC during 2004-05. For example, more than 35000 people were getting health services per PHC in the Arni block. Attention needs to be given to ensure that all the blocks have PHCs at the rate of one PHC per 30000 population. In the same way, all vacancies need to be filled at the earliest to avoid the status of one medical officer looking after more than one PHC.

Table 3.25: Availability of Health Infrastructure in Tiruvannamalai District

Items	Tiruvannamalai	Tamil Nadu
Population (2001)	2186125	62405679
Total Beds	971	49856
Population per bed ratio	2251	1252
Total no. of doctors	182	8907
Population per doctor	12012	7006
Population Served per PHC	26989	

Source: *Statistical Handbook of TN 2003*

About 2.7 million outpatients were treated every year through PHCs with the average out-patient per day per PHC hovering around 90. About 15000 in-patients were treated annually through PHCs in the district.

DLHS, 2002 found that the utilization of government services for treating reproductive and child health related aspects varied from 100 per cent for female sterilization to 37 per cent for complication due to contraceptive pills. For ANC, it was 60.5 per cent, 49.7 per cent for pregnancy complication, 46.6 per cent for post delivery complications and 44.5 per cent for treatment of RTI/STI. Private health facility catered to the rest of the patients on these aspects. Utilization of private services though substantial, its status could not be presented here due to lack of data.

3.9 Child Immunization

An important way to reduce child mortality is immunization against the six major vaccine preventable diseases. DLHS, 2002 found that 87 per cent of children (12- 35 months) were fully protected through immunization in Tiruvannamalai. About 91 per cent of urban and 86 per cent of rural children were fully protected. Most of them were immunized at Government health facility (88 %). Immunization was more or less uniform across education, castes and standard of living. Coverage of pulse polio vaccine was 100 per cent in the district in the recent years indicating high performance. The above analysis indicates that with some additional efforts, the district can easily achieve 100 per cent immunization.

3.10 Health Camps

Different medical camps organized by the health department play a very important role in creating awareness among the general mass regarding their health. Those who do not have easy access to the medical facilities have an opportunity to check their health conditions in different health camps. The number of people joining such camps during recent years has increased.

The data for the year 2005 indicated that around 73 to 79 per cent of students who attended the school health camps had been treated for any one of the minor ailments. Three main diseases detected in the school camps were ARI (Acute Respiratory Infection), dental carries and worm infection. A considerable number of students were also suffering from Vitamin A deficiency. Around 270 students had been referred to the taluk hospitals from the school health camps.

According to the report of family health awareness campaign–2005 in Tiruvannamalai HUD, 3.7 per cent of total estimated target population in the age group of 15-49 years had attended the health camps. The attendance of the females was nearly double. The data also indicated that 80 percent of total attended persons were suffering from some type of STI/RTI diseases. There is need for more number of health camps in the district.

3.11 Health Expenditure

Project Appraisal Document by the World Bank pertaining to Tamil Nadu Health Systems Project, 2004 indicated that per capita spending per annum for medical and public health was Rs. 77 and for family planning was Rs. 28, putting the total per capita health expenditure per annum at Rs. 98. For Tamil Nadu it was Rs. 107, Rs. 23 and Rs. 131, respectively. This indicates that some other districts were getting the lion's share. In Coimbatore which is considered to be one of the rich districts in Tamil Nadu, the per capita health expenditure was Rs. 150. The Tamil Nadu Human Development report categorized Tiruvannamalai district as one of the bottom five districts with poor social and economic development. By that criterion per capita health expenditure must have been considerably more in Tiruvannamalai when compared to that of Tamil Nadu.

The project document also indicated that about 75-80 per cent of the total health expenditure was spent on salaries and wages indicating the systemic malaise in health budgeting. This systemic malaise would significantly reduce effectiveness of health expenditure.

3.12 Summary and Conclusion

The district has achieved replacement level of population with considerable reduction of CBR, CDR and natural growth rate of population. In terms of CBR and CDR the district has achieved the goals set for the year 2000 by National Health Policy. The decadal growth rate of population in the district was lower than that of Kerala, which is considered as a model among South Asian countries. All these factors indicate that a conducive demographic environment for human development exists in the district. Though it is difficult to identify all the reasons for this fertility transition, considerable increase in female literacy and consequent adoption of contraceptive measures could have played an important role. In-migration being marginal in scale when compared to the total population did not have much influence on population change. Out migration could have had the effect but it could not be ascertained due to lack of data. Out migration could have been the main reason for drastic changes in population witnessed in some of the blocks.

Sex ratio in the district had improved between 1991 and 2001 and stood at 995 in 2001. The improvement was more in the case of urban areas and in SC social group. This indicates that the

position of women with respect to men in the pertaining region, social group and place of residence had improved. Slum population is on the increase as urbanization is happening on a large scale. Between 1991 and 2001, many rural areas had become urban and so the population growth of urban areas was drastically high.

Life expectancy at birth (LEB) had improved considerably between 1996 and 2001 in the district. LEB of male was 67 years and that of female was 70 years during the same period. This improvement can be attributed to the significant reduction in MMR, IMR and incidence of killer diseases. There was considerable decrease in MMR in the district between 1998 and 2003 and it stood at 1.6 in 2003. Similarly performance regarding IMR was also very impressive. From 41.7 in 1998, it had reached 29.3 in 2003. The district has achieved the goal for 2000 set by National Health Policy regarding MMR and IMR. The incidence of leprosy has come down very drastically in recent years and the district is closer to goal set by National Health Policy 2002 namely eliminating leprosy by 2005. The incidence of malaria and filaria was minimal in the district. So was the case of chikungunya in the recent past. The performance of health infrastructure was quite appreciable with reference to ANC and immunization. The share of safe deliveries also improved significantly from 51 per cent in 1998-99 to 78 per cent in 2002. These could be the reasons for a significant reduction of MMR and IMR in the district. A significant improvement was witnessed in the nutritional status of children in terms of weight for age in the district.

The areas for concern for demographic transition are a high percentage of girls marrying before the legal age of 18 and a considerable proportion of high order births. The corresponding figures for the district as per DLHS-2002 were 25 per cent and 34.2 per cent respectively. Both of these aspects have future consequences like high possibility of maternal mortality, infant mortality, still births, low birth weight etc. Another important issue was that much of the decline in TFR had been achieved by the decline in child bearing of older women and not that of young women. DLHS-2002 indicated that the age-specific fertility in the younger age groups 20-24 and 25-29 were 0.161 and 0.102, respectively. The total unmet need for family planning was 14 per cent and there was no male sterilization. Sex ratio of 0-6 years age group in the district had declined from 964 to 948 between 1991 and 2001 indicating a move towards reversal in the trend favouring boys. This can be due to sex selective abortion and female infanticide. Interestingly, this practice has been relatively new unlike in other districts known for it.

There are also many areas for concern regarding mortality and morbidity. Even after good performance in ante natal care (ANC) the major medical causes for maternal deaths in the district are PIH and PPH. In the same way, the reasons for IMR were asphyxia, low birth weight, prematurity and congenital heart diseases. More than 50 per cent of infant deaths were happening in the early neo natal stage (0-7 days) and still birth rate was around 25. The share of low birth weight babies to total number of live births was more than 10 per cent in the district. The share of home deliveries in the total deliverers was considerable in the district. Various studies found that prevalence of and vulnerability for both HIV and trafficking was high in Tiruvannamalai district. Very high level of

anaemia was found among children, adolescent girls and pregnant women. The problem was more or less uniform across standard of living and place of residence. The district is far away from the goal for 2007 set by the State Tenth Plan regarding anaemia. The district had a poor record pertaining to providing drinking water within premises, usage of toilets in home and presence of drainage system at home and street.

It can be observed that the basic reason behind most of the health and demographic issues mentioned above arises from the disadvantaged position of women in the society subscribing to the view that health of population is largely dependent on the health of the women. Even for the significant improvements observed in the district, the improvements in women's position was very instrumental. So the long-term solution for the above-mentioned issues lies in improving the position of women in the society. It can also be observed that poverty is another major underlying cause of the above-mentioned issues. So, significant investment on female literacy and education and livelihood enhancement is essential to considerably improve the health status in the district.

In the medium term, thrust should be given on the following areas to make a significant positive impact on the health scenario of the district.

- Identifying the health hot spots in terms of geographical area, social group, age group and gender through decentralized participatory approach and addressing them in a targeted manner. Its time to go beyond average and district level indicators.
- Proactive plan and implementation to meet the health needs of urban population in the district as it is growing at a tremendous pace.
- It is also time to shift the focus from quantity of health services to quality and efficiency. Clear performance indicators and efficient monitoring system with incentives for better performance need to be put in place
- Promoting self help approach in handling health problems particularly with respect to women. Self help programmes improve women's knowledge of their bodies and empowers them for gaining control over their bodies and their sexuality.
- Promoting healthy food habits like including millets and non-cultivated food items like many green in the diet, because change in food habit is one of the primary reasons for various illnesses witnessed now. This would considerably reduce anaemia and non-conventional diseases.
- Ensuring community ownership of many health initiatives through various means so that health services become demand driven in nature.
- Learning from success stories at micro and macro levels and taking that learning to other areas.
- Increasing health budget for the activities component in the district.
- Promoting Indian system of medicines on a large scale.
- Bringing in many private health institutions in a way that complements and supplements the government health efforts. This should go hand in hand with regulation of private practitioners through commonly accepted service and cost norms.

Other specific suggestions are,

- Improving access to 24 hour facility based emergency obstetric and neo natal care to reduce MMR and IMR. The recent initiative to convert one PHC in each block to this kind of facility is a step in the right direction.
- Improving the quality and effectiveness of ANC.
- Increasing the share of institutional deliveries to 100 per cent by 2010 as envisaged by the State Population Policy
- Significant educational efforts need to be made to reduce the share of women marrying below the age of 18 years and to reduce higher order births. Adolescent girls should be targeted for these education efforts.
- Addressing the issue of anaemia in a comprehensive and an effective manner. Coverage of target group for IFA tablets should be drastically increased. Here too the recent initiative to use Indian system of medicine to address anaemia is a step in the right direction
- Improving the participation of men in contraception through proper education and provision of services
- Identifying specific reasons for declining juvenile sex ratio and addressing the same on a priority basis.
- For this, the implementation of the Preconception and Prenatal Diagnostics Techniques Act (PC & PNDT) needs to be ensured.
- Ensuring adequate manpower by filling the vacancies in the health department
- Giving high priority to address HIV/AIDS in the district. In this respect, the recent initiative regarding convergence of HIV /AIDS with RCH Programme is a positive move.
- Giving high priority to make available drinking water within premises and to facilitate good drainage system both at home and streets.

To understand the health situation in the district comprehensively, there is a need to look at the conditions of all sections of people rather than judging the impact of development in health as averages. Averages most often mislead since they overlook distributive justice. While data on the education situation is available social groupwise, most of the health and nutrition-related indicators are available only at an aggregate level. The same inadequacy was also witnessed for data on water and sanitation situation in the district. Understanding of health situation of vulnerable groups like SC, ST is possible only if disaggregated data is available. The recent initiative to collect systematic information on MMR through verbal autopsy is to be appreciated. There is also inadequacy regarding data collection on disease incidence and so in calculating disease burden. So a system of independent, disaggregated data collection, analysis and flagging in the right forum on aspects regarding health, nutrition and sanitation should be put in place.

Exclusive study on the out migrants from the district is to be taken up regarding their destination, purpose and quality of well being in the migrated place. This information could throw light on the human development condition of considerable share of population in the Tiruvannamalai district.

Jawadhu Hills is an outlier in the district in terms of high population growth, low sex ratio, high home deliveries and low performance in other health indicators. Focused attention need to be given to improve the services of current health infrastructure both in terms of quality and quantity to bring changes in the short term. Intensive information, education and communication effort should also be taken up to bring attitudinal change. In the long term, improving the education status particularly that of women and economic situation would bring sustained improvements in health in this block. Selection of this block under *Vaazhndhu Kattuvom* is a step in the right direction.

Chapter IV

Literacy and Education

Literacy and education has the unique characteristics of being both the means and end of human development, as it has both an instrumental and an intrinsic value. They have a great instrumental role in improving the capabilities, thereby improving the freedom of choice of human beings which is the basics of human development. Tamil Nadu, given its rich heritage in education, is in the forefront with regard to several educational indicators such as literacy, school enrolment, infrastructure, access and achievement. Tiruvannamalai being a backward district, a lot of attention was bestowed by the State on education in the recent past. In this chapter progress in literacy, school education and higher education are discussed. Elementary education is examined as an indicator of the present level of human development as well as a means for greater human development in future. While data from various sources are used, data from DISE have been extensively used in the study.

4.1 Literacy Rate

4.1.1 Literacy performance of Tiruvannamalai

One cannot overstate the instrumental role of literacy in bringing out various dimensions of human development. Ravallion & Datt (2002) observed that literacy played a notable role in making the growth of non farm economy pro-poor in various states of India. The role of female literacy is much more crucial for bringing about human development not only in this generation but also in future generations. Abhiman Das (2001) found that female literacy served as the threshold of women for bringing in fertility decline in various districts of India. There had been a significant progress in literacy rate of the district between 1991 and 2001 from 53.1 to 67.4 per cent. This was mainly due to significant progress in the literacy rate of both males and females, with the females (16.38%) outdoing males (12.47%). As a result, there was a slight reduction in male female literacy gap from 27.45 to 23.54 percent. Though the district literacy rate was marginally better than that of the nation, it was far behind when compared to the state getting the 23rd rank among the 30 districts in 2001. So there is so much need to invest in this district to improve the educational status. Particular attention is needed to improve the female literacy as the male-female literacy gap is very high. It is heartening to observe that Tiruvannamalai is fast catching up with the State through higher growth rate. There is significant rural urban gap in literacy, particularly so for female literacy. But this gap is narrowing due to higher growth rate of literacy in the rural areas between 1991 and 2001.

4.1.2 Literacy by Block and Gender

There had been a very significant rise in the literacy rates in all the blocks between 1991 and 2001, particularly so with Jawadhu Hills, Polur, Thurinjapuram and Chengam. But there are wide variations across blocks and across social grouping in the district. There were as many as nine blocks exhibiting higher literacy rate than the district as a whole during 2001. First five blocks performing relatively better with respect to literacy rate are Arni, Tiruvannamalai, West Arni, Cheyyar and Vandavasi.

Jawadhu Hills was the worst performing block with only 38 per cent literacy rate. This was followed by Thandrampet, both standing apart from other blocks in terms of very low literacy. The other three blocks performing poor in terms of literacy rate in the year 2001 are Kalasapakkam, Chengam and Pudupalayam. The literacy rates of all the blocks were lower than the state average except Tiruvannamalai and Arni.

The female literacy rate in Jawadhu Hills was also found to be very poor (just 26.22 %). Female literacy in the rest of the blocks was in the range of 46 to 64 per cent. All the blocks had female literacy lower than that of the state. Considerable positive changes in female literacy rates in 2001 were observed in the blocks of Polur, Thurinjapuram and Chetpet. A positive feature in this district was that the male-female literacy gaps had narrowed in all the blocks except Jawadhu Hills between 1991 and 2001. Here also Jawadhu Hills is an outlier with the male-female literacy gap widening from 15.26 to 23.29 per cent in the same period. All the blocks had a higher male-female literacy gap than that of the state. The lowest male-female literacy gap that was observed in the block of Tiruvannamalai was also above the state average. Care has to be taken to increase the literacy rates in all the blocks with high focus on female literacy.

Table 4.1: Status of Literacy in Tiruvannamalai

Block / Urban	Literacy		Male literacy		Female literacy		Changes in Total Literacy Rate (1991-2001)			Male female literacy gap	
	1991	2001	1991	2001	1991	2001	M	F	T	1991	2001
Vembakkam	52.66	67.96	68.17	81.25	37.00	54.66	13.08	17.66	15.30	31.17	26.59
Cheyyar	58.62	70.85	72.30	82.44	44.84	59.37	10.14	14.53	12.23	27.46	23.07
Anakkavur	54.11	66.83	69.13	79.95	39.15	53.71	10.82	14.56	12.72	29.98	26.24
Pernamallur	53.37	67.46	70.06	81.42	36.97	53.87	11.36	16.90	14.09	33.09	27.55
Vandavasi	56.63	70.75	70.16	81.64	42.93	59.89	11.48	16.96	14.12	27.23	21.75
Thellar	54.88	67.47	69.80	80.13	39.82	54.69	10.33	14.87	12.59	29.98	25.44
Arni	62.28	74.42	76.22	85.34	48.34	63.62	9.12	15.28	12.14	27.89	21.72
West Arni	59.29	71.04	74.84	83.33	43.91	58.97	8.49	15.06	11.75	30.93	24.36
Polur	53.56	70.15	68.15	82.28	38.96	58.19	14.13	19.23	16.59	29.19	24.09
Kalasapakkam	47.24	62.70	61.88	76.20	32.29	49.17	14.32	16.88	15.46	29.59	27.03
Chetpet	52.57	67.96	67.70	81.02	37.34	55.22	13.32	17.88	15.39	30.36	25.80
Thurinjapuram	47.64	64.55	62.55	77.54	32.27	51.48	14.99	19.21	16.91	30.28	26.06
Kilpennathur	53.42	68.42	66.52	80.36	40.14	56.78	13.84	16.64	15.00	26.38	23.58
Tiruvannamalai	61.92	74.05	73.59	83.70	49.97	64.31	10.11	14.34	12.13	23.63	19.39
Pudupalayam	44.46	60.45	57.17	72.57	31.56	48.25	15.40	16.69	15.99	25.61	24.32
Chengam	44.72	61.64	56.00	72.04	33.04	50.99	16.04	17.95	16.92	22.96	21.05
Thandrampet	42.24	57.82	53.93	69.37	30.23	46.00	15.44	15.77	15.58	23.70	23.37
Jawadhu Hills	18.98	38.17	26.33	49.51	11.07	26.22	23.18	15.15	19.19	15.26	23.29
District	**53.10**	**67.39**	**66.70**	**79.17**	**39.25**	**55.63**	**12.47**	**16.38**	**14.29**	**27.45**	**23.54**
State	**62.70**	**73.50**	**73.80**	**82.30**	**51.30**	**64.60**	**8.50**	**13.30**	**10.80**	**22.50**	**17.70**

Source: Census of India

4.1.3 Literacy Rate by Social Grouping

While SC social group was lagging behind the overall literacy rate by a small margin, ST social group fared very badly when compared to the district average and in general also. Targeted attention in the coming years on educating children from these social groups is very much essential to bring a

significant change in the situation. Peculiarly the male female literacy gap is lower in the case of SC and ST than that of district average.

There were 2.84 lakh illiterate persons living in the district in the age group of 15-35 of which 1.57 lakhs were females in 2001. A high number of illiterate persons was found in the block of Tiruvannamalai followed by Thandrampet, Chengam and Polur. Among the urban bodies, largest portion of illiterate persons more than 25000 were found in the block of Tiruvannamalai during the year of 2005. This age group is the most productive age group of the district. So proper care need to be taken to attract them to the adult education centres. As for the future, all depends on how children are enrolled into the education system, retained and given quality education. The following section discusses the status of the education system.

Table 4.2: Status of Literacy among SC & ST in Tiruvannamalai, 2001

Block / Urban	SC			ST			Gender Gap	
	M	F	T	M	F	T	SC	ST
Vembakkam	74.75	50.29	62.52	57.69	38.81	48.25	24.46	18.88
Cheyyar	75.84	54.62	65.18	58.53	42.15	50.3	21.22	16.38
Anakkavur	73.55	49.41	61.48	56.76	38.13	47.45	24.14	18.63
Pernamallur	74.91	49.56	62.06	57.81	38.25	47.9	25.35	19.56
Vandavasi	75.11	55.1	65.09	57.96	42.52	50.23	20.01	15.44
Thellar	73.72	50.31	62.07	56.89	38.83	47.9	23.41	18.06
Arni	78.51	58.53	68.47	60.59	45.17	52.84	19.98	15.42
West Arni	76.66	54.25	65.36	59.16	41.87	50.44	22.41	17.29
Polur	75.7	53.53	64.54	58.42	41.31	49.81	22.17	17.11
Kalasapakkam	70.1	45.24	57.68	54.1	34.91	44.52	24.86	19.19
Chetpet	74.54	50.8	62.52	57.52	39.21	48.25	23.74	18.31
Thurinjapuram	71.34	47.36	59.39	55.05	36.55	45.83	23.98	18.5
Kilpennathur	73.93	52.24	62.95	57.06	40.31	48.58	21.69	16.75
Tiruvannamalai	77	59.17	68.13	59.43	45.66	52.58	17.83	13.77
Pudupalayam	66.76	44.39	55.61	51.52	34.26	42.92	22.37	17.26
Chengam	66.28	46.91	56.71	51.15	36.2	43.76	19.37	14.95
Thandrampet	63.82	42.32	53.19	49.25	32.66	41.05	21.5	16.59
Jawadhu Hills	45.55	24.12	35.12	35.15	18.62	27.1	21.43	16.53
District	72.84	51.18	62	56.21	39.5	47.85	21.66	16.71
Tamil Nadu	77.15	55.28	66.21	50.15	32.78	41.52	21.87	17.37

Source: Census of India

4.2 Elementary Education

India has been criticized for investing more on higher education to the neglect of basic education. The situation has changed to a large extent in the recent past in terms of policy attention and in the share of investment. In 2002, the 93rd amendment to the Constitution decreed free and compulsory education to all children between the ages 6 and 14. Through the Distict Primary Education Project, which was an externally funded scheme and Sarva Shiksha Abiyan, an exclusively Government funded scheme, specific focus was and is being given to universalize elementary education. The following section discusses the improvement in various parameters of elementary education in the district.

4.2.1 Access Rate

The Gross Access Ratio in the district for the year 2004-05 was 100 per cent for both primary and secondary schools. This is a significant achievement for the SSA programme in the district when compared to the status in 1993-94 particularly regarding upper primary schools. In the blocks or sub-blocks dominated by hilly tracks like Jawadhu Hills, different criteria need to be used for calculating GAR. More concentration of primary and upper primary schools is needed, given the poor availability of road and transport facilities in these areas. The SSA norm for upper primary and primary school ratio is 1:2 but in Tiruvannamalai district, this ratio stood at 1:1.321 by 2004-05. Around 35 primary schools need to be upgraded to the upper primary level to achieve the SSA norm.

Table 4.3: Access to Primary and Upper Primary Sections in Tiruvannamalai District

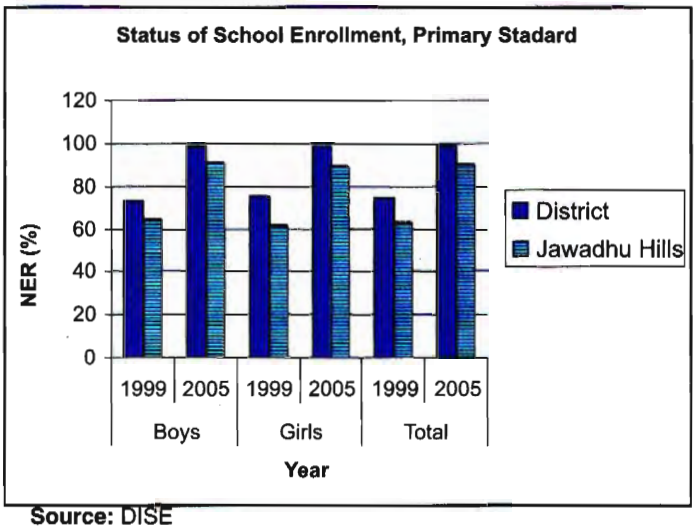
Year	GAR to Primary schools	GAR to upper primary schools
1993-94[1]	100	84.27
2003-04[2]	98.36	99.24

Source: [1] Tamil Nadu Human Development Report & [2]School Mapping, DISE

4.2.2 Net Enrolment Ratio

The Net Enrolment Ratio (NER) in the district as a whole in primary section was 98.17 per cent in 2005 with 17 out of 18 blocks performing in the range of 96.47 to 99.76 per cent. The only outlier was Jawadhu Hills as shown in the table. There had been a very significant progress in NER since 1999 in the district due to focused initiatives like District Primary Education Program and Sarva Shiksha Abiyan (SSA). Considerable increases in NER was observed for all the blocks, particularly so with Chengam and Kalasapakkam. No discrimination between boys and girls was observed in NER and in fact the enrollment of girls was better than that of boys in many blocks.

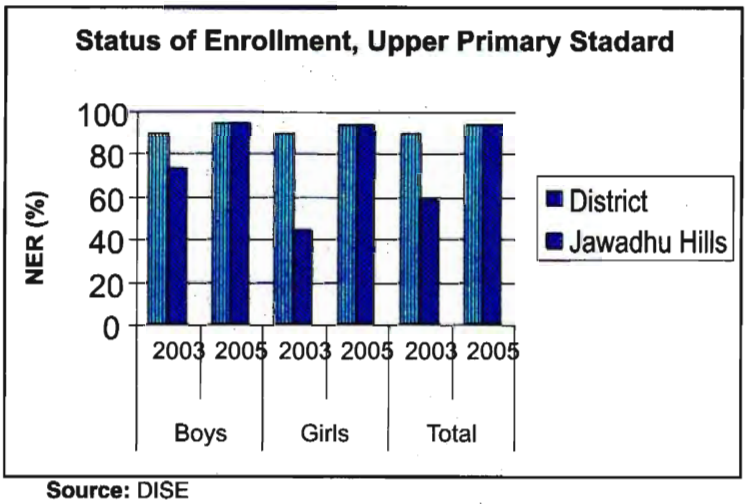
Fig. 4.1



Source: DISE

The Net Enrolment Ratio (NER) in the district as a whole in upper primary sections was 93 per cent in 2005 and the pattern exhibited by the NER primary schools was also found here. Here also the only outlier was Jawadhu Hills. There had been a significant progress in NER since 2002. The blocks of West Arni, Vembakkam and Thellar exhibit comparatively better NER in the recent years than other blocks. Unlike NER of the primary section, there is lot of scope to improve the NER of upper primary sections in most of the blocks.

Fig. 4.2



Source: DISE

The NER of SC students in the primary section was 96.1 per cent in 2005 indicating that there was not much difference between the SC social group and overall district. There was also not much difference between boys and girls in SC community. The overall NER for ST students in upper primary schools was 92 per cent in the year of 2005, again showing there was not much difference with that of the overall district. Slow growth of NER of the SC students in upper primary sections was witnessed in all the blocks.

Table 4.4: Status of School Enrolment in SC and ST Social Group in Tiruvannamalai

Stage of Education	NER- SC						NER- ST					
	Boys		Girls		Total		Boys		Girls		Total	
Primary	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
District	75	96.3	76	96	76	96.1	72	95.4	68	94.8	70	95.1
Jawadhu Hills	51	85.4	63	81.2	57	83.3	71	80.1	66	79.84	69	79.95
Upper Primary	**2003**	**2005**	**2003**	**2005**	**2003**	**2005**	**2003**	**2005**	**2003**	**2005**	**2003**	**2005**
District	89	93	88	92	89	92	75	95	63	94	69	94
Jawadhu Hills	74	80	73	75	73	78	76	80	37	54	57	67

Source: DISE

In respect of NER of ST children, most of the blocks lay above the district average except Jawadhu Hills. There was an increase in the NER of ST students, both boys and girls, in this block over the years. But the NER is yet to reach to 80 per cent. The year of 2001 may be termed as the bench mark year for primary schools as from this year the NER had started to increase. The NER of ST boys was not much different from that of girls. In the upper primary section also similar pattern was observed as that of primary section. Thandrampet had the second highest ST population next to Jawadhu Hills and here the NER of ST students were much better when compared to the district average. This indicates that if targeted action is taken in Jawadhu Hills, the situation can be improved to a large extent.

In 2004, about 4133 students were enrolled in 86 unrecognized schools in Tiruvannamalai district. It is to be checked whether NER calculation takes this into account and how the presence of unrecognized schools is looked at.

4.2.3 Attendance Rate

The students of primary sections of all the blocks attended more than 90 per cent classes in all the blocks. There was not much difference among boys and girls. There was not much difference between students belonging to SC and ST social group and all the students put together. There was a slight improvement in the attendance rate over years.

Table 4.5: School Attendance Status in Tiruvannamalai

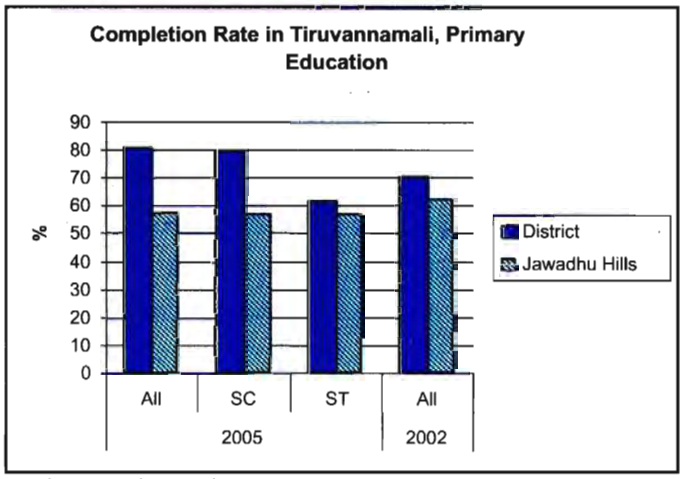
Stage of Education	Year	All	SC	ST
Primary	2003-04[1]	95	92	90
Upper Primary	2005-06[1]	94	91	93
	2002-03[2]	91	89	87

Source: [1]Cohort Study; [2]Sample study, DISE

4.2.4 Completion Rate

There was a significant rise in average completion rate in primary education between the years 2002 and 2005 in this district. In all the blocks, improvement was observed with respect to completion rates in primary sections. The lowest completion rate in primary section was observed in the block of Jawadhu Hills. Still it remained as the outlier. Low completion rate was also observed in the blocks of Cheyyar, Pernamallur, Pudupalayam and Chengam. There was not much difference among boys and girls. The completion rate in upper primary sections in the district had increased to 80 per cent in 2005 from 70 per cent in 2002. The lowest completion rate was observed in the block of Anakkavur in the year of 2005, whereas the highest rate was noticed in the block of Arni in the upper primary section.

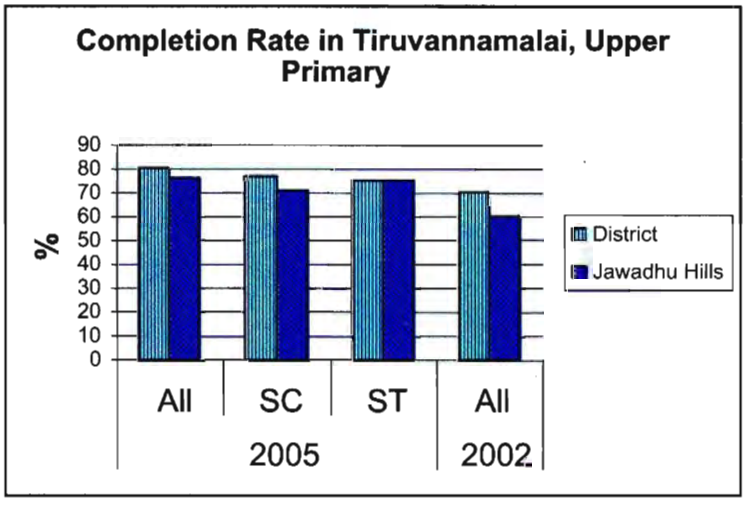
Fig. 4.3



Source: Cohort Study

The completion rate for the SC students in primary education was 79 per cent in the year 2005-06 in the district indicating that there was not much difference with that of all the students put together. Same was the case with that of upper the primary section. But the completion rate of ST students was far below than that of the district average, particularly so pertaining to primary section. This in combination with the low enrollment rate would have a very sharp adverse influence over educational capabilities of this social group. Again this calls for urgent targeted action by the development community.

Fig. 4.4



Source: Cohort Study

4.2.5 Dropout Rate

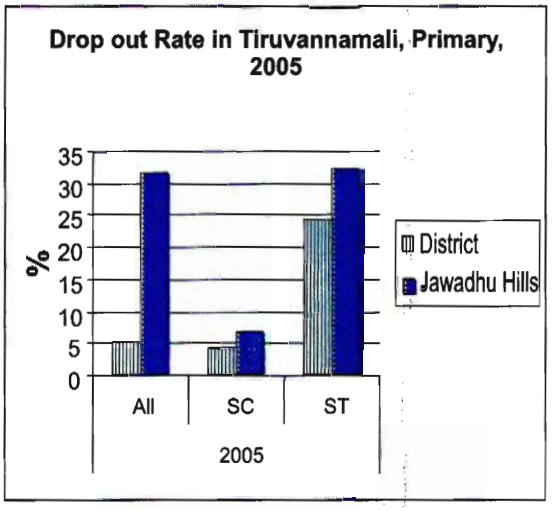
The average dropout rate in the district as a whole had declined sharply till 2005 from 1998-99. As in other indicators, the highest dropout rate (31.51%) in the primary standard was observed in the block of Jawadhu Hills. This block needs special attention to encourage the students to continue their study particularly in primary sections. The drop out rate in all the blocks had reduced except a few which

include Cheyyar, Pernamallur, Pudupalayam and Chengam. The average drop out rate of the girl children in primary section was slightly higher than that of the boys.

Drastic decline was also witnessed regarding the drop out rate in the upper primary education in the district when the data 2005 was compared with that of 1998-99. Similar to that of primary section, here also the drop out rate of the girls was slightly higher than that of boys. The lowest drop out rate in upper primary standard in the year 2005 was observed in the block of Pernamallur. The highest drop out rate was observed in the block of Chengam to the tune of 19 per cent closely followed by Jawadhu Hills. This was the case even after the reduction of drop out rate in 2005-06 over the previous years. The drop out rate of SC girl students in upper primary section was more than that of boys in the district in 2005.

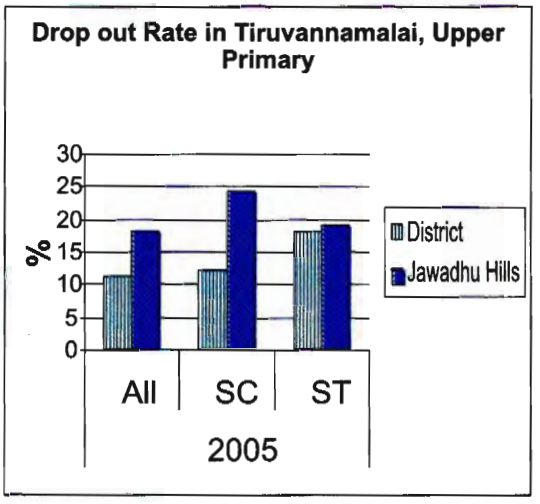
Like the two preceding indicators, there was only a marginal difference between SC students and the overall district drop out rate. But there was a drastic difference between the dropout rate of the ST students and that of the district. This was the case both in primary and upper primary sections. There was more than 30 per cent dropout rate of in primary section and 18 per cent drop out in upper primary section among ST students in Jawadhu Hills.

Fig. 4.5



Source: Cohort Study

Fig. 4.6



Source: Cohort Study

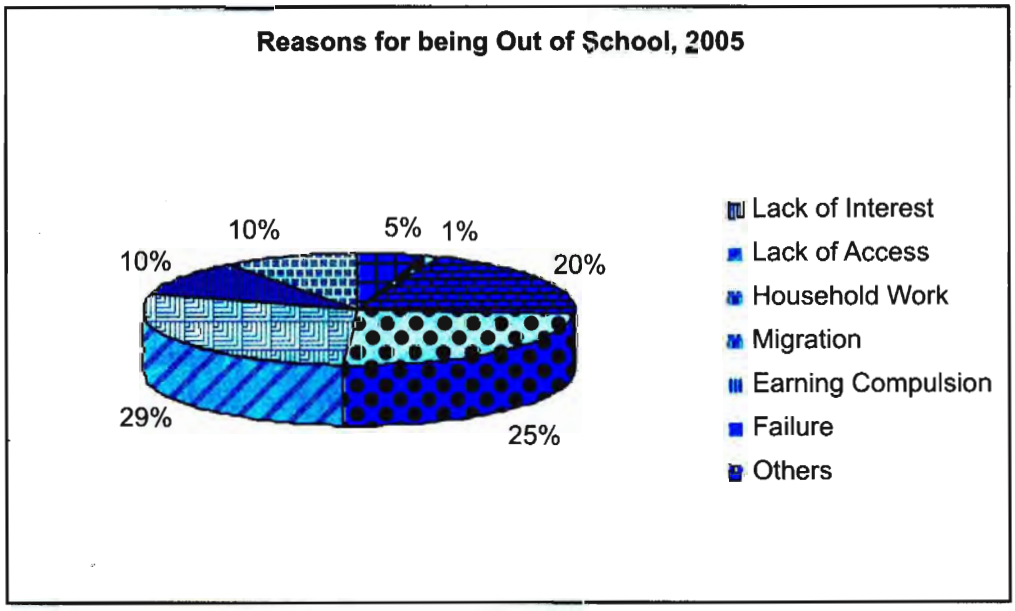
4.2.6 Out of School Children

The number of out of school children in the district during 2000-01 was 23319. Through enrolment in formal schools and in bridge courses, the number was reduced to 4456 in 2005. Even after accounting for over reporting, this is a major achievement for the SSA programme in the district. As per household survey, majority of the out of school children were in the following four blocks: Jawadhu Hills (1287), Chengam (484), Tiruvannamalai (433) and Thandrampet (376). The least number of out of school children was found in the Thellar block (53). The highest number of out of school children was found in the 11 to 14 age group, indicating that recent efforts by the State to improve enrollment,

retention and mainstreaming out of school children had paid off well. The total number of out of school children had been declining over years. If various strategies tried out to mainstream the out of school children are pursued with vigour in the above-mentioned 4 blocks, there can be a significant reduction in the out of school children in the district.

But still these efforts will not stop the inflow of 'out of school children' in full, as the major reasons for becoming out of school children, which can be dropping out of the education system or never enrolling into the system has very strong economic roots. This is very much evident from the figure given below, which shows that migration and economic compulsion were the major reasons for becoming out of school children. This is very much so because over the years, there has been considerable positive change in the attitude of parents regarding education of their children which is very much capitalized by the private schools. So livelihood enhancement needs to be addressed in a focused manner in the regions showing a high per cent of out of school children.

Fig. 4.7



Source: Household Survey, 2005

4.2.7 Transition Rate

The district had achieved 96.9 per cent transition rate in the primary section by 2001 and there had been a marginal increase in the same until 2005. Transition rate of most of the blocks fell near the district average. Even Jawadhu Hills, the usual outlier, was falling closer to that of the district average with 91 per cent transition rate. There was not much difference between boys and girls in this regard. There was not much difference between the transition rates of SC and ST social groups and the overall district.

Table 4.6: Transition Rates in Tiruvannamalai District

Stage of Education	2005-06[1]			2001[2]
	All	SC	ST	All
V to VI				
District	98.15	97.66	93.91	96.9
Jawadhu Hills	91.02	96.15	90.59	88.9
VIII to IX				
District	95.6	94.8	93.0	
Jawadhu Hills	84.2	86.2	81.9	

Source: [1]Cohort Study, DISE; [2]Sample study, DISE

The same trend was found regarding transition rate in upper primary sections. There was not much difference between boys and girls. Also there was not much difference between the transition rates of SC and ST social groups and the overall district. Transition of upper primary sections in most blocks fell near the district average. But Jawadhu Hills again remained as an outlier with considerably lower transition rate than that of overall district. This indicates that targeted action is needed there to address this issue.

4.3 Status of Quality of Education in Primary Standard

In the year 2004-05, 75 per cent of the total students passed out with more than 60% marks in Class V in Tiruvannamalai district. The performances of the blocks of Anakkavur, Vembakkam, West Arni, Vandavasi and Tiruvannamalai were better than the other blocks. The poorly performed blocks include Pudupalayam, Chengam and Jawadhu Hills. The girls performed better than the boys. If the share of students passed eighth standard with more than 60 per cent marks is considered the situation of the district was very poor. This indicates the poor quality of education in terms of learning outcomes. Further it was found in a sample study by *Padippum Inikkum* initiative (see box) that only 36 per cent of students can read even Tamil fluently.

Nirupam Bajpai and Sangeeta Goyal (2004) identified weak teacher motivations, their apathy towards teaching and high teacher truancy as the reasons for the poor quality of elementary education. They also argued that the low quality of the school system contributes to parental apathy towards actually sending their children to school even when most parents recognize the importance of education as a means to social and economic mobility for their children and have strong educational aspirations for both sons and daughters. This situation calls for shift of focus from quantitative parameters of primary and upper primary education to that of quality parameters.

Table 4.7: Percentage Passed With More Than 60% in Class V, 2004-05

Block / Urban	B	G	T
Vembakkam	81.91	82.99	82.43
Cheyyar	72.98	70.87	71.90
Anakkavur	81.17	85	82.94
Pernamallur	71.46	73.03	72.23
Vandavasi	78.05	82.88	80.43
Thellar	75.84	73.99	74.88
Arni	70.86	78.94	74.62
West Arni	78.89	82.75	80.74
Polur	71.49	77.35	74.44
Kalasapakkam	76.33	76.77	76.54
Chetpet	76.01	78.02	77.01
Thurinjapuram	73.05	74.32	73.68
Kilpennathur	77.31	81.65	79.49
Tiruvannamalai	78.67	81.33	79.96
Pudupalayam	60.61	64.06	62.28
Chengam	59.24	67.18	63.09
Thandrampet	78.51	80.01	79.23
Jawadhu Hills	67.14	64.52	65.97
District	**74.25**	**77.27**	**75.72**

Source: DISE

The Government of Tamil Nadu, through the Sarva Shiksha Abhiyan, launched a pilot reading programme *Padippum Inikkum–A campaign to ensure all children read Tamil fluently* in two of the most educationally backward blocks of Kanchipuram and Tiruvannamalai districts. Seventy one schools in Latur Block and 113 schools in Vembakkam block were selected. Government of India has also designated Tiruvannamalai as one of the special focus districts in Tamil Nadu. The reading programme is being implemented by the Government school teachers during school hours. AID INDIA resource persons are providing training, developing teaching-learning materials and helping with field support and documentation. They classified the students of 3rd-5th standard into five different levels based on language skills.

The aim of this project is to equip all children to read fluently i.e. Level 4.

The children were evaluated to categorize them according to the level of ability of reading at the beginning of the programme.

Pre-programme Reading Status of Schools as on 1st March, 2006; Vembakkam Block

Total number of school	113
Schools with collected evaluation data	64
Total numbers of children in 3rd – 5th standard	3562
Number of children who can read fluently	1298 (36%)
Number of children who can not read	2264 (64%)
Number of Children by Reading Levels	
Level 4: Can read stories	1298 (36%)
Level 3: Can read sentences only	847 (24%)
Level 2: Can read words only	661 (19%)
Level 1: Can identify letters only	482 (13%)
Level 0: Can't identify even letters	274 (8%)
The results based on the 64 schools where data were collected	

The pre-programme report showed that 64 per cent of children in the 3rd – 5th standard were unable to read. But after two months, in a mid-programme assessment, the improvement in all the levels was observed.

Mid-programme assessment of the project on Reading Status is given below:

Total numbers o schools at the review	100
Total number of children in 3rd – 5th students	5886
Number of children who read stories fluently	
As on 1st Feb 2006 (initially)	2444 (43%)
As on 1st March 2006 (1 month class)	3456 (61%)
As on 1st April 2006 (2 month class)	4505 (80%)
This is the estimates from the teacher	

4.4 Pupil-Teacher Ratio (PTR)

The district had attained the desired rate of 40 pupils per teacher long back by 1993-94 (with PTR of 37) and had remained closer to 40 over years until 2005-06. This was not so the case with all the blocks. While there had been a significant decline in PPR in blocks like Arni, Polur, Chetpet and Thurinjapuram, there had been a significant rise in blocks like Vembakkam, Anakkavur, Thellar, West Arni, Pudupalayam, Chengam and Jawadhu Hills. This is very much surprising given the concerted

attention primary education is getting in the recent years. Immediate action need to be taken to reduce the PTR in West Arni, Pudupalayam, Chengam, Thandrampet and Jawadhu Hills.

Table 4.8: Pupil-Teacher Ratio in Tiruvannamalai

Block / Urban	Primary		Upper Primary	
	97-98	2005-06	2002	2005-06
Vembakkam	37	42	49	43
Cheyyar	33	29	33	45
Anakkavur	31	40	36	47
Pernamallur	36	35	40	45
Vandavasi	34	34	42	43
Thellar	31	42	43	43
Arni	40	30	42	45
West Arni	38	53	37	46
Polur	36	31	45	45
Kalasapakkam	41	41	49	42
Chetpet	37	32	41	42
Thurinjapuram	43	35	49	45
Kilpennathur	40	40	37	47
Tiruvannamalai	42	38	46	42
Pudupalayam	46	60	49	48
Chengam	50	60	56	46
Thandrampet	50	52	51	44
Jawadhu Hills	47	59	45	52
District	39	40	43	45

Source: DISE

In the same way, for upper primary education, the district had achieved PTR of 38 by the year 1998-99 and then it had marginally increased over the recent years. While there had been a significant decline in PTR in blocks like Vembakkam, Kalasapakkam, Chengam and Thandrampet, there had been a significant rise in blocks like Cheyyar, Anakkavur, West Arni, Kilpennathur and Jawadhu Hills. Immediate action need to be taken to reduce the PTR in Anakkavur, Kilpennathur, Pudupalayam and Jawadhu Hills.

The above situation had existed in spite of appointment of 425 teachers in different primary and upper primary schools in different blocks of this district during 2002-03 to 2005-06 under the Sarva Shiksha Abhiyan (SSA) scheme. Of this, a majority of them were appointed in the upper primary schools (329). A proper plan is required to rationalize the availability of teachers across the district, particularly in the primary section since the gross entitlement of additional teachers for this category is 89. Care has to

be given to fill all the sanctioned posts in the district as early as possible, taking into account that the gross entitlement of additional teachers of the upper primary section was 164 in 2005-06.

4.5 Numbers of Schools without Equipment/Facilities

There were 2103 class rooms, which required repair in all the primary and upper primary schools. As for as drinking water facility, there had been a considerable improvement over the years but still there is need for making it universal as this is a basic need. Particular attention need to be given to Anakkavur. Many studies have found out that toilet facilities influence enrolment and attendance in the schools (Grover, Shuchi and Nishu Harpreet Singh, 2002). Nearly 36.5 and 49.7 percent of primary and upper primary schools did not have toilet in the schools premises. The situation was more or less the same in most of the blocks except Anakkavur. If separate toilets for girls is considered, the situation was very pathetic particularly for blocks like Jawadhu Hills, Kalasapakkam and Anakkavur. The situation regarding playground and kitchen for midday meals was much better than access ramps and boundary. Lack of electricity connection was also witnessed in 733 schools in the district in 2004. In most of the aspects, Jawadhu Hills had fared badly indicating that it requires special attention.

Table 4.9: Schools without Infrastructural Facilities in Tiruvannamalai, 2005-06

Sl. No	Items	Primary	Upper Primary	Total
1	Total no of School	1528	650	2178
2	No of Repairable Classroom	1210	893	2103
3	% of schools without HM room	68.4	33.8	58.1
4	% of Schools without drinking water facility	4.7	6.9	5.4
5	% of Schools without Toilets	36.5	49.7	40.4
6	% of Schools without Girls toilets	76.2	44.9	66.9
7	% of Schools without Access Ramp	89.1	72.5	84.2
8	% of Schools without Boundary	54.3	39.1	49.8
9	% of Schools without Playground	37.2	26.2	33.9
10	% of Schools without Kitchen for mid day meal	16.6	19.7	17.5

Source: DISE 2005-06

4.6 Higher Secondary Education

4.6.1 Pass out rate

Table 4.10: Pass out percentages in Higher Secondary Examination

Type of the Schools	HS Exam, March 2005				
	No of Schools	No of Students Appeared	No of Students Passed	March 2005 Pass %	No of Students Failed
Government Higher Secondary Schools	69	9539	5303	55.59	4236
Municipal Higher Secondary Schools	2	419	229	54.65	190
Aided & Self financed State Board HS schools	21	2927	2235	76.36	692
Matric HS School	17	1007	944	93.74	63
Total	**109**	**13892**	**8711**	**62.71**	**5181**

Source: Chief Educational Officer, Tiruvannamalai

The overall pass out rate in Higher Secondary Examination in the district as a whole was 62.71 per cent in the year of 2005 indicating the need for large scale improvement. The performance of the matriculation schools was far better than any other type of schools. The performance of the Government HS schools as well as Municipal HS schools was very poor. This poor pass out rate reflects the quality of education through out the education system to an extent. Students are promoted easily upto ninth standard and only in the tenth standard and twelfth standard they face external exams. They fail miserably in these examinations and for most of them that is the end of their educational career. Dreze and Sen (2002) also noted that there may have actually been an increase in educational inequality in recent years, especially if we take the quality of education into account, due to the expansion of private schools which are accessible only by children from privileged backgrounds and the decline in the quality of schooling provided by the public school system. Care has to be taken for providing quality education from the beginning in the government schools so that this pattern is discontinued. As government schools house a majority of the students of the district, specific attention needs to be given to them to enhance quality.

4.7 Higher Education

There were 11 colleges for general education in the Tiruvannamalai district catering to around 7000 students in 2003-04. Out of these eleven colleges, two of them were women's colleges. There were 6 engineering colleges in the district housing 7612 students in 2003-04. There was no university in this district and no other professional colleges offering courses like Agriculture, Veterinary, Medical (except one Nursing College in Vandavasi) and Law in this district except engineering. There were 8 polytechnic colleges and 12 ITIs in the district in 2003-04.

It can be seen that while the enrolment of girl students was more or less equal in the colleges for general education, their presence was very poor in the technical education colleges. Considering that

major proportion of students going out of the district for education particularly for professional education would be males, the overall presence of females from this district in higher education seems to be quite low. This would have a significant adverse impact over the gender aspects of the wellbeing by worsening the relative position of women with respect to men.

Table 4.11: Data on Higher Educational Institutions in Tiruvannamalai District

COLLEGES FOR GENERAL EDUCATION						
S.No	Name Of The Institution	No. of Institution	Students			Teachers
			Boys	Girls	Total	
1	Govt. Colleges	3	2342	1823	4165	151
2	Aided Colleges	0				
3	Self Financed Aided Colleges	8	1462	1341	2803	231

Source: District Statistical Handbook, 2003-04

Table 4.12: Schools/Colleges for Professional Education in Tiruvannamalai District

Name Of The Institution	No. of Institution	Students			Teachers
		Boys	Girls	Total	
Arunai Engineering College.Tiruvannamalai.	1	2342	382	2724	131
Kamban Engg.College.Tiruvannamalai	1	192	49	241	30
SKP,Engg,College,Tiruvannamalai	1	720	190	910	49
Balji Chokkalingam Engg, College, Arni	1	431	115	546	95
ArulmighuMeenachi, Vadamavanandal	1	1625	401	2026	117
Thiruvalluvar College of Engg,&Tec, Vadamavanandal	1	980	185	1165	119
Total	**6**	**6290**	**1322**	**7612**	**541**
Polytechnic	8	2932	230	3162	163
ITI	12	560	35	595	45
Total	**20**	**3492**	**265**	**3757**	**208**

Source: District Statistical Handbook, 2003-04

4.8 Efforts for Improving the Educational Status of the District

All round efforts has been taken up to address various facets of issues related to education in the district by various actors including district administration and civil society groups. They are presented below.

4.8.1 DPEP- SSA

District Primary Education Program followed by Sarva Shiksha Abiyan, which has universalisation of elementary education as the aim, by community-ownership of the school system. The main aim is to universalize elementary education by the year of 2010. They have focused on enrollment and retention in primary and upper primary education and creation of necessary manpower and

infrastructure. Further, focus on improving human resources was given through on-the-job training by various set ups like Cluster Resource Centre and Block Resource Centre. Continuous monitoring is also ensured through these institutional arrangements. The major improvements in elementary education witnessed in the district can be attributed to DPEP & SSA. Further, SSA also undertakes special targeted activities.

4.8.2 Kasturba Gandhi Balika Vidyalaya Residential Schools (KGBV)

KGBV, one such specific activity, covers 250 out of school girl children in 2005-06. The students are provided with food, uniform, cosmetics, woolen blankets, library books, teaching and learning equipments (TLE), sports articles, cycles, tailoring machines, etc. Stipends are given every month. PTA meetings and medical inspections are conducted every month. Four schools in Jawadhu Hills and one in Thandrampet were run under KGBV as these two blocks were classified as educationally backward blocks based on rural literacy and male-female literacy gap.

KGBV schools were started in the year 2005-06 with the objective to educate the never enrolled or drop out girl children within the age group of 11 to 14 years upto eighth standard. After completing 18 months, the students will appear directly in the eighth standard examination (age should be minimum 12½ years since that is the minimum age for appearing the eighth standard examination). All the schools are run by different NGOs. Only trained teachers are appointed in the schools under KGBV porgramme and they are provided Rs. 4000 per month as salary along with food and lodging. A grant of Rs. 26000/student/year is provided through KGBV.

A KGBV school was run by an NGO, Society for Women's Education and Development, in Jawadhu Hills. Among the 53 students studying in this school, 38 falling in the age group of 11-14 years were never enrolled. Special attention to every student was given to improve their learning. Medical inspections were conducted in every month and files of the health report for each individual were maintained properly. Parents have actively participated in the monthly PTA meetings. The students have been segregated into different groups according to their capacity. There were six teachers along with 11 non-teaching staffs working in this school. This school was considered as successful by the stake holders.

4.8.3 National Programme of Education for Girls at Elementary Level (NPEGL)

The NPEGL scheme was launched in 13 educationally backward blocks to increase the literacy rate of the girls. Remedial teachings are given to all the slow learners from third standard to eighth standard. Additional class rooms had been built in the blocks to facilitate the programme and the schools are awarded based on their performance. So far, 7343 girl children were benefited and 672 teachers were given training under this programme in Thandrampet and Jawadhu Hills.

4.8.4 Integrated Education for the Disabled (IED)

Integrated education for the disabled is being implemented through 36 NGOs in the district. The targeted number of disabled children was 84673. Around 64703 children attended the medical camps organized for identification of the disabled children. Among them, 22044 had been identified for supply of Assistive Devices and 1091 children for undergoing surgeries. So far, 17369 children were given with assistive devices, while 559 children had undergone surgery. Total of 758 special teachers were appointed and the children benefited through special teaching were 4664 in the year of 2005-06. The maximum number of children benefited by this programme were residing in the block of Tiruvannamalai.

4.8.5 Special Coaching Class for SC, ST and Disabled Students

It was done for students undergoing primary and upper primary education to improve their performance, through 681 schools and 1217 centres for primary section and 294 schools and 1003 centres for upper primary section. In the year 2002-03, 59422 SC and ST students and 692 students were reached through these efforts.

4.8.6 Early Childhood Care Education (ECCE)

It was provided for children in the age group of 3+ to 4+ to make the children ready for schools through 2024 ICDS and upgraded centres in 2005-06. Around 44163 children were covered in 2005-06. Another 9440 children were covered by different LKG/UKG schools in the district in the year 2003-04. The coverage in respect of children in both types of schools for the early childhood was very low in the block of Jawadhu Hills.

4.8.7 Noon Meal Scheme

It is one of most popular initiative of the State and it has earned a good name for significantly influencing enrollment and attendance. Later this initiative was tried in many other states. In Tiruvannamalai, there were 1862 noon meal centres catering to food and nutrition requirements of the government school students.

Further Education Guarantee Scheme centres, bridge course, back to school camps and residential camps were conducted to bring back out of school children back into the education system. The INDUS project in the district also focused on this aspect.

4.8.8 Adult Education Centres

There are 873 adults education centres running in the district of Tiruvannamalai. Maximum number of them were located in the block of Tiruvannamalai. Availability of adult education centres was least in the block of Jawadhu Hills followed by Chengam, Pudupalayam, Thandrampet and Kilpennathur. The major problems encountered by the adult education centres were non-attendance of the members as well as the irregularity in the salary payment to the teachers.

4.8.9 Provision of Scholarships and Hostel Facilities to Students

Financial support and hostel provision is given to students belonging to SC, ST, MBC and BC and details are presented below.

Table 4.13: Scholarships to Students by Government, 2003-04

Schedule Caste/ Schedule Tribe		Denotified Communities/Most Backward Classes		Backward Classes	
No of Beneficiaries	Amount (Rs. in '000)	No of Beneficiaries	Amount (Rs. in '000)	No of Beneficiaries	Amount (Rs. in '000)
44528	14764	33029	4907	18635	4544

Source: District Statistical Handbook, 2003-04

Table 4.14: Availability of Hostels by Social Group, 2003-04

Schedule caste			Schedule Tribe			Most Backward Class and Denotified Communities			Backward Class		
Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
27	14	41		1	1	18	8	26	5	6	11

Source: District Statistical Handbook, 2003-04

4.9 Ranking of the Blocks

The blocks have been ranked according to their performances with respect to literacy rate, net enrolment ratio and drop out rates. The lower the rate of drop out better would be the performance. As a first step, the blocks were ranked based on their relative performance and then these ranks were multiplied with their assigned weights. Maximum of 0.50 weights has been assigned to literacy rate, 0.25 to NER and another 0.25 to drop out rate. All the weighted ranks were added up to obtain the final score and the blocks were ranked based on this final score.

Arni block has emerged as the best performer in the district of Tiruvannamalai followed by West Arni, Kilpennathur, Tiruvannamalai and Chetpet. Jawadhu Hills has emerged as the worst performing block with respect to all the three indicators of educational attainment. It was followed by Chengam, Thandrampet, Anakkavur and Pudupalayam. Taking into account the performance in primary section the blocks performing comparatively better among all the eighteen blocks are West Arni and Vandavasi. The poor performing blocks are again Jawadhu Hills, Thandrampet, Pudupalayam and Chengam indicating that these blocks require special attention to upgrade their relative performance.

Top and Bottom Five Blocks Based on the Performance in Literacy and Education

Indicators	Top 5	Bottom 5
Literacy Rate	Arni	Jawadhu Hills
Net Enrolment Ratio	West Arni	Chengam
Drop out Rate	Kilpenntahur	Thandrampet
	Tiruvannamalai	Anakkavur
	Chetpet	Pudupalayam

4.10 Stake Holder Perception of Reasons for Poor Performance in Education

From the interaction with the local and district level officials and few NGOs, the following general reasons were identified for poor performance in education and literacy:

- Poverty and compulsion to send children to work
- Migration for livelihood reasons
- Poor motivation of teachers in adult education centres due to salary issues
- Poor attendance in adult education centres and Transitional Educational Centres
- Poor access to schools in terms of transport facilities in blocks like Jawadhu Hills and Thandrampet.
- Discontinuation of girl students after elementary education due to adverse social practices
- Lack of effective participation of the community

The box below gives specific reasons for poor performance in Jawadhu Hills.

The reasons of poor performance of Jawadhu Hills:

There are several socio-cultural-economic causes for poor performance of Jawadhu Hills with respect to education. This block is a hilly track with 87 per cent of the population belonging to tribal community. They are characterized by illiteracy and poverty and they derive their livelihood mainly from agricultural activities and particularly, female literacy is very poor. Migration for livelihoods is quite common. They engage their children in different types of works from very childhood instead of sending them to school. Children face difficulty to go to school due to the hilly tract and lack of transport facilities. Household works, migration and compulsion to work are the primary reasons for high out of school children in this block. Early marriage is common among girls and boys. Further, the tribal community does not prefer any external intervention in their culture. The attendances in the adult education centres are very low and education department officials opined that the television programmes in the evening are the primary reasons.

There are four types of schools running in this block viz. forest schools, welfare schools, union schools and residential schools. The enrollment of the students has been increasing but there are several vacant posts in teaching positions in the forest schools run by the Forest department. The attendance in welfare schools and in the residential schools is quite low. Children used to go to collect tamarind during the month of Feb-March and they just come to school to take the mid day meal. Most of the teachers want to get transferred as early as possible to avoid the remoteness experienced in this block. The classes in the special coaching centres are not conducted regularly. Students also do not attend the classes regularly. The associations like VEC and PTA practically do not function in this block. So it is less of a problem of non availability of infrastructure and more of a problem of inefficient delivery of services by the existing education system.

But the community now realizes the needs for education and sending their children to the schools. The improvements in the NER in primary as well as upper primary levels reflect this trend.

4.11 Summary and Conclusion

Concerted and all round efforts were put in the district to improve the educational status with more focus to backward blocks. Due to these efforts, there had been significant achievements in the district in elementary education in terms of improvements in NER, Attendance Rate, CR, DR and TR in primary and upper primary sections and GAR in upper primary section. The indicators pertaining to SC and ST students had also shown considerable improvement. The indicators pertaining to SC social group were very close to that of overall district. The district administration and other actors need to be appreciated for giving high thrust for universalizing elementary education.

Goals of SSA

- All children in school, Education Guarantee Center, Alternative School, 'Back to School' camp by 2003.
- All children complete five years of primary schooling by 2007.
- All children complete eight years of schooling by 2008.
- Focus on quality primary education with emphasis on education for life.
- Bridge social and gender gaps in primary education by 2007 and in elementary education by 2010.

But considering the goals of the SSA programme, still a lot has to be achieved. Further improvements are needed regarding CR and DR in upper primary sections. Broadly speaking, achievements in terms of quantitative improvements, though marginally below the goals of SSA, were very significant. But on the quality front, there is so much to be achieved as the gap from the desired level is quite significant. As for the school education above elementary education, the pass out percentage was very poor, again indicating the poor quality of the total education system. The district enjoyed only limited higher education infrastructure and there were no professional colleges except for engineering. Women's enrollment in the technical courses was also very poor.

There should be a thrust in the following areas to bring in significant improvements in the educational status in the district.

- **Sustaining the special attention given to Jawadhu Hills and Thandrampet.** Additional attention to be given for Chengam, Pudupalayam and Anakkavur.
- **Identifying the hot spots of poor education** in terms of villages, social groups and occupational groups and taking necessary action.
- **Building strong accountability in the system.** This need to be done through instituting supervision mechanism that reinforce good teacher management and through periodical evaluation of learning outcome of the students.

- **Institute a system of monitoring and evaluation of student learning.** Grover *et al*, 2002 recommended administering standardized assessment to a sample of students in standard V in every four years and establishing a common examination paper for all standards from III to V.
- **Ensuring community ownership and greater role for local bodies.** They should have a role in supervising the service delivery and the outcome of the educational system. Widespread presence of the SHGs in the district needs to be capitalized for this.
- **Learning from the success stories and taking that learning to other areas.**

The strategies to be adopted at different levels of education in the district is given below

- **Elementary education:** Twin strategies of a) sustaining the quantitative improvements and b) giving fresh focus on quality parameters need to be followed.
- **Secondary and higher secondary education:** Both quantitative and qualitative parameters need to be focused more.
- **Collegiate education:** Creation of necessary infrastructure and ensuring enrollment of girls need to be given focus.

The thrust given both for absorbing all the children into the education system and bringing back both children and adults lying outside into the system need to be continued, as the district is still far below the acceptable level of literacy, particularly female literacy.

Other specific areas to be addressed include,

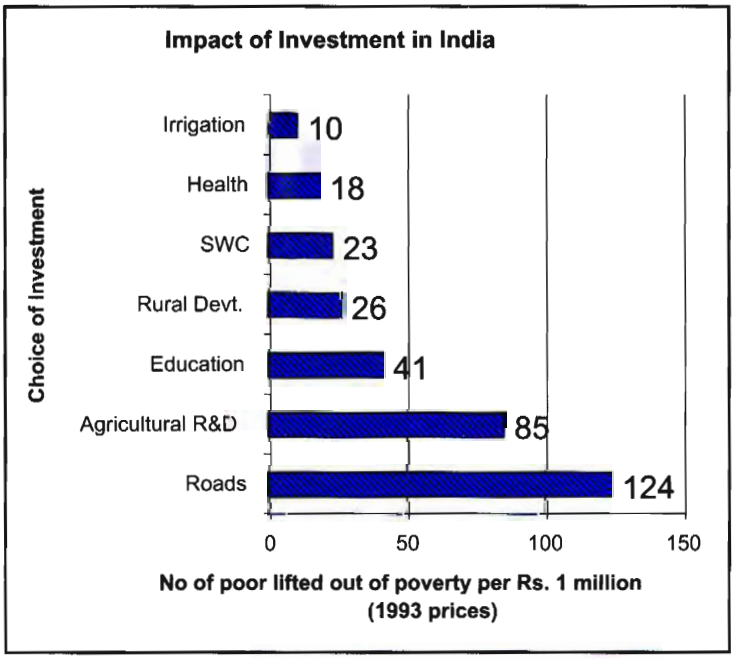
- Placement of enough teachers in upper primary section
- Rational distribution of teachers
- Converting the targeted efforts given to Jawadhu Hills into tangible results by ensuring proper functioning of different type of schools.
- Addressing the need for basic infrastructure facilities in the schools.
- Teachers of small schools should be given special training in multi grade teaching to achieve improvement in teaching at the primary level.

Chapter V

Infrastructure

Infrastructural facilities play a crucial role in facilitating attainment of various facets of human development. The impact of investment on different kinds of infrastructure varies widely. It is important for the policy makers to make an informed choice as the resources are limited. As the figure given below indicates, the impact of investment on roads on poverty reduction was much higher than conventionally known investment priorities like health, education and irrigation in India. As the infrastructure has such impact on human development, it is important to understand the current level of infrastructure in the district. The infrastructure can be either private like house or public in nature. Major public infrastructural facilities are road and telecommunication, electrification, Public Distribution System and banking services. Social infrastructure like Self Help Groups (SHG) also play a crucial role in achieving human development through building social capital and taking up economic activities. This chapter focuses on the status of these types of infrastructure and their implication on human development.

Fig.5.1



Source: International Food Policy Research Institute, 2002

SWC – Soil and Water Conservation

5.1 Road Infrastructure

As indicated above, roads play very many roles in actualizing the general development and so human development. The analysis of block-wise road infrastructure indicates that there was a wide level of disparity among the blocks of Tiruvannamalai district in the presence of road infrastructure in 2003-04. The block of Polur had the lowest road infrastructure among all the blocks, closely followed by the block of Jawadhu Hills. In addition to this, the blocks of Thandrampet and Pudupalayam also exhibited

a low level of road infrastructure. On the contrary, the highest surfaced road length in per 100 square Km. of geographical area was observed in the block of Thurinjapuram (84.96 Km.) followed by the block of Tiruvannamalai. Specific focus needs to be given to improved road infrastructure in Polur, Jawadhu Hills, Thandrampet and Pudupalayam.

Table 5.1: Length of Road (Kms.) per 100 Square Km. of Geographical Area in Tiruvannamalai

Blocks	Surfaced Road	Unsurfaced Road	Total
Anakkavur	37.58	2.92	40.50
Arni	64.03	17.44	81.45
Arni (West)	55.32	25.54	80.86
Chengam	43.30	7.75	51.05
Chetpet	70.30	0.00	70.30
Cheyyar	71.91	19.18	91.09
Jawadhu Hills	9.21	27.07	36.28
Kalasapakkam	45.58	35.07	80.65
Kilpennathur	52.74	29.61	82.35
Polur	6.09	0.00	6.09
Pernamallur	38.68	47.07	85.75
Pudupalayam	29.62	17.49	47.11
Thandrampet	20.43	10.14	30.57
Thellar	57.22	20.70	77.92
Thurinjapuram	84.96	21.43	106.40
Tiruvannamalai	74.35	29.59	111.56
Vembakkam	39.09	12.76	51.85
Wandiwash	55.26	23.94	79.20
District	**41.93**	**19.12**	**59.58**

Source: Block Statistical Hand Books, 2003-04

5.2 Electrification

About 98.69 per cent of total villages in the district of Tiruvannamalai had been electrified in 2003-04. Another 14 villages in this district need to be electrified to achieve the 100 per cent electrification of the villages in Tiruvannamalai. All the villages of twelve blocks in this district have been electrified completely. The lowest percentage in terms of electrification of villages was observed in the block of Thurinjapuram (89.55%). In this block, another seven villages are to be electrified. Two villages each in the block of Chetpet, Kilpennathur and Polur are to be electrified. On the other, one village each in the blocks of Pernamallur and Thellar are to be connected through electrification. So, in general, on this front, the district had fared well and with minimum investment, it can easily claim to be a 100 per cent electrified district.

Table 5.2: Status of Electrification in the Blocks of Tiruvannamalai

Blocks	Percentage of Villages Electrified	Number of unelectrified villages
Anakkavur	100.00	0
Arni	100.00	0
Arni (West)	100.00	0
Chengam	100.00	0
Chetpet	96.83	2
Cheyyar	100.00	0

Blocks	Percentage of Villages Electrified	Number of unelectrified villages
Jawadhu Hills	100.00	0
Kalasapakkam	100.00	0
Kilpennathur	96.92	2
Polur	96.43	2
Pernamallur	98.51	1
Pudupalayam	100.00	0
Thandrampet	100.00	0
Thellar	98.55	1
Thurinjapuram	89.55	7
Tiruvannamalai	100.00	0
Vembakkam	100.00	0
Wandiwash	100.00	0
District	**98.69**	**14**

Source: Block Statistical Hand Books, 2003-04

5.3 Postal Services

The population served per post office doing postal business alone was abysmally high in the block of Chetpet. The data needs to be verified to validate this inference. The concentration of post offices was also low in the blocks of Arni, Pudupalayam and Wandiwash (Vandavasi). Apart from this, the post offices in the blocks of Chengam, Cheyyar, Thurinjapuram and Tiruvannamalai served more population per post office than the district average. The lowest number of population was served in the block of Jawadhu Hills closely followed by the block of Vembakkam.

The population served per post and telegraph office was the highest in the block of Arni (164405 persons per P&T office) followed by Wandiwash (Vandavasi) and Cheyyar. A less number of population was served per post and telegraph office in the blocks of Tiruvannamalai and Kilpennathur. The population served per telegraph office in almost all the blocks was very high except in the blocks of West Arni (20628) and Kilpennathur (27660). Courier services have come up on a large scale and communicating through telephone has also become cheaper in the recent years. Further, the financial services of post offices have become more predominant than that of letter and telegraph services. So, it is time to review the role played by post offices in connecting people and take necessary measures to make them more relevant. As postal network has a wide presence in the district, they can be made to function as multi-service points in collaboration with other entities.

Table 5.3: Population Served per Postal/Telegraph Offices

Blocks	Post offices (doing postal business alone)	Post and Telegraph Office	Telegraph Office
Anakkavur	4452	17807	
Arni	9134	164405	164405
Arni (West)	4126	20628	20628
Chengam	5635	36064	
Chetpet	34233	17117	51350
Cheyyar	4913	122819	
Jawadhu Hills	2407	43320	
Kalasapakkam	4649	26729	106916
Kilpennathur	3815	5823	27660

Blocks	Post offices (doing postal business alone)	Post and Telegraph Office	Telegraph Office
Polur	3488	12072	78470
Pernamallur	3410	85254	
Pudupalayam	8237	53544	
Thandrampet	4121	38116	
Thellar	3509	32753	
Thurinjapuram	6203	NA	55824
Tiruvannamalai	5756	5756	135268
Vembakkam	2654	20794	124761
Wandiwash	7779	132243	132243
District	**4817**	**18249**	**106889**

Source: Block Statistical Hand Books, 2003-04

5.4 Telephone Services

Home telephone was considered a household amenity of the affluent a decade earlier. But now it has attained a status of essential amenity even among low income classes, indicating the need for connectivity. This became very visible once low investment mobile telephone services became available. It is one of the fastest penetrating technologies even in the rural areas. Telephones that way do not stop with serving as communication devices but go beyond that by serving many other purposes like a tool for livelihood. As data was not available for mobile telephone penetration, data pertaining only to the fixed phone services is used for analysis.

On analyzing the population served per telephone in use, it was observed that it was the highest in Jawadhu Hills indicating poor connectivity. There was only one telephone against 722 persons in this block. The concentration of telephones were also very less in the blocks of Vembakkam, Anakkavur, Pudupalayam and Pernamallur. The availability of telephones was relatively higher in the blocks of Arni, Cheyyar, West Arni and Wandiwash (Vandavasi).

A wide variation in terms of availability of PCOs was observed among the blocks of Tiruvannamalai. There was one Public Call Office (PCO) for every 1698 persons in the district. But the concentration of PCOs was very less in the block of Pudupalayam (more than 13000 persons per PCO). It was also lower in the blocks like Vembakkam, Jawadhu Hills, Pernamallur, Kalasapakkam, etc. The concentration of PCOs was the highest in the block of Arni (571) followed by Vandavasi and Thurinjapuram.

The availability of STD booths was the highest in the blocks of Arni (587 persons/STD booth) followed by Vandavasi (837). On the contrary, it was the lowest in the block of Anakkavur where more than 23000 persons were served by each STD booth. Other blocks exhibiting higher numbers of persons served per STD booth were Chengam and Pernamallur. Specific reasons for low connectivity need to be identified and necessary steps are to be taken up.

Table 5.4: Population Served per Telephone Facility

Blocks	Telephone in Use	Public Call Office	STD booth
Anakkavur	334	1295	23743
Arni	14	571	587
Arni (West)	30	1001	1021
Chengam	50	1443	7213
Chetpet	60	1975	NA
Cheyyar	21	2118	999
Jawadhu Hills	722	5415	NA
Kalasapakkam	39	2608	NA
Kilpennathur	44	2012	1165
Polur	35	1706	NA
Pernamallur	166	3707	6558
Pudupalayam	232	13386	NA
Thandrampet	80	2541	1930
Thellar	95	2457	2729
Thurinjapuram	59	846	NA
Tiruvannamalai	NA	NA	NA
Vembakkam	552	6931	3669
Wandiwash	29	806	837
District	**48**	**1698**	**2370**

Source: Block Statistical Hand Books, 2003-04

5.5 Public Distribution System

The Public Distribution System (PDS) is an important state intervention to ensure food security, particularly for the poor. It aims to achieve price stability to make available a few selected articles of mass consumption at reasonable prices. Effectiveness of PDS depends on access, purchasing capacity of the clientele and quality of implementation. Data, available only for access to PDS, it is presented here.

The analysis of population served per fair price shop revealed that it was the highest in the block of Arni (3425) followed by Tiruvannamalai (2973) and Jawadhu Hills (2888). The lowest numbers of persons served per fair price shop was observed in the block of Anakkavur (1113) followed by Pernamallur (1152) and Vembakkam (1211). Reasons for difference in access need to be found for taking measures to correct the situation.

Table 5.5: Population Served per Fair Price Shop (PDS), 2001

Block	No
Anakkavur	1113
Arni	3425
Arni (West)	1587
Chengam	2073
Chetpet	1467
Cheyyar	1575
Jawahdu Hills	2888
Kalasapakkam	1445
Kilpenntahur	1676
Polur	1938
Pernamallur	1152
Pudupalayam	2059
Thandrampet	1733
Thellar	1276

Block	No
Thurinjapuram	1744
Tiruvannamalai	2973
Vembakkam	1211
Vandavasi	1593
District	**1707**

Source: Public Distribution System, 2005

5.6 Banking

The data on population served per commercial bank branch shows that the lowest number of persons was served in the block of Chetpet (12800). Comparatively less number of persons was also served by per bank branch in the blocks of Pernamallur, Tiruvannamalai and Thurinjapuram indicating that banking network was much better in these areas. But the concentration of bank branches in terms of population was very less in the block of Chengam where one bank branch was available against more than 60000 persons. It was followed by the blocks of Jawadhu Hills and Vandavasi. Only one bank branch was available in the block of Jawadhu Hills.

Table 5.6: Population Served per Commercial Bank Branch

Blocks	Numbers of Commercial Bank Branches	Population Served per Commercial Bank Branch
Anakkavur	3	23743
Arni	8	20551
Arni (West)	5	20628
Chengam	3	60107
Chetpet	8	12838
Cheyyar	5	24564
Jawadhu Hills	1	43320
Kalasapakkam	4	26729
Kilpennathur	5	22128
Polur	8	19617
Pernamallur	5	17051
Pudupalayam	3	35696
Thandrampet	6	25411
Thellar	5	19652
Thurinjapuram	6	18608
Tiruvannamalai	15	18036
Vembakkam	5	24952
Wandiwash	4	33061
District	**99**	**22673**

Source: District Credit Plan, 2005-06, Tiruvannamalai, Indian Bank, Lead District Office, Tiruvannamalai, Vellore Circle

More than availability, utilization gives a better picture of access to infrastructure. The data on households availing banking services indicates that the overall level of utilization of banking services was poor both in the state and the district. The percentage of households availing banking services in the district was marginally lower than that of the state. The share of households availing bank services in taluks was closer to the district average except in Arni. The banks should take necessary steps to reach the currently unreached households. Initiatives are needed in two directions, one is making available financial products that are attractive to large section of the population and the other is to

change institutional forms of delivering banking service. The banks have been moving in the second direction in the last one decade by routing credit through SHGs.

Table 5.7: Percentages of Households Availing Banking Services

Taluk	Households (No)	Percentage of households availing banking services
Arni	58,173	15.89
Cheyyar	71,196	22.52
Vandavasi	72,402	19.26
Polur	88,810	19.25
Chengam	87,096	19.93
Tiruvannamalai	104,720	20.69
Tiruvannamalai (Mpty.)	24,993	26.80
Tiruvannamalai District	**482,397**	**19.77**
Tamil Nadu	**14,173,626**	**22.82**

Source: Census of India, 2001

5.7 Insurance

Insurance plays a major role in protecting livelihoods from sudden unexpected losses, thereby giving continuity to livelihoods even after the incidence of accidents and other such situations. It is also an instrument any individual or business can use strategically to protect themselves in a proactive manner. The situation in Tiruvannamalai typically reflects the situation in rural India. In the district, the penetration had been very poor as depicted by the data given below. The number of policies was nowhere closer to the need. Even the number of policies taken does not reflect the reality as many policy holders enrolled in insurance for income tax reasons. As the demand was low the number of branches was also low. Insurance education is very much essential to improve the penetration of various insurance products.

Table 5.8: Insurance Penetration in Tiruvannamalai In 2004-05

Name of the Insurance	No of branches	Policies Issued	Sum Assured (in Crores)	No of beneficiaries	Amount paid as compensation (in Crores)
LIC	4	50399	300.46	26525	16.83
PLI Rural	447	7043	29.88		
Urban	1	632	5.59		
United Insurance	1	9762	2.57	9762	2.47
New India Assurance	1	7246		7246	0.82

Source: District Statistical Handbook, 2004-05

5.8 Self Help Group (SHG)

Self help groups were proven to be good vehicle for organizing poor particularly women to address micro credit needs, gender issues and social issues. It is one of the effective low cost development interventions which can be simultaneously used for poverty reduction, women empowerment and empowerment of vulnerable social groups. Due to its proven success, the state government has been promoting it for more than a decade and most of the state projects were implemented through them.

Many development organizations either with or without the support of the state has been promoting SHGs for various related objectives. As SHGs contribute significantly for human development, it is important to look into their status in the district. Data that was available for only financial support provided through SHGs, is presented below.

The total number of SHGs functioning in the district of Tiruvannamalai in 2005 were 11555. In the rural area, the highest number of SHGs was observed in the block of Kalasapakkam (729) closely followed by Tiruvannamalai (722), Vandavasi (684), Polur (681) and Chengam (665). The lowest numbers of SHGs were noticed in the block of Jawadhu Hills (246), followed by Anakkavur (390) and Pudupalayam (425). About 81 per cent SHGs completed more than 6 months and about 84 per cent of them were eligible to get finance. In the rural area, the highest percentage of eligible SHG's was observed in the block of Arni (96.10%) followed by Tiruvannamalai (92.30%), Kilpennathur (89.92%) and Thandrampet (89.65%), indicating that most of the SHGs were functioning well.

Nearly 80 per cent of total eligible SHGs had been linked for credit in the district of Tiruvannamalai in 2005. Linkage performance was particularly good in Jawadhu Hills. Comparatively more share of eligible SHGs had been linked in the blocks of Thandrampet (92.37%), Tiruvannamalai (88.99%) and Vembakkam (86.12%). On the contrary, the lowest share of credit linked SHGs among the eligible SHGs was observed in the block of Pudupalayam (58.22%) followed by Arni, West Arni and Kalasapakkam. Upto 2005, a total of Rs. 4857.47 lakhs of credit had been disbursed to 5882 SHG's with an average of Rs. 0.83 lakhs. The major sources of credit to SHGs were from commercial banks, THADCO, SGSY and RMK.

One of the main indicators of the extent to which SHGs serve for poor is the level of coverage of poor among its members. More than 90 per cent SC/ST habitation had been covered under SHGs in this district as reported in 2005. The maximum percentage of coverage among all the blocks was observed in the block of West Arni. In this block, more than 96 per cent of total SC/ST habitations had been covered. In the same way, a considerable number of SC and ST families was covered through SHGs with members only from their community. Coverage of BPL families belonging to these vulnerable social groups was also very significant indicating that SHGs in Tiruvannamalai were aiming to serve them.

Table 5.9: Coverage of SC/ST Habitations by SHGs in Tiruvannamalai (Rural), 2005

Sl.No.	Particulars	
1	Coverage of SC/ST habitations	93%
2	Exclusive SC SHGs	2508
3	Members in Exclusive SC SHGs	42578
4	Exclusive ST SHGs	325
5	Members in Exclusive ST SHGs	5058
6	Coverage of SC/ST BPL families	90.49

Source: Project Officer of Mahalir Thittam, Tiruvannamalai

5.9 Housing

The housing condition reflects various dimensions of wellbeing and has significant influence on human development. Houses mean very many things to people like identity, source of self esteem, working place, bankable asset, etc. By 2001, only 50 per cent of the households were living in a good/permanent house. The situation was more or less same in three taluks. The situation was considerably better in Arni taluk and it was relatively worse in Vandavasi and Chengam taluks. The share of permanent houses in the district was considerably lower than that of the state indicating comparatively lower living condition and asset status in Tiruvannamalai than many other districts. Another dimension of housing situation is availability of living space. This indicated again various dimensions of well being like privacy. Share of households living in one room house or without exclusive room declined from 61 per cent in 1991 to 55.7 per cent in 2001 indicating the living condition had not changed much. In Tamil Nadu culture aspiration for having a good house is high and comes next only to meeting basic needs. Majority of households being not able to improve their house indicates a great sense of inability. The share of households living in one room or without exclusive room in the state was marginally lower than that of the district. The situation was considerably more pathetic in urban areas than rural areas both in the state and in the district.

Table 5.10: Distribution of Households According to the Condition of the Houses in Tiruvannamalai District

Taluk/District/ State	Type of census houses (%)				
	Permanent	Semi permanent	Temporary		Unclassifiable
			Serviceable	Non serviceable	
Arni	62.77	13.59	20.75	2.88	0.01
Cheyyar	47.36	11.12	39.23	2.30	0.00
Vandavasi	44.25	9.01	44.25	2.48	0.00
Polur	50.54	11.03	35.57	2.86	0.00
Chengam	41.87	10.75	44.51	2.87	0.00
Tiruvannamalai	51.18	12.94	32.90	2.97	0.00
Tiruvannamalai District	**49.18**	**11.41**	**36.66**	**2.75**	**0.00**
Tamil Nadu	**58.52**	**18.15**	**19.68**	**3.63**	**0.02**

Source: Census of India, 2001

Table 5.11: Distribution of Households according to the Number of Dwelling Rooms in Tiruvannamalai District

State/District	Total/ Rural/ Urban	Households having number of dwelling rooms (%)				
		No Exclusive room	One	Two	Three	Four and Above
Tamil Nadu	Total	11.06	42.30	26.76	11.89	7.99
	Rural	14.74	45.86	25.01	8.83	5.56
	Urban	5.90	37.30	29.23	16.18	11.39
Tiruvannamalai	Total	8.91	46.76	28.75	9.53	6.05
	Rural	9.51	48.23	28.39	8.52	5.35
	Urban	5.82	39.24	30.61	14.67	9.66
Tiruvannamalai (Mpty.)	Total	5.03	42.78	29.05	15.17	7.97

Source: Census of India, 2001

Another way of looking into the housing situation is the availability of the independent sleeping rooms for the married couples. The table of married couples having independent sleeping room exhibits that 51 per cent of total married couples had independent sleeping room in Tiruvannamalai in 2001 which was marginally higher than the state. The condition in rural as well as in urban areas were better than that of the state.

Table 5.12: Percentage of Married Couples Having Independent Sleeping Room in Tiruvannamalai District

District/Mpty./State		%
Tiruvannamalai	Total	51
	Rural	49
	Urban	62
City - Tiruvannamalai Mpty	Total	61
Tamil Nadu	Total	49
	Rural	43
	Urban	58

Source: Census of India, 2001

5.10 Electrification of Individual Houses

Lack of electrification of individual house is also a very good indicator of various dimensions of poverty as it negatively influences the current living condition of the household and also the future well being through hampering education of the children. During 2001, nearly 76 per cent of total households were electrified in the district and this had been a sharp rise over that of the 1991 situation (51.51). Among the taluks, Chengam exhibited the lowest percentage of electrified households (69.37%) in 2001. As one fourth of the total households lived in unelectrified houses in the district, serious efforts are needed to make coverage of electrification 100 per cent.

Table 5.13: Distribution of Households According to the Sources of Light

Taluk	Source of lighting (%)					
	Electricity	Kerosene	Solar energy	Other oil	Any other	No lighting
Arni	83.88	15.43	0.14	0.15	0.07	0.33
Cheyyar	80.38	19.21	0.13	0.08	0.04	0.18
Vandavasi	78.65	20.66	0.14	0.03	0.04	0.48
Polur	72.91	26.54	0.16	0.04	0.03	0.31
Chengam	69.37	30.12	0.30	0.04	0.02	0.16
Tiruvannamalai	73.53	25.92	0.16	0.04	0.06	0.30
Tiruvannamalai District	**75.69**	**23.75**	**0.18**	**0.06**	**0.04**	**0.29**
Tamil Nadu	**78.18**	**21.08**	**0.24**	**0.04**	**0.07**	**0.38**

Source: Census of India, 2001

"***Namadu Gramam***" has been conceived with the objective of ensuring all round development of villages across the state. Under this scheme, development activities are converged with the participation of the people. The project would address various needs of the villages like health, sanitation, education, nutrition, water supply, environment and empowerment of women. To accelerate poverty reduction in rural areas, 25 ultra poor households will be selected in every village panchayat annually. The selected household will be provided livelihood security, nutrition support, shelter security and health security.

Under this scheme, the people and Panchayati Raj Institutions (PRI) have been motivated to participate in the process of development of their village and improvement of their quality of life. The people and the Grama Sabha prepare their Village Development Plan and take control of their own growth and development. Villages are categorized into A, B and C category in the descending order of achievement and development fund is allotted based on improvement from one category to other as an incentive. In 2004-05, there were no A category village panchayat in the district. There were only 69 village panchayats falling in the B category.

All the village panchayats of this district are covered under this project. Various kind of infrastructure needed for the village is expected to be built by the local people through this project. In the Tiruvannamalai district, construction of 49.75 km. cement road was completed in 2005-06 under this project.

5.11 Summary and Conclusion

On the infrastructure front, the district had fared well in the case of roads, electrification of villages and individual houses, PDS and SHGs. Electrification of individual houses had sharply improved in 2001 over that of 1991 situation. The district administration needs to be appreciated for the improvement in the above-mentioned public infrastructure. The recent effort to identify infrastructural needs and planning for the same at the village level through various schemes is a very positive move. Attempts towards community ownership of the assets created and maintenance by the community are highly appreciated.

But there was a lot of variation across the blocks regarding PDS and roads. It is important to find the specific reasons for the poor performance in the blocks and based on that necessary intervention need to be planned. With such targeted interventions the district can easily attain appreciable levels of road and PDS infrastructure. As far as road infrastructure is concerned, it is time to look beyond availability of roads to quality of available roads. Poor quality of roads is a widespread problem and it is usually not reported. There should be a system for continuous monitoring of quality of roads and for timely action. As mentioned above, the local bodies can be given the responsibility for this task for village roads.

The penetration of banking services, insurance and telephone services was very poor. As far as insurance is concerned, much needs to be done to make it serve as an important instrument for vulnerability reduction in various spheres of life, thereby making it significantly contributing for human development. Intensive insurance education need to be given with the specific focus to rural areas along with designing suitable insurance products for various sections of the population. The banks should take necessary steps to reach the currently unreached households. Initiatives are needed in two directions, one in making available financial products that are attractive to large section of the population and the other in changing institutional forms of delivering banking service. The banks have been moving in the second direction in the last one decade by routing credit through SHGs.

It is time to review the role played by post offices in connecting people and take necessary measures to make them more relevant. As postal network has a wide presence in the district, they can be made to function as multi-service points in collaboration with other entities. Necessary learning need to be taken from various experiments conducted in other parts of the country and pilots to be tried for the same.

The backbone of SHGs performance is promotional and operational support given by promoting agencies, both non-governmental and governmental in nature. Necessary resources need to be made available for continued promotional efforts to make the development gains from SHGs sustainable.

Improvement in private infrastructure is a function of general economic improvement, attitudinal changes and response of government for the private demand. The status of electrification of individual houses had considerably improved between 1991 and 2001. But still, one fourth of the households in the district did not have electrification in their house by 2001. There was not much improvement on the condition of houses between 1991 and 2001. About 50 per cent of the households in the district were living in semi permanent or temporary houses by 2001. The situation was more or less same even if other parameters like number of rooms in the house and exclusive room for the married couple are considered. So, various measures are needed to improve the housing situation in the district. The recent efforts by district administration to facilitate housing credit through banks and SHG network to disadvantaged families is a promising step in this direction.

Chapter VI
Social Vulnerability

Social vulnerability is an important dimension of human development. There are various dimensions of social vulnerability. The major forms are vulnerability due to gender and caste discrimination. The other forms of social vulnerability are disability, child labour and old age dependency. Some of the emerging social vulnerability areas are HIV/AIDs patients and women headed households. Social vulnerability is largely a result of social norms and taboos like patriarchal attitude and casteism. It is also a result of poor economic development characterized by remnants of feudalism and migration. Economic development by itself will not solve this issue and in fact, old age problems increases with economic development as it is accompanied by demographic transition. Proactive public action is needed to create a congenial environment to address these issues. This chapter deals with the status of child labour, disability, caste and gender based discrimination and aged persons in the district. Data from Census and concerned departments were mostly relied upon.

6.1 Child Labour

Child labour is a result of various socio economic factors. While poverty pushes the families to send their children as labourers, feudalistic attitude in the society gives a congenial environment for the same. Household survey in Tiruvannamalai, 2005 indicated that three major causes for out of school children were earning compulsion (29 %), migration (25 %) and household work (20). All these three causes are directly related to child labour. A recent report documented transporting of minor girls from Jawadhu Hills to Athur to employ as farm labourers for three months[5]. Vulnerability of girl child labour in the work spots is much more than that of boys. There are two data sets related to child labour for Tiruvannamalai district.

The report of Child Labour Survey, March 2003, Tamil Nadu, exhibits that there were 1427 children working in this district as child labours among which 795 were boys and 632 were girls. There could be a lot of unreported cases of child labour particularly those involved in household work. The data from Directorate of School Education indicated that in 1998-99, the share of boys and girls in the total workforce in the district was 10.9 per cent and 12.9 per cent respectively.

As per the Child Labour Survey, March 2003, among the municipalities, the largest number of child labourers was observed in Arni, whereás it was the lowest in the area of Vandavasi. Among all the Panchayat Unions, the number of child labourers was the highest in Pudupalayam (225). There were more number of child labourers also in the Panchayat Unions of Arni, West Arni, Chengam and Jawadhu Hills. A lesser number of child labourers was found in the Panchayat Unions of Thurinjapuram, Anakkavur and Vembakkam. Among the four Town Panchayats, Pernamallur was found to have the highest number of child labourers. The occupation of child labourers varied across

[5] The New Indian Express, September 28, 2006.

the blocks and it included many occupations like engagement in shops, cattle grazing, biscuit making and weaving.

Household survey, 2005 indicated that there were 1275 child labourers in Tiruvannamalai and gave very different results at block level. The survey indicated that major number of child labourers was present in Jawadhu Hills (32%), Tiruvannamalai (13 %) and Chengam (8.5 %). Taking into account the considerable level of underreporting, these data sets indicate that child labour issue needs targeted action in the district.

Multi pronged approach is needed to address child labour issue. Direct interventions could be policy changes to make child labour unattractive for employers, effective enforcement of the legal provisions against child labour, media based efforts for educating parents and employers and proactive action to bring child labourers into education system. Indirect intervention could be ensuring livelihood security in the pockets where child labourers are rampant. There are two major problems with the education system that leads to supply of child labourers. They are unattractive teaching methods and not ensuring minimum learning standards. Enhancement of quality of education system on these aspects would go a long way in reducing child labour in future.

Table 6.1: Distribution of Child Labour in the District of Tiruvannamalai, March 2003

Administrative Unit	Location	Gender		Total
		Boys	Girls	
Municipality	Arni	47	22	69
	Tiruvannamalai	39	9	48
	Vandavasi	4	3	7
Panchayat Union	Anakkavur	10	1	11
	Arni	106	91	197
	West Arni	89	80	169
	Chengam	77	55	132
	Cheyyar	17	25	42
	Jawadhu Hills	58	42	100
	Kilpennathur	16	25	41
	Polur	17	18	35
	Pudupalayam	106	119	225
	Thandrampet	23	19	42
	Thellar	21	34	55
	Tiruvannamalai	74	21	95
	Thurinjapuram	6	4	10
	Vembakkam	13	3	16
	Vandavasi	33	15	48
Town Panchayat	Chetpet	5	1	6
	Kalampur	2	2	4
	Kannamangalam	14	15	29
	Kilpennathur	1	1	2
	Pernamallur	17	27	44
Tiruvannamalai District Total		795	632	1427

Source: Child Labour Survey, March 2003, Tamil Nadu

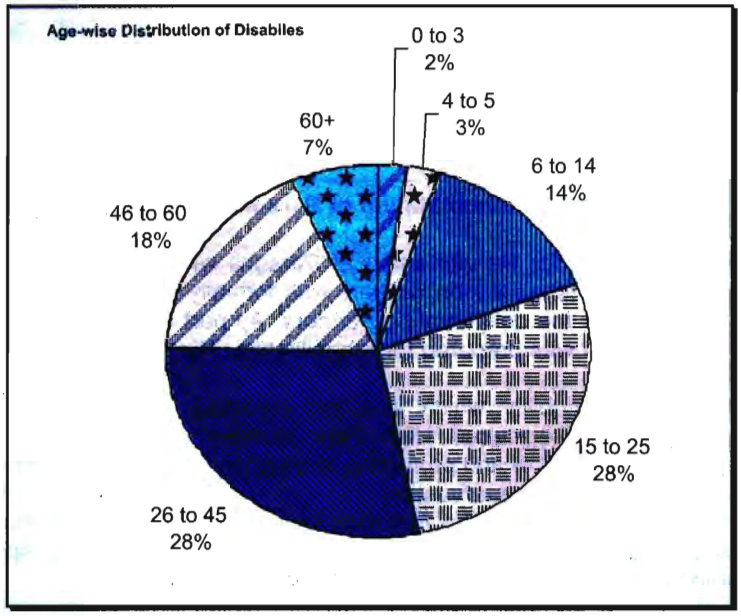
INDUS Child Labour Project

Indo-U.S. (INDUS) collaboration project on elimination of child labour is being run in the district. The major objectives of the project are to identify child workers between 9 and 13 and to educate them in Alternative Education Centres (AECs). Besides, arrangements are also made to identify workers in the 14-17 age group and provide them vocational training. Measures are initiated to send children in schools-age group to schools. The children were taught in AECs through the `Joy of Learning' method. Mid-day meal, uniforms, notebooks and medical facilities are provided free besides an incentive of Rs.100 per month per student. For the district Rs. 1.25 crores was allocated under this project. So far 32 AECs were initiated under this project.

6.2 Disability

Disability is both a health and social problem. Many studies indicate that there is evidence of the impact of disability on multiple dimensions of poverty. Disability affects indicators of material well-being (such as income, employment and consumption), access to and effective use of services (such as education and health), and social and psychological status (such as marriage prospects and decision-making power). These different aspects are closely interlinked, and characteristics such as gender and urban or rural location have an important effect on the disability-poverty relationship. The major problem the persons with disability (PWD) face through out their life is being looked down upon by others. So any rehabilitation effort should also try to change the attitude of the rest of the society on PWDs. Census 2001 indicated that the share of person with disability (PWD) in the total population of the district of Tiruvannamalai was 2.24 per cent. Disability Survey conducted in the district in 2002 indicated that there were a total of 29165 PWDs in the district.

Fig.6.1

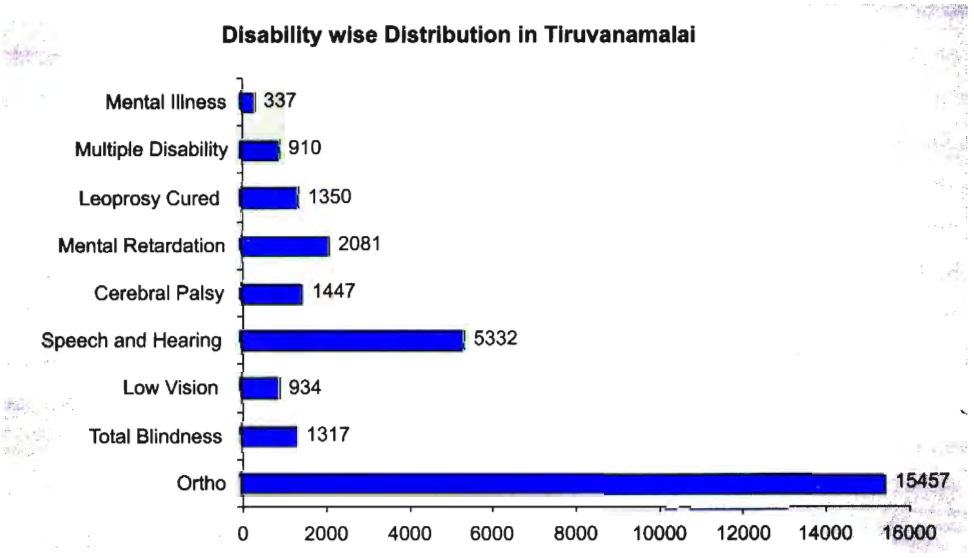


Source: Disability Survey, Tiruvannamalai, 2002

It was revealed from the age-wise distribution of the PWDs in the district that the share of PWDs in the age groups of 15 to 25 years and 26 to 45 years were the highest followed by 46 to 60 years. About 7 per cent and 5 per cent PWDs belonged to the older age group (> 60 years) and 0-5 years age group. Among the total PWDs, the share of males and females were 60 per cent and 40 per cent, respectively. Among all the PWDs, the largest number had orthopedic disability (53 per cent of total PWDs) followed by speech and hearing disability (18.28%).

The reason for high orthopedic disability and high incidence of PWDs in the above mentioned age groups need to be found. Further analysis is needed to understand to what extent the above mentioned disabilities could have been prevented. These aspects would help in planning to reduce further increase in PWDs.

Fig. 6.2



Source: Disability Survey, Tiruvannamalai, 2002

National Programme for the Rehabilitation of Persons with Disability (NPRPD)

The National Programme for Rehabilitation of Persons with Disability with 700 Panchayat level Community based Rehabilitation workers was formally sanctioned during 2002-03. Ten NGOs were identified as the collaborating partners. As part of it **REHAB-VISION 2007** was launched and action plan was prepared for rehabilitation. The major components of the action plan were:

a) Prevention of disability which included imparting training to adolescent groups, maintenance of Registered High Risk Mothers at the village level with close collaboration with ICDS and promoting institutional deliveries & immunization.
b) Early identification and intervention
c) Intervention in education like inclusion of disabled children in schools, training and orientation of teachers on integration of children with disability, special schools for disabled children, scholarships and prevocational training.
d) Rehabilitation assistance through vocational training for self employment and
e) Resource mobilization and creation of a barrier free environment.

6.3 Social Group Related Vulnerability

This is an age-old type of social vulnerability resulting from *varna* system of Hindu religion. This coupled with feudalistic economy had a far reaching negative influence on the well being of many caste groups belonging to SC and ST. Through long-term practice, the individuals of these social groups were made to accept a low social standing and have perception of low personal worth, by default. Relatively poor asset ownership, high incidence of poverty and lack of bargaining power were the other major consequences. An alarming feature of this kind of vulnerability is that low dignity, poverty and lack of bargaining power reinforce each other, thereby resulting in a vulnerability spiral. The Dravidian movement initiated by E.V.R. Periyar had a significant impact in addressing this issue in Tamil Nadu. The State has been trying to address these issues through a three pronged approach. One is to give targeted economic support through various government schemes and quotas to ensure economic development of these social groups. The second is creating legal provisions to address the atrocities against them. The third is ensuring the presence of these social groups in governance by creating reserved constituencies.

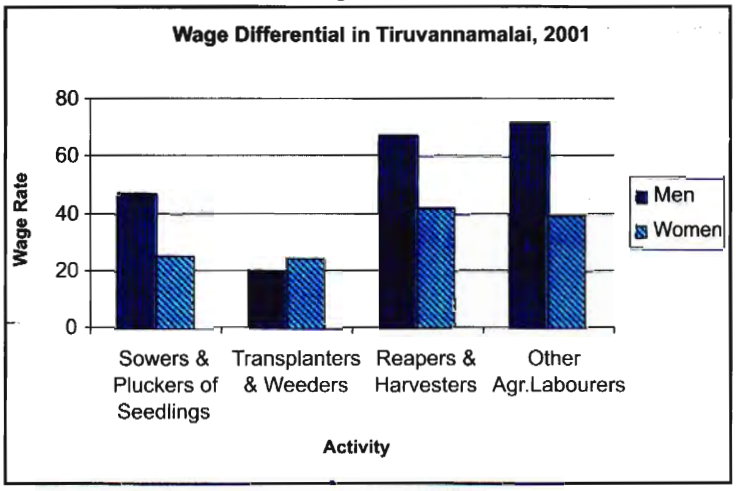
Significant economic development and so social development had resulted due to these efforts. The literacy rates and other health achievements of these social groups indicate a significant improvement over years. But sill they are far from reaching the overall population standards on these aspects. In the eight blocks that had more than 25000 SC population in 1991, the proportion of poor among SC families was much higher than that of their share in the population. In Jawadhu Hills also it was the same situation for ST social group. Child labour prevalence, which is a symptom of economic backwardness, was more rampant among ST population in Jawadhu Hills.

Discrimination on the basis of caste has changed much in the last 3 decades, but some remnants of the old tendencies remain. Even now intermittent discrimination is expressed as atrocities. The data from the Inspector of Police indicate that year-wise cases registered in this district related to crimes against SC/ST had been increasing in the recent years. This might be due to increased awareness rather than increase in atrocities against SC/ST. It could be seen from the data that there was only a few convicted cases. There could be a large number of unreported cases and the situation seems to be grim. There have been instances where there were efforts to thwart the use of provision of reserved constituencies. A recent case is thwarting of election of *dalit* women in Angunam village, near Vettavalam by the backward caste Hindus.

Table 6.2: Details of SC/ST Act Cases Registered by Local Police and their Disposal

Year	Reported	Convicted	Acquitted	Referred	Pending Trial
1992	22		14	7	1
1993	24		7	15	2
1994	17		6	11	
1995	12		6	6	
1996	16		5	11	
1997	10		4	6	
1998	13	2	10	1	
1999	11		7	3	1

Fig. 6.3



Source: Census of India, 2001

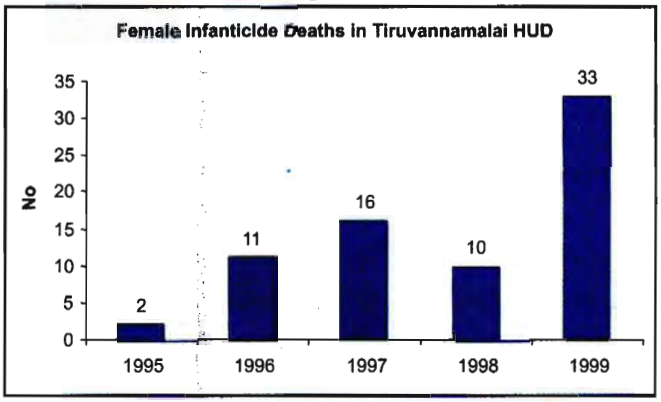
Tiruvannamalai being an agrarian district a large proportion of women workers are engaged as agricultural labourers. In 2001, there were 1.4 women agricultural labourers per male agricultural labourer. In agriculture, gender division of roles are more or less fixed with women doing only activities like plucking seedlings, transplanting, weeding and harvesting. The figure above gives the details of the wage differential in the district between men and women. The wage differential ranged from 19 per cent to 86 percent depending on the type of work. This is the situation in spite of the Minimum Wages Act. Casualisation of labour is very high among females than males in the district. High levels of discrimination against women can be observed in land ownership pattern. Women headed households is on the rise due to a high level of migration among men. This is particularly true of agricultural households and so feminization of agriculture is on the rise.

Similar kind of inequality can be seen on various aspects of development. Estimation of real GDP per capita in purchasing power parity (PPP) by State Planning Commission in 2001 found that it was $687.66 for women and $1815.39 for men in the district. Besides relatively low income when compared to men, decision making regarding utilization of what they earn is also not in their hands most of the time. So, a major share of poor individuals is female by gender. Poor and very poor women have more chances of undergoing difficult labour and other pregnancy complications. On an average they had smaller infants. The male-female literacy gap had widened between 1991 and 2001. There were as many as four blocks viz. Kalasapakkam, Pudupalayam, Thandrampet and Jawadhu Hills that exhibited less than 50 per cent female literacy rates. The block of Jawadhu Hills showed only 26.22 per cent female literacy rate in the year of 2001. Drop out of the girls in primary as well in upper primary sections was higher than the boys.

Another sphere of inequality is health. DLHS, 2002 indicated that while 56 per cent of the eligible women underwent sterilization there was no male sterilization among the families surveyed. This indicates the basic flaw in the population policy. Unfortunately the official policies consider women's health need only from the perspective of their role as produces of children and so there contribution

towards changing the social attitudes regarding position of women is meager. DLHS 2002 indicated that about 25 per cent of married women belonged to the age group below 18 years. Early marriage not only denies a girl the years of growth and development but it is harmful to health. Maternal and female infant deaths constituted significant proportion of total mortality in the district. Female infanticide was on the increase in the district. Detailed analysis of the health situation elsewhere in the report clearly indicated most of the major health issues in the district have their roots in the disadvantaged position of women in the society.

Fig. 6.4



Source: Venkatesh Athreya and Sheela Rani Chunkath, *Tackling Female Infanticide, Social Mobilization in Dharmapuri (1997-99),* Economic and Political Weekly, December 2, 2000. (Data source has been stated to be Primary Health Centre (PHC) records.)

Their bodily integrity was also challenged by various kinds of crimes against them like rape, molestation, sexual harassment, beating by husband, dowry related harassment, trafficking etc. The number of reported rape cases had increased in the district in the last few years and most of them were pending. Same was the picture with the cases booked under the Dowry Prohibition Act. The cases of dowry deaths, cruelty by husband or his relatives, molestation and sexual harassment were reported in this district. There were nine dowry deaths in 2002. But there could be large number of unreported cases due to the strong influence of family culture and fear of ostracism by the society. The dowry system has not reduced over the years and in fact, the amount of dowry demanded is on the increase. The study by Shakti Vahini for Assessing Vulnerabilities for HIV/AIDS and Trafficking found that in Tiruvannamalai prevalence of trafficking of women was high and the vulnerability for trafficking was also high.

The State has been trying to address these issues through a three-pronged approach. One is to give targeted support through various government schemes regarding health and education. The second is creating legal provisions to address the atrocities against them. The third is ensuring the presence of women in governance by creating reserved constituencies. There are also positive trends like improvement in literacy, school enrolment and pass percentage, organizing themselves into SHGs, participation in local elections, etc. But there is a long way to go to reach acceptable levels of gender status. The on going discussion indicates need for more targeted action along the three lines mentioned above. Going beyond the home and taking various other roles through employment and

participation in social activities through education and other opportunities and being a bread winner could help a lot in improving the status of women. The long-term solution lies in acquiring a bargaining power within the home and within the society through organizing themselves, changing the existing patriarchal culture and attitudinal change of men.

6.5 Aged Persons

The proportion of persons aged 60 and above to persons aged 15-59 years in the total population increased from 7.71 per cent to 9.38 per cent during the period 1991 to 2001. In the same period, the proportion of aged population increased from 7.45 per cent to 8.82 per cent in the state indicating that the district had more proportion of aged population. The proportion of aged population is expected to increase in the coming years due to demographic transition which is a consequence of social development. So the investment and attention to address the needs of aged population should also increase.

Aged dependency ratio increased from 13.4 per cent to 15.3 per cent during the period 1991 and 2001. Considering that more than 70 per cent of the workers are dependant on agriculture, at least that proportion of aged would hail from cultivators and agricultural labourers. There are no social security mechanisms to this category of aged persons except support by their sons. As the joint family system is undergoing significant change in favour of small families even in rural areas, the social and economic vulnerability of the aged persons is on the increase. The various mechanisms in place in developed countries to address this issue are yet to percolate in our country. Currently this issue is addressed through old age pension scheme jointly implemented by state and central government. The old age person if enrolled in the scheme can receive Rs. 200 per month. The other interventions are free supply of rice and provision of meals through noon meal programme. While these interventions are very much essential they are far from the level of social security required to address the issue. But coverage of even these minimum social security measures was very low. Old age pension beneficiaries' coverage ratio was just 26.35 per cent for the period 1991 to 2000. In the same way number of aged persons getting meals under the noon meal programme was also meager in number. So, there is a large need to increase the coverage of aged persons under the existing schemes.

6.6 Schemes evolved by the District Social Welfare Office

The Table 6.3 gives the details of schemes run by district welfare office from 2001-02 to 2005-06. Due to data limitation, the percentage of coverage of these schemes with reference to the number of persons in need of these schemes could not be provided.

Table 6.3: Details of the Different Schemes Run by District Social Welfare Office

		2001-02	2002-03	2003-04	2004-05	2005-06	Total
Tamil Nadu Govt. Intercaste Marriage Assistance Scheme	No of Beneficiaries	77	18	36	25	42	198
	Expenditure Incurred (in lakhs)	14.9	3.6	7.2	5	8.3	39
EVR Maniyammaiyar Ninaivu Widow Daughters Marriage Assistance Scheme	No of Beneficiaries	50	45	70	13	62	240
	Expenditure Incurred (in lakhs)	3.5	3.15	6.43	1.3	6.2	20.58
Dr. Dharmambal Ammaiyar Ninaivu Widow Remarriage Scheme	No of Beneficiaries	8	2	2	4	3	19
	Expenditure Incurred (in lakhs)	0.8	0.2	0.2	0.4	0.3	1.9
Annai Theresa Orphan Girl Marriage Assistance Scheme	No of Beneficiaries	4	3	4	1	1	13
	Expenditure Incurred (in lakhs)	0.28	0.21	0.37	0.1	0.1	1.06
Free Supply of Note Books	No of Beneficiaries	955	1069	572	492	429	3517
	Expenditure Incurred (in lakhs)	0.489	0.489	0.31	0.259	0.199	1.746
Girl Child Protection Scheme (Old Scheme)	No of Beneficiaries	344					344
	Expenditure Incurred (in lakhs)	1.32					1.32
Girl Child Protection Scheme (New Scheme)	No of Beneficiaries		199	218	413	281	1111
	Expenditure Incurred (in lakhs)		60.496	66.108	125.224	85.424	337.252

Source: District Social Welfare Officer, Tiruvannamalai

6.7 Summary and Conclusion

Focused efforts are being taken to address child labour and disability through specific schemes in the district. The district administration and other actors need to be appreciated for these concerted efforts. In the same way, focused efforts were also taken up to improve the social and economic situation of SC and ST social groups. There has been considerable improvement in terms of social and economic development in these social groups in the recent years. The efforts to improve the situation of women in the district through SHGs is also appreciable. The gap between male and female regarding parameters related to elementary education has narrowed very significantly in the recent years.

Many issues related to social vulnerability still remains prominent in the district. While there was significant improvement in the economic situation of SC social group, caste based discrimination is still in vogue in many parts of the district. This is expressed through atrocities against them and through efforts to thwart them from sharing political power. Though focused efforts were made regarding ST social group, they are far behind the rest of the society in terms of economic and social development. They seem to be in a time warp and are about ten years behind the rest of the society in terms of development. There is no adequate social security mechanism for the aged people and the coverage of even the lean package of social security measures like old age pension, free rice and provision of mid-day meals was very limited.

The above situation indicates that more public action is needed to address these issues. The three-pronged approach adopted by the state to address caste and gender discrimination faced by SC/ST social group and women namely targeted economic support through various government schemes and quotas to ensure economic development, creating legal provisions to address the atrocities against them and ensuring the presence of them in governance by creating reserved constituencies should be strengthened further. Specific policies that aid these issues like population policy and the policy that ST people from Jawadhu Hills should get their community certificates only from Revenue Division Officer residing in Tiruvannamalai, need to be identified and corrected at the earliest. Various opportunities need to be created for occupational mobility of SC/ST communities which can result in social mobility. Similarly more income opportunities need to be created for women to strengthen their position within home as bread earners. The long-term solution lies in acquiring bargaining power by these social groups and women through organizing themselves and attitudinal change of the rest of the society. Improved coverage of aged people under existing social security measures and introduction of need-based interventions, which address the old age problem in a comprehensive way are to be taken up. Proactive planning is needed to address this issue as the number of aged people is going to increase in the coming years.

Discrimination based on caste faced by SC social group is different from ST social group. Even within the SC social group, there is a lot of difference between various castes. This is the case even with economic development. So it is time to go beyond looking at SC as a homogeneous social group for policy purposes and to look at them as a group of communities with different level of social economic vulnerability. Identifying the most vulnerable castes among SC social group is important for better policy making and targeting. Hot spot analysis is very much essential to identify specific pockets where atrocities against SC/ST social group are present and to identify other vulnerability dimensions, which will not be captured by secondary data.

Mandating announcement of gender policy by each department and organization and the allocation of necessary funds for implementing the same would help a lot in mainstreaming gender concerns. Further a system of collecting disaggregated data based on gender, age and social group on all aspects related to human development need to be instituted to get a clear picture of the status and for monitoring the progress.

Chapter VII

Summary and Way Forward

The preceding chapters of this DHDR have attempted to summarize the human development gains on various aspects in the district and to identify the challenges to be overcome in the coming years. It became clear from these discussions that the district is moving fast on the social development path with considerable gains in human development. These positive changes can be attributed to strong social development focus of the district administration, exclusive attention given by the state government in terms of various schemes due to the backwardness of the district, involvement of civil society and improved local governance. The recent introduction of schemes like INDUS project, *Vaazhndhu Kattuvom* and National Rural Employment Guarantee Scheme in the district is a case in point. That way bifurcation from North Arcot district has benefited the district quite significantly. But the improvement in terms of economic development has been limited particularly considering the **distributive aspect**. And this has considerable influence on offsetting the social development efforts by the district administration. Even regarding social development while there had been overall improvement in aspects like nutritional status of children, there was considerable inequality in certain other aspects with in the district like female literacy. So the social development focus given so far need to be sustained based on their impact on human development so far and it need to be combined with economic development focus to bring in comprehensive human development in the district. The following section summarizes the achievements made in various sectors and other development aspects in the district and also suggests ways for overcoming the current challenges.

7.1 Employment, Income and Poverty

Work Participation Rate (WPR) increased from 45.64 to 48.71 per cent between 1991 and 2001 in the district. The increase in WPR was witnessed both in rural and urban areas. This is significant because there was a slight decline in the WPR between 1981 and 1991. But the increase in total workers between 1991 and 2001 was mainly due to phenomenal increase in marginal workers category. In fact, the number of main workers had come down by 52490 and this was particularly so in rural areas. The WPR in rural areas was significantly more than that of urban areas in 2001. WPR of males was more than that of females. The percentage shares of agricultural labourers as well as cultivators to total workers was more than 70 per cent in 2001 indicating that agriculture still remained as the prime livelihood in the district.

The district Net Domestic Product at constant prices had grown at a lower rate than that of the state between 1993-94 and 2001-02. Further, the per capita income in the district of Tiruvannamalai was lower than that of the state by 58 per cent. Inequality in Tiruvannamalai district was much more than that of Tamil Nadu.

- Integrating the rural markets in the district with booming urban markets in a systematic way through creating necessary infrastructure.
- Targeted livelihood enhancement measures for the poor and vulnerable communities in the various parts of the district. *Vaazhndhu Kattuvom* Scheme is a step in the right direction.
- Significant enhancement of the human resources and transport and communication infrastructure particularly in the rural areas.
- Making the fast growing tertiary sector more pro-poor
- Increasing the dynamism of secondary sector through initiatives like modernizing handlooms in Arni.

Further analysis at block level is needed to understand specific regional causes for above mentioned issues. From the policy angle there is need for understanding which policy cause these issues and which counters them. Consequence of the above-mentioned issues on various dimensions of human development also need to be analyzed and documented. There is a need for putting in place a monitoring system at the district level to monitor changes in WPR, income and poverty situation at micro level, particularly with reference to various social groups, age group and gender.

7.2 Agriculture

A large section of population depends on agriculture for their livelihood in the district. The share of marginal and small farmers in the district is around 90 per cent and their share in the area cultivated is around 54 per cent. Tanks and wells were the primary sources of irrigation. Though depletion of the ground water is at alarming level in some parts, the district is in a relatively better position regarding ground water than many other districts. The area under irrigation is increasing very slowly. Around 41 per cent of the gross cropped area is cultivated with rainfed crops. Cheyyar river is one of the important irrigation sources in the northern part of the district. The performance in agriculture of the northern part of the district is better than the southern part because of better rainfall and irrigation availability. Major crops in the district are paddy, groundnut, millets, pulses and sugarcane. Few new initiatives were also taken up in this district. Contract Farming has been introduced in this district particularly for two crops, Coleus and Jatropha, but on a small scale (1000 acres each). Drip irrigation, Systemic Rice Intensification (SRI) and pit method of sugarcane cultivation has been introduced among the farmers. This district is known as the rice exporting and paddy importing one as large number of rice mills is situated here.

But the overall picture is one of stagnation and decline. The net area sown has fluctuated very much with the current fallow increasing over time. The production of most of the major crops in the district had declined in the last 10 years particularly due to decline in area. Yield has stabilized and the improvement in the last 10 years had been very marginal. This is the case in spite of very large yield gaps. Cotton production had been fluctuating very much. The decline in area under crops does not seem to be replaced with horticultural crops like trees, vegetables or flower crops. The variation in production of rainfed crops was very high due to vagaries of monsoon. Farmers often get non-

remunerative prices for their produce. There has been large scale migration of male workforce to nearby large cities.

The main reasons for such a situation were,

- Inadequate application of technologies
- Inadequate availability of good quality seeds and seeds of new varieties
- High variation in rainfall pattern
- Inadequate water use efficiency and inadequate adoption of technologies for the same
- Poor maintenance of irrigation tanks
- Irrational use of chemical inputs
- Inadequately capitalizing the marketing opportunities in the nearby Chennai and Bangalore
- Inadequate infrastructure and institutional mechanisms for capitalizing the marketing opportunities.

There is an urgent need for shift away from '**crop focus**' to '**livelihood focus**' by all the actors involved in promoting agriculture in the district. Farming system approach needs to be followed. The twin focus should be **ensuring food security and income security, in an ecological way**. Again to ensure food security for the cultivators, the main focus need to be on self provision through own cultivation, as it only ensures healthy food. Under the farming system approach, the district need to be divided into various typologies based on soil, climate and irrigation availability and existing viable farming systems practiced by the successful farmers in each typology need to be understood. Based on the inputs from university and relevant bodies, other viable livelihood options have to be found for each typology. All the actors need to focus on taking these two kinds of viable farming system options to a large scale through various institutional arrangements. Within the farming system framework, the major focus need to be on the following.

- Optimal use of land resources. For this computerization of land records and making land transactions transparent need to be taken up on an urgent basis.
- Optimal use of water resources to double the water use efficiency. Renovation of irrigation tanks to be given priority.
- Exclusive focus and implementation set up for promoting various interventions in dryland farming instead of clubbing it as one of the hundreds of activities.
- Diversification into livestock rearing and horticulture. Livestock rearing is very much promising if the past success of dairy in the district and assured and regular remuneration from livestock rearing are considered.
- Growing for the market. Identifying and bringing in crops like maize which has the advantages of large-scale market demand, assured remuneration and ecologically better in terms of low water requirement. For the same institutional mechanisms like contract farming can be facilitated with necessary regulation.
- Creation of marketing infrastructure for capitalizing marketing opportunities like warehouses and cool chambers, wherever possible through public-private participation (PPP). Direct marketing

with grading and standardization needs to be given focus. The existing marketing infrastructure like regulated markets needs to be made functional to achieve their purpose.

- Establishing efficient and practical insurance mechanism particularly for rainfed crops, if possible through PPP.
- Following group approach rather than individual farmer approach.
- Establishing price support mechanism not only for paddy but also other crops like pulses and oilseeds.
- Creation of infrastructure for weather forecasting.

The current mode of segmented implementation of various activities through various departments is in principle and practice does not go well with the farming system approach. For operationalising farming system approach with focus on above areas, the implementation set up need to be broadly restructured to ensure integrated, one stop service delivery and support to the farmers. The current Project Implementation Agency (PIA) model practiced for watershed projects like Restructured NWDPRA hold promise to achieve this. The specialized discipline-wise support can be given through the PIAs by various relevant bodies.

7.3 Health

The district has achieved replacement level of population with considerable reduction of CBR, CDR, and natural growth rate of population. In terms of CBR and CDR, the district has achieved the goals set for the year 2000 by National Health Policy. The decadal growth rate of population in the district was lower than that of Kerala, which is considered as a model among South Asian countries. All these factors indicate that a conducive demographic environment for human development exists in the district. Though it is difficult to identify all the reasons for this fertility transition, considerable increase in female literacy and consequent adoption of contraceptive measures could have played an important role. In-migration being marginal in scale when compared to the total population did not have much influence on population change. Out migration could have had the effect but it could not be ascertained due to lack of data. Out migration could have been the main reason for drastic changes in population witnessed in some of the blocks.

Sex ratio in the district had improved between 1991 and 2001 and stood at 995 in 2001. The improvement was more in the case of urban areas and in SC social group. This indicates that the position of women with respect to men in the pertaining region, social group and place of residence had improved. Slum population is on the increase as urbanization is happening on a large scale. Between 1991 and 2001, many rural areas had become urban and so the population growth of urban areas was drastically high.

Life expectancy at birth (LEB) had improved considerably between 1996 and 2001 in the district. LEB of male was 67 years and that of female was 70 years during the same period. This improvement can be attributed to the significant reduction in MMR, IMR and incidence of killer diseases. There was a considerable decrease in MMR in the district between 1998 and 2003 and it stood at 1.6 in 2003.

Similarly, performance regarding IMR was also very impressive. From 41.7 in 1998, it had reached 29.3 in 2003. The district has achieved the goal for 2000 set by National Health Policy regarding MMR and IMR. The incidence of leprosy has come down very drastically in recent years and the district is closer to goal set by National Health Policy 2002 namely eliminating leprosy by 2005. The incidence of malaria and filaria was minimal in the district. So was the case of chikungunya in the recent past. The performance of health infrastructure was quite appreciable with reference to ANC and immunization. The share of safe deliveries also improved significantly from 51 per cent in 1998-99 to 78 per cent in 2002. These could be the reasons for significant reduction of MMR and IMR in the district. A significant improvement was witnessed in the nutritional status of children in terms of weight for age in the district.

The areas for concern for demographic transition are a high percentage of girls marrying before legal age of 18 years and considerable proportion of high order births. The corresponding figures for the district as per DLHS-2002 were 25 per cent and 34.2 per cent respectively. Both of these aspects have future consequences like high possibility of maternal mortality, infant mortality, still births, low birth weight etc. Another important issue was that much of the decline in TFR had been achieved by the decline in child bearing of older women and not that of young women. DLHS-2002 indicated that the age specific fertility in the younger age groups 20-24 and 25-29 were 0.161 and 0.102, respectively. The total unmet need for family planning was 14 per cent and there was no male sterilization. Sex ratio of 0-6 years age group in the district had declined from 964 to 948 between 1991 and 2001 indicating a move towards reversal in the trend favouring boys. This can be due to sex selective abortion and female infanticide. Interestingly, this practice has been relatively new unlike in other districts known for it.

There are also many areas for concern regarding mortality and morbidity. Even after good performance in ante natal care (ANC) the major medical causes for maternal deaths in the district are PIH and PPH. In the same way, the reasons for IMR were asphyxia, low birth weight, prematurity and congenital heart diseases. More than 50 per cent of infant deaths was happening in the early neo natal stage (0-7 days) and still birth rate was around 25. The share of low birth weight babies to total number of live births was more than 10 per cent in the district. The share of home deliveries in the total deliverers was considerable in the district. Various studies found that prevalence of and vulnerability for both HIV and trafficking was high in Tiruvannamalai district. A very high level of anaemia was found among children, adolescent girls and pregnant women. The problem was more or less uniform across standard of living and place of residence. The district is far away from the goal for 2007 set by State Tenth Plan regarding anaemia. The district had a poor record pertaining to providing drinking water within premises, usage of toilets in home and presence of drainage system at home and street.

It can be observed that the basic reason behind most of the health and demographic issues mentioned above arises from the disadvantaged position of women in the society subscribing to the view that health of population is largely dependant on the health of the women. Even for the

significant improvements observed in the district the improvements in women's position was very instrumental. So the long-term solutions for the above-mentioned issues lies in improving the position of women in the society. It can also be observed that poverty is another major underlying cause of the above-mentioned issues. Therefore, significant investment on female literacy and education and livelihood enhancement is essential to considerably improve the health status in the district.

In the medium term, thrust should be given on the following areas to make significant positive impact on the health scenario of the district.

- Identifying the health hot spots in terms of geographical area, social group, age group and gender through decentralized participatory approach and addressing them in a targeted manner. Its time to go beyond average and district level indicators.
- Proactive plan and implementation to meet the health needs of urban population in the district as it is growing at a tremendous pace.
- It is also time to shift the focus from quantity of health services to quality and efficiency. Clear performance indicators and efficient monitoring system with incentives for better performance need to be put in place
- Promoting self help approach in handling health problems particularly with respect to women. Self help programmes improve women's knowledge of their bodies and empowers them for gaining control over their bodies and their sexuality.
- Promoting healthy food habits like including millets and non-cultivated food items like many green in the diet, because change in food habit is one of the primary reasons for various illnesses witnessed now. This would considerably reduce anaemia and non-conventional diseases.
- Ensuring community ownership of many health initiatives through various means so that health services become demand driven in nature.
- Learning from success stories at micro and macro levels and taking that learning to other areas.
- Increasing health budget for the **activities component** in the district.
- Promoting Indian system of medicines in a large scale.
- Bringing in many private health institutions in a way that complements and supplements the government health efforts. This should go hand in hand with regulation of private practitioners through commonly accepted service and cost norms.

Other specific suggestions are,

- Improving access to 24-hour facility based emergency obstetric and neo natal care to reduce MMR and IMR. The recent initiative to convert one PHC in each block to this kind of facility is a step in the right direction.
- Improving the quality and effectiveness of ANC.
- Increasing the share of institutional deliveries to 100 per cent by 2010 as envisaged by State Population Policy

- Significant educational efforts need to be made to reduce share of women marrying below the age of 18 years and to reduce higher order births. Adolescent girls should be targeted for these education efforts.
- Addressing the issue of anaemia in a comprehensive and effective manner. Coverage of target group for IFA tablets should be drastically increased. Here too the recent initiative to use Indian system of medicine to address anaemia is a step in the right direction
- Improving the participation of men in contraception through proper education and provision of services
- Identifying specific reasons for declining juvenile sex ratio and addressing the same on a priority basis. For this Implementation of Preconception and Prenatal Diagnostics Techniques Act (Pc & Pndt) need to be ensured.
- Ensuring adequate man power by filling the vacancies in the health department
- Giving high priority to address HIV/AIDS in the district. In this respect the recent initiative regarding convergence of HIV /AIDS with RCH Programme is a positive move.
- Giving high priority to make available drinking water within premises and to facilitate good drainage system both at home and streets.

To understand the health situation in the district comprehensively there is a need to look at the conditions of all sections of people rather than judging the impact of development in health as averages. Averages most often mislead since they overlook distributive justice. While data on education situation is available social groupwise, most of the health and nutrition related indicators are available only at aggregate level. The same inadequacy was also witnessed for data on water and sanitation situation in the district. Understanding of health situation of vulnerable groups like SC, ST is possible only if disaggregated data is available. The recent initiative to collect systematic information on MMR through verbal autopsy is to be appreciated. There is also inadequacy regarding data collection on disease incidence and so in calculating disease burden. So a system of independent, disaggregated data collection, analysis and flagging in the right forum on aspects regarding health, nutrition and sanitation should be put in place.

Jawadhu Hills is an outlier in the district in terms of high population growth, low sex ratio, high home deliveries and low performance in other health indicators. Focused attention need to be given to improve the services of current health infrastructure both in terms of quality and quantity to bring changes in the short term. Intensive information, education and communication effort should also be taken up to bring attitudinal change. In the long term, improving the education status particularly that of women and economic situation would bring sustained improvements in health in this block. Selection of this block under *Vazhndhu Kattuvom* is a step in the right direction.

7.4 Education

Concerted and all round efforts were put in the district to improve the educational status with more focus to backward blocks. Due to these efforts there had been significant achievements in the district in elementary education in terms of improvements in NER, Attendance Rate, CR, DR and TR in

primary and upper primary sections and GAR in upper primary section. The indicators pertaining to SC and ST students had also shown considerable improvement. The indicators pertaining to SC social group were very close to that of overall district. The district administration and other actors need to be appreciated for giving high thrust for universalizing elementary education.

But considering the goals of the SSA programme, still a lot has to be achieved. Further improvements are needed regarding CR and DR in upper primary sections. Broadly speaking achievements in terms of quantitative improvements, though marginally below the goals of SSA, were very significant. But on the quality front there is so much to be achieved as the gap from the desired level is quite significant. As for the school education above elementary education the pass out percentage was very poor, again indicating the poor quality of total education system. The district enjoyed only limited higher education infrastructure and there were no professional colleges except for engineering. Women's enrollment in the technical courses was also very poor.

There should be thrust in the following areas to bring in significant improvements in the educational status in the district.

- **Sustaining the special attention given to Jawadhu Hills and Thandrampet.** Additional attention to be given for Chengam, Pudupalayam and Anakkavur.
- **Identifying the hot spots of poor education** in terms of villages, social groups and occupational groups and taking necessary action.
- **Building strong accountability in the system.** This need to be done through instituting supervision mechanism that reinforces good teacher management and through periodical evaluation of learning outcome of the students.
- **Institute a system of monitoring and evaluation of student learning**. Grover *et al*, 2002 recommended administering standardized assessment to a sample of students in standard V in every four years and establishing a common examination paper for all standards from III to V.
- **Ensuring community ownership and greater role for local bodies**. They should have a role in supervising the service delivery and the outcome of the educational system. Widespread presence of the SHGs in the district needs to be capitalized for this.
- **Learning from the success stories and taking that learning to other areas**.

The strategies to be adopted at different levels of education in the district is given below

- **Elementary education:** Twin strategies of a) sustaining the quantitative improvements and b) giving fresh focus on quality parameters need to be followed.
- **Secondary and higher secondary education:** Both quantitative and qualitative parameters need to be focused more.
- **Collegiate education:** Creation of necessary infrastructure and ensuring enrollment of girls need to be given focus.

The thrust given both for absorbing all the children into the education system and bringing back both children and adults lying outside into the system need to be continued, as the district is still far below the acceptable level of literacy, particularly female literacy.

Other specific areas to be addressed include,

- Placement of enough teachers in upper primary section
- Rational distribution of teachers
- Converting the targeted efforts given to Jawadhu Hills into tangible results by ensuring proper functioning of different type of schools.
- Addressing the need for basic infrastructure facilities in the schools.
- Teachers of small schools should be given special training in multi grade teaching to achieve improvement in teaching at the primary level.

7.5 Infrastructure

On the infrastructure front the district had fared well in the case of roads, electrification of villages and individual houses, PDS and SHGs. Electrification of individual houses had sharply improved in 2001 over that of 1991 situation. The district administration needs to be appreciated for improvement in above mentioned public infrastructure. The recent effort to identify infrastructural needs and planning for the same at the village level through various schemes is a very positive move. Attempts towards community ownership of the assets created and maintenance by the community are highly appreciated.

But there was lot of variation across the blocks regarding PDS and roads. It is important to find the specific reasons for the poor performance in the blocks and based on that necessary intervention need to be planned. With such targeted interventions the district can easily attain appreciable levels of road and PDS infrastructure. As far as road infrastructure is concerned, it is time to look beyond availability of roads to quality of available roads. Poor quality of roads is a widespread problem and it is usually not reported. There should be a system for continuous monitoring of quality of roads and for timely action. As mentioned above, the local bodies can be given the responsibility for this task for village roads.

The penetration of banking services, insurance and telephone services was very poor. As for as insurance is concerned much need to be done to make it serve as an important instrument for vulnerability reduction in various spheres of life, and thereby making it significantly contributing for human development. Intensive insurance education need to be given with the specific focus to rural areas along with designing suitable insurance products for various sections of the population. The banks should take necessary steps to reach the currently unreached households. Initiatives are needed in two directions, one in making available financial products that are attractive to large section of the population and the other is to change institutional forms of delivering banking service. The

banks have been moving in the second direction in the last one decade by routing credit through SHG's.

It is time to review the role played by post offices in connecting people and take necessary measures to make them more relevant. As postal network has wide presence in the district they can be made to function as multi-service points in collaboration with other entities. Necessary learning need to be taken from various experiments conducted in other parts of the country and pilots to be tried for the same.

The backbone of SHGs performance is promotional and operational support given by promoting agencies, both non-governmental and governmental in nature. Necessary resources need to be made available for continued promotional efforts to make the development gains from SHGs sustainable.

Improvement in private infrastructure is a function of general economic improvement, attitudinal changes and response of government for the private demand. The status of electrification of individual houses had considerably improved between 1991 and 2001. But still one fourth of the households in the district did not have electrification in their house by 2001. There was not much improvement on the condition of houses between 1991 and 2001. About 50 per cent of the households in the district were living in semi permanent or temporary houses by 2001. The situation was more or less same even if other parameters like number of rooms in the house and exclusive room for the married couple are considered. So, various measures are needed to improve the housing situation in the district. The recent efforts by district administration to facilitate housing credit through banks and SHG network to disadvantaged families is a promising step in this direction.

7.6 Social Vulnerability

Focused efforts are being taken to address child labour and disability through specific schemes in the district. The district administration and other actors need to be appreciated for these concerted efforts. In the same way, focused efforts were also taken up to improve the social and economic situation of SC and ST social groups. There has been a considerable improvement in terms of social and economic development in these social groups in the recent years. The efforts to improve women situation in the district through SHGs is also appreciable. The gap between male and female regarding parameters related to elementary education has narrowed very significantly in the recent years.

Many issues related to social vulnerability still remains prominent in the district. While there was significant improvement in the economic situation of SC social group caste based discrimination is still in vogue in many parts of the district. This is expressed through atrocities against them and through efforts to thwart them from sharing political power. Though focused efforts were made regarding ST social group, they are far behind the rest of the society in terms of economic and social development. They seem to be in a time warp and are about ten years behind the rest of the society in terms of development. There is no adequate social security mechanism for the aged people and the coverage

of even the lean package of social security measures like old age pension, free rice and provision of mid-day meals was very limited.

The above situation indicates that more public action is needed to address these issues. The three-pronged approach adopted by the state to address caste and gender discrimination faced by SC/ST social group and women namely targeted economic support through various government schemes and quotas to ensure economic development, creating legal provisions to address the atrocities against them and ensuring the presence of them in governance by creating reserved constituencies should be strengthened further. Specific policies that aid these issues like population policy and the policy that ST people from Jawadhu Hills should get their community certificates only from Revenue Division Officer residing in Tiruvannamalai, need to be identified and corrected at the earliest. Various opportunities need to be created for occupational mobility of SC/ST communities which can result in social mobility. Similarly more income opportunities need to be created for women to strengthen their position within home as bread earners. The long-term solution lies in acquiring bargaining power by these social groups and women through organizing themselves and attitudinal change of the rest of the society. Improved coverage of aged people under existing social security measures and introduction of need based interventions which addresses the old age problem in a comprehensive way are to be taken up. Proactive planning is needed to address this issue as the number of aged people is going to increase in the coming years.

Discrimination based on caste faced by SC social group is different from ST social group. Even within the SC social group there is a lot of difference between various castes. This is the case even with economic development. So it is time to go beyond looking at SC as a homogeneous social group for policy purposes and to look at them as a group of communities with different level of social economic vulnerability. Identifying the most vulnerable castes among SC social group is important for better policy making and targeting. Hot spot analysis is very much essential to identify specific pockets where atrocities against SC/ST social group are present and to identify other vulnerability dimensions, which will not be captured by secondary data.

Mandating announcement of gender policy by each department and organization and the allocation of necessary funds for implementing the same would help a lot in mainstreaming gender concerns. Further, a system of collecting disaggregated data based on gender, age and social group on all aspects related to human development need to be instituted to get a clear picture of the status and for monitoring the progress.

7.7 Common Strategies for Impacting Human Development in the District

It can be observed that some strategies suggested to address sectoral issues are common. Broader Strategies needed for significant improvement in the human development situation of the district are given below.

- **Invest only on sectors and development interventions that have high impact on human development** in the district. Sectoral analysis done in the preceding chapters indicates that the

inter-sectoral linkages were very strong in bringing about or hindering the overall human development in the district. It was also found that there can be wide difference in the impact of investments made in various sectors. Given the situation of limited resources, it is important for the district administration to identify and put the funds on the sound choices for development investment in the district, through rigorous analysis of the impact of investments made in the past[8].

- Attempting targeting in two ways.
  - One is **targeting backward blocks**. The analysis in the earlier chapters of the report identified the bottom five blocks in the district in terms of education and poverty. They need to be targeted well in terms of finding block specific reasons and block specific plans. They need to be given priority in the allocation of district funds.
  - The second is **targeting hot spots** regarding various social and economic issues. For this hot spots at the micro level like villages need to be identified through proper participatory process. Then intervention should be done on a case by case basis. This method of targeting will be useful in the case of indicators in which the district has achieved significant achievements and could not achieve 100 per cent coverage like nutritional status of children. More than that it will be very useful to address issues not thrown up by quantitative parameters.

- **Learning from success stories regarding various socio-economic developments** in the district and taking the learning to other parts of the district areas.

- **Proactively responding to urbanization** which is happening at a fast pace by creating necessary infrastructure and services.

- **Shifting from supply based approach to demand based and incentive based approach** to various development services. The performance based development funding to village panchayats in *Namadhu Gramam* and *Vaazhndhu Kattuvom* schemes is a case in point. Community ownership attempted in various schemes need to be made a reality to strengthen demand based approach.

- **Building strong accountability in the system to improve efficiency of service delivery.** This also goes along with the strategy of shifting focus from quantity to quality, as the district has created significant levels of basic infrastructure regarding many government services like health and education. Establishing **outcome** based performance indicators and code of ethics for all departments would go a long way in improving accountability.

[8] Instead of thinly spreading the limited funds on very high number of schemes, the district can identify just ten interventions that can have very high impact on human development and can put all the funds in them.

- Monitoring the various dimensions of human development in the district on a continuous basis. The parameters to be monitored have to be identified and an exclusive system of surveillance, analysis and flagging in right forums need to be instituted.

- Increasing the participation and investment from private sector with necessary regulation wherever there is possibility for win-win situation in the district. This would help in increasing resource flow in the district as well as technical know how and good management practices.

Specific studies are needed on the following topics to understand the casual reasons behind many changes related to human development in the district.

- Study of impact of various development investments in lifting poor out of poverty, similar to the study done by IFPRI.
- Sub-district explorative study to understand the causes behind changes in population and to give input to population policy at district level.
- Exclusive study on the out migrants from the district regarding their destination, purpose and quality of well being in the migrated place. This information could throw light on human development condition of considerable share of population in Tiruvannamalai district.
- An exclusive study on tertiary sector in the district to understand the reasons for its remarkable growth and to explore ways for making it pro-poor.

To facilitate improvement in effectiveness, the district administration needs to be given the privilege and autonomy to improvise the operational rules of the state and central government development projects, based on the local context.

Human Development Fact Sheet of Tiruvannamalai District

Sl No	Indicators	Tiruvannamalai	Tamilnadu
	Demography		
1	Total Population - 2001	2186125	62405679
2	Sex Ratio – 2001	995	987
3	Sex Ratio of Children 0-6 years - 2001	948	942
4	Total Fertility Rate, 2001	2.1	1.8
	Aged Dependency Ratio, 2001	9.38	8.82
	Income		
	Per Capita Net Domestic Product, 2001-02 at constant prices (1993-94), in Rs.	8067	12717
	Percentage of Persons in Labour Force, 2001	48.71	44.67
	Percentage of Female in Labour Force, 2001	39.59	31.54
	Share of Workers Depending on Agriculture	72.22	49.33
	Percentage of Population Below Poverty Line, 1999-2000	36.44	19.18
	Literacy & Education		
8	Literacy Rate – 2001 (%)	67.39	73.50
	Female Literacy Rate – 2001	55.63	64.60
	Rural Literacy Rate – 2001	64.65	67
	Rural Female Literacy Rate - 2001	52.14	56
	Urban Literacy Rate – 2001	79.52	82
	Urban Female Literacy Rate – 2001	70.97	76
	Net Enrolment Ratio – Primary, 2005-06	98.17	
	Net Enrolment Ratio – Upper Primary, 2005-06	95.69	
	Girls Net Enrolment Ratio – Primary, 2005-06	97.76	
	Pupil-Teacher Ratio (Primary School) – 2005-06	40.00	
	Health & Nutrition		
22	Life Expectancy at Birth, Male, 1996-2001	67	64.82
23	Life Expectancy at Birth , Female, 1996-2001	70	65.20
24	Infant Mortality Rate, 2003	29.3	30.1
25	Maternal Mortality Rate, 2003 (per 1000 live births)	1.6	1.4
	Percentage of Severely Malnourished Children, 2001 (<3 yrs)	0.4	
	Prevalence of Anaemia Among Children, 2002 (<6 yrs)	96	
	Basic Amenities		
26	Share of Households with Access to Safe Drinking Water, 2001	21.90	27.06
27	Share of Households with Access to Toilet Facilities, 2001	16.5	35.2
	Share of Households living in Permanent Houses, 2001	49.18	58.52
	Share of Households Living in Electrified Houses, 2001	75.69	78.18
	Environment		
28	Percentage of Recorded Forest Area to Total Geographical Area	22.20	23

Data Source

1. Demography and Basic Amenities – Census of India, 2001
2. Income
   - Per Capita Net Domestic Product & Poverty – DoES, Tamil Nadu
   - Percentage of Persons in Labour Force – Census of India
3. Education
   - Literacy Rate – Census of India
   - Net Enrolment Ratio & Pupil-Teacher Ratio – DISE cited in SSA Report, Tiruvannamalai
4. Health
   - District Statistical Handbook, VES 2003, ICDS III, DLHS-RCH 2002
5. Environment
   - District Forest Office

Tiruvannamalai

District Human Development Report - 2007

Annexure: Data Tables

Table A2.1: Block-wise Work Participation Rate as per 1991 and 2001 Census

Blocks	Total workers		WPR		% of main workers to total workers		% of marginal workers to total workers	
	1991	2001	1991	2001	1991	2001	1991	2001
I. Blocks with rural areas only								
Vembakkam	56873	NA	51.11	NA	95.29	NA	4.71	NA
Anakkavur	39075	47020	51.49	56.25	96.57	82.09	3.43	17.91
Pernamallur	40911	54171	47.77	57.14	93.35	82.75	6.65	17.25
Thellar	49858	64532	51.11	57.67	93.90	78.63	6.10	21.37
Kalasapakkam	47388	NA	45.50	NA	95.80	NA	4.20	NA
Thurinjapuram	51822	58529	50.30	52.51	93.97	82.36	6.03	17.64
Kilpennathur	53480	68147	47.25	55.29	91.03	81.48	8.97	18.52
Thandrampet	65186	136553	46.83	64.85	95.14	97.68	4.86	2.32
Jawadhu Hills	16697	NA	51.93	NA	88.26	NA	11.74	NA
Sub-Total (I)	**421290**	**NA**	**48.87**	**NA**	**94.11**	**NA**	**5.89**	**NA**
II. Blocks with urban areas since 2001 Census								
West Arni	43441	49327	44.80	47.83	94.07	77.02	5.93	22.98
Chetpet	47442	NA	46.82	NA	94.60	NA	5.40	NA
Pudupalayam	39046	NA	49.43	NA	90.58	NA	9.42	NA
Chengam	56571	101381	42.60	52.24	96.85	82.01	3.15	17.99
Sub-Total (II)	**186500**	**NA**	**45.48**	**NA**	**94.32**	**NA**	**5.68**	**NA**
III. Blocks with urban areas since 1991Census								
Cheyyar	50696	54693	43.51	56.07	94.43	81.87	5.57	18.13
Vandavasi	54570	61450	44.71	46.47	97.84	78.59	2.16	21.41
Arni	61713	NA	61.04	NA	97.29	NA	2.71	NA
Polur	70880	NA	47.87	NA	93.60	NA	6.40	NA
Tiruvannamalai	86783	88226	36.63	35.11	94.97	78.51	5.03	21.49
Sub-Total (III)	**324642**	**NA**	**44.80**	**NA**	**95.51**	**NA**	**4.49**	**NA**
All	**932432**	**NA**	**45.64**	**NA**	**94.64**	**NA**	**5.36**	**NA**

Source: Census of India 1991 & 2001, sited in *Block Statistical Handbooks* from respective blocks.

Table A2.2: Percentage Distribution of Main Workers into Different Sub-Categories in Different Blocks as Per 1991 And 2001 Census

Blocks	Cultivators		Agr. Labourers		Agr. Workers		HH industry, manuf., proce., serv.& repairs		Other workers	
	1991	2001	1991	2001	1991	2001	1991	2001	1991	2001
I. Blocks with rural areas only										
Vembakkam	34.97	NA	44.12	NA	79.09	NA	12.43	NA	8.48	NA
Anakkavur	40.52	37.25	47.69	44.66	88.22	81.91	3.62	3.02	8.16	15.07
Pernamallur	45.50	40.64	41.33	41.72	86.83	82.36	4.99	4.77	8.18	12.87
Thellar	47.68	36.72	39.61	45.06	87.30	81.78	3.83	4.71	8.88	13.51
Kalasapakkam	39.80	NA	48.61	NA	88.41	NA	2.95	NA	8.65	NA
Thurinjapuram	56.21	56.23	35.55	30.32	91.77	86.55	1.98	1.45	6.26	12.00
Kilpennathur	45.95	35.19	40.75	44.69	86.70	79.88	3.26	3.03	10.04	17.08
Thandrampet	42.02	19.54	48.58	22.59	90.61	42.13	1.76	2.38	7.64	55.50
Jawadhu Hills	71.35	NA	23.25	NA	94.61	NA	0.39	NA	5.00	NA
Sub-Total (I)	**44.98**	**NA**	**42.63**	**NA**	**87.61**	**NA**	**4.25**	**NA**	**8.15**	**NA**
II. Blocks with urban areas since 2001 Census										
West Arni	32.43	29.35	41.09	28.07	73.53	57.42	13.54	15.09	12.93	27.49
Chetpet	42.98	NA	41.46	NA	84.44	NA	4.03	NA	11.52	NA
Pudupalayam	44.03	NA	45.40	NA	89.42	NA	2.02	NA	8.56	NA
Chengam	40.10	38.47	46.46	40.48	86.56	78.95	2.93	0.77	10.50	20.29
Sub-Total (II)	**39.84**	**NA**	**43.72**	**NA**	**83.57**	**NA**	**5.50**	**NA**	**10.94**	**NA**
III. Blocks with urban areas since 1991Census										
Cheyyar	31.78	28.75	34.62	39.16	66.41	67.92	23.79	12.02	9.80	20.06
Vandavasi	28.37	31.06	46.44	30.54	74.80	61.60	17.77	3.70	7.43	34.69
Arni	21.74	NA	30.62	NA	52.35	NA	38.75	NA	8.90	NA
Polur	39.91	NA	42.20	NA	82.11	NA	12.00	NA	5.89	NA
Tiruvannamalai	31.17	34.34	28.45	47.50	59.62	81.85	28.30	2.70	12.08	15.45
Sub-Total (III)	**30.82**	**NA**	**35.86**	**NA**	**66.69**	**NA**	**24.33**	**NA**	**8.99**	**NA**
All	**38.98**	**NA**	**40.47**	**NA**	**79.45**	**NA**	**14.22**	**NA**	**6.33**	**NA**

Source: Census of India 1991 & 2001, sited in *Block Statistical Handbooks* from respective blocks.

Table A2.3: Gender Wise Work Participation Rate in Different Blocks as Per 1991 And 2001 Census

Blocks	Total male workers		Total female workers		Male WPR		Female WPR		% of main workers to total workers			
									Male		Female	
	1991	2001	1991	2001	1991	2001	1991	2001	1991	2001	1991	2001
I. Blocks with urban areas only												
Vembakkam	32719	NA	24154	NA	58.44	NA	43.69	NA	99.53	NA	89.54	NA
Anakkavur	21564	25067	17511	21953	56.85	62.08	46.13	50.80	99.52	89.01	92.94	74.19
Pernamallur	23774	27954	17137	26217	55.69	62.26	39.89	52.54	99.47	90.89	84.86	74.08
Thellar	27800	33212	22058	31320	56.60	61.66	45.55	53.96	99.26	85.60	87.14	71.24
Kalasapakkam	30151	NA	17237	NA	57.20	NA	33.51	NA	99.47	NA	89.38	NA
Thurinjapuram	29670	33118	22152	25411	56.78	58.97	43.63	45.94	99.39	89.31	86.70	73.29
Kilpennathur	31040	35653	22440	32494	54.36	60.01	40.00	50.89	98.88	87.25	80.17	75.16
Thandrampet	39191	NA	25995	NA	55.33	NA	38.02	NA	99.68	NA	88.29	NA
Jawadhu Hills	9594	NA	7103	NA	57.57	NA	45.86	NA	99.56	NA	73.00	NA
Sub-Total (I)	**245503**	**NA**	**175787**	**NA**	**56.40**	**NA**	**41.19**	**NA**	**99.41**	**NA**	**86.70**	**NA**
II. Blocks with urban areas since 2001 Census												
West Arni	26593	29798	16848	19529	55.03	58.05	34.63	37.69	99.25	87.44	85.90	61.11
Chetpet	27655	NA	19787	NA	54.31	NA	39.25	NA	99.30	NA	88.03	NA
Pudupalayam	22622	NA	16424	NA	56.76	NA	41.96	NA	97.43	NA	81.14	NA
Chengam	37176	57250	19395	44131	54.90	59.79	29.80	44.89	99.38	86.70	92.00	75.92
Sub-Total (II)	**114046**	**NA**	**72454**	**NA**	**55.15**	**NA**	**35.64**	**NA**	**98.94**	**NA**	**87.04**	**NA**
III. Blocks with urban areas since 1991Census												
Cheyyar	32211	NA	18485	NA	54.96	NA	31.38	NA	99.20	NA	86.12	NA
Vandavasi	33601	38046	20969	23404	54.70	57.43	34.59	35.46	99.83	85.81	94.65	66.85
Arni	41035	NA	20678	NA	55.48	NA	28.18	NA	99.68	NA	92.56	NA
Polur	42000	NA	28880	NA	56.72	NA	39.03	NA	99.54	NA	84.95	NA
Tiruvannamalai	61183	48163	25600	40063	51.02	43.37	21.90	28.57	99.36	84.91	84.49	70.81
Sub-Total (III)	**210030**	**NA**	**114612**	**NA**	54.14	**NA**	29.86	**NA**	99.51	**NA**	88.18	**NA**
All	**569579**	**NA**	**362853**	**NA**	**55.30**	**NA**	**35.82**	**NA**	**99.35**	**NA**	**87.24**	**NA**

Source: Census of India 1991 & 2001, sited in *Block Statistical Handbooks* from respective blocks.

Table A2.4: Gender Wise Percentage Distribution of Main Workers into Different Sub-Categories in Different Blocks as Per 1991 and 2001 Census

Blocks	Cultivators				Agr. Labourers				HH industry, manuf., proce., serv.& repairs				Other workers			
	Male		Female		Male		Female		Male		Female		Male		Female	
	1991	2001	1991	2001	1991	2001	1991	2001	1991	2001	1991	2001	1991	2001	1991	2001
I. Blocks with urban areas only																
Vembakkam	41.38	NA	25.32	NA	29.87	NA	65.56	NA	17.83	NA	4.30	NA	10.91	NA	4.83	NA
Anakkavur	52.89	45.60	24.22	25.82	30.43	29.48	70.46	65.45	5.59	3.53	1.01	2.32	11.09	21.39	4.30	6.41
Pernamallur	55.20	50.16	29.73	28.18	27.61	26.22	63.65	62.01	6.54	5.64	2.45	3.64	10.65	17.98	4.17	6.18
Thellar	59.07	44.54	31.34	26.75	23.72	32.16	62.43	61.50	5.37	4.58	1.60	4.86	11.84	18.71	4.62	6.88
Kalasapakkam	48.45	NA	22.96	NA	36.75	NA	71.69	NA	4.14	NA	0.61	NA	10.65	NA	4.74	NA
Thurinjapuram	66.43	58.82	40.52	52.11	23.08	24.04	54.71	40.30	2.65	1.73	0.95	0.99	7.84	15.41	3.82	6.59
Kilpennathur	54.35	39.97	31.61	29.10	28.94	33.23	60.90	59.29	4.46	2.83	1.21	3.30	12.24	23.97	6.28	8.31
Thandrampet	52.09	NA	24.89	NA	36.09	NA	69.86	NA	2.24	NA	0.93	NA	9.58	NA	4.33	NA
Jawadhu Hills	80.12	NA	55.20	NA	13.70	NA	40.85	NA	0.50	NA	0.19	NA	5.67	NA	3.76	NA
Sub-Total (I)	**54.49**	**NA**	**29.75**	**NA**	**29.28**	**NA**	**64.01**	**NA**	**5.88**	**NA**	**1.62**	**NA**	**10.36**	**NA**	**4.61**	**NA**
II. Blocks with urban areas since 2001 Census																
West Arni	39.51	30.12	19.53	27.68	26.11	20.45	68.42	44.71	17.75	16.37	5.87	12.31	16.64	33.07	6.18	15.30
Chetpet	52.78	NA	27.54	NA	26.55	NA	64.97	NA	5.59	NA	1.58	NA	15.09	NA	5.90	NA
Pudupalayam	54.22	NA	27.17	NA	32.29	NA	67.08	NA	2.71	NA	0.88	NA	10.78	NA	4.87	NA
Chengam	48.42	40.94	22.86	34.82	35.07	31.21	70.05	54.20	3.69	0.39	1.37	1.33	12.82	27.46	5.72	9.66
Sub-Total (II)	**48.53**	**NA**	**24.30**	**NA**	**30.36**	**NA**	**67.65**	**NA**	**7.25**	**NA**	**2.36**	**NA**	**13.87**	**NA**	**5.69**	**NA**
III. Blocks with urban areas since 1991Census																
Cheyyar	36.06	NA	23.18	NA	22.42	NA	59.11	NA	30.32	NA	10.68	NA	11.19	NA	7.02	NA
Vandavasi	33.07	30.08	20.42	33.10	34.75	23.62	66.19	45.00	23.33	3.75	8.36	3.60	8.85	42.55	5.03	18.29
Arni	23.27	NA	18.41	NA	18.34	NA	56.84	NA	48.23	NA	18.54	NA	10.15	NA	6.21	NA
Polur	45.78	NA	29.91	NA	30.37	NA	62.35	NA	16.56	NA	4.23	NA	7.29	NA	3.51	NA
Tiruvannamalai	33.49	40.15	24.60	25.98	18.42	35.22	56.64	65.21	35.49	3.16	8.15	2.03	12.60	21.47	10.62	6.78
Sub-Total (III)	**34.27**	**NA**	**23.67**	**NA**	**24.03**	**NA**	**60.33**	**NA**	**31.46**	**NA**	**9.61**	**NA**	**10.24**	**NA**	**6.39**	**NA**
All	**45.84**	**NA**	**26.73**	**NA**	**27.55**	**NA**	**63.56**	**NA**	**19.27**	**NA**	**5.21**	**NA**	**7.34**	**NA**	**4.51**	**NA**

Source: Census of India 1991 & 2001, sited in *Block Statistical Handbooks* from respective blocks.

Table A2.5: Percentage Distribution of No of Operational Holdings According To the Land Holdings (In Ha.), 2001-02

Blocks	<.5	0.5-1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 7.5	7.5 to 10	10 t o 20	20 to 30	30 to 40	40 to 50	>50	Total
Anakkavur	55.90	24.63	13.90	3.65	1.10	0.42	0.28	0.08	0.05	0.00	0.00	0.00	0.00	100.00
Arni	61.79	27.68	6.59	2.03	0.77	0.67	0.37	0.10	0.00	0.00	0.00	0.00	0.00	100.00
Arni (West)	56.72	23.16	14.68	3.13	1.42	0.44	0.34	0.06	0.02	0.02	0.00	0.00	0.00	100.00
Chengam	47.68	25.52	18.55	4.91	1.68	0.75	0.63	0.18	0.09	0.01	0.00	0.00	0.00	100.00
Chetpet	55.85	23.67	14.63	3.82	1.18	0.45	0.31	0.06	0.02	0.00	0.00	0.00	0.00	100.00
Cheyyar	60.94	21.44	12.99	2.88	0.93	0.42	0.28	0.08	0.03	0.01	0.00	0.00	0.00	100.00
Jawadhu Hills	37.89	24.79	23.23	7.46	3.65	1.35	1.14	0.38	0.08	0.03	0.00	0.01	0.00	100.00
Kalasapakkam	51.13	25.82	16.75	3.96	1.40	0.53	0.31	0.06	0.03	0.00	0.00	0.00	0.00	100.00
Kilpennathur	55.77	22.44	14.98	4.15	1.38	0.65	0.44	0.11	0.08	0.00	0.00	0.00	0.00	100.00
Polur	49.69	26.16	17.91	4.32	1.14	0.47	0.26	0.04	0.02	0.00	0.00	0.00	0.00	100.00
Pernamallur	59.52	22.71	12.98	3.08	1.01	0.44	0.19	0.04	0.03	0.00	0.00	0.00	0.00	100.00
Pudupalayam	49.84	24.99	18.24	4.34	1.39	0.52	0.55	0.09	0.04	0.01	0.00	0.00	0.00	100.00
Thandrampet	44.59	24.16	20.39	5.96	2.32	1.14	0.98	0.28	0.16	0.03	0.00	0.00	0.00	100.00
Thellar	54.83	24.38	14.45	3.89	1.23	0.61	0.45	0.12	0.03	0.00	0.00	0.00	0.00	100.00
Thurinjapuram	50.25	24.99	17.31	4.71	1.61	0.54	0.45	0.08	0.07	0.00	0.00	0.00	0.00	100.00
Tiruvannamalai	78.94	14.91	3.69	1.41	0.53	0.39	0.10	0.02	0.01	0.00	0.00	0.00	0.00	100.00
Vembakkam	59.81	20.01	13.21	3.90	1.54	0.78	0.56	0.11	0.06	0.02	0.00	0.00	0.00	100.00
Wandiwash	55.08	23.56	14.77	3.89	1.42	0.52	0.52	0.16	0.06	0.01	0.00	0.00	0.00	100.00

Source: Different issues of Block Statistical Handbook

Table A2.6: Percentage Distribution of Area According To the Land Holding (In Ha.), 2001-02

Block	<0.5	0.5-1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 7.5	7.5 to 10	10 t o 20	20 to 30	30 to 40	40 to 50	>50	Total
Anakkavur	18.75	26.18	28.82	13.06	5.77	2.74	2.41	1.02	1.07	0.16	0.00	0.00	0.00	100
Arni	27.10	25.72	24.58	10.16	4.53	2.23	2.87	2.07	0.73	0.00	0.00	0.00	0.00	100
Arni (West)	15.79	0.00	44.27	21.80	8.57	3.97	2.03	2.05	0.61	0.38	0.34	0.18	0.00	100
Chengam	13.08	23.04	29.66	14.83	7.68	3.92	4.40	1.79	1.42	0.18	0.00	0.00	0.00	100
Chetpet	19.52	24.37	29.02	13.70	6.00	2.94	2.72	0.78	0.32	0.64	0.00	0.00	0.00	100
Cheyyar	22.64	24.89	28.51	11.13	5.12	3.01	2.73	1.02	0.63	0.31	0.00	0.00	0.00	100
Jawadhu Hills	50.49	8.86	16.64	8.87	6.14	2.85	3.36	1.60	0.50	0.38	0.00	0.30	0.00	100
Kalasapakkam	16.90	25.23	31.28	13.33	6.38	3.23	2.51	0.70	0.45	0.00	0.00	0.00	0.00	100
Kilpennathur	16.93	22.91	28.94	14.02	6.72	4.09	3.75	1.34	1.31	0.00	0.00	0.00	0.00	100
Polur	16.31	25.43	33.43	13.98	5.28	2.81	2.04	0.43	0.29	0.00	0.00	0.00	0.00	100
Pernamallur	22.55	25.02	29.04	11.81	5.60	3.20	1.82	0.49	0.48	0.00	0.00	0.00	0.00	100
Pudupalayam	15.26	22.93	33.08	13.30	6.31	3.04	4.20	1.01	0.68	0.20	0.00	0.00	0.00	100
Thandrampet	10.05	17.72	30.83	15.58	8.54	5.52	6.20	2.59	2.28	0.68	0.00	0.00	0.00	100
Thellar	18.93	23.87	28.23	13.24	5.98	3.88	3.79	1.45	0.64	0.00	0.00	0.00	0.00	100
Thurinjapuram	14.49	23.38	31.73	14.78	7.12	3.08	3.45	0.82	1.15	0.00	0.00	0.00	0.00	100
Tiruvannamalai	41.59	30.07	12.83	6.97	3.39	3.29	1.19	0.40	0.25	0.00	0.00	0.00	0.00	100
Vembakkam	39.74	25.55	13.37	7.66	4.93	4.74	1.41	1.11	1.50	0.00	0.00	0.00	0.00	100
Wandiwash	18.80	22.95	27.85	12.98	6.78	3.21	4.13	1.88	1.03	0.40	0.00	0.00	0.00	100

Source: Different issues of Block Statistical Handbook

Table A2.7: Month Wise/Season Wise Average Rainfall–Tiruvannamalai District: 1995-2004

Season	Month	Normal Rainfall (mm)	Average Rainfall (mm)	SD	CV	Comment
Winter	Jan	26.4	6.31	11.34	179.72	HIGHEST VARIABILITY
	Feb	10.1	4.32	12.59	291.41	
	Total	**36.5**	**10.63**	**15.47**	**145.56**	
Summer	Mar	14.1	5.51	12.09	219.40	UNSTABLE
	April	23.2	20.64	22.97	111.29	
	May	75.4	103.66	118.35	114.17	
	Total	**112.7**	**129.81**	**122.93**	**94.70**	
S W Monsoon	June	59.8	72.92	66.54	91.25	LOW VARABILITY
	July	94.8	93.66	45.34	48.41	
	Aug	154.7	122.24	72.18	59.05	
	Sept	159.1	186.93	87.63	46.88	
	Total	**468.4**	**475.75**	**158.33**	**33.28**	
N E Monsoon	Oct	270.9	198.89	47.12	23.69	LOW VARABILITY
	Nov	164.7	134.60	76.18	56.60	
	Dec	21.5	100.70	99.44	98.75	
	Total	**457.1**	**424.12**	**144.60**	**34.10**	
	Grand Total	**1074.7**	**1040.31**	**206.79**	**19.88**	For the year round, rainfall is stable

Source: Action Plan for 2005-06, Joint Director of Agriculture, Tiruvannamalai

Table A2.8: Percentage Distribution of Area, 2003-04

	Percentage distribution of geographical area according land use pattern										In ha.	
Blocks	Forest	Barren and Uncultivable Land	Land Put to Non Agricultural Use	Cultivable Waste	Permanent Pastures and other grazing land	Land under misc. tree crops and groves not included in net sown area	Current fallows	Other fallow lands	Net Sown Area	Geographical Area according to Village papers (ha.)	Total Cropped Area	Area Sown more than once
Anakkavur	0.78	1.13	30.49	3.74	2.16	2.71	15.69	6.29	37.02	26042	13974	4334
Arni	14.93	2.74	26.24	2.41	1.33	4.28	5.43	7.46	35.19	25398	11030	2093
Arni (West)	2.30	1.98	20.77	1.51	1.15	1.14	25.08	5.01	41.06	20095	10421	1645
Chengam	47.23	2.55	7.96	1.12	0.00	0.37	1.20	4.64	34.92	59853	24646	3746
Chetpet	12.09	2.93	21.94	5.07	0.69	1.20	7.13	9.05	39.89	24636	11815	1987
Cheyyar	0.04	1.04	34.14	4.32	0.55	1.97	4.76	8.90	44.28	26045	13359	2520
Jawadhu Hills	85.77	0.75	0.82	0.43	0.27	0.09	3.25	1.09	7.52	91067	6445	3675
Kalasapakkam	2.72	1.59	15.63	5.62	0.99	1.05	23.02	10.50	38.88	25989	10515	411
Kilpennathur	0.30	10.27	9.60	1.45	0.40	0.14	19.18	2.23	56.43	27585	28810	13245
Polur	0.02	9.30	15.89	4.09	0.76	0.62	35.68	11.16	22.48	28696	14709	3020
Pernamallur	4.49	6.75	12.12	2.04	2.35	3.53	25.91	6.16	36.66	28172	11621	1293
Pudupalayam	40.17	4.33	14.85	1.85	0.00	0.94	13.75	0.62	23.49	32896	7989	876
Thandrampet	26.94	4.85	12.61	1.10	0.14	0.35	7.29	4.98	41.73	53156	24728	2545
Thellar	4.09	2.67	22.84	2.32	1.60	1.43	22.60	2.72	39.73	29642	13096	1218
Thurinjapuram	0.31	3.04	9.21	1.51	0.17	0.61	22.60	1.02	61.53	28459	18849	1339
Tiruvannamalai	20.24	0.69	18.45	1.03	0.03	0.74	14.75	0.98	43.09	40971	23398	5745
Vembakkam	0.39	0.91	35.13	6.08	0.43	2.72	11.99	8.71	33.65	32670	13490	2496
Wandiwash	0.61	3.48	27.52	4.78	1.03	3.80	37.21	3.02	18.56	29627	6417	418

Source: Different issues of Block Statistical Handbook

Table A2.9: Sources of Irrigation

Blocks	Surface Water			Ground Water			
	Tanks	Larger	Small	Private Tube well	Dug Wells	With Pumpsets	Without Punpsets
Anakkavur	148	55	93		17305		
Arni	117	28	89		4184		
Arni (West)					7942	7110	832
Chengam	95	17	78		13076	12576	1053
Chetpet	83	34	49		7301	7301	
Cheyyar	125	62	63		6820	6760	60
Jawadhu Hills					391	338	53
Kalasapakkam	90	26	64		9058	6475	519
Kilpennathur	117				11507		
Polur	119	40	79		7488		
Pernamallur	123	37	86		10752		
Pudupalayam	70	17	53		3516	3334	182
Thandrampet	104	18	86		12736	8206	
Thellar	130	98	32		12503		
Thurinjapuram	109	33	76		11100		
Tiruvannamalai	123	37	86		14095	12395	1700
Vembakkam	201	165	36	318	4267	4002	265
Wandiwash	137	48	89		10862	10056	806

Source: Different issues of Block Statistical Handbook

Table A2.10: Area Irrigated by Sources (Net Area)

Blocks	Surface Water			Ground Water			
	Tanks	Larger	Small	Private Tube Well	Dug Wells	With Pumpsets	Without Pumpsets
Anakkavur					4890		
Arni	950				4756		
Arni (West)					5520		
Chengam							
Chetpet	633	430	203		2194		
Cheyyar	865	430	435		4860	4826	34
Jawadhu Hills					800		800
Kalasapakkam		1012			1654		
Kilpennathur	1764				7357		
Polur	1933	650	1283		3944	3944	
Pernamallur					2701		
Pudupalayam		2163			5754		5754
Thandrampet					13160		
Thellar					5532		
Thurinjapuram	1911	342	1569		7914		
Tiruvannamalai		1459			10380	10380	
Vembakkam	1786	1484	302	302	5460		
Wandiwash							

Source: Different issues of Block Statistical Handbook

Table A2.11: Numbers of livestock in per 100 ha. of geographical area

Blocks	Total Cattle	Total Buffaloes	Sheep	Goats	Pigs	Other Livestock	Total Livestock	Total Poultry
Anakkavur	78	25	80	38	7	13	293	75
Arni	91	36	64	46	10	176	452	162
Arni (West)	82	32	86	59	8	1	268	162
Chengam	129	1	68	49	5	0	252	76
Chetpet	72	2	83	33	1	10	127	65
Cheyyar	98	21	67	38	3	10	238	111
Jawadhu Hills	166	2	9	13	0	8	NA	34
Kalasapakkam	81	9	51	53	6	2	202	58
Kilpennathur	99	1	32	20	0	0	153	36
Polur	147	13	51	68	6	42	271	92
Pernamallur	161	13	57	37	5	1	274	59
Pudupalayam	51	5	58	16	4	0	163	2
Thandrampet	29	1	52	38	1	8	234	41
Thellar	54	13	84	31	3	133	318	68
Thurinjapuram	115	2	30	20	0	0	168	0
Tiruvannamalai	48	19	49	112	7	0	130	0
Vembakkam	79	42	81	34	2	0	238	91
Wandiwash	79	20	82	27	4	5	217	103

Source: Different issues of Block Statistical Handbook

Table A3.1: Block-wise CBR in Tiruvannamalai District, 2002-2005

Blocks	2002	2003				2004				2005	
		M	F	T	Rank	M	F	T	Rank	T	Rank
Tiruvannamalai	NA	19.41	18.73	19.07	13	20.05	18.49	19.28	15	19.2	17
Thandrampet	NA	19.23	18.84	19.04	12	19.14	18.31	18.73	13	19.13	16
Chengam	NA	19.56	19.17	19.37	16	20.28	18.65	19.47	17	19.35	18
Pudupalayam	NA	19.53	18.34	18.94	11	20.12	18.75	19.44	16	18.17	12
Jamunamarathur	NA	22.52	19.18	20.88	18	21.52	18.82	20.17	18	16.63	5
Chetpet	NA	19.61	18.86	19.24	15	18.19	17.35	17.77	9	17.88	11
Polur	NA	18.91	18.79	18.85	10	19.01	17.49	18.25	11	17.76	10
Kalasapakkam	NA	19.66	19.26	19.46	17	19.42	18.6	19.01	14	18.87	15
Thurinjapuram	NA	17.87	19.98	18.84	9	18.11	17.07	17.59	7	18.17	12
Kilpennathur	NA	17.41	21.07	19.11	14	18.69	18.49	18.59	12	18.35	14
Rural Total	**NA**	**19.13**	**19.19**	**19.16**		**19.33**	**18.16**	**18.75**		**18.54**	
TV Malai Mpty.	NA	NA	NA	NA		NA	NA	NA		15.64	
TMV HUD Total	NA	NA	NA	NA		NA	NA	NA		**18.26**	
West Arni	18	NA	NA	17.47	3	NA	NA	16.12	3	16.6	3
Arni	17	NA	NA	16.88	2	NA	NA	16.33	4	16.7	6
Pernamallur	18	NA	NA	16.8	1	NA	NA	16.38	5	15.2	2
Vembakkam	18	NA	NA	17.53	4	NA	NA	16.68	6	16.8	7
Cheyyar	17	NA	NA	17.53	4	NA	NA	15.98	2	16.6	3
Anakkavur	18	NA	NA	18.63	7	NA	NA	17.63	8	17.7	9
Vandavasi	19	NA	NA	18.68	8	NA	NA	17.98	10	17.5	8
Thellar	18	NA	NA	18.13	6	NA	NA	14.18	1	14.5	1
Rural Total	**18**	**NA**	**NA**	**17.7**		**NA**	**NA**	**16.4**		**16.5**	
Arni	NA	NA	NA	NA		NA	NA	17.1		NA	
Tiruvathipuram	NA	NA	NA	NA		NA	NA	9.3		NA	
Vandavasi	NA	NA	NA	NA		NA	NA	10.5		NA	
Urban Total	NA	NA	NA	NA		NA	NA	13.3		NA	
Cheyyar HUD Total	NA	NA	NA	NA		NA	NA	16		NA	

Source: Deputy Director of Health Services, Tiruvannamalai HUD and Cheyyar HUD

Table A3.2: Block-wise CDR: 2002 to 2005

HUD	Blocks	2002	2003				2004				2005	
		T	M	F	T	Rank	M	F	T	Rank	T	Rank
Tiruvannamalai HUD	Tiruvannamalai	NA	5.81	6.06	5.93	10	5.86	4.59	5.23	7	6.89	11
	Thandrampet	NA	6.22	6.86	6.53	14	5.3	4.36	4.84	5	6.02	5
	Chengam	NA	6.43	5.85	6.14	11	6.74	5.68	6.21	14	7.55	16
	Pudupalayam	NA	6.16	5.11	5.64	8	6.21	5.15	5.69	11	7.54	15
	Jamanamarathur	NA	4.36	4.05	4.21	2	1.63	1.26	1.45	1	2.92	1
	Chetpet	NA	7.28	6.22	6.75	15	6.67	5.06	5.86	12	6.85	10
	Polur	NA	6.03	4.91	5.46	7	6.26	5.01	5.63	10	6.93	12
	Kalasapakkam	NA	8.22	6.93	7.57	18	6.9	6.63	6.77	18	8.15	18
	Thurinjapuram	NA	6.06	6.49	6.26	12	6.12	4.99	5.56	9	7.39	13
	Kilpennathur	NA	5.24	6.28	5.73	9	7.16	6.11	6.64	17	6.25	6
	RURAL TOTAL	**NA**	**6.27**	**6.01**	**6.14**		**6.15**	**5.11**	**5.63**		**6.87**	
	TVMalai Mpty	NA	NA	NA	NA		NA	NA	NA		4.5	
	HUD	NA	NA	NA	NA		NA	NA	NA		6.61	
Cheyyar HUD	West Arni	3.7	NA	NA	3.37	1	NA	NA	4.58	3	6.5	9
	Arni	6.7	NA	NA	5.38	6	NA	NA	5.4	8	5.9	4
	Pernamallur	5.1	NA	NA	6.44	13	NA	NA	5.95	13	8	17
	Vembakkam	4.6	NA	NA	6.96	16	NA	NA	6.27	15	6.4	8
	Cheyyar	5.1	NA	NA	5.09	5	NA	NA	3.68	2	5.2	2
	Anakkavur	6	NA	NA	7.14	17	NA	NA	6.37	16	7.4	14
	Vandavasi	3.9	NA	NA	4.74	3	NA	NA	5.18	6	6.3	7
	Thellar	3.2	NA	NA	5.03	4	NA	NA	4.66	4	5.2	2
	Rural Total	**4.6**	**NA**	**NA**	**5.48**		**NA**	**NA**	**5.3**		**6.3**	
	Arni	NA	NA	NA	NA		NA	NA	5.2		NA	
	Tiruvathipuram	NA	NA	NA	NA		NA	NA	2.5		NA	
	Vandavasi	NA	NA	NA	NA		NA	NA	0		NA	
	Urban Total	NA	NA	NA	NA		NA	NA	3.2		NA	
	HUD Total	NA	NA	NA	NA		NA	NA	5		NA	

Source: Deputy Director of Health, Tiruvannamalai HUD & Cheyyar HUD

Table A3.3: Trend in Performance & Family Planning among Eligible Couples Tiruvannamalai District: 1990-91 to 2004-05

Year	Sterilization			IUD			CC Users			OP Users		
	Target	Ach	%	Target	Ach	%	Target	Ach	%	Target	Ach	%
1990-91	13000	**15456**	118.9	22000	**13589**	61.8	16000	**11853**	74.1	6500	**6899**	106.1
1991-92	13000	**14494**	111.5	20000	**16446**	82.2	13000	**15447**	118.8	8000	**5741**	71.8
1992-93	13000	**14444**	111.1	17000	**19417**	114.2	11000	**12135**	110.3	7000	**4803**	68.6
1993-94	14000	**13992**	99.9	14000	**17850**	127.5	13000	**18900**	145.4	9000	**8792**	97.7
1994-95	14000	**13376**	95.5	15000	**16792**	111.9	14000	**13915**	99.4	8500	**9681**	113.9
1995-96	14000	**11987**	85.6	15000	**17855**	119.0	14000	**9545**	68.2	8500	**9360**	110.1
1996-97	14000	**12136**	86.7	15000	**13419**	89.5	14000	**6356**	45.4	8500	**6397**	75.3
1997-98	14000	**12907**	92.2	15000	**15121**	100.8	NIL	**5151**	NIL	8500	**5975**	70.3
1998-99	14000	**13121**	93.7	15000	**14425**	96.2	NIL	**8071**	NIL	8500	**7426**	87.4
1999-2000	14000	**14434**	103.1	15000	**13982**	93.2	NIL	**8593**	NIL	8500	**7105**	83.6
2000-01	15500	**15071**	97.2	15000	**13741**	91.6	NIL	**6714**	NIL	8500	**6941**	81.7
2001 - 02	16500	**15244**	92.4	16000	**13023**	81.4	NIL	**5761**	NIL	8500	**7108**	83.6
2002 - 03	17500	**15655**	89.5	15000	**15866**	105.8	8000	**5591**	69.9	9000	**5030**	55.9
2003 - 04	21000	**16044**	76.4	17000	**15938**	93.8	12000	**6185**	51.5	12000	**5737**	47.8
2004 - 05	17000	**16399**	96.5	17000	**15789**	92.9	13000	**6414**	49.3	9600	**6132**	63.9

Source: District Family Welfare Bureau, Tiruvannamalai

Table A3.4: Type of Abortions Recorded in Tiruvannamalai HUD: 2003 & 2004

Blocks	2003				2004			
	MTP	Illegal	Spontaneous	Total	MTP	Illegal	Spontaneous	Total
Tiruvannamalai	18	0	129	**147**	56	0	128	**184**
Thandrampet	24	20	85	**129**	58	16	161	**235**
Chengam	20	2	160	**182**	41	5	181	**227**
Pudupalayam	33	0	104	**137**	28	0	111	**139**
Jamanamarathur	2	0	23	**25**	0	0	18	**18**
Chetpet	24	0	127	**151**	17	0	115	**132**
Polur	20	0	105	**125**	55	1	182	**238**
Kalasapakkam	27	0	181	**208**	47	3	228	**278**
Thurinjapuram	40	0	179	**219**	75	6	106	**187**
Kilpennathur	16	0	103	**119**	44	0	111	**155**
TOTAL	**224**	**22**	**1196**	**1442**	**421**	**31**	**1341**	**1793**

Source: Deputy Director of Health Services, Tiruvannamalai

Table A3.5: Number of Abortions Recorded in Cheyyar HUD: 2002-03 to 2004-05

Blocks	2002-03	2003-04	2004-05
West Arni	142	139	71
Arni	110	59	73
Pernamallur	113	112	89
Vembakkam	195	137	140
Cheyyar	66	33	44
Anakkavur	148	71	146
Vandavasi	77	43	51
Thellar	185	131	132
Total	**1036**	**725**	**746**

Source: Deputy Director of Health Services, Cheyyar

Table A3.6: Pregnant Women Registered for Ante-natal Care in Tiruvannamalai Health Unit District, 2004

Blocks	ANC		EARLY ANC		H. R. A.N. CASE REF.	
	Target	Registered	Registered		Registered	
			No.	%	No.	%
Tiruvannamalai	2354	2441	2014	83	352	14
Thandrampet	2766	2914	2318	80	380	13
Chengam	2524	2624	2015	77	326	12
Pudupalayam	1407	1509	1149	76	133	9
Jamanamarathur	668	692	407	59	87	13
Chetpet	1692	1736	1427	82	488	28
Polur	2514	2405	1984	82	270	11
Kalasapakkam	1867	1897	1622	86	274	14
Thurinjapuram	1759	1780	1580	89	234	13
Kilpennathur	1955	2040	1614	79	355	17
RURAL TOTAL	19504	20038	16130	80	2899	14
T'Malai Mpty	1776	1723	972	56	126	7
HUD Total	**21280**	**21761**	**17102**	**79**	**3025**	14

Source: Deputy Director of Health Services, Tiruvannamalai

Table A3.7: Block-wise Coverage of TT (Mother) in Tiruvannamalai HUD: 2004 & 2005

Blocks	2004			2005	
	Registered	TT	%	Registered	No
Tiruvannamalai	2441	2265	92.8	NA	2465
Thandrampet	2914	2679	91.9	NA	3011
Chengam	2624	2272	86.6	NA	2553
Pudupalayam	1509	1332	88.3	NA	1414
Jamanamarathur	692	659	95.2	NA	718
Chetpet	1736	1536	88.5	NA	1598
Polur	2405	2209	91.9	NA	2368
Kalasapakkam	1897	1743	91.9	NA	1860
Thurinjapuram	1780	1619	91.0	NA	1673
Kilpennathur	2040	1977	96.9	NA	2030
Rural Total	20038	18291	91.3	NA	19690
T'MALAI MPTY	1723	1692	98.2	NA	1638
HUD Total	**21761**	**19983**	91.8	NA	**21328**

Source: Deputy Director of Health, Tiruvannamalai Health Unit District

Table A3.8: Block-wise Coverage of TT (Mother) in Cheyyar HUD

Blocks	2002-03			2003-04			2004-05		
	Registered	TT	%	Registered	TT	%	Registered	TT	%
West Arni	2117	2052	96.9	2002	1905	95.2	2003	1963	98.0
Arni	2214	2095	94.6	2045	2014	98.5	2044	2030	99.3
Pernamallur	1726	1747	101.2	1718	1760	102.4	1698	1627	95.8
Vembakkam	2608	2610	100.1	2350	2376	101.1	2281	2361	103.5
Cheyyar	1844	1821	98.8	1683	1687	100.2	1634	1596	97.7
Anakkavur	1597	1589	99.5	1574	1580	100.4	1525	1517	99.5
Vandavasi	2234	2287	102.4	2241	2214	98.8	2199	2191	99.6
Thellar	2114	2200	104.1	1910	1909	99.9	1678	1719	102.4
Rural Total	**16454**	**16401**	**99.7**	**15523**	**15445**	**99.5**	**15062**	**15004**	**99.6**

Source: Deputy Director of Health, Cheyyar Health Unit District

Table A3.9: Block-wise Place of Deliveries in Tiruvannamalai HUD: 2004-05

Blocks	2004-05					Upto December 2005				
	Institutional Deliveries		Domiciliary Deliveries		Total Deliveries	Institutional Deliveries		Domiciliary Deliveries		Total Deliveries
	No	%	No	%		No	%	No	%	
Tiruvannamalai	1729	77	515	23	2244	1862	85.1	327	14.9	2189
Thandrampet	2234	88.4	294	11.6	2528	2494	95.2	125	4.8	2619
Chengam	1879	80.9	444	19.1	2323	2013	85.4	345	14.6	2358
Pudupalayam	1211	87.6	172	12.4	1383	1078	91.5	100	8.5	1178
Jamanamarathur	313	52.3	285	47.7	598	492	76.3	153	23.7	645
Chetpet	1407	93.7	94	6.3	1501	1327	95.4	64	4.6	1391
Polur	1858	88.1	250	11.9	2108	1992	97.2	58	2.8	2050
Kalasapakkam	1587	93.8	105	6.2	1692	1638	97.8	37	2.2	1675
Thurinjapuram	1440	90.9	145	9.1	1585	1474	93.8	98	6.2	1572
Kilpennathur	1481	83.6	290	16.4	1771	1527	91.2	147	8.8	1674
RURAL TOTAL	15139	85.4	2594	14.6	17733	15897	91.6	1454	8.4	17351
T'Malai Mpty	1351	88.4	178	11.6	1529	1372	90.8	139	9.2	1511
HUD Total	**16490**	**85.6**	**2772**	**14.4**	**19262**	**17269**	**91.6**	**1593**	**8.4**	**18862**

Source: Deputy Director of Health Services, Tiruvannamalai HUD

Table A3.10: Block-wise Place of Deliveries in Cheyyar HUD: 2001-02 to 2004-05

Blocks	2001-02					2002-03					2004-05				
	Institutional Deliveries		Domicile Deliveries		Total Deliveries	Institutional Deliveries		Domicile Deliveries		Total Deliveries	Institutional Deliveries		Domicile Deliveries		Total Deliveries
	No.	%	No	%		No.	%	No	%		No.	%	No.	%	
West Arni	1504	81	344	19	1848	1695	94	104	6	1799	1582	92	133	8	1715
Arni	1528	79	412	21	1940	1724	95	100	5	1824	1689	96	67	4	1756
Pernamallur	1355	82	302	18	1657	1409	93	102	7	1511	1250	89	153	11	1403
Vembakkam	2051	87	309	13	2360	2157	95	105	5	2262	1950	96	83	4	2033
Cheyyar	1219	75	397	25	1616	1447	91	144	9	1591	1357	95	66	5	1423
Anakkavur	1195	78	343	22	1538	1334	95	73	5	1407	1202	90	135	10	1337
Vandavasi	1599	78	460	22	2059	1872	93	136	7	2008	1764	90	204	10	1968
Thellar	1801	89	227	11	2028	1843	99	14	1	1857	1373	96	64	4	1437
Rural Total	**12252**	**81**	**2794**	**19**	**15046**	**13481**	**95**	**778**	**5**	**14259**	**12167**	**93**	**905**	**7**	**13072**

Source: Deputy Director of Health Services, Cheyyar HUD

Table A3.11/ Block-wise Maternal Mortality Rate, 2002-2005

HUD	Blocks	2002	2003		2004		2005	
		MMR	MMR	Rank	MMR	Rank	MMR	Rank
Tiruvannamalai HUD	Tiruvannamalai	NA	1.75	15	3.43	18	1.40	12
	Thandrampet	NA	0.89	9	3.02	17	0.90	10
	Chengam	NA	1.63	13	0.97	10	0.60	6
	Pudupalayam	NA	1.17	10	1.13	14	3.00	17
	Jamunamarathur	NA	0.00	1	1.26	15	0.00	1
	Chetpet	NA	1.46	12	1.06	12	0.50	4
	Polur	NA	0.66	7	0.68	8	1.00	11
	Kalasapakkam	NA	2.21	17	0.90	9	1.40	12
	Thurinjapuram	NA	0.47	3	0.99	11	0.50	4
	Kilpennathur	NA	0.84	8	0.00	1	0.40	3
	Rural Total	NA	1.18		1.46		1.00	
	HUD Total	NA	NA		NA		0.90	
Cheyyar HUD	West Arni	2.7	1.67	14	0.52	5	0.60	6
	Arni	2.8	0.57	6	2.33	16	1.70	15
	Pernamallur	1.3	2.81	18	0.58	7	1.50	14
	Vembakkam	1.8	0.47	3	0.00	1	3.10	18
	Cheyyar	1.3	1.95	16	1.08	13	0.70	8
	Anakkavur	0	1.42	11	0.00	1	0.00	1
	Vandavasi	2.5	0.50	5	0.52	5	2.20	16
	Thellar	0.5	0.00	1	0.40	4	0.70	8
	Rural Total	1.7	1.08		0.80		1.40	
	Arni	NA	NA		0.00		NA	
	Tiruvathipuram	NA	NA		3.00		NA	
	Vandavasi	NA	NA		0.00		NA	
	Urban Total	NA	NA		0.60		NA	
	HUD Total	NA	NA		0.80		NA	

Source: Deputy Director of Health Services, Tiruvannamalai and Cheyyar

Table A3.12: Block-wise IMR in Tiruvannamalai: 2002 to 2005

HUD	Blocks	2003				2004				2005	
		M	F	T	Rank	M	F	T	Rank	T	Rank
Tiruvannamalai HUD	Tiruvannamalai	24.42	21.03	22.78	7	22.02	23.29	22.62	9	22	9
	Thandrampet	21.17	25.55	23.26	8	24.55	28.82	26.61	11	19	6
	Chengam	18.63	37.28	27.79	13	24.15	40.08	31.75	16	32	17
	Pudupalayam	31.43	27.03	29.33	14	31.42	40.43	35.71	18	25	11
	Jamanamarathur	22.52	10.96	17.31	2	26	29.57	27.67	12	2.9	1
	Chetpet	19.14	21.87	20.48	4	19.73	8.58	14.25	1	24	10
	Polur	17.24	20.79	19.04	3	13.11	26.19	19.4	4	18	4
	Kalasapakkam	15.78	32.98	24.3	9	16.67	28.78	22.55	8	30	15
	Thurinjapuram	19.28	40.27	29.55	15	20.1	37.08	28.27	13	26	12
	Kilpennathur	21.7	28.74	25.32	11	26.11	21.11	23.62	10	17	3
	RURAL TOTAL	**20.75**	**27.6**	**24.11**		**21.93**	**28.43**	**25.06**		**23**	
	TV Malai Mpty.	NA	NA	NA		NA	NA			19	
	HUD Total	NA	NA	NA		NA	NA			**21**	
Cheyyar HUD	West Arni	NA	NA	22.26	6	NA	NA	14.72	2	14.8	2
	Arni	NA	NA	25.24	10	NA	NA	20.4	6	20.3	8
	Pernamallur	NA	NA	27.43	12	NA	NA	31.88	17	34	18
	Vembakkam	NA	NA	33.05	18	NA	NA	30.55	14	27.6	14
	Cheyyar	NA	NA	32.43	17	NA	NA	18.65	3	26.5	13
	Anakkavur	NA	NA	31.87	16	NA	NA	31.43	15	31.3	16
	Vandavasi	NA	NA	22.17	5	NA	NA	19.4	4	19.5	7
	Thellar	NA	NA	16.58	1	NA	NA	21.26	7	18.5	5
	Rural Total	**NA**	**NA**	**26.18**		**NA**	**NA**	**23.4**		**23.6**	
	Arni	NA	NA	NA		NA	NA	9.6		NA	
	Tiruvathipuram	NA	NA	NA		NA	NA	3		NA	
	Vandavasi	NA	NA	NA		NA	NA	0		NA	
	Urban Total	NA	NA	NA		NA	NA	6.5		NA	
	HUD Total	NA	NA	NA		NA	NA	21.4		NA	

Source: Deputy Director of Health Services, Cheyyar & Tiruvannamalai HUD

Table A3.13: Sex Ratio at Birth, Tiruvannamalai Health Unit District: 2003 & 2004

Blocks	2003	2004
Tiruvannamalai	936	890
Thandrampet	918	933
Chengam	965	911
Pudupalayam	914	911
Jamanamarathur	822	879
Chetpet	963	968
Polur	1021	927
Kalasapakkam	983	945
Thurinjapuram	958	929
Kilpennathur	1057	990
RURAL TOTAL	**962**	**929**

Source: Deputy Director of Health, Tiruvannamalai HUD

Table A3.14: Block-wise and Sex-wise Early, Late and Post Neo-natal Deaths in Tiruvannamalai HUD, 2003-2005

Blocks	2003								2004								2005							
	0-7 days		8-28 Days		29-365 days		Total		0-7 days		8-28 Days		29-365 days		Total		0-7 days		8-28 Days		29-365 days		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Tiruvannamalai	19	10	7	6	10	13	36	29	14	14	5	6	15	12	34	32	12	13	6	6	11	16	29	35
Thandrampet	19	23	6	6	12	12	37	41	18	27	5	8	19	11	42	46	11	18	1	9	11	14	23	41
Chengam	10	26	8	14	11	16	29	56	21	37	2	7	16	15	39	59	13	40	7	1	16	22	36	63
Pudupalayam	16	13	5	3	7	6	28	22	17	18	3	4	9	12	29	34	12	15	3	3	5	4	20	22
Jamanamarathur	9	3	1	1	0	0	10	4	1	5	4	3	6	3	11	11	1	0	0	0	1	0	2	0
Chetpet	12	12	3	2	5	8	20	22	7	5	4	2	8	1	19	8	14	11	6	1	6	8	26	20
Polur	8	20	6	4	12	8	26	32	7	20	3	3	10	14	20	37	11	18	5	8	4	7	20	33
Kalasapakkam	9	19	5	9	4	9	18	37	12	16	2	8	5	7	19	31	14	19	3	2	12	15	29	36
Thurinjapuram	8	22	6	12	7	8	21	42	9	23	3	7	9	6	21	36	10	14	2	11	7	10	19	35
Kilpennathur	13	12	1	7	11	16	25	35	15	11	6	3	9	10	30	24	11	13	1	2	7	5	19	20
RURAL TOTAL	**123**	**160**	**48**	**64**	**79**	**96**	**250**	**320**	**121**	**176**	**37**	**51**	**106**	**91**	**264**	**318**	**109**	**161**	**34**	**43**	**80**	**101**	**223**	**305**
TVMalai. Mpty.																	11	16	2	1	8	3	21	20
HUD total																	120	177	36	44	88	104	244	325

Source: Deputy Director of Health Services, Tiruvannamalai

Table A3.15: Block-wise Early, Late and Post Neo-natal Deaths in Cheyyar HUD, 2002-03 to 2004-05

Blocks	2002-03				2003-04				2004-05			
	0-7 days	8-28 days	29-365 days	TOTAL	0-7 days	8-28 days	29-365 days	TOTAL	0-7 days	8-28 days	29-365 days	TOTAL
West Arni	29	11	18	**58**	17	9	17	**43**	7	6	11	**24**
Arni	22	5	10	**37**	24	5	14	**43**	16	8	11	**35**
Pernamallur	26	9	15	**50**	15	3	13	**31**	26	7	11	**44**
Vembakkam	33	8	27	**68**	44	13	24	**81**	36	5	20	**61**
Cheyyar	19	5	20	**44**	30	6	13	**49**	21	5	3	**29**
Anakkavur	34	4	16	**54**	24	5	16	**45**	26	5	11	**42**
Vandavasi	33	6	8	**47**	24	6	12	**42**	27	4	7	**38**
Thellar	16	8	12	**36**	7	4	7	**18**	16	4	8	**28**
Rural Total	212	56	126	**394**	185	51	116	**352**	175	44	82	**301**

Source: Deputy Director of Health Services, Cheyyar

Table A3.16: Block and Sex-wise Nos. and Rates of Still Births in Tiruvannamalai HUD, 2003 & 2004

Blocks	2003						2004					
	No of Still Birth			Still Birth Rates			No of Still Birth			Still Birth Rates		
	M	F	T	M	F	T	M	F	T	M	F	T
Tiruvannamalai	42	38	80	27.7	26.82	27.28	32	25	57	20.3	17.87	19.16
Thandrampet	48	33	81	26.73	20.15	23.59	39	32	71	22.29	19.66	21.02
Chengam	37	47	84	23.21	30.34	26.73	39	51	90	23.58	33.49	28.33
Pudupalayam	28	18	46	30.47	21.63	26.27	20	19	39	21.21	22.09	21.63
Jamanamarathur	10	8	18	22.03	21.45	21.77	34	28	62	74.4	70	72.35
Chetpet	23	18	41	21.54	17.58	19.6	15	18	33	15.34	18.95	17.12
Polur	24	22	46	15.67	14.09	14.87	44	41	85	28.04	28.2	28.12
Kalasapakkam	39	35	74	33.05	30.25	31.66	30	33	63	25.64	29.73	27.63
Thurinjapuram	39	33	72	34.57	30.67	32.67	26	39	65	24.28	38.61	31.23
Kilpennathur	21	19	40	17.9	15.36	16.6	25	22	47	21.29	18.98	20.15
RURAL TOTAL	**311**	**271**	**582**	**25.16**	**22.84**	**24.03**	**304**	**308**	**612**	**24.63**	**26.8**	**25.68**

Source: Deputy Director of Health, Tiruvannamalai HUD

Table A3.17: Block-wise Numbers of Still Births Recorded in Cheyyar HUD: 2002-03 to 2004-05

Blocks	2002-03	2003-04	2004-05
West Arni	23	24	20
Arni	41	39	49
Pernamallur	11	15	9
Vembakkam	54	43	51
Cheyyar	31	16	15
Anakkavur	38	24	16
Vandavasi	26	20	23
Thellar	31	23	31
Rural Total	**255**	**204**	**214**

Source: Deputy Director of Health, Cheyyar HUD

Table A3.18: Block and Sex-wise Perinatal Mortality Rates in Tiruvannamalai HUD: 2003 & 2004

Blocks	2003						2004					
	Perinatal Deaths			Perinatal Mortality Rate			Perinatal Deaths			Perinatal Mortality Rate		
	M	F	T	M	F	T	M	F	T	M	F	T
Tiruvannamalai	61	48	109	40	34	37	46	39	85	29	28	29
Thandrampet	67	56	123	37	34	36	57	59	116	33	36	34
Chengam	47	73	120	29	47	38	60	88	148	36	58	47
Pudupalayam	44	31	75	48	37	43	37	37	74	39	43	41
Jamanamarathur	19	11	30	42	29	36	35	33	68	77	83	79
Chetpet	35	30	65	33	29	31	22	23	45	22	24	23
Polur	32	42	74	21	27	24	51	61	112	33	42	37
Kalasapakkam	48	54	102	41	47	44	42	49	91	36	44	40
Thurinjapuram	47	55	102	42	51	46	35	62	97	33	61	47
Kilpennathur	34	31	65	29	25	27	40	33	73	34	28	31
RURAL TOTAL	434	431	865	**35**	**36**	**36**	425	484	909	**34**	**42**	**38**

Source: Deputy Director of Health, Tiruvannamalai HUD

Table A3.19: Block wise Perinatal Deaths in Cheyyar HUD: 2002-03 to 2004-05

Blocks	2002-03	2003-04	2004-05
West Arni	52	41	27
Arni	63	63	65
Pernamallur	37	30	35
Vembakkam	87	87	87
Cheyyar	50	46	36
Anakkavur	72	48	42
Vandavasi	59	44	50
Thellar	47	30	47
Rural Total	**467**	**389**	**389**

Source: Deputy Director of Health, Cheyyar HUD

Table A3.20: Block-wise Children Deaths (1-5 yrs.), Cheyyar HUD: 2001-02 to 2003-04

Blocks	2001-02			2002-03			2003-04		
	M	F	T	M	F	T	M	F	T
West Arni	5	1	6	3	2	5	3	0	3
Arni	7	9	16	3	7	10	6	4	10
Pernamallur	2	4	6	2	2	4	5	1	6
Vembakkam	2	3	5	9	6	15	8	4	12
Cheyyar	4	3	7	5	3	8	1	3	4
Anakkavur	8	4	12	6	2	8	6	7	13
Vandavasi	3	3	6	3	3	6	1	8	9
Thellar	3	3	6	3	7	10	1	0	1
Rural Total	**34**	**30**	64	**34**	**32**	66	**31**	**27**	58

Source: Deputy Director of Health Services, Cheyyar HUD

Table A3.21: Block-wise Childhood Immunization Coverage in Tiruvannamalai HUD, 2004 & 2005

Blocks	BCG		DPT		OPV		MEASLES	
	2004	2005	2004	2005	2004	2005	2004	2005
Tiruvannamalai	2192	2185	2201	2242	2199	2242	2143	2253
Thandrampet	2603	2716	2589	2669	2600	2669	2465	2635
Chengam	2297	2372	2258	2261	2281	2259	2203	2272
Pudupalayam	1334	1160	1316	1307	1320	1307	1273	1306
Jamanamarathur	726	614	738	691	738	691	572	622
Chetpet	1469	1412	1576	1416	1567	1416	1581	1513
Polur	2060	1992	2052	2058	2052	2058	2073	2100
Kalasapakkam	1699	1643	1707	1653	1706	1653	1741	1690
Thurinjapuram	1600	1577	1567	1506	1566	1506	1583	1559
Kilpennathur	1922	1848	1851	1830	1864	1830	1826	1794
RURAL Total	17902	17519	17855	17633	17893	17631	17460	17744
T'MALAI MPTY	*1507*	1494	*1502*	1502	*1502*	1502	*1511*	1478
HUD Total	**19409**	**19013**	**19357**	**19135**	**19395**	**19133**	**18971**	**19222**

Source: Deputy Director of Health, Tiruvannamalai HUD

Table A3.22: Block-wise Childhood Immunization Coverage in Cheyyar HUD, 2002-03 to 2004-05

Blocks	BCG								
	2002-03			2003-04			2004-05		
	P.T	Ach	%	P.T	Ach	%	P.T	Ach	%
West Arni	1872	1810	97	1743	1795	103	1723	1717	100
Arni	1937	1797	93	1779	1688	95	1758	1742	99
Pernamallur	1631	1497	92	1460	1448	99	1382	1405	102
Vembakkam	2344	2290	98	2201	1977	90	1942	2005	103
Cheyyar	1637	1590	97	1548	1527	99	1483	1472	99
Anakkavur	1462	1380	94	1354	1378	102	1348	1333	99
Vandavasi	2048	1976	96	1962	1979	101	1948	1974	101
Thellar	1970	1849	94	1824	1639	90	1616	1410	87
Rural Total	**14901**	**14189**	**95**	**13871**	**13431**	**97**	**13200**	**13058**	**99**
	OPV & DPT								
West Arni	1872	1946	104	1743	1897	109	1723	1835	107
Arni	1937	2000	103	1779	2102	118	1758	1900	108
Peranamllur	1631	1592	98	1460	1906	131	1382	1457	105
Vembakkam	2344	2381	102	2201	2336	106	1942	2074	107
Cheyyar	1637	1830	112	1548	1825	118	1483	1723	116
Annakavoor	1462	1425	97	1354	1408	104	1348	1371	102
Vandavasi	2048	2104	103	1962	2142	109	1948	2001	103
Thellar	1970	1976	100	1824	1871	103	1616	1589	98
Rural Total	**14901**	**15254**	**102**	**13871**	**15487**	**112**	**13200**	**13950**	**106**
	Measles								
West Arni	1872	1916	102	1743	1813	104	1723	1817	105
Arni	1937	1998	103	1779	1993	112	1758	1946	111
Peranamllur	1631	1626	100	1460	1631	112	1382	1550	112
Vembakkam	2344	2336	100	2201	2221	101	1942	2038	105
Cheyyar	1637	1784	109	1548	1673	108	1483	1565	106
Annakavoor	1462	1419	97	1354	1422	105	1348	1321	98
Vandavasi	2048	2069	101	1962	2000	102	1948	2018	104
Thellar	1970	2049	104	1824	1915	105	1616	1601	99
Rural Total	**14901**	**15197**	**102**	**13871**	**14668**	**106**	**13200**	**13856**	**105**

Source: Deputy Director of Health, Cheyyar HUD

Measure of participation by children of moderate malnutrition	No of Children in 6-36 months in grade II actually receiving supplement	2963	100.00
	No of Children in 6-36 months in grade II weighted	2963	
Measure of participation by children of severe malnutrition	No of Children in 6-36 months in grade III and IV actually receiving supplement	56	100.00
	No of Children in 6-36 months in grade III and IV	56	
Measures of registration of early pregnancies	No of AN mothers within the first 16 weeks of pregnancy since April	34405	84.94
	No of expected AN mothers since April	40507	
Measure of weight monitoring of registered AN mothers	Total no of pregnant women weighed upto the month	34813	84.93
	Total no of registered pregnant women upto the month	40991	
Measure for food supplementation for pregnant women	No of pregnant women who received food supplementation during the month	10797	100.00
	No of pregnant eligible for food supplementation during the month	10797	
Measure of coverage of IFA tablets	No of AN mothers completed 3 doses (100 tablets) of IFA since April	35536	87.73
	No of AN Expected mother since April	40507	
Measure of coverage of immunization	No of children 12-23 months who completed immunization at appropriate age	29035	90.73
	Total no of children in 12-23 months old	32002	
Measure of coverage of Vit. A	No of children in 6-36 months given Vit. A solution	62157	73.78
	Total no of children in 6-36 months	84243	
Measure of coverage of TT second dose	No of AN mothers administered II TT and booster since April	34257	84.57
	No of AN mothers since April	40507	
Measure of consumption of IFA tablets to Ado. Gils	No of Ado. Girls consumed IFA tablets	138656	100.00
	Total no of ado girls in the project	138656	
Measure of breast feeding (colostrum) immediately after birth	Mothers who breastfed colostrum immediately after birth during the month	1851	97.73
	Total no of live birth in the project during the month	1894	
Measure of providing semi-solid to children of 6-9 months	No of children in 6-9 months providing semi solids and solids	11495	94.58
	No of children of 6-9 months old	12154	
Measure of AWW received pre service training	No of AWW received at least on round of pre service training (induction)	1455	100.00
	Total no of AWW in the project	1455	
Measure of AWCs received one set of IEC training materials	No of AWCs receiving at least one set of IEC or Training materials	1455	100.00
	Total no of AWCs functioning in the project	1455	

Measures of AWCs received Pre school and medicine Kit	No of AWCs received at least one round of pre school and medicine kit in the last one year		#DIV/0!
	Total no of AWCs functioning in the project		
Measure of AN registration	Total no of mothers registered since April	40991	101.19
	No of expected AN mothers since April	40507	
Measure of food supplementation for nursing mothers	No of nursing mothers who received food supplementation during the month	13786	100.00
	Total no of nursing mothers eligible for food supplementation during the month	13786	
Measure of eligibility BY growth faultering	No of growth faultered children in 6-36 months (in N+Gr I)	21375	27.15
	No of Norrmal+Grade I children in 6-36 months weighted	78736	
Measure of graduation	No of children graduated in 90 days of feeding	3518	69.01
	No of children who have completed 90 days feeding during the month	5098	
Measure of relapse rate	No of relapsed cases during the month	1453	15.56
	No of children graduated during the past 3 months	9336	
No of diarrhoea cases (ORT)	No of children affected by diarrhoea	325	0.33
	Total no of children in 0-36 months	99478	
Measure of measles immunization	No of children under age 1 year who got measles immunization	20503	57.16
	Total no of children under age of 1 year	35867	
Measure of reduction of pre school drop out rate	No of children 37-60 months dropped from the pre school	0	0.00
	Total no of pre school children 37-60 months enrolled	45874	
Measure of referral of severely malnutrition and ill children and at high risk pregnant woman	No of referred severe mal nutrition and ill children and high risk pregnant women	5875	100.00
	Total no of severe mal nutrition and ill children and high risk pregnant women with low pregnancy weight (less than 42 Kg.)	5875	
Measure of high order birth	No of high order birth (3 and above) during the month	399	21.07
	Total no of live birth in the project during the month	1894	
Usage of Iodized salt	No of house using iodized salt in cooking	239612	59.31
	Total no of households in the project	403969	
Measure of occurrence of deliveries with unsafe birth intervals	No of deliveries occurred during the month with unsafe birth interval of less than 24 months (excluding prima para)	633	33.42
	No of deliveries occurred during the month	1894	
Measure of mean age of girls at marriage	Total age of the girls at first marriage during the month	14709	19
	Total no of girls married during the month	774	

Source: WB ICDS, Tiruvannamalai

Table A3.25: Taluk-wise Number Of Families with PDS (Public Distribution System) Card Holders, 2005-06

Taluks	Renewal	Appeal for cards	Left out	Total
Tiruvannamalai	115545	7649	22769	145963
Chengam	87710	4090	19716	111516
Polur	89396	3771	19764	112931
Arni	58893	1433	12329	72655
Cheyyar	70567	3123	10448	84138
Vandavasi	73979	4009	10308	88296
Total	**496090**	**24075**	**95334**	**615499**

Table A3.26: Adolescent Girls Received IFA Tablets under Anaemia Control Programme in Tiruvannamalai HUD: 2004 & 2005

Blocks	2004			2005		
	Target	Average per week	Achievements percentage	Target	Average per week	Achievements percentage
Tiruvannamalai	11027	10235	93	11027	10555	96
Thandrampet	11724	11229	96	11724	11150	95
Chengam	12473	12032	96	12473	11995	96
Pudupalayam	6666	6474	97	6666	6245	94
Jamanamarathur	3408	3310	97	3408	3189	94
Chetpet	8764	8272	94	8764	8284	95
Polur	13628	13298	98	13628	13057	96
Kalasapakkam	8667	8525	98	8667	8107	94
Thurinjapuram	9248	9058	98	9248	8841	96
Kilpennathur	10158	9762	96	10158	9584	94
HUD TOTAL	**95763**	**92195**	**96**	**181368**	**172433**	**95**

Source: Deputy Director of Health, Tiruvannamalai HUD

Table A3.27: Sex-wise Numbers of Under 5 Years of Age Children Received Vitamin A in Tiruvannamalai HUD (Date of Campaign: 16.08.2005 TO 18.08.2005)

Blocks	Total No. of children to be covered				No. of children administred with Vit -A				Dropouts				Target	Vit A Received
	Male		Female		Male		Female		Male		Female			
	6 - 36 Months	37 - 60 Months	6 - 36 Months	37 - 60 Months	6 - 36 Months	37 - 60 Months	6 - 36 Months	37 - 60 Months	6 - 36 Months	37 - 60 Months	6 - 36 Months	37 - 60 Months		
Tiruvannamalai	4098	3543	3770	3286	4014	3480	3693	3200	84	63	77	86	14697	14387
Thandrampet	4483	3617	4310	3467	4369	3532	4217	3385	114	85	93	82	15877	15503
Chengam	4022	3337	3995	3341	3835	3132	3800	3173	187	205	195	168	14695	13940
Pudupalayam	2308	1761	2090	1673	2222	1690	2008	1598	86	71	82	75	7832	7518
Jamanamarathur	1302	1131	1146	1044	1226	1070	1084	1006	76	61	62	38	4623	4386
Chetpet	2373	2215	2258	2308	2258	2135	2145	2197	115	80	113	111	9154	8735
Polur	3924	3877	3709	3896	3796	3772	3596	3781	128	105	113	115	15406	14945
Kalasapakkam	3104	2575	2906	2547	3007	2497	2820	2485	97	78	86	62	11132	10809
Thurinjapuram	3006	2322	2558	2121	2964	2300	2531	2085	42	22	27	36	10007	9880
Kilpennathur	2767	2616	2648	2639	2706	2563	2596	2584	61	53	52	55	10670	10449
Rural Total	*31387*	*26994*	*29390*	*26322*	*30397*	*26171*	*28490*	*25494*	*990*	*823*	*900*	*828*	114093	110552
TIRUVANNAMALAI MUNICIPALITY	3362	2687	3272	2621	2934	2434	2822	2339	428	253	450	282	11942	10529
HUD TOTAL	34749	29681	32662	28943	33331	28605	31312	27833	1418	1076	1350	1110	126035	121081

Source: Deputy Director of Health, Tiruvannamalai HUD

Table A3.28: Vitamin–A Campaign Report on VAD (Post Natal Lactating Mothers) Date of Campaign: 19, 20 & 21.09.2005

Blocks	Targeted Mothers	Actual Number Administrated with Vit 'A'	Achievement
Tiruvannamalai	1452	1391	96
Thandrampet	1915	1835	96
Chengam	1578	1540	98
Pudupalayam	723	698	97
Jamanamarathur	618	582	94
Chetpet	889	845	95
Polur	1510	1448	96
Kalasapakkam	1082	1062	98
Thurinjapuram	1082	1082	100
Kilpennathur	1031	984	95
Rural Total	**11880**	**11467**	**97**
Tiruvannamalai Municipality	1316	1207	92
HUD TOTAL	**13196**	**12674**	**96**

Source: Deputy Director of Health, Tiruvannamalai HUD

Table A3.29: Block and Sex wise LBW in Cheyyar HUD: 2001-02 to 2003-04

Blocks	2001-02				2002-03				2003-04			
	M		F		M		F		M		F	
	No	%	No	%	No	%	No	%	No	%	No	%
West Arni	174	17.96	148	17.31	133	14.63	122	14.07	111	12.51	94	10.73
Arni	136	13.57	141	15.60	69	7.96	83	9.06	78	9.14	75	9.07
Pernamallur	124	14.55	97	12.34	64	8.07	49	6.93	54	7.47	62	8.88
Vembakkam	159	13.04	136	12.43	102	9.35	136	12.18	96	9.26	102	10.46
Cheyyar	154	18.92	144	18.14	102	12.62	129	17.15	135	17.93	135	18.00
Anakkavur	81	9.62	62	9.23	100	13.97	97	14.85	120	15.89	89	13.95
Vandavasi	73	6.97	67	6.81	97	9.56	89	9.20	51	5.20	40	3.95
Thellar	131	12.66	113	11.92	94	10.77	130	13.64	69	8.42	67	8.09
HUD Total	**1032**	**13.26**	**908**	**12.90**	**761**	**10.76**	**835**	**12.05**	**714**	**10.49**	**664**	**10.05**

Source: Deputy Director of Health, Cheyyar HUD

Table A3.30: Block and Sex wise LBW of <2000 gms. in Cheyyar HUD: 2001-02 to 2003-04

Blocks	2001-02				2002-03				2003-04			
	M		F		M		F		M		F	
	No	%	No	%	No	%	No	%	No	%	No	%
West Arni	10	1.03	6	0.70	26	2.86	15	1.73	18	2.03	16	1.83
Arni	19	1.90	22	2.43	17	1.96	16	1.75	14	1.64	7	0.85
Pernamallur	24	2.82	23	2.93	17	2.14	7	0.99	16	2.21	14	2.01
Vembakkam	19	1.56	22	2.01	18	1.65	25	2.24	24	2.31	21	2.15
Cheyyar	8	0.98	10	1.26	11	1.36	22	2.93	14	1.86	23	3.07
Anakkavur	8	0.95	9	1.34	28	3.91	16	2.45	13	1.72	11	1.72
Vandavasi	10	0.96	10	1.02	16	1.58	13	1.34	12	1.22	7	0.69
Thellar	24	2.32	27	2.85	12	1.37	22	2.31	12	1.47	8	0.97
HUD Total	**122**	**1.57**	**129**	**1.83**	**145**	**2.05**	**136**	**1.96**	**123**	**1.81**	**107**	**1.62**

Source: Deputy Director of Health, Cheyyar HUD

Water and Sanitation

Table A3.31: Distribution of Households by Source of Drinking Water and Its Location (in percentage)

Location	Within Premises	Near Premises	Away
Total			
Total No of Households	21.9	65.97	12.14
Tap	27.05	66.44	6.51
Handpump	4.1	74.52	21.38
Tubewell	30.43	50.46	19.11
Well	13.16	59.76	27.08
Rural			
Total No of Households	15.72	72.32	11.96
Tap	19.85	74.33	5.82
Handpump	3.17	75.23	21.6
Tubewell	20.48	60.38	19.14
Well	9.43	63.36	27.21
Urban			
Total No of Households	53.44	33.52	13.05
Tap	59.09	31.34	9.58
Handpump	14.42	66.68	18.9
Tubewell	59	21.97	19.03
Well	44.66	29.36	25.97
Muncipalities			
Arani (M)			
Total No of Households	57.95	29.19	12.86
Tap	62.51	27.15	10.34
Handpump	15.32	67.72	16.96
Tubewell	69.26	18.11	12.63
Well	56.5	21	22.5
Chengam (TP)			
Total No of Households	38.09	46.62	15.29
Tap	44.52	45.35	10.14
Handpump	12.28	64.91	22.81
Tubewell	56.32	24.52	19.16
Well	23.59	54.03	22.38
Chetpet (TP)			
Total No of Households	39.53	36.82	23.65
Tap	56.55	33.89	9.55
Handpump	7.05	72.49	20.46
Tubewell	39.18	45.61	15.2
Well	20.53	13.79	65.67
Desur (TP)			
Total No of Households	27.42	60.78	11.8
Tap	34.72	60.07	5.21

Handpump	6.06	86.36	7.58
Tubewell	0.96	99.04	0
Well	14.75	29.51	55.74
Dusi (CT)			
Total No of Households	45.36	46.72	7.92
Tap	51.59	46.3	2.11
Handpump	9.23	87.69	3.08
Tubewell	0	20.83	79.17
Well	9.76	31.71	58.54
Kalambur (TP)			
Total No of Households	62.76	32.48	4.76
Tap	68.41	29.06	2.53
Handpump	12.78	68.42	18.8
Tubewell	11.48	52.46	36.07
Well	31.25	15.63	53.13
Kannamangalam (TP)			
Total No of Households	44.58	49.89	5.53
Tap	47.67	51.68	0.65
Handpump	5.13	90.38	4.49
Tubewell	77.31	21.01	1.68
Well	43.98	19.88	36.14
Kilpennathur (TP)			
Total No of Households	28.05	52.37	19.59
Tap	49.64	41.47	8.89
Handpump	2.31	72.86	24.82
Tubewell	25	48.21	26.79
Well	6.79	31.48	61.73
Peranamallur (TP)			
Total No of Households	35.42	61.12	3.47
Tap	39.11	57.48	3.41
Handpump	3.09	92.78	4.12
Tubewell	0	100	0
Well	13.64	86.36	0
Polur (TP)			
Total No of Households	48.79	33.31	17.9
Tap	52.44	34.74	12.82
Handpump	11.28	72.82	15.9
Tubewell	81.01	6.23	12.76
Well	53.67	13.67	32.67
Pudupalayam (TP)			
Total No of Households	34.38	53.15	12.46
Tap	38.02	53.61	8.37
Handpump	6.02	62.04	31.94
Tubewell	14.29	76.79	8.93

Well	49.32	45.7	4.98
Sathiyavijayanagaram (CT)			
Total No of Households	55.45	36.94	7.62
Tap	62.05	31.79	6.15
Handpump	13.95	69.77	16.28
Tubewell	32.14	66.67	1.19
Well	33.91	44.35	21.74
Tiruvannamalai (M)			
Total No of Households	62.71	25.33	11.97
Tap	65.45	24.91	9.64
Handpump	25.35	41.37	33.27
Tubewell	56.91	12.27	30.82
Well	68.51	23.03	8.46
Tiruvethipuram (M)			
Total No of Households	56.82	38.05	5.13
Tap	57.68	38.4	3.91
Handpump	37.21	54.65	8.14
Tubewell	74.74	8.42	16.84
Well	62.53	24.27	13.19
Vandavasi (M)			
Total No of Households	57.22	20.4	22.38
Tap	57.34	19.49	23.17
Handpump	81.73	17.34	0.93
Tubewell	68.49	30.14	1.37
Well	54.28	30.48	15.24
Vettavalam (TP)			
Total No of Households	38.84	45.95	15.2
Tap	61.04	28.87	10.09
Handpump	4.14	80.46	15.4
Tubewell	27.45	9.8	62.75
Well	48.24	40	11.76

Source: Census Data, 2001

Note:

1. This table excludes institutional households.
2. Near premises has been considered if the source availed is within 100 meters for urban areas and 500 meters for rural areas.

Table A3.32: Status of Water Supply as on 30.01.2006 from Executive Engineer/TWAD, RWS DN. /Tiruvannamalai

Water Supply in 2004-05	
i. Total No. of habitations in the district	3865
ii. No of habitations fully covered	3260
iii. No of habitations partially covered	605 (upto 31.03.2005)
iv. No of habitations not covered	Nil

Out lay and utilization of funds for drinking water and sanitation development over years

For Drinking water

Year	Physical	Financial (Rs. in lakhs)
2001-02	236	826
2002-03	126	567
2003-04	181	815
2004-05	142	635
Total	**685**	**2843**

Short and long term district drinking water and sanitation plan development

For drinking water

Year	Schemes
2005-06	152
2006-07	220
2007-08	233
Total	**605**

Table A3.33: No of Different Schemes running in the Blocks of Tiruvannamalai District

Block / Urban	No of Panchayats	No of Habitation	No. of HP Schemes	No of PP Schemes	No of HSC	No of PF
Vembakkam	64	250	182	227	4578	1916
Cheyyar	53	229	201	211	1379	1957
Anakkavur	55	188	161	168	363	1250
Pernamallur	57	179	166	162	3043	1296
Vandavasi	61	261	223	239	555	2179
Thellar	61	257	188	226	364	1176
Arni	38	149	138	146	5922	1365
West Arni	37	169	151	149	1887	1223
Polur	40	251	217	203	4118	1513
Kalasapakkam	45	196	179	148	3716	1477
Chetpet	49	186	162	165	2330	1618
Thurinjapuram	47	235	209	185	3135	1508
Kilpennathur	45	191	172	179	2303	1525
Tiruvannamalai	69	245	217	229	2032	2452
Pudupalayam	37	161	147	117	1737	539
Chengam	44	215	187	178	2113	1868
Thandrampet	47	246	189	218	3715	1953
Jawadhu Hills	11	257	204	166	0	744
District	**860**	**3865**	**3293**	**3316**	**43290**	**27559**

Source: TWAD

HP- Hand Pump, **PP**-Power Pump, **HSC**-House Service Connection, **PF**-Public Fountain

Table A3.34: Sources of Drinking Water (Nos.)

Block / Urban	Hand Pump	Draw Well	Ring Well	Rain Water Harvesting	Power Pump	CWSS	Pipe Line Extension	Gravity Schemes	Others	Mini Power Pump	Total
Vembakkam	528	8	0	0	159	127	53	0	31	119	1025
Cheyyar	433	2	0	0	108	105	30	0	31	106	815
Anakkavur	454	6	0	0	102	117	14	0	31	99	823
Pernamallur	464	1	0	0	185	48	22	0	4	109	833
Vandavasi	497	3	0	0	175	116	23	0	26	107	947
Thellar	434	4	0	0	128	117	33	0	42	126	884
Arni	380	0	0	0	181	4	12	0	1	111	689
West Arni	565	0	0	0	145	6	26	0	1	131	874
Polur	685	4	0	0	225	2	39	0	0	141	1096
Kalasapakkam	607	3	0	0	204	5	17	0	0	150	986
Chetpet	410	0	0	0	196	41	35	0	16	130	828
Thurinjapuram	657	9	1	0	198	11	31	0	0	154	1061
Kilpennathur	511	4	0	0	211	3	45	0	1	117	892
Tiruvannamalai	827	7	0	0	268	9	44	0	2	127	1284
Pudupalayam	494	1	2	0	141	0	25	0	0	120	783
Chengam	669	103	0	0	187	0	47	0	0	149	1155
Thandrampet	722	11	0	0	212	62	57	0	2	121	1187
Jawadhu Hills	460	32	1	0	141	6	25	0	0	53	718
District	9797	198	4	0	3166	779	578	0	188	2170	16880

Source: TWAD, Tiruvannamalai
CWSS – Combined Water Supply Scheme

Table A3.35: Rate of completion of toilets in the district upto 2005-06

Block / Urban	IHHL	School Toilets	Anganwadi Toilet	IWSC
Vembakkam	86.48	94.69	100	100
Cheyyar	86.66	98.73	100	100
Anakkavur	79.29	91.67	100	100
Pernamallur	87.43	100.00	100	100
Vandavasi	87.72	92.63	100	100
Thellar	83.81	92.74	100	100
Arni	87.70	100.00	100	100
West Arni	87.82	100.00	100	100
Polur	85.82	91.38	100	100
Kalasapakkam	83.89	98.92	100	100
Chetpet	83.76	96.49	100	100
Thurinjapuram	86.73	100.00	100	100
Kilpennathur	79.33	68.70	100	100
Tiruvannamalai	87.24	66.39	100	100
Pudupalayam	81.53	100.00	100	100
Chengam	85.00	87.60	100	100
Thandrampet	83.16	82.76	100	100
Jawadhu Hills	74.00	82.76	100	100
District	84.80	90.50	100	100

Table A3.36: Average Out Patient (OP) per day per PHC in the Blocks of Tiruvannamalai
HUD: 2004 & 2005

Blocks	2004		2005	
	No of OP	Average OP per day per PHC	No of OP	Average OP per day per PHC
Tiruvannamalai	178947	81	133688	73
Thandrampet	164034	75	119722	65
Chengam	143977	66	112625	61
Pudupalayam	93022	85	72434	79
Jamanamarathur	54623	75	49260	80
Chetpet	187819	128	138912	113
Polur	186894	102	147483	96
Kalasapakkam	200115	109	163890	107
Thurinjapuram	105803	96	76805	84
Kilpennathur	185501	101	146859	96
RURAL TOTAL	**1500735**	**91**	**1161678**	**84**

Source: Deputy Director of Health, Tiruvannamalai HUD

Table A3.40: Block-wise Blood Smear Examined for Malaria Parasite in Cheyyar HUD, 2002 to 2004

Blocks	2002				2003				2004			
	Pop	Total Blood Smear		Total No,of +ve for Mp	Pop	Total Blood Smear		Total No,of +ve for Mp	Pop	Total Blood Smear		Total No,of +ve for Mp
		Collected	Examined			Collected	Examined			Collected	Examined	
West Arni	105358	26344	26344	2	105358	26261	26261	2	104760	18673	18673	3
Arni	101003	22378	22378	4	101080	19192	19192	6	105165	18518	18518	7
Pernamallur	92637	22857	22857	5	89276	23919	23919	14	85883	17510	17510	8
Vembakkam	121481	23100	23100	6	120833	21138	21138	1	119115	16488	16488	0
Cheyyar	90737	23588	23588	2	90988	23805	23805	3	87024	20619	20619	3
Anakkavur	85092	16435	16435	1	79408	13167	13167	6	75456	12691	12691	0
Vandavasi	107669	20601	20601	3	107486	18544	18544	0	107548	14988	14988	4
Thellar	103292	12038	12038	2	104551	12218	12218	0	97861	12027	12027	0
Total	807269	167341	167341	25	798980	158244	158244	32	782812	131514	131514	25

Source: Deputy Director of Health Services, Cheyyar HUD

Table A3.41: Block-wise Blood Smear Examined & Positive for Micro Filarial Cases in Cheyyar HUD: 2001 to 2004

Blocks	2001			2002			2003			2004		
	BS Collected	BS Examined	No. of Positive for Mf	BS Collected	BS Examined	No. of Positive for Mf	BS Collected	BS Examined	No. of Positive for Mf	BS Collected	BS Examined	No. of Positive for Mf
West Arni	4895	4895	0	5531	5531	0	5208	5208	3	2703	2703	3
Arni	4125	4125	19	4712	4712	2	5562	5562	0	1786	1786	11
Pernamallur	4365	4365	0	4337	4337	0	5189	5189	0	3105	3105	1
Vembakkam	2956	2956	0	1723	1723	3	2098	2098	0	1998	1998	3
Cheyyar	5626	5626	7	4916	4916	0	7218	7218	13	4084	4084	1
Anakkavur	2198	2198	8	3271	3271	0	2841	2841	0	2461	2461	7
Vandavasi	4414	4414	1	3046	3046	0	1361	1361	0	542	542	0
Thellar	2824	2824	0	2490	2490	0	1036	1036	0	1002	1002	0
Rural Total	**31403**	**31403**	**35**	**30026**	**30026**	**5**	**30513**	**30513**	**16**	**17681**	**17681**	**26**

Source: Deputy Director of Health, Cheyyar HUD

Table A3.42: School Children Health Camp Programme in Tiruvannamalai HUD: 2005

SNo.	PARTICULARS	PRIMARY SCHOOL	MIDDLE SCHOOL	HIGH SCHOOL	HR.SEC. SCHOOL	TOTAL SCHOOL
1	**Total No. of Schools to be Covered**	**833**	**168**	**95**	**53**	**1149**
2	**No. of Schools Covered so for**	**687**	**206**	**112**	**83**	**1088**
3	**Total No. of Students**	**91662**	**51187**	**45489**	**50863**	**239201**
4	**No. of Students examined so for**	**67173**	**46912**	**31517**	**43815**	**189417**
5	**No. of Students treated for minor ailments**	**52780**	**37248**	**23366**	**32194**	**145588**
6	**MORBIDITY PATTERN**					
	a) Dental Carries	11813	7029	4379	6208	29429
	b) Worm Infection	10174	6893	3636	3872	24575
	c) A.R.I.	10941	7939	5118	6077	30075
	d) Anaemia	1376	824	611	848	3659
	e) Vitamin 'A' Deficiency	5072	3666	2244	1983	12965
	f) Scabies	1649	900	480	646	3675
	g) Defective Vision	1	0	2	0	3
	h) Otitis Media	101	53	16	36	206
	i) Leprosy	7	3	0	8	18
	j) Defective Hearing	9	6	3	0	18
	k) Rheum. Heart Disease	17	5	7	13	42
	l) T.B.	3	1	0	1	5
	m) Goitre	23	0	1	37	61
7	**No. of Students referred to Taluk Hospitals or any other Referral Hospitals**	**83**	**67**	**74**	**46**	**270**
8	**Percentage of Schools Covered**	**82**	**123**	**118**	**157**	**95**
9	**Percentage of Students Covered**	**73**	**92**	**69**	**86**	**79**
10	**Percentage of Students Treated for Minor Ailments**	**79**	**79**	**74**	**73**	**77**

Source: Deputy Director of Health, Tiruvannamalai HUD

Table A3.43: Persons Treated and Referred Under Family Health Awareness Campaign-Tiruvannamalai HUD: 2005

Date of Camp		18.11.2005 to 02.12.2005		
Total No. of reporting Units (PHCs)		**HSC: 253**	**Mpty: 3**	
No. of Units reported		**256**		
Total No. of Households		1370348		
		MALE	**FEMALE**	**TOTAL**
i	Total estimated target population (15 - 49 yrs.)	264517	269577	534094
ii	Number of persons actually attended camp (15 - 49 yrs.)	6548	13241	19789
iii	% of persons actually attended camp out of (i)	2.5	4.9	3.7
iv	Total No. referred to Health Centres / Hospitals	56	272	328
v	Percentage of persons referred for treatment out of (ii)	0.9	2.1	1.7
vi	Number of RTI / STI cases treated	5306	10373	15679
	a. With ulcers	148	208	356
	b. With Discharge	3900	8120	12020
	c. Others (specify)			
	i. PID	2	1735	1737
	ii. Painful Scrotal Swelling	110	0	110
	iii. Inguinal Bubo	17	65	82
	iv. Burning Micturation	352	15	367
	v. Others	777	230	1007
vii	Percentage of persons with RTI / STI out of (vi)	81.0	78.3	79.2

Source: Deputy Director of Health, Tiruvannamalai HUD

Table A3.44: Adolescent Girls Attended & Referred under Family Health Awareness Campaign in Cheyyar HUD

Year	Attended	Referral	Ulcer	Others
2001-02	12880	233	399	4932
2002-03	16830	132	375	3787
2003-04	17324	546	325	3167
2004-05	24959	1222	285	3764
Total	**71993**	**2133**	**1384**	**15650**

Source: Deputy Director of Health Services, Cheyyar HUD

Table A3.45: Persons Attended, Diagnosed and Referred in Family Health Awareness Campaign in Cheyyar HUD: 2001-02 to 2004-05

Year	No. of Attended	Referral	Cancer	Heart	Diabetes	Geriatric	Urine Test	Blood Test	Scan	Others
2001-02	12094	284	18	539	114	1739	3036	1717	130	9684
2002-03	37129	1198	24	758	308	13379	8046	5540	262	22660
2003-04	36834	410	38	408	353	10954	10970	6888	301	25051
2004-05	37659	400	17	131	168	11688	10070	6247	258	25655
Total	**123716**	**2292**	**97**	**1836**	**943**	**37760**	**32122**	**20392**	**951**	**83050**

Source: Deputy Director of Health Services, Cheyyar HUD

Table A3.46: Population served by per PHC in Cheyyar HUD: 2004-05

Blocks	Population served per PHC	Houses served per PHC
West Arni	20952	4340
Arni	35055	7516
Pernamallur	21471	5001
Vembakkam	19853	4210
Cheyyar	21756	4907
Anakkavur	25152	5616
Vandavasi	21510	4332
Thellar	19572	4373
Rural Total	**22366**	**4843**

Source: Deputy Director of Health, Cheyyar HUD

Table A3.47: Status of the blocks according to the Numbers of PHC's available along with to be available, Cheyyar HUD: 2004-05

S.No	Blocks	MYEP-2004-05			PHC Available	To be Available	New PHC To be Established
		Male	Female	Total			
1	West Arni	52868	52939	105808	5	4	-
2	Arni	53151	53065	106217	3	4	1
3	Pernamallur	43371	43370	86742	4	3	-
4	Vembakkam	60490	59816	120306	6	4	-
5	Cheyyar	43665	44229	87894	4	3	-
6	Anakkavur	38412	37798	76211	3	3	-
7	Vandavasi	54829	53795	108623	5	4	-
8	Thellar	49440	49400	98840	5	3	-
RURAL TOTAL		396227	394413	790640	35	28	1

Source: Deputy Director of Health, Cheyyar HUD
MYEP: Mid Year Estimated Population

Table A3.48: HSC wise population and Vital Events in Cheyyar HUD, 2004 (1.1.2003 to 31.12.2003)

S. NO	NAME OF HSC	Family Surveyed	POPULATION					Live Births			Still Births			Infant Deaths			Maternal deaths	TOTAL DEATHS		
			SC/ST		OTHERS		Total													
			M	F	M	F		M	F	Total	M	F	Total	M	F	Total		M	F	Total
1	Ganesapuram	937	639	613	1331	1327	3910	45	37	82	0	1	1	2	1	3	1	17	17	34
2	Savarapoondi	1518	487	456	2528	2465	5936	55	58	113	1	0	1	3	0	3	0	36	19	55
3	Arambalur	784	416	426	1189	1235	3266	34	37	71	1	0	1	1	2	3	0	7	11	18
4	Kasthampadi	1460	455	443	1964	1968	4830	54	42	96	2	1	3	3	2	5	1	24	16	40
5	Reddipalayam	1120	270	256	2132	2060	4718	41	39	80	0	1	1	0	2	2	0	22	10	32
6	Kalpoondi	928	1556	1536	639	427	4158	45	47	92	1	0	1	0	1	1	0	23	16	39
7	Ariyalam	1261	562	583	2072	2000	5217	59	51	110	2	0	2	1	3	4	0	24	19	43
8	S.V.Nagaram	1141	7	8	2237	2244	4496	32	39	71	1	2	3	1	1	2	0	28	13	41
9	M.M.Vinnamangalam	1273	1302	1259	1388	1494	5443	58	54	112	1	1	2	4	1	5	1	25	27	52
10	Kilpudupakkam	1841	251	255	3496	3379	7381	62	87	149	2	1	3	4	0	4	1	32	19	51
11	Dusi	1325	280	272	2732	2748	6032	54	49	103	1	1	2	0	1	1	0	18	17	35
12	Kilnelli	1083	824	788	1548	1570	4730	30	30	60	0	3	3	2	0	2	0	22	24	46
13	Kuzhamandal	1234	628	591	2248	2100	5567	59	31	90	1	1	2	7	1	8	0	32	19	51
14	Purisai	1279	693	734	2098	2156	5681	45	57	102	0	2	2	2	2	4	0	27	23	50
15	Salukai	1062	807	774	1529	1510	4620	40	52	92	0	1	1	1	2	3	0	18	20	38
16	Kodanallur	1081	385	378	2000	2018	4781	44	61	105	1	1	2	1	2	3	0	24	25	49
17	Theyyar	1219	444	560	2120	2125	5249	50	45	95	0	0	0	0	3	3	0	21	22	43
18	Nambedu	1122	618	596	1801	1801	4816	43	44	87	1	1	2	1	2	3	0	29	27	56
19	Madam	1164	1024	977	1400	1425	4826	35	40	75	0	1	1	1	0	1	0	29	12	41
20	Embalam	1190	1010	1296	1503	1507	5316	41	36	77	1	0	1	2	0	2	0	21	17	38
	Total	24022	12658	12801	37955	37559	100973	926	936	1862	16	18	34	36	26	62	4	479	373	852

Source: Deputy Director of Health, Cheyyar HUD

Table A3.49: HSC wise Vital Rates in Cheyyar Health Unit District, 2003

Sl. No.	NAME OF HSC	CBR	CDR	IMR	SBR	MMR
1	Ganesapuram	20.97	8.70	36.59	12.20	12.20
2	Savarapoondi	19.04	9.27	26.55	8.85	0.00
3	Arambalur	21.74	5.51	42.25	14.08	0.00
4	Kasthampadi	19.88	8.28	52.08	31.25	10.42
5	Reddipalayam	16.96	6.78	25.00	12.50	0.00
6	Kalpoondi	22.13	9.38	10.87	10.87	0.00
7	Ariyalam	21.08	8.24	36.36	18.18	0.00
8	S.V.Nagaram	15.79	9.12	28.17	42.25	0.00
9	M.M.Vinnamangalam	20.58	9.55	44.64	17.86	8.93
10	Kilpudupakkam	20.19	6.91	26.85	20.13	6.71
11	Dusi	17.08	5.80	9.71	19.42	0.00
12	Kilnelli	12.68	9.73	33.33	50.00	0.00
13	Kuzhamandal	16.17	9.16	88.89	22.22	0.00
14	Purisai	17.95	8.80	39.22	19.61	0.00
15	Salukai	19.91	8.23	32.61	10.87	0.00
16	Kodanallur	21.96	10.25	28.57	19.05	0.00
17	Theyyar	18.10	8.19	31.58	0.00	0.00
18	Nambedu	18.06	11.63	34.48	22.99	0.00
19	Madam	15.54	8.50	13.33	13.33	0.00
20	Embalam	14.48	7.15	25.97	12.99	0.00
	Total	**18.44**	**8.44**	**33.30**	**18.26**	**2.15**

Source: Deputy Director of Health, Cheyyar HUD

Table A3.50: PHC wise Vital Rates in Cheyyar HUD: 2005

SL No	Name of Block	NAME OF PHC	IMR	MMR	BR	DR
1	West Arni	Malayampattu	5.6	0	17.4	5
		Thatchur	15.9	0	17.1	6.3
		Devigapuram	25.8	0	17.5	7.5
		Kannamangalam	13.1	2.6	16.7	7.6
		Onnupuram	12.6	0	14.5	6.1
		TOTAL	14.8	0.6	16.6	6.5
2	Arni	S.V.Nagaram	27.4	1.6	15.5	6.9
		Nesal	18.8	1.9	17.8	5.5
		Mullandiram	14.4	1.6	17.2	5.3
		TOTAL	20.3	1.7	16.7	5.9
3	Peranamallur	Pernamallur	39.2	0	15	8.9
		Anaibogi	38.5	0	15.5	7.2
		Madam	35	0	14.6	8.2
		Kollappalur	26.8	4.5	15.6	7.6
		TOTAL	34	1.5	15.2	8
4	Vempakkam	Vempakkam	28.3	5.7	17.1	5.3
		Mamandur	26.9	0	15.9	6.5
		Chinnaezhacherry	42.8	6.6	16.4	6.1
		Perungattur	43.5	0	15.3	8.1
		Natteri	16.1	2.7	18.2	5.6
		Ariyur	7.4	3.7	18.4	6.7
		TOTAL	27.6	3.1	16.8	6.4
5	Cheyyar	Nedumbirai	30.3	2.2	17.3	4.9
		Thozuppedu	22.3	0	15.1	4.9
		Navalpakkam	33.2	0	17.2	6.5
		M.S.Mangalam	19.8	0	17.5	4.6
		TOTAL	26.5	0.7	16.6	5.2
6	Anakavoor	Kovilur	29.7	0	16.9	6.5
		Akkur	36	0	17	6.7
		Veerambakkam	27.1	0	20	9
		TOTAL	31.3	0	17.7	7.4
7	Vandavasi	Vazhur	7.4	0	17.4	5.6
		Irumbedu	5.3	0	18.3	6
		Kovalai	23.9	8	17.6	6.2
		Osur	14.7	0	18.7	6.9
		Ulunthai	53	3.5	14.8	7
		TOTAL	19.5	2.2	17.5	6.3
8	Thellar	Thellar	14.4	2.1	14.8	5.7
		Kunnagampoondi	20.2	0	13.5	6.6
		Desur	27.8	0	11	4
		Mazhaiyur	23.6	0	15	5.1
		Ponnur	15.9	0	16.7	4.2
		TOTAL	18.5	0.7	14.5	5.2
		RURAL TOTAL	23.6	1.4	16.5	6.3

Table A3.51: PHC wise Vital Rates in Tiruvannamalai HUD: 2005

Sl. No.	Blocks	Name of the PHC	Population	Live Births	Infant Death			1 – 5 Years Death			Deaths			No. of Maternal Deaths
					M	F	T	M	F	T	M	F	T	
1	Tiruvannamalai	**KATTAMPOONDI**	33495	608	7	3	10	4	0	4	103	90	193	
2		MEYYUR	29553	572	4	8	12	2	1	3	72	54	126	0
3		PAVITHRAM	20405	399	3	4	7	1	0	1	70	83	153	1
4		PALAYANUR	24665	466	9	15	24	2	2	4	76	71	147	1
5		ANANANDAL	24646	462	2	2	4	1	0	1	91	57	148	0
6		SU.VALAVETTI	19349	413	4	3	7	0	0	0	69	58	127	1
		Block Total	**152113**	**2920**	**29**	**35**	**64**	**10**	**3**	**13**	**481**	**413**	**894**	**4**
7	Thandrampet	**VANAPURAM**	28543	568	6	8	14	0	2	2	82	81	163	0
8		THANDRAMPATTU	35995	686	5	7	12	1	3	4	92	82	174	2
9		MALAMANJANUR	27084	507	0	4	4	1	1	2	51	60	111	0
10		SATHANURDAM	31405	563	3	7	10	0	0	0	96	93	189	0
11		PERUNGULATHUR	24842	474	4	5	9	2	1	3	68	60	128	0
12		REDDIYAPALAYAM	29260	591	5	10	15	2	3	5	74	68	142	1
		Block Total	**177129**	**3389**	**23**	**41**	**64**	**6**	**10**	**16**	**463**	**444**	**907**	**3**
13	Chengam	**MELPALLIPATTU**	30646	543	11	14	25	1	1	2	101	84	185	0
14		CHENNASAMUDRAM	27611	545	8	14	22	2	5	7	85	72	157	1
15		PARAMANANDAL	22941	455	5	4	9	1	0	1	69	71	140	1
16		MELPENNATHUR	26587	501	6	8	14	4	1	5	104	72	176	0
17		ARATTAVADI	27046	534	3	6	9	0	1	1	82	77	159	0
18		ELANGUNNI	26266	540	3	17	20	1	2	3	96	67	163	0
		Block Total	**161097**	**3118**	**36**	**63**	**99**	**9**	**10**	**19**	**537**	**443**	**980**	**2**
19	Pudupalayam	**KARAPATTU**	29437	538	2	3	5	2	1	3	125	101	226	0
20		PUDUPALAYAM	37287	676	5	11	16	0	0	0	126	130	256	1
21		PERIYAKULAM	24840	450	13	8	21	2	0	2	56	58	114	4
		Block Total	**91564**	**1664**	**20**	**22**	**42**	**4**	**1**	**5**	**307**	**289**	**596**	**5**
22	Jamunamarathur	NAMMIYAMPATTU	19553	329	0	0	0	1	0	1	47	33	80	0
23		JAMUNAMARATHUR	21269	350	2	0	2	1	0	1	21	10	31	0
		Block Total	**40822**	**679**	**2**	**0**	**2**	**2**	**0**	**2**	**68**	**43**	**111**	**0**
24	Chetpet	KOMMANANDAL	26047	453	7	7	14	1	0	1	74	64	138	0
25		V.M.MANGALAM	17039	330	7	4	11	0	1	1	52	59	111	0
26		THATCHAMPADI	36859	638	3	5	8	0	1	1	93	101	194	1
27		CHETPET	27330	497	9	4	13	1	3	4	102	84	186	0
		Block Total	**107275**	**1918**	**26**	**20**	**46**	**2**	**5**	**7**	**321**	**308**	**629**	**1**

Sl. No.	Blocks	Name of the PHC	Population	Live Births	Infant Death			1 – 5 Years Death			Deaths			No. of Maternal Deaths
					M	F	T	M	F	T	M	F	T	
28	Polur	**KALAMBUR**	29810	520	6	7	13	0	0	0	91	100	191	0
29		TIRUCHURPETTAI	45582	807	7	5	12	0	1	1	127	125	252	2
30		KELUR	35973	640	1	7	8	1	1	2	84	77	161	0
31		VAZHIYUR	24275	423	3	7	10	2	0	2	109	94	203	1
32		KALASAMUDRAM	25985	480	3	7	10	1	1	2	103	90	193	0
		Block Total	**161625**	**2870**	**20**	**33**	**53**	**4**	**3**	**7**	**514**	**486**	**1000**	**3**
33	Kalasapakkam	**KADALADI**	24200	460	8	10	18	0	3	3	108	93	201	2
34		KALASAPAKKAM	21516	392	9	12	21	2	1	3	83	62	145	0
35		M.V.NALLUR	22864	414	2	5	7	5	0	5	91	62	153	0
36		PADAGAM	20379	393	7	5	12	0	0	0	87	69	156	0
37		A.M.PUDUR	27686	542	3	4	7	0	0	0	76	68	144	1
		Block Total	**116645**	**2201**	**29**	**36**	**65**	**7**	**4**	**11**	**445**	**354**	**799**	**3**
38	Thurinja-puram	**MANGALAM**	56989	1049	12	21	33	3	1	4	236	151	387	1
39		THURINJAPURAM	26830	475	3	8	11	0	1	1	72	70	142	0
40		NORTHAMPOONDI	31315	568	4	6	10	0	0	0	109	95	204	0
		Block Total	**115134**	**2092**	**19**	**35**	**54**	**3**	**2**	**5**	**417**	**316**	**733**	**1**
41	Kilpennathur	**KILPENNATHUR**	25587	431	4	2	6	1	0	1	58	64	122	0
42		SOMASIPADI	27681	516	7	8	15	2	1	3	91	67	158	0
43		MEKKALUR	17583	328	0	5	5	0	0	0	40	35	75	0
44		KONALUR	24308	478	5	4	9	0	0	0	69	76	145	0
45		VETTAVALAM	27540	499	3	1	4	1	0	1	102	77	179	1
		Block Total	**122699**	**2252**	**19**	**20**	**39**	**4**	**1**	**5**	**360**	**319**	**679**	**1**
Rural Total			**1246103**	**23103**	**223**	**305**	**528**	**51**	**39**	**90**	**3913**	**3415**	**7328**	**23**
46		**T V Malai Mpty.**	135705	2122	21	20	41	1	1	2	223	303	526	0
HUD Total			1381808	25225	244	325	569	52	40	92	4136	3718	7854	23

Table A4.1: Block wise Literacy Rate in Tiruvannamalai District (ALL), 1991

Block / Urban	1991									
	Urban			Rural			Total(ALL)			Male Female Literacy Gap
	M	F	T	M	F	T	M	F	T	
Vembakkam				68.17	37.00	52.66	68.17	37.00	52.66	31.17
Cheyyar	82.95	61.56	72.31	68.32	37.91	53.51	72.30	44.84	58.62	27.46
Anakkavur				69.13	39.15	54.11	69.13	39.15	54.11	29.98
Pernamallur				70.06	36.97	53.37	70.06	36.97	53.37	33.09
Vandavasi	82.66	61.18	71.95	66.98	38.26	52.71	70.16	42.93	56.63	27.23
Thellar				69.80	39.82	54.88	69.80	39.82	54.88	29.98
Arni	83.88	62.33	73.17	71.52	39.69	55.66	76.22	48.34	62.28	27.89
West Arni				74.84	43.91	59.29	74.84	43.91	59.29	30.93
Polur	80.46	57.37	68.83	65.85	35.46	50.68	68.15	38.96	53.56	29.19
Kalasapakkam				61.88	32.29	47.24	61.88	32.29	47.24	29.59
Chetpet				67.70	37.34	52.57	67.70	37.34	52.57	30.36
Thurinjapuram				62.55	32.27	47.64	62.55	32.27	47.64	30.28
Kilpennathur				66.52	40.14	53.42	66.52	40.14	53.42	26.38
Tiruvannamalai	86.38	66.75	76.72	62.20	35.19	48.82	73.59	49.97	61.92	23.63
Pudupalayam				57.17	31.56	44.46	57.17	31.56	44.46	25.61
Chengam				56.00	33.04	44.72	56.00	33.04	44.72	22.96
Thandrampet				53.93	30.23	42.24	53.93	30.23	42.24	23.70
Jawadhu Hills				26.33	11.07	18.89	26.33	11.07	18.89	15.26
District	84.44	63.6	74.1	64.25	35.90	50.16	66.70	39.25	53.10	27.45

Source: Census of India

Table A4.2: Block wise Literacy Rate Tiruvannamalai District (ALL), 2001

Block / Urban	Urban			Rural			Total(ALL)			Male Female Literacy Gap	Changes in Total Literacy Rate (1991-2001)		
	M	F	T	M	F	T	M	F	T		M	F	T
Vembakkam	81.66	55.63	68.67	81.23	54.61	67.93	81.25	54.66	67.96	26.59	23.59	23.28	23.36
Cheyyar	90.43	73.56	81.95	79.19	53.58	66.34	82.44	59.37	70.85	23.07	40.12	35.33	37.62
Anakkavur	-	-	-	79.95	53.71	66.83	79.95	53.71	66.83	26.24	21.27	20.36	20.82
Pernamallur	88.45	63.26	75.51	80.96	53.23	66.92	81.42	53.87	67.46	27.55	21.82	21.87	21.80
Vandavasi	90.73	76.23	83.29	79.09	54.99	67.11	81.64	59.89	70.75	21.75	21.92	23.29	22.52
Thellar	86.51	65.66	76.02	79.77	54.06	66.98	80.13	54.69	67.47	25.44	20.67	20.43	20.52
Arni	88.61	71.73	80.08	83.36	58.64	70.96	85.34	63.62	74.42	21.72	47.55	42.23	44.79
West Arni	89.46	68.88	79.03	82.48	57.58	69.93	83.33	58.97	71.04	24.36	19.80	21.54	20.60
Polur	88.23	67.55	77.78	80.4	55.22	67.74	82.28	58.19	70.15	24.09	18.41	21.15	19.60
Kalasapakkam	-	-	-	76.2	49.17	62.7	76.2	49.17	62.7	27.03	23.98	21.83	22.77
Chetpet	87.06	69.4	78.11	79.71	52.13	65.75	81.02	55.22	67.96	25.8	23.83	23.57	23.48
Thurinjapuram	-	-	-	77.54	51.48	64.55	77.54	51.48	64.55	26.06	24.75	24.29	24.38
Kilpennathur	84.38	64.51	74.38	79.16	54.5	66.65	80.36	56.78	68.42	23.58	24.51	22.94	23.46
Tiruvannamalai	89.66	74.72	82.27	77.77	54.18	65.98	83.7	64.31	74.05	19.39	32.00	35.05	33.46
Pudupalayam	79.29	57.6	68.24	71.64	46.88	59.34	72.57	48.25	60.45	24.32	25.16	22.01	23.53
Chengam	81.03	64.76	72.92	70.37	48.37	59.52	72.04	50.99	61.64	21.05	25.21	23.24	24.16
Thandrampet	-	-	-	69.37	46	57.82	69.37	46	57.82	23.37	24.40	20.61	22.46
Jawadhu Hills	-	-	-	49.51	26.22	38.17	49.51	26.22	38.17	23.29	30.17	18.10	24.24
District	**88.14**	**70.97**	**79.52**	**77.15**	**52.14**	**64.65**	**79.17**	**55.63**	**67.39**	**24.15**	26.79	25.90	26.24

Source: Census of India

Table A4.3: Illiterate Population in the age group of 15-35 in Tiruvannamalai, 2005

Block / Urban	T	M	F	SC	ST
Vembakkam	10321	4921	5400	3270	264
Cheyyar	9195	3711	5484	2750	248
Anakkavur	6805	2384	4421	2654	345
Pernamallur	7083	2598	4485	2009	306
Vandavasi	10192	4486	5706	4143	389
Thellar	7466	3978	3488	3216	648
Arni	11158	4230	6928	3006	133
West Arni	8406	3030	5376	1446	120
Polur	21788	9976	11812	8243	813
Kalasapakkam	8740	4200	4540	2622	292
Chetpet	8557	4072	4485	1909	88
Thurinjapuram	15736	7653	8083	4437	623
Kilpennathur	16751	7531	9220	4462	499
Tiruvannamalai	27492	11184	16308	9369	899
Pudupalayam	14747	6142	8605	5568	213
Chengam	25920	12829	13091	14443	81
Thandrampet	26782	12810	13972	6843	3350
Jawadhu Hills	15567	6514	9053	256	14415
Block	**252706**	**112249**	**140457**	**80646**	**23726**
Municipality					
Tiruvannamalai	25597	12300	13297	7739	64
Arni	4879	2406	2473	1057	53
Tiruvathipuram (Cheyyar)	617	180	437	82	53
Vandavasi	723	309	414	201	81
Total	31816	15195	16621	9079	251
Grand Total	**284522**	**127444**	**157078**	**89725**	**23977**

Source: Valarkalvi *Thittam*, Tiruvannamalai District

Table A4.4: Access Rate

Block / Urban	Primary						Upper Primary					
	2002-03			2003-04			2002-03			2003-04		
	No. of Habitation	No. of Habitation shared by School with radius of 1KM	GAR	No. of Habitation	No. of Habitation shared by School with radius of 1KM	GAR	No. of Habitation	No. of Habitation shared by School with radius of 3KM	GAR	No. of Habitation	No. of Habitation shared by School with radius of 3KM	GAR
Vembakkam	192	191	99.48	192	192	**100**	192	191	99.48	192	192	100
Cheyyar	192	189	98.44	192	189	98.44	192	188	97.92	192	188	97.92
Anakkavur	103	103	100	103	103	**100**	103	102	99.03	103	102	99.03
Pernamallur	193	193	100	193	193	**100**	193	193	100	193	193	100
Vandavasi	112	112	100	112	112	**100**	112	108	96.43	112	108	96.43
Thellar	176	176	100	176	176	**100**	176	176	100	176	176	100
Arni	121	121	100	121	121	**100**	121	121	100	121	121	100
West Arni	176	176	100	176	176	**100**	176	176	100	176	176	100
Polur	275	265	96.36	275	265	96.36	275	272	98.91	275	272	98.91
Kalasapakkam	183	183	100	183	183	**100**	183	183	100	183	183	100
Chetpet	120	120	100	120	120	**100**	120	119	99.17	120	119	99.17
Thurinjapuram	235	216	91.91	235	220	93.62	235	230	97.87	235	230	97.87
Kilpennathur	210	206	98.1	210	207	98.57	210	210	100	210	210	100
Tiruvannamalai	206	203	98.54	206	205	99.51	206	200	97.09	206	200	97.09
Pudupalayam	119	119	100	119	119	**100**	119	119	100	119	119	100
Chengam	152	146	96.05	152	147	96.71	152	152	100	152	152	100
Thandrampet	180	171	95	180	171	95	180	180	100	180	180	100
Jawadhu Hills	217	211	97.24	217	211	97.24	217	217	100	217	217	100
District	**3162**	**3101**	98.07	**3162**	**3110**	98.36	**3162**	**3137**	99.21	**3162**	**3138**	99.24

Source: School Mapping-2003

Table A4.5: Net Enrolment Ratio – Primary Education

Block / Urban	NER - Primary 2005									NER - Primary 2004								
	All			SC			ST			All			SC			ST		
	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T
Vembakkam	99.06	99.37	99.22	99.16	99.72	99.44	96.12	95.34	95.73	98.27	98.29	98.28	99.08	99.59	99.32	95.65	94.81	95.27
Cheyyar	99.42	98.74	99.08	99.95	97.92	98.94	96.14	93.12	94.63	99.38	98.60	98.99	95.94	95.92	95.93	95.24	92.00	93.71
Anakkavur	99.62	99.24	99.43	99.67	99.15	99.41	97.12	99.15	98.14	99.53	99.01	99.28	99.60	98.10	98.89	96.36	98.35	97.40
Pernamallur	98.87	99.85	99.36	99.34	94.86	97.10	96.81	96.87	96.84	98.19	99.73	98.94	96.22	93.06	94.65	95.70	95.96	95.83
Vandavasi	97.95	99.64	98.80	95.56	98.32	96.94	93.61	92.34	92.98	97.88	99.58	98.69	94.26	97.32	95.71	92.27	91.75	92.01
Thellar	99.90	99.61	99.76	95.34	95.12	95.23	99.12	93.14	96.13	99.84	99.50	99.67	94.63	94.62	94.62	98.68	92.95	95.82
Arni	96.48	96.87	96.68	96.97	96.81	96.89	95.34	94.92	95.13	95.46	95.57	95.51	95.92	95.68	95.80	94.66	93.80	94.23
West Arni	99.78	99.64	99.71	93.84	93.15	93.50	96.85	95.92	96.39	99.74	99.46	99.61	92.75	92.96	92.85	96.55	95.83	96.23
Polur	99.70	98.17	98.94	94.84	96.84	95.84	96.52	96.86	96.69	99.68	98.97	99.33	93.62	95.74	94.84	95.49	95.40	95.45
Kalasapakkam	97.51	97.54	97.53	95.85	97.15	96.50	96.96	96.17	96.57	99.31	96.79	96.54	94.70	96.55	95.58	95.35	95.83	95.52
Chetpet	97.72	99.80	98.76	97.36	97.52	97.44	99.81	99.54	99.68	97.64	99.75	98.67	96.84	96.47	96.65	99.00	99.00	99.00
Thurinjapuram	98.51	98.56	98.54	96.12	95.16	95.64	96.87	96.12	96.50	98.41	98.46	98.43	95.34	94.55	94.95	95.07	95.52	99.42
Kilpennathur	97.05	99.84	98.45	96.84	97.97	97.41	96.12	97.24	96.68	96.85	99.76	98.23	95.94	96.87	96.39	95.88	96.46	96.17
Tiruvannamalai	97.05	99.54	98.30	96.85	97.16	97.01	93.18	93.84	93.51	96.86	99.33	98.03	95.30	95.06	95.19	92.32	92.69	92.50
Pudupalayam	99.24	99.71	99.48	98.36	98.16	98.26	98.12	93.84	95.98	98.93	99.61	99.25	97.44	97.30	97.37	97.96	92.86	96.10
Chengam	99.07	99.81	99.44	97.24	97.15	97.20	93.13	95.91	94.52	98.56	99.79	99.16	96.23	95.18	95.71	92.26	94.81	93.53
Thandrampet	95.79	97.14	96.47	95.26	93.84	94.55	95.05	95.86	95.48	95.49	96.50	95.97	94.82	92.31	93.57	93.04	94.97	93.98
Jawadhu Hills	90.86	89.17	90.02	85.36	81.16	83.26	80.05	79.84	79.95	81.55	80.15	80.94	73.37	75.47	74.34	73.17	70.69	72.08
District	**97.98**	**98.46**	**98.22**	**96.33**	**95.95**	**96.14**	**95.38**	**94.78**	**95.08**	**97.15**	**98.04**	97.60	95.54	**95.51**	**95.59**	**80.98**	**81.63**	**81.80**

Source: DISE

Block / Urban	NER - Primary 2003									NER - Primary 2002									NER - Primary 2001								
	All			SC			ST			All			SC			ST			All			SC			ST		
	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T
Vembakkam	97	96	96	98	99	98	90	94	92	95	93	94	97	95	96	94	93	94	98	98	98	98	98	98	96	96	96
Cheyyar	98	97	97	94	95	95	89	81	90	98	97	97	93	92	92	94	91	93	98	97	98	99	98	99	97	100	99
Anakkavur	99	99	99	99	97	98	93	97	95	99	99	99	95	90	92	91	91	91	94	99	96	99	99	99	97	91	94
Pernamallur	97	98	98	96	92	94	93	96	95	97	98	98	95	91	93	95	95	95	100	100	100	100	100	100	100	100	100
Vandavasi	96	100	98	93	96	94	89	91	90	96	99	98	93	96	94	91	91	91	99	99	99	100	100	100	98	99	98
Thellar	100	99	100	94	94	94	90	92	91	99	99	99	93	93	93	92	91	91	97	95	96	99	100	99	98	93	95
Arni	96	94	95	95	94	95	93	95	94	93	92	92	94	94	94	90	91	91	80	80	80	75	76	76			
West Arni	98	98	98	92	92	92	94	97	96	98	97	98	92	91	91	94	93	94	97	99	98	94	91	92	100	100	100
Polur	98	97	98	92	94	93	94	96	95	98	97	98	92	93	93	92	90	91	97	98	97	98	98	98	100	96	98
Kalasapakkam	97	95	96	93	95	94	95	96	96	94	95	95	93	95	94	91	93	92	99	99	99	96	99	97	90	93	92
Chetpet	98	98	98	96	95	96	100	94	97	96	98	97	91	90	91	86	88	87	100	98	99	100	100	100			
Thurinjapuram	97	97	97	94	94	94	94	98	96	97	97	97	90	91	91	90	92	91	99	98	99	92	90	91	96	90	94
Kilpennathur	95	97	96	95	96	95	95	98	96	94	97	96	93	96	94	91	90	91	98	98	98	98	97	97	97	96	96
Tiruvannamalai	95	96	96	94	94	94	92	94	93	92	94	93	94	92	93	90	91	91	94	96	95	96	96	96	99	95	97
Pudupalayam	98	95	97	96	96	96	98	92	95	95	95	95	91	91	91	91	92	91	97	97	97	96	96	96	100	100	100
Chengam	97	98	98	95	94	94	92	94	93	97	98	97	95	92	93	91	90	91	98	98	98	98	98	98	84	86	85
Thandrampet	96	95	96	93	91	92	93	97	95	91	91	91	93	91	92	91	90	91	96	97	97	94	94	94	92	89	91
Jawadhu Hills	76	67	72	72	74	73	72	69	71	69	64	67	64	65	64	62	59	61	79	74	76	88	83	85	78	72	75
District	**97**	**96**	**96**	**94**	**94**	**94**	**79**	**81**	**80**	**94**	**95**	**97**	**93**	**93**	**93**	**74**	**73**	**74**	**96**	**96**	**96**	**96**	**96**	**96**	**85**	**82**	**84**

Source : DISE

Source: Household Information Survey

Table A4.7: Attendance Rate: Upper Primary Standard

Block	2005-06			2003-04									2002-03									Primary 2003-04		
				All			SC			ST			All			SC			ST			All	SC	ST
	ALL	SC	ST	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T			
Vembakkam	96	95	95	97	92	95	96	95	96	89	89	89	95	97	96	89	95	92	86	92	89	98	98	97
Cheyyar	94	92	96	88	87	88	82	75	79	96	89	93	92	93	92	89	89	89	98	96	97	95	94	93
Anakkavur	92	91	95	97	95	96	96	95	96	100	100	100	95	97	96	90	95	93	86	92	90	97	96	91
Pernamallur	96	97	96	93	92	93	93	98	96	91	90	91	93	92	93	93	98	100	91	90	91	96	95	97
Vandavasi	97	95	95	96	97	97	94	97	96	100	100	100	94	96	95	92	94	93	90	92	91	98	95	97
Thellar	96	95	97	96	98	97	94	97	96	94	98	96	93	91	92	96	93	94	75	75	75	99	96	97
Arni	92	91	95	92	95	94	96	96	96	100	100	100	82	85	83	81	82	81				95	92	99
West Arni	98	96	99	99	95	97	90	97	94	100	100	100	92	95	93	97	96	96	96	97	97	98	97	98
Polur	97	95	94	95	94	94	94	91	93	94	67	80	95	97	96	90	95	93	86	92	90	96	94	78
Kalasapakkam	96	95	92	90	90	90	90	89	90	90	87	89	92	96	94	92	93	93	96	88	97	98	96	95
Chetpet	92	91	85	95	95	95	100	86	93				99	97	98	95	97	96				95	95	94
Thurinjapuram	96	91	89	98	99	99	98	99	99	93	100	96	93	92	92	90	89	90	98	96	97	94	92	91
Kilpennathur	93	90	92	88	85	87	81	76	79	80	79	80	88	85	86	81	76	80	80	79	79	95	91	92
Tiruvannamalai	97	96	96	95	95	95	94	94	94	96	95	96	94	92	93	90	92	91	94	96	95	97	95	95
Pudupalayam	97	96	96	85	92	89	79	86	83	100	100	100	89	89	89	96	97	97	73	79	76	96	95	99
Chengam	98	95	91	97	97	97	89	86	88	81	85	83	63	60	76	45	52	67	53	53	69	99	95	95
Thandrampet	94	93	90	90	87	89	80	87	84	83	75	79	93	92	92	90	89	90	98	96	97	94	92	91
Jawadhu Hills	92	91	90	91	88	90	92	93	93	80	79	80	90	84	87	84	83	84	90	84	87	97	95	91
District	**94**	**91**	**93**	**93**	**93**	**93**	91	91	91	92	90	91	91	90	91	88	89	89	87	87	87	95	92	90

Source: Sample Study, 2002-03 to 2003-04, DISE Cohort Study, 2005-06, DISE

Table A4.8: Completion Rates in Primary Education: Tiruvannamalai District

Block / Urban	Completion Rate, 2005			Completion Rate, 2003			Completion Rate, 2002			Completion Rate, 1996-97 to 2000-01
	ALL	SC	ST	B	G	T	B	G	T	T
Vembakkam	84.33	83.76	74.85	73.62	77.35	75.48	76.00	78.00	77.00	65.66
Cheyyar	77.16	73.40	64.65	66.10	60.65	63.36	71.00	71.00	71.00	66.36
Anakkavur	83.74	80.72	62.50	79.85	81.44	80.62	75.00	81.00	78.00	73.93
Pernamallur	75.54	75.61	42.76	62.38	65.43	63.89	58.00	64.00	61.00	58.79
Vandavasi	84.16	80.53	85.79	67.26	68.99	68.13	68.00	62.00	65.00	62.80
Thellar	80.13	76.75	60.12	66.41	67.92	67.18	65.00	67.00	66.00	65.69
Arni	82.55	81.67	87.50	64.60	69.56	67.20	65.00	69.00	67.00	65.53
West Arni	85.01	79.43	100.00	69.01	74.88	71.89	68.00	70.00	69.00	69.65
Polur	82.94	79.42	70.24	68.35	71.78	70.08	70.00	78.00	74.00	71.72
Kalasapakkam	83.09	82.09	100.00	72.86	74.56	73.69	72.00	74.00	73.00	67.09
Chetpet	82.36	75.78	-	72.13	78.11	75.11	70.00	74.00	72.00	69.15
Thurinjapuram	86.66	85.57	66.91	76.58	76.86	76.72	71.00	77.00	74.00	68.14
Kilpennathur	83.74	83.76	78.69	74.19	79.88	77.03	70.00	74.00	72.00	69.75
Tiruvannamalai	81.06	78.94	71.07	67.74	72.22	70.07	68.00	72.00	70.00	67.49
Pudupalayam	74.55	70.39	75.00	64.44	67.90	66.12	68.00	64.00	66.00	61.85
Chengam	79.03	76.31	49.74	67.08	68.33	67.70	72.00	68.00	70.00	68.10
Thandrampet	84.40	84.05	70.87	69.16	69.40	69.27	74.00	68.00	71.00	61.14
Jawadhu Hills	57.10	56.93	56.87	51.35	61.73	55.81	65.00	59.00	62.00	47.17
District	**80.90**	**79.27**	**61.26**	**72.00**	**70.00**	**71.00**	**69.22**	**70.56**	**69.89**	**66.25**

Source: Cohort Study, DISE

Table A4.9: Completion Rates in Upper Primary Sections

Block / Urban	2005									2003			2002		
	ALL			SC			ST								
	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T
Vembakkam	73	73	73	67	70	68	50	100	75	69	70	70	58	64	61
Cheyyar	78	78	78	75	71	73	36	54	45	66	61	63	60	68	64
Anakkavur	70	71	70	65	65	65	46	25	36	64	59	61	82	82	82
Pernamallur	87	85	86	88	92	90	67	100	83	64	67	65	52	62	57
Vandavasi	88	81	85	88	71	80	68	93	90	73	74	74	62	66	64
Thellar	85	84	85	79	83	81	73	75	74	73	76	75	71	69	70
Arni	86	87	87	84	84	84	71	100	86	67	68	67	83	85	84
West Arni	77	79	78	69	73	71	100	50	75	64	72	68	82	86	84
Polur	78	74	77	74	76	75	50	100	75	72	79	75	84	84	84
Kalasapakkam	79	77	78	77	67	72	100	60	80	71	72	72	70	74	72
Chetpet	78	77	77	79	78	78	43	100	71	61	66	63	62	66	64
Thurinjapuram	86	83	83	80	78	79	75	69	72	69	72	71	74	72	73
Kilpennathur	81	90	85	85	91	88	45	80	62	74	76	75	78	70	74
Tiruvannamalai	79	80	80	75	85	78	75	75	75	62	63	63	70	74	72
Pudupalayam	77	72	75	73	69	71	86	88	87	70	61	66	65	69	67
Chengam	76	77	76	71	78	75	100	91	95	72	77	74	71	67	69
Thandrampet	77	82	79	76	81	78	79	80	80	67	69	68	63	63	63
Jawadhu Hills	79	71	76	80	61	71	79	71	75	60	64	63	62	58	60
District	**80**	**80**	**80**	**77**	**76**	**77**	**75**	**75**	**75**	**76**	**74**	**75**	**69**	**71**	**70**

Source: Cohort Study, DISE

Table A4.10: Dropout Rates in Primary Education

Block/ Urban	Dropout Rate 2005			Dropout Rate 2003			Dropout Rate 2002			Dropout Rate 1996-97 to 2000-01
	ALL	SC	ST	B	G	T	B	G	T	T
Vembakkam	2.44	1.75	12.89	1.99	2.83	2.41	6	6	6	7.55
Cheyyar	7.06	6.76	8.61	11.6	17	14.3	5	5	5	5.73
Anakkavur	2.59	2.60	2.78	0.6	1.44	1	1	1	1	3.19
Pernamallur	8.17	6.22	33.83	0.27	0.55	0.41	1	1	1	1.6
Vandavasi	2.13	3.16	0.00	3.75	3.38	3.56	8	2	5	5.68
Thellar	1.16	0.42	6.85	1.15	1.69	1.43	5	5	5	5.3
Arni	3.17	1.45	0.00	5.28	5.38	5.33	9	7	8	7.45
West Arni	3.11	4.79	0.00	3.06	3.42	3.24	7	11	9	5.37
Polur	2.64	4.70	0.00	7.93	6.66	7.29	5	7	6	5.53
Kalasapakkam	3.02	2.49	0.00	3.81	4.17	3.99	8	6	7	9.44
Chetpet	1.93	3.44	0.00	1.12	1.02	1.07	4	4	4	2.79
Thurinjapuram	1.58	1.44	0.00	0.2	0.1	0.15	8	8	8	3.81
Kilpennathur	5.04	5.11	0.00	5.6	4.75	5.17	5	11	8	8.69
Tiruvannamalai	3.84	3.13	10.44	0.76	0.63	0.69	8	10	9	10.1
Pudupalayam	6.18	7.54	0.00	13.1	11.4	12.24	8	12	10	12.9
Chengam	7.19	8.21	13.85	12.4	11.8	12.08	14	8	11	12.6
Thandrampet	4.72	2.88	13.01	13.4	14.1	13.75	9	7	8	16.5
Jawadhu Hills	31.51	6.67	31.98	31	25.3	28.51	26	30	28	39.2
District	**5.02**	**4.02**	**24.06**	**6**	**8**	**7**	**7.61**	**7.83**	**7.72**	**8.58**

Source: Cohort Study, DISE

Table A4.11: Dropout Rates Upper Primary Sections

Block / Urban	2005									2003			2002		
	ALL			SC			ST								
	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T
Vembakkam	11	11	11	11	8	10	50	0	25	12	13	13	18	16	17
Cheyyar	9	13	11	10	14	12	27	31	29	12	17	14	15	15	15
Anakkavur	13	16	14	13	18	16	38	50	44	16	23	19	2	2	2
Pernamallur	1	3	2	0	0	0	33	0	17	15	12	14	14	14	14
Vandavasi	6	13	10	5	22	13	13	7	10	11	10	10	16	10	13
Thellar	7	7	7	9	8	8	27	25	26	11	8	10	3	7	5
Arni	6	7	7	6	8	7	29	0	14	16	15	15	11	13	12
West Arni	13	12	12	17	15	16	0	17	8	18	11	14	11	13	12
Polur	9	12	10	13	12	12	22	0	11	6	8	7	5	5	5
Kalasapakkam	11	14	13	14	19	16	0	40	20	21	16	18	17	15	16
Chetpet	9	10	10	7	12	9	14	0	7	16	13	15	18	16	17
Thurinjapuram	7	9	8	5	6	6	8	23	16	10	10	10	7	5	6
Kilpennathur	10	7	8	9	6	8	38	15	26	14	13	13	7	5	6
Tiruvannamalai	10	12	11	11	12	11	17	13	15	19	16	17	9	13	11
Pudupalayam	12	15	14	15	16	16	14	13	13	15	23	19	17	9	13
Chengam	19	17	18	21	15	18	0	9	5	18	17	18	12	16	14
Thandrampet	14	14	14	16	14	15	17	14	16	22	20	21	16	12	14
Jawadhu Hills	17	20	18	20	28	24	16	21	19	30	24	28	28	24	26
District	**10**	**12**	**11**	**11**	**13**	**12**	**18**	**18**	**18**	**13**	**13**	**13**	**13**	**12**	**12**

Source: Cohort Study, DISE

Table A4.8: Completion Rates in Primary Education: Tiruvannamalai District

Block / Urban	Completion Rate, 2005			Completion Rate, 2003			Completion Rate, 2002			Completion Rate, 1996-97 to 2000-01
	ALL	SC	ST	B	G	T	B	G	T	T
Vembakkam	84.33	83.76	74.85	73.62	77.35	75.48	76.00	78.00	77.00	65.66
Cheyyar	77.16	73.40	64.65	66.10	60.65	63.36	71.00	71.00	71.00	66.36
Anakkavur	83.74	80.72	62.50	79.85	81.44	80.62	75.00	81.00	78.00	73.93
Pernamallur	75.54	75.61	42.76	62.38	65.43	63.89	58.00	64.00	61.00	58.79
Vandavasi	84.16	80.53	85.79	67.26	68.99	68.13	68.00	62.00	65.00	62.80
Thellar	80.13	76.75	60.12	66.41	67.92	67.18	65.00	67.00	66.00	65.69
Arni	82.55	81.67	87.50	64.60	69.56	67.20	65.00	69.00	67.00	65.53
West Arni	85.01	79.43	100.00	69.01	74.88	71.89	68.00	70.00	69.00	69.65
Polur	82.94	79.42	70.24	68.35	71.78	70.08	70.00	78.00	74.00	71.72
Kalasapakkam	83.09	82.09	100.00	72.86	74.56	73.69	72.00	74.00	73.00	67.09
Chetpet	82.36	75.78	-	72.13	78.11	75.11	70.00	74.00	72.00	69.15
Thurinjapuram	86.66	85.57	66.91	76.58	76.86	76.72	71.00	77.00	74.00	68.14
Kilpennathur	83.74	83.76	78.69	74.19	79.88	77.03	70.00	74.00	72.00	69.75
Tiruvannamalai	81.06	78.94	71.07	67.74	72.22	70.07	68.00	72.00	70.00	67.49
Pudupalayam	74.55	70.39	75.00	64.44	67.90	66.12	68.00	64.00	66.00	61.85
Chengam	79.03	76.31	49.74	67.08	68.33	67.70	72.00	68.00	70.00	68.10
Thandrampet	84.40	84.05	70.87	69.16	69.40	69.27	74.00	68.00	71.00	61.14
Jawadhu Hills	57.10	56.93	56.87	51.35	61.73	55.81	65.00	59.00	62.00	47.17
District	**80.90**	**79.27**	**61.26**	**72.00**	**70.00**	**71.00**	**69.22**	**70.56**	**69.89**	**66.25**

Source: Cohort Study, DISE

Table A4.9: Completion Rates in Upper Primary Sections

Block / Urban	2005									2003			2002		
	ALL			SC			ST								
	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T
Vembakkam	73	73	73	67	70	68	50	100	75	69	70	70	58	64	61
Cheyyar	78	78	78	75	71	73	36	54	45	66	61	63	60	68	64
Anakkavur	70	71	70	65	65	65	46	25	36	64	59	61	82	82	82
Pernamallur	87	85	86	88	92	90	67	100	83	64	67	65	52	62	57
Vandavasi	88	81	85	88	71	80	68	93	90	73	74	74	62	66	64
Thellar	85	84	85	79	83	81	73	75	74	73	76	75	71	69	70
Arni	86	87	87	84	84	84	71	100	86	67	68	67	83	85	84
West Arni	77	79	78	69	73	71	100	50	75	64	72	68	82	86	84
Polur	78	74	77	74	76	75	50	100	75	72	79	75	84	84	84
Kalasapakkam	79	77	78	77	67	72	100	60	80	71	72	72	70	74	72
Chetpet	78	77	77	79	78	78	43	100	71	61	66	63	62	66	64
Thurinjapuram	86	83	83	80	78	79	75	69	72	69	72	71	74	72	73
Kilpennathur	81	90	85	85	91	88	45	80	62	74	76	75	78	70	74
Tiruvannamalai	79	80	80	75	85	78	75	75	75	62	63	63	70	74	72
Pudupalayam	77	72	75	73	69	71	86	88	87	70	61	66	65	69	67
Chengam	76	77	76	71	78	75	100	91	95	72	77	74	71	67	69
Thandrampet	77	82	79	76	81	78	79	80	80	67	69	68	63	63	63
Jawadhu Hills	79	71	76	80	61	71	79	71	75	60	64	63	62	58	60
District	**80**	**80**	**80**	**77**	**76**	**77**	**75**	**75**	**75**	**76**	**74**	**75**	**69**	**71**	**70**

Source: Cohort Study, DISE

Table A4.12 Age Group wise Out of School Children, 2005-06

Blocks	6-8 Years			8-10 Years			10-14 Years			Grand Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Vembakkam	3	4	7	12	19	31	11	13	24	26	36	62
Cheyyar	5	7	12	13	11	24	56	52	108	74	70	144
Anakkavur	7	4	11	7	12	19	31	38	69	45	54	99
Pernamallur	7	9	16	6	6	12	57	50	107	70	65	135
Vandavasi	8	5	13	7	7	14	77	80	157	92	92	184
Thellar	5	6	11	9	5	14	18	10	28	32	21	53
Arni	3	8	11	5	6	11	57	95	152	65	109	174
West Arni	8	7	15	9	7	16	47	47	94	64	61	125
Polur	6	7	13	6	8	14	88	69	157	100	84	184
Kalasapakkam	5	7	12	5	7	12	35	37	72	45	51	96
Chetpet	5	9	14	7	6	13	97	96	193	109	111	220
Thurinjapuram	6	5	11	4	5	9	99	94	193	109	104	213
Kilpennathur	6	8	14	5	4	9	33	26	59	44	38	82
Tiruvannamalai	5	6	11	6	7	13	208	201	409	219	214	433
Pudupalayam	4	6	10	5	6	11	46	38	84	55	50	105
Chengam	6	15	21	7	13	20	254	189	443	267	217	484
Thandrampet	4	6	10	8	9	17	216	133	349	228	148	376
Jawadhu Hills	5	6	11	7	17	24	588	664	1252	600	687	1287
District	98	125	223	128	155	283	2018	1932	3950	2244	2212	4456

Source: Household Survey, 2005

Table A4.13: Out of School Children with Reasons

Block / Urban	No of Out of School children	Lack of Interest	Lack of Access	Household Work	Migration	Earning Compulsion	Fallure	Others
Vembakkam	62	8	4	10	19	6	5	10
Cheyyar	144	13	2	28	27	16	37	21
Anakkavur	99	5	2	42	31	2	3	14
Pernamallur	135	7	3	48	25	22	18	12
Vandavasi	184	11	1	49	12	67	11	33
Thellar	53	2	1	16	15	7	5	7
Arni	174	10	5	42	31	56	8	22
West Arni	125	5	2	51	15	25	7	20
Polur	184	17	0	60	25	30	29	23
Kalasapakkam	96	6	3	23	2	19	18	25
Chetpet	220	10	2	53	61	55	4	35
Thurinjapuram	213	10	1	43	44	46	36	33
Kilpennathur	82	4	2	29	26	3	10	8
Tiruvannamalai	433	26	3	22	81	163	106	32
Pudupalayam	105	5	2	47	25	15	8	3
Chengam	484	28	2	44	81	214	52	63
Thandrampet	376	21	5	93	131	55	35	36
Jawadhu Hills	1287	35	5	191	463	474	54	65
District	4456	223	45	891	1114	1275	446	462

Source: Household Survey, 2005

Table A4.14: Transition Rate- Primary (V Std to VI Std)

Block / Urban	2005-06			2004			2003			2002			2001		
	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T
Vembakkam	99.17	98.62	98.9	99.27	99.48	**99.37**	83	91	**87**	98	97	**98**	97.6	96.8	**97.2**
Cheyyar	98.53	98.34	98.44	98.49	98.91	**98.71**	81	95	**88**	97	96	**97**	98.6	96.7	**97.5**
Anakkavur	97.92	96.99	97.45	98.57	99.39	**98.95**	100	99	**99**	99	99	**99**	100	100	**100**
Pernamallur	94.53	98.95	96.84	97.05	96.92	**96.99**	99	97	**98**	99	97	**98**	100	98.8	**99.4**
Vandavasi	98.43	99.08	98.74	99.72	99.71	**99.71**	100	100	**100**	96	98	**97**	100	98.8	**99.4**
Thellar	98.66	98.65	98.66	99.9	99.63	**99.76**	81	91	**86**	94	96	**95**	100	97.6	**98.7**
Arni	98.07	98.78	98.41	98.08	98.32	**98.19**	98	98	**98**	95	98	**97**	98.1	95.5	**96.8**
West Arni	98.6	97.91	98.26	98.91	98.9	**98.9**	97	98	**98**	97	98	**98**	99	97.3	**98.1**
Polur	98.82	98.81	98.82	98.32	99.09	**98.71**	98	96	**97**	97	96	**97**	99.3	95.3	**97.3**
Kalasapakkam	97.6	98.56	98.08	97.77	98.67	**98.22**	99	99	**99**	95	95	**95**	100	97.7	**98.9**
Chetpet	98.25	98.47	98.36	97.57	97.6	**97.58**	100	100	**100**	93	95	**94**	84.4	85.4	**84.9**
Thurinjapuram	98.13	98.27	98.2	99.47	99.76	**99.61**	87	87	**87**	94	93	**94**	100	99.3	**99.7**
Kilpennathur	97.15	98.44	97.76	99.35	99.57	**99.46**	94	95	**95**	94	95	**95**	96.1	100	**98.1**
Tiruvannamalai	98.5	98.46	98.48	98.02	98.62	**98.31**	88	91	**90**	100	98	**99**	100	97.9	**98.9**
Pudupalayam	97.19	94.83	96.04	97.3	98	**97.64**	89	100	**100**	96	98	**97**	99.3	97.7	**98.5**
Chengam	98.61	97.43	98.03	97.47	98.4	**97.92**	97	96	**96**	87	89	**88**	97.4	100	**98.7**
Thandrampet	98.51	98.06	98.29	99.89	98.96	**99.44**	100	89	**95**	90	97	**94**	100	98	**99**
Jawadhu Hills	89.43	93.12	91.02	98.44	99.42	**98.87**	100	100	**100**	84	74	**79**	90.4	86.4	**88.9**
District	**98.24**	**98.05**	**98.15**	**98.53**	**98.85**	**98.69**	**94**	**96**	**95**	**95**	**95**	**95**	**97.3**	**96.5**	**96.9**

Source: DISE, 2004-05
Sample Study, 2001-2003
Cohort Study, 2005-06

Table A4.15: Transition Rate – Upper Primary, 2005-06

Block / Urban	All			SC			ST		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Vembakkam	98.1	98.5	98.3	96.7	98.0	97.3	96.7	100.0	97.4
Cheyyar	91.4	95.8	94.0	83.3	95.1	89.4	80.0	100.0	83.3
Anakkavur	89.3	87.5	88.5	85.1	84.4	84.8	72.5	82.5	77.5
Pernamallur	98.0	96.8	97.5	97.3	97.2	97.3	100.0	100.0	100.0
Vandavasi	97.6	96.3	97.1	96.3	93.1	95.0	92.3	75.0	88.2
Thellar	97.5	97.4	97.5	95.2	95.8	95.5	98.0	98.0	98.0
Arni	99.0	99.1	99.1	99.3	100.0	99.6	100.0		100.0
West Arni	97.8	97.0	97.4	98.3	98.9	98.6	92.9	100.0	95.0
Polur	98.3	97.6	98.0	95.6	95.3	95.5	93.8	100.0	96.0
Kalasapakkam	98.1	97.6	97.9	98.5	95.9	97.0	85.7	100.0	90.0
Chetpet	98.5	97.6	98.2	97.0	97.9	97.4	100.0	100.0	100.0
Thurinjapuram	97.8	98.0	97.9	97.4	97.6	97.5	95.0	97.0	96.0
Kilpennathur	96.9	96.2	96.6	93.9	93.8	93.9	95.0	95.0	95.0
Tiruvannamalai	92.8	97.8	65.0	95.7	96.3	95.9	96.3	95.0	97.5
Pudupalayam	94.7	96.7	95.7	92.1	96.5	94.2	100.0	100.0	100.0
Chengam	94.2	96.3	95.2	80.3	93.4	86.7	79.2	95.0	88.2
Thandrampet	92.9	98.1	95.5	97.7	97.2	97.4	95.0	98.0	96.5
Jawadhu Hills	91.7	89.5	84.2	84.4	88.9	86.2	79.5	88.0	81.9
District	96.4	94.6	95.6	94.1	95.8	94.8	93.0	93.3	93.0

Source: Cohort Study

Table A4.16: Transition Rate- Primary (SC & ST students)

Block / Urban	Transition Rate (V Std to VI Std), 2005-06						Transition Rate (V Std to VI Std), 2003-04						Transition Rate (V Std to VI Std), 2002-03					
	SC			ST			SC			ST			SC			ST		
	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T
Vembakkam	98.8	98.44	98.62	96	95.83	95.92	74	81	78	70	86	78	85	85	85	80	82	81
Cheyyar	98.55	98.47	98.51	100	91.61	95.83	65	82.1	73	100	86	93	92	90	91	94	90	92
Anakkavur	97.33	97.55	97.44	93.33	100	96.55	100	100	100	90	100	95	95	92	94	90	92	91
Pernamallur	87.14	98.39	92.42	90	100	94.74	97	99	98	78	71	75	97	99	98	78	71	75
Vandavasi	98.75	99.42	99.06	94.29	96.97	95.59	100	100	100	100	100	100	94	96	95	90	92	91
Thellar	99.67	99.33	99.5	95.24	100	97.56	62	63	62	61	44	52	97	93	95	95	95	95
Arni	94.61	96.09	95.39	87.5	100	93.33	98	98	98	88	98	93	90	92	91	100	100	100
West Arni	98.51	97.96	98.24	94.12	93.75	93.94	72	76	74	100	100	100	67	71	69	100	100	100
Polur	97.86	98.43	98.13	92.31	100	96	93	92	93	95	92	94	92	90	91	94	90	92
Kalasapakkam	97.27	98.2	97.7	100	100	100	96	92	94	97	98	98	72	75	74	60	73	67
Chetpet	99.42	97.84	98.71	100	100	100	100	100	100	NA	NA	NA	98	97	98	NA	NA	NA
Thurinjapuram	98.55	98.07	98.32	90	94.44	92.11	74	75	75	73	73	73	89	88	89	94	92	93
Kilpennathur	95.33	98.74	96.92	100	93.75	96.88	71	69	70	72	70	71	71	69	70	72	70	71
Tiruvannamalai	98.96	98.73	98.84	93.75	96.67	95.16	59	68	64	72	72	72	92	95	94	94	96	95
Pudupalayam	95.52	92.96	94.24	100	100	100	100	100	100	100	100	100	96	98	97	82	86	84
Chengam	97.43	97.74	97.59	100	94.74	97.37	87	84	86	86	80	83	53	67	60	86	57	57
Thandrampet	98.64	98.18	98.42	95.45	95.24	95.35	67	100	84	100	100	100	92	90	91	94	90	92
Jawadhu Hills	100	91.67	96.15	88.31	93.3	90.59	100	100	100	100	100	100	53	67	60	84	62	73
District	**97.38**	**97.95**	**97.66**	**93.37**	**94.52**	**93.91**	**84**	**88**	**86**	**87**	**86**	**87**	**85**	**86**	**86**	**86**	**85**	**86**

Source: Cohort Study, 2005-06
Sample Study, 2002-03 to 2003-04.

Table A4.17: Block wise Percentages of Schools without Infrastructural facilities in Tiruvannamalai, 2005-06

Blocks	Total no of School		No of Repairable Classroom		% of schools without HM room		% of Schools without drinking water facility		% of Schools without Toilets		% of Schools without Girls toilets		% of Schools without Access Ramp		% of Schools without Boundary		% of Schools without Playground		% of Schools without Kitchen for mid day meal	
	P	UP	P	UP	P	UP	P	UP	P	UP	P	UP	P	UP	P	UP	P	UP	P	UP
Vembakkam	104	27	72	48	62.5	33.3	5.8	3.7	40.4	81.5	78.8	48.1	88.5	55.6	64.4	40.7	38.5	25.9	10.6	7.4
Cheyyar	97	31	85	34	76.3	22.6	5.2	3.2	25.8	51.6	72.2	32.3	94.8	64.5	53.6	51.6	25.8	25.8	20.6	29.0
Anakkavur	79	21	75	22	7.6	4.8	22.8	19.0	8.9	28.6	100.0	61.9	94.9	76.2	62.0	47.6	59.5	28.6	6.3	19.0
Pernamallur	79	33	40	31	88.6	24.2	0.0	6.1	26.6	54.5	83.5	39.4	88.6	69.7	39.2	33.3	8.9	9.1	7.6	12.1
Vandavasi	87	35	65	56	37.9	20.0	2.3	8.6	21.8	51.4	72.4	37.1	94.3	71.4	44.8	31.4	33.3	14.3	8.0	11.4
Thellar	89	41	59	61	59.6	26.8	4.5	9.8	52.8	51.2	88.8	61.0	96.6	82.9	49.4	43.9	16.9	9.8	18.0	34.1
Arni	81	43	69	53	61.7	44.2	7.4	7.0	27.2	44.2	63.0	46.5	79.0	72.1	56.8	44.2	42.0	48.8	24.7	16.3
West Arni	61	29	74	74	80.3	24.1	0.0	3.4	27.9	37.9	83.6	27.6	85.2	62.1	68.9	41.4	23.0	20.7	18.0	17.2
Polur	96	38	81	53	74.0	39.5	6.3	7.9	26.0	36.8	80.2	39.5	90.6	73.7	60.4	31.6	47.9	34.2	20.8	7.9
Kalasapakkam	80	28	65	54	82.5	32.1	2.5	10.7	41.3	50.0	75.0	75.0	95.0	89.3	60.0	50.0	35.0	39.3	16.3	28.6
Chetpet	73	31	46	32	79.5	38.7	2.7	3.2	43.8	48.4	84.9	45.2	91.8	74.2	57.5	45.2	42.5	22.6	15.1	12.9
Thurinjapuram	90	32	75	48	82.2	37.5	1.1	9.4	38.9	53.1	61.1	31.3	88.9	78.1	47.8	43.8	51.1	25.0	16.7	25.0
Kilpennathur	80	45	61	59	82.5	42.2	1.3	4.4	43.8	44.4	75.0	46.7	87.5	64.4	62.5	40.0	33.8	28.9	18.8	17.8
Tiruvannamalai	138	76	109	115	72.5	30.3	7.2	5.3	47.1	57.9	60.1	35.5	74.6	64.5	42.0	36.8	36.2	31.6	16.7	31.6
Pudupalayam	59	28	53	35	71.2	46.4	6.8	7.1	45.8	46.4	59.3	53.6	88.1	78.6	49.2	35.7	45.8	17.9	23.7	17.9
Chengam	81	45	58	55	86.4	44.4	3.7	8.9	50.6	46.7	76.5	42.2	92.6	75.6	48.1	35.6	42.0	26.7	18.5	22.2
Thandrampet	79	48	80	46	79.7	58.3	2.5	8.3	35.4	54.2	81.0	33.3	88.6	87.5	58.2	27.1	27.8	16.7	11.4	16.7
Jawadhu Hills	75	19	43	17	46.7	0.0	0.0	0.0	49.3	42.1	86.7	100.0	92.0	63.2	62.7	36.8	61.3	47.4	29.3	5.3
District	1528	650	1210	893	68.4	33.8	4.7	6.9	36.5	49.7	76.2	44.9	89.1	72.5	54.3	39.1	37.2	26.2	16.6	19.7

Source: DISE 2005-06

P – Primary Schools & **UP** – Upper Primary Schools

Table A4.18: Number of ECCE Children

Block / Urban	2005-06					2003				2001					
	Population 3-5	ICDS/TINP		Upgraded Centres		ICDS Centres	Children	Others LKG/UKG	Total Children	ICDS Centres	Total Children	TINP Centres	Total Children	Others LKG/UKG Classes	Total Children
		Centres	Beneficiaries	Centres	Beneficiaries										
Vembakkam	3714	80	2560	41	1315	95	5754	252	6006	49	2444	73	2859	19	2636
Cheyyar	3758	69	2208	31	1085	70	3604	986	4590	35	2024	76	2260	2	115
Anakkavur	2107	59	1888	29	765	62	3305	303	3608	35	4156	72	1605	20	1341
Pernamallur	2638	58	1856	29	931	62	3318	158	3476	55	3518	90	1985	7	3104
Vandavasi	4190	84	2688	41	1125	95	5573	1078	6651	53	3677	78	2690	5	312
Thellar	2989	66	2112	41	1070	77	4481	232	4713	56	3958	82	2145	4	423
Arni	5170	67	2144	30	1145	65	4878	558	5436	38	2264	62	2215	16	1849
West Arni	3840	65	2080	31	1060	65	4797	1344	6141	50	2965	92	2215	0	0
Polur	5530	92	2944	36	1175	79	5903	645	6548	52	3999	57	2475	6	373
Kalasapakkam	3384	78	2496	36	1175	81	5365	52	5417	54	3907	89	2245	0	0
Chetpet	4312	65	2080	36	975	74	4431	344	4775	38	2392	61	2280	2	282
Thurinjapuram	3479	73	2336	41	1153	85	5564	214	5778	75	5664	76	2503	12	1083
Kilpennathur	4161	76	2432	41	1260	90	5761	278	6039	61	5451	72	2816	6	541
Tiruvannamalai	8092	131	4727	71	2351	92	7198	1403	8601	80	6139	87	3743	1	36
Pudupalayam	3132	53	1696	31	875	60	4358	478	4836	3	220	57	1490	0	0
Chengam	4586	85	2820	36	1065	81	6523	923	7446	47	3038	51	2470	6	419
Thandrampet	4965	94	3108	41	1025	99	6925	125	7050	53	3662	51	2008	12	1858
Jawadhu Hills	1713	59	1988	28	765	57	2134	67	2201	46	3062	68	1740	3	876
District	**71754**	**1354**	**44163**	**670**	**20315**	1389	89872	9440	99312	880	62540	1294	41744	121	15248
	Source: Monthly Review Format					Source: Project Office, ICDS				Source: Household Survey, 2001					

Table A4.19: Numbers of Adult Education Centres

Block / Urban	Numbers
Vembakkam	58
Cheyyar	48
Anakkavur	38
Pernamallur	43
Vandavasi	55
Thellar	44
Arni	50
West Arni	45
Polur	58
Kalasapakkam	44
Chetpet	41
Thurinjapuram	49
Kilpennathur	43
Tiruvannamalai	80
Pudupalayam	35
Chengam	57
Thandrampet	66
Jawadhu Hills	19
Block	**873**

Source: *Valarkalvi Thittam*, Tiruvannamalai District

Table A4.20: Age-wise no of children in Transitional Educational Centre – 2005-06

Block	Age															Grand Total		
	9			10			11			12			13					
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Vembakkam	0	0	0	5	5	10	1	4	5	19	11	30	3	6	9	28	26	54
Cheyyar	0	3	3	1	9	10	3	2	5	13	16	29	24	26	50	41	56	97
Anakkavur	1	1	2	1	1	2	1	1	2	9	5	14	14	6	20	26	14	40
Pernamallur	0	0	0	1	1	2	0	0	0	5	3	8	12	31	43	18	35	53
Vandavasi	2	2	4	0	1	1	0	1	1	5	7	12	10	17	27	17	28	45
Thellar	5	0	5	1	2	3	0	3	3	2	7	9	10	6	16	18	18	36
Arni	6	3	9	14	3	17	2	3	5	13	17	30	22	15	37	57	41	98
West Arni	2	6	8	10	6	16	8	6	14	15	19	34	5	15	20	40	52	92
Polur	3	1	4	2	1	3	2	10	12	17	21	38	23	22	45	47	55	102
Kalasapakkam	6	1	7	5	3	8	10	6	16	5	8	13	5	7	12	31	25	56
Chetpet	0	0	0	2	1	3	0	2	2	3	6	9	11	19	30	16	28	44
Thurinjapuram	0	1	1	1	4	5	2	5	7	6	6	12	8	18	26	17	34	51
Kilpennathur	1	0	1	2	1	3	1	5	6	5	10	15	6	21	27	15	37	52
Tiruvannamalai	6	3	9	9	2	11	6	5	11	30	14	44	26	40	66	77	64	141
Pudupalayam	4	1	5	1	6	7	4	12	16	5	13	18	23	27	50	37	59	96
Chengam	9	10	19	15	4	19	8	15	23	25	34	59	22	26	48	79	89	168
Thandrampet	7	5	12	15	14	29	13	17	30	14	26	40	44	43	87	93	105	198
Jawadhu Hills	18	13	31	23	26	49	9	12	21	7	11	18	7	16	23	64	78	142
District	70	50	120	108	90	198	70	109	179	198	234	432	275	361	636	721	844	1565

Table A4.21: Teachers appointed under SSA (Sarva Shiksha Abhiyan)

Block / Urban	2002-03		2003-04		2004-05		2005-06		Total		Grand Total
	P	UP	P	UP	P	UP	P	UP	P	UP	
Vembakkam	4	3	2	3	0	0	0	1	6	7	13
Cheyyar	4	0	0	0	0	0	0	1	4	1	5
Anakkavur	2	0	0	0	0	0	0	0	2	0	2
Pernamallur	2	15	0	0	0	8	0	1	2	24	26
Vandavasi	0	3	0	0	0	6	0	0	0	9	9
Thellar	6	21	0	0	0	4	0	1	6	26	32
Arni	8	21	2	0	0	10	0	0	10	31	41
West Arni	4	15	0	0	0	2	0	1	4	18	22
Polur	0	3	0	0	0	6	0	2	0	11	11
Kalasapakkam	0	9	0	3	0	0	0	0	0	12	12
Chetpet	0	15	0	0	0	0	0	0	0	15	15
Thurinjapuram	0	18	8	0	0	0	0	2	8	20	28
Kilpennathur	4	15	2	0	0	0	0	2	6	17	23
Tiruvannamalai	8	15	4	3	0	14	0	7	12	39	51
Pudupalayam	4	12	8	0	0	0	0	5	12	17	29
Chengam	0	21	2	3	0	6	2	5	4	35	39
Thandrampet	6	15	0	6	0	4	0	3	6	28	34
Jawadhu Hills	6	12	0	0	0	4	8	3	14	19	33
District	**58**	**213**	**28**	**18**	**0**	**64**	**10**	**34**	**96**	**329**	**425**

Source: DEEO, Tiruvannamalai

Table A4.22: Noon Meal Programme

	No of Centres			No of Beneficiaries	
Blocks	**Above 500**	**Below 500**	**Total**	**Working Days**	**Holidays**
Tiruvannamalai	2	149	151	25737	3596
Kilpennathur	2	112	114	18415	2728
Thurinjapuram	1	108	109	15599	2879
Polur		120	120	19467	3251
Kalasapakkam	5	94	99	16071	3158
Chetpet	2	96	98	15021	1420
Chengam	3	104	107	20127	2580
Pudupalayam	1	78	79	12613	1964
Thandrampet	7	105	112	20861	3615
Jawadhu Hills		47	47	5385	1500
Cheyyar	2	91	93	12390	2132
Anakkavur	2	93	95	9698	1608
Vembakkam		127	127	17592	3292
Wandiwash	5	106	111	16442	1864
Thellar	2	123	125	14178	2309
Pernamallur		105	105	11812	1553
Arni		86	86	13234	2197
Arni (West)		84	84	12692	2041
Total	34	1828	1862	277334	43687

Table A4.23: Ranking Blocks Based on Performance in Literacy and Education

Block / Urban	Ranks on the basis of Indicators			Weighted Ranks			Total Rank	Overall Rank
	Literacy Rate, 2001	NER in Upper Primary, 2005	DR in Upper Primary, 2005	Literacy Rate	NER	DR		
Vembakkam	8 (67.96)	2 (96)	9 (11)	4.00	0.50	2.25	6.75	8
Cheyyar	4 (70.85)	14 (92)	9 (11)	2.00	3.50	2.25	7.75	9
Anakkavur	12 (66.83)	11 (94)	14 (14)	6.00	2.75	3.50	12.25	15
Pernamallur	11 (67.46)	11 (94)	1 (2)	5.50	2.75	0.25	8.50	11
Vandavasi	5 (70.75)	8 (95)	6 (10)	2.50	2.00	1.50	6.00	5
Thellar	10 (67.47)	2 (96)	2 (7)	5.00	0.50	0.50	6.00	5
Arni	1 (74.42)	8 (95)	2 (7)	0.50	2.00	0.50	3.00	1
West Arni	3 (71.04)	1 (98)	12 (12)	1.50	0.25	3.00	4.75	2
Polur	6 (70.15)	14 (92)	6 (10)	3.00	3.50	1.50	8.00	10
Kalasapakkam	14 (62.7)	2 (96)	13 (13)	7.00	0.50	3.25	10.75	12
Chetpet	8 67.96	2 (96)	6 (10)	4.00	0.50	1.50	6.00	5
Thurinjapuram	13 (64.55)	14 (92)	4 (8)	6.50	3.50	1.00	11.00	13
Kilpennathur	7 (68.42)	2 (96)	4 (8)	3.50	0.50	1.00	5.00	3
Tiruvannamalai	2 (74.05)	8 (95)	9 (11)	1.00	2.00	2.25	5.25	4
Pudupalayam	16 (60.45)	2 (96)	14 (14)	8.00	0.50	3.50	12.00	14
Chengam	15 (61.64)	14 (92)	17 (18)	7.50	3.50	4.25	15.25	17
Thandrampet	17 (57.82)	11 (95)	14 (14)	8.50	2.75	3.50	14.75	16
Jawadhu Hills	18 (38.17)	18 (76)	17 (18)	9.00	4.50	4.25	17.75	18

Figures in the parenthesis represent the rates

Table A5.1: Block-wise Performances of SHGs in the District of Tiruvannamalai, 2005
Source: Project Officer, Mahalir Thittam, Tiruvannamalai

Blocks		>6 months		Eligible SHGs		Total Credit Linkage			Direct (in percentage)		TAHDCO RF (in percentage)		TAHDCO EA (in percentage)		SGSY RF (in percentage)		SGSY EA (in percentage)		RMK (in percentage)	
	No of SHGs	Nos.	Percentage to total	Eligible SHGs	Percentage to >6 months	SHG	Percentage to Eligible SHGs	Amount (Rs. in lakh)	SHGs	Amount	SHGs	Amount	SHGs	Amount	SHGs	Amount	SHGs	Amount	SHGs	Amount
Kilpennathur	426	357	83.80	321	89.92	255	79.44	180.26	31.37	19.97	4.31	1.78	0.78	3.65	0.64	14.27	18.82	59.58	10.59	0.75
Tiruvannamalai	722	610	84.49	563	92.30	501	88.99	403.35	58.88	39.27	4.19	1.71	6.59	10.61	0.37	17.35	10.78	30.99	1.00	0.06
Chengam	665	543	81.65	481	88.58	366	76.09	266.64	43.17	27.42	15.85	7.52	1.91	4.59	0.41	18.47	11.48	42.00	0.00	0.00
Thandrampet	608	541	88.98	485	89.65	448	92.37	338.18	43.97	26.33	16.96	5.80	2.46	13.56	0.39	11.28	13.17	43.02	0.00	0.00
Jawadhu Hills	246	213	86.59	150	70.42	159	106.00	136.08	5.66	2.98	34.59	9.00	0.63	0.59	0.60	21.42	28.30	64.96	8.81	1.03
Pudupalayam	425	351	82.59	292	83.19	170	58.22	139.89	42.35	23.16	7.65	2.43	4.71	18.86	0.50	21.09	22.35	34.46	0.00	0.00
Kalasapakkam	729	595	81.62	524	88.07	365	69.66	238.25	75.07	41.78	1.92	0.86	5.48	17.38	0.23	13.52	9.86	26.15	4.11	0.31
Polur	681	541	79.44	319	58.96	245	76.80	198.62	58.78	32.37	5.71	2.48	2.04	5.79	0.36	22.08	14.69	37.28	0.00	0.00
Thurinjapuram	641	532	83.00	436	81.95	366	83.94	290.64	58.74	33.79	7.65	2.61	1.91	7.33	0.34	14.88	14.75	40.70	10.66	0.68
Arni (West)	549	450	81.97	323	71.78	218	67.49	231.16	37.61	16.02	6.88	2.01	2.29	5.41	0.56	16.17	26.15	60.39	0.00	0.00
Chetpet	525	413	78.67	368	89.10	308	83.70	264.59	35.71	18.71	4.55	1.32	2.60	9.52	0.60	26.90	16.23	43.55	0.00	0.00
Arni	484	359	74.17	345	96.10	218	63.19	217.12	54.59	23.42	6.42	2.23	11.47	30.63	0.39	14.94	14.22	28.78	0.00	0.00
Cheyyar	499	367	73.55	290	79.02	242	83.45	186.17	21.49	15.98	16.94	6.79	1.24	4.57	0.62	19.59	17.77	52.85	2.07	0.21
Anakkavur	390	302	77.44	258	85.43	215	83.33	162.61	29.77	18.60	3.72	1.51	0.93	2.77	0.67	26.73	17.67	49.97	4.19	0.43
Pernamallur	441	358	81.18	307	85.75	238	77.52	251.28	25.63	12.24	9.66	2.41	1.26	2.85	0.65	12.53	36.55	69.72	3.78	0.26
Thellar	578	469	81.14	420	89.55	351	83.57	259.25	50.14	36.37	7.98	2.87	0.28	0.96	0.42	17.07	11.11	42.72	0.00	0.00
Vandavasi	684	556	81.29	478	85.97	383	80.13	353.80	36.81	25.58	17.49	5.72	3.92	12.42	0.46	12.96	15.93	43.32	0.00	0.00
Vembakkam	648	518	79.94	454	87.64	391	86.12	407.56	40.66	27.43	9.46	2.93	5.63	18.60	0.50	23.45	12.79	27.59	0.00	0.00
Village Panchayat Total	9941	8075	81.23	6814	84.38	5439	79.82	4525.45	44.27	26.07	9.74	3.40	3.27	10.06	0.46	17.66	15.96	42.64	2.26	0.17

Table A5.2: Town Panchayat and Urban Area wise Performances of SHGs in the District of Tiruvannamalai, 2005

Town panchayat		>6 months		Eligible SHGs		Total Credit Linkage			Direct (in percentage)		TAHDCO RF (in percentage)		TAHDCO EA (in percentage)		SGSY RF (in percentage)		SGSY EA (in percentage)		RMK (in percentage)	
	No of SHGs	Nos.	Percentage to total	Eligible SHGs	Percentage to >6 months	SHG	Percentage to Eligible SHGs	Amount (Rs. in lakh)	SHGs	Amount	SHGs	Amount	SHGs	Amount	SHGs	Amount	SHGs	Amount	SHGs	Amount
Vettavalam	61	51	83.61	38	74.51	43	113.16	33.15	51.16	49.77	0.00	0.00	0.00	0.00	48.84	25.34	6.98	24.89	0.00	0.00
Kilpennathur	34	29	85.29	20	68.97	18	90.00	11	16.67	20.45	0.00	0.00	0.00	0.00	83.33	54.55	5.56	25.00	0.00	0.00
Chengam	65	60	92.31	15	25.00	19	126.67	10.75	47.37	62.79	0.00	0.00	0.00	0.00	52.63	37.21	0.00	0.00	0.00	0.00
Polur	102	37	36.27	11	29.73	26	236.36	18.05	38.46	34.07	0.00	0.00	0.00	0.00	61.54	35.46	7.69	30.47	0.00	0.00
Kalambur	79	63	79.75	41	65.08	42	102.44	37.25	83.33	70.47	0.00	0.00	0.00	0.00	16.67	7.52	7.14	22.01	0.00	0.00
Chetpet	124	107	86.29	89	83.18	96	107.87	72.3	79.17	78.84	0.00	0.00	0.00	0.00	20.83	11.07	4.17	10.10	0.00	0.00
Desur	29	19	65.52	17	89.47	13	76.47	12.45	38.46	30.12	0.00	0.00	0.00	0.00	61.54	25.70	15.38	44.18	0.00	0.00
Kannamangalam	24	16	66.67	12	75.00	5	41.67	2.7	40.00	55.56	0.00	0.00	0.00	0.00	60.00	44.44	0.00	0.00	0.00	0.00
Pernamallur	23	18	78.26	14	77.78	17	121.43	13.56	88.24	94.10	0.00	0.00	0.00	0.00	11.76	5.90	0.00	0.00	0.00	0.00
Pudupalayam	53	45	84.91	32	71.11	34	106.25	28.8	64.71	57.29	0.00	0.00	0.00	0.00	35.29	16.67	8.82	26.04	0.00	0.00
Town panchayat Total	594	445	74.92	289	64.94	313	108.30	240.01	63.58	62.25	0.00	0.00	0.00	0.00	36.42	19.00	5.75	18.75	0.00	0.00
Rural Total	10535	8520	80.87	7103	83.37	5752	80.98	4765.46	45.32	27.89	9.21	3.23	3.09	9.56	45.46	17.73	15.40	41.44	2.14	0.16
		>6 months		Eligible SHGs		Total Credit Linkage			Direct (in percentage)		TAHDCO RF (in percentage)		TAHDCO EA (in percentage)		SGSY RF (in percentage)		SGSY EA (in percentage)		RMK (in percentage)	
Urban	No of SHGs	Nos.	Percentage to total	Eligible SHGs	Percentage To >6 months	SHG	Percentage to Eligible SHGs	Amount (Rs. in lakh)	SHGs	Amount	SHGs	Amount	SHGs	Amount	SHGs	Amount	SHGs	Amount	SHGs	Amount
Arni MC	152	80	52.63	36	45.00	18	50.00	43.86	94.44	99.43	5.56	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cheyyar MC	162	102	62.96	70	68.63	22	31.43	7.4	86.36	89.86	13.64	10.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tiruvannamalai MC	277	233	84.12	180	77.25	66	36.67	26.7	93.94	87.64	6.06	3.93	1.52	8.43	0.00	0.00	0.00	0.00	0.00	0.00
Vandavasi MC	110	79	71.82	61	77.22	24	39.34	14.05	62.50	64.41	37.50	17.79	4.17	17.79	0.00	0.00	0.00	0.00	0.00	0.00
Urban Total	701	494	70.47	347	70.24	130	37.46	92.01	86.92	89.89	13.08	4.95	1.54	5.16	0.00	0.00	0.00	0.00	0.00	0.00
Others , MC, ICDS	319	0	0.00	0	0.00	0		0	0.00	0.00	0.00	0.00	0.00	0.00						
Grand Total	11555	9014	78.01	7450	82.65	5882	78.95	4857.47	46.24	29.07	9.30	3.26	3.06	9.47	44.46	17.39	15.06	40.65	2.09	0.15

Source: Project Officer, Mahalir Thittam, Tiruvannamalai

Table A6.1: Block-wise No of Disables in Tiruvannamalai District, 2005

Blocks/Town Panchayat/Municipality	Male	Female	Total
Anakkavur	989	621	1610
Arni	777	506	1283
West Arni	974	618	1592
Chengam	1156	749	1905
Chetpet	805	546	1351
Cheyyar	748	514	1262
Jawadhu hills	408	242	650
Kalasapakkam	907	576	1483
Kilpennathur	682	455	1137
Pernamallur	962	630	1592
Polur	912	557	1469
Pudupalayam	863	553	1416
Thandrampet	999	645	1644
Thellar	952	641	1593
Thurinjapuram	1016	618	1634
Tiruvannamalai	1241	800	2041
Vandavasi	884	629	1513
Vembakkam	1096	809	1905
Chengam Town Panchayat	227	160	387
Chetpet Town Panchayat	171	122	293
Desur Town Panchayat	32	27	59
Kalambur Town Panchayat	62	64	126
Kannamanghalam Town Panchayat	77	40	117
Kilpennathur Town Panchayat	81	63	144
Pernamallur Town Panchayat	61	48	109
Polur Town Panchayat	114	95	209
Pudupalayam Town Panchayat	84	56	140
Vettavalam Town Panchayat	88	71	159
Tiruvannamalai Municipality	731	489	1220
Arni Municipality	333	240	573
Cheyyar Municipality	238	164	402
Vandavasi Municipality	129	114	243
Total	**18799**	**12462**	**31261**

Source: Disability Survey, Disability Office, Tiruvannamalai

Table A6.2: Disability Survey 2002, Tiruvannamalai

Age Group		Ortho	Total Blindness	Low Vision	Speech and Hearing	Cerebral Pulsy	Mental Retardation	Leoprosy Cured	Multiple Disability	Mental Illness	Total
0 to 3	M	151	12	8	58	77	44	1	34	0	**385**
	F	109	4	1	29	45	23	1	29	0	**241**
	T	**260**	**16**	**9**	**87**	**122**	**67**	**2**	**63**	**0**	**626**
4 to 5	M	154	13	10	111	73	48	7	38	0	**454**
	F	107	10	10	73	56	35	4	40	0	**335**
	T	**261**	**23**	**20**	**184**	**129**	**83**	**11**	**78**	**0**	**789**
6 to 14	M	998	70	77	506	258	324	14	111	7	**2365**
	F	706	52	58	434	170	243	18	84	14	**1779**
	T	**1704**	**122**	**135**	**940**	**428**	**567**	**32**	**195**	**21**	**4144**
15 to 25	M	2773	146	112	766	225	400	29	146	42	**4639**
	F	2001	118	89	627	196	303	21	100	31	**3486**
	T	**4774**	**264**	**201**	**1393**	**421**	**703**	**50**	**246**	**73**	**8125**
26 to 45	M	2817	271	150	880	140	286	144	118	79	**4885**
	F	1735	203	122	746	77	211	121	93	67	**3375**
	T	**4552**	**474**	**272**	**1626**	**217**	**497**	**265**	**211**	**146**	**8260**
46 to 60	M	1904	162	116	484	57	87	436	47	36	**3329**
	F	998	130	88	354	35	58	193	35	37	**1928**
	T	**2902**	**292**	**204**	**838**	**92**	**145**	**629**	**82**	**73**	**5257**
60+	M	716	86	55	189	31	11	281	16	14	**1399**
	F	288	40	38	75	7	8	80	19	10	**565**
	T	**1004**	**126**	**93**	**264**	**38**	**19**	**361**	**35**	**24**	**1964**
Total	M	9513	760	528	2994	861	1200	912	510	178	**17456**
	F	5944	557	406	2338	586	881	438	400	159	**11709**
	T	**15457**	**1317**	**934**	**5332**	**1447**	**2081**	**1350**	**910**	**337**	**29165**

Table A6.3: Crime against Women Cases Reported during 2004 to 2005 up to 31.08.2005 in Tiruvannamalai District

OFFENCE	2001					2002						2003						2004						2005			
	Reported	Convicted	Acquitted	Pending Trial	Referred	Reported	Convicted	Acquitted	Pending Trial	Under Investigation	Referred	Reported	Convicted	Acquitted	Pending Trial	Under Investigation	Referred	Reported	Convicted	Acquitted	Pending Trial	Under Investigation	Referred	Reported	Pending Trial	Under Investigation	Referred
Rape	6			6	1	10		2	8			25		2	21		2	27			24	2	1	20	11	9	
Kidnapping	33		8	7	18	44		4	13		27	20		1	8		11	25		1	5	1	18	14	4	4	6
Dowry Death	1		1			9			9			6			6			3			3			4	2	2	
Cruelty by husband or his relatives	16	1	4	6	5	18		4	9		5	8			7		1	4			4			10	10		
Molestation	53	10	18	19	6	54	6	11	33		4	37	4	7	21		5	27	3	4	19		1	10	10		
Sexual harassment	9	6	2	1		30	10	19			1	6	1		4		1	16			15		1	18	18		
Importation of girls																											
Dowry Prohibition Act												16		3	11		2	20	7	2	11			31	24	5	2
Total	**118**	**17**	**33**	**39**	**30**	**165**	**16**	**40**	**72**	**0**	**37**	**118**	**5**	**13**	**78**	**0**	**22**	**122**	**10**	**7**	**81**	**3**	**21**	**107**	**79**	**20**	**8**

Source: District Crime Record Bureau, Tiruvannamalai District, Deputy Inspector General of Police, Vellor Range, Vellor, Date of Inspection 04.05.2006

Glossary

1. **Abortion:** Termination of pregnancy (expulsion or extraction of embryo/fetus) before 22 weeks of gestation or fetus weighs less than 500g. Abortion may be spontaneous (due to natural causes, such as miscarriage) or induced.
2. **Old Age Dependency ratio**: The ratio of persons aged 60 and above to persons aged 15 to 59.
3. **Antenatal Period:** The period from conception until the onset of labor, approximately 40 weeks.
4. **Attendance Rate:** The percentage of students totally attending classes.
5. **Completion Rate (CR):** The percentage of the students completing their education in the primary standards to the total enrolled defined as the completion rate in the primary standards.
6. **Cropping Intensity:** Percentage of gross cropped area to net cropped area in a year.
7. **Crude Birth Rate (CBR**): CBR is number of live births per 1000 of mid year population.
8. **Crude Death Rate (CDR):** CDR is number of deaths per 1000 population.
9. **Drop out Rate (DR):** The percentage of students leaving school system without completing the class.
10. **Early Neonatal Death:** Death of a child under seven days of age.
11. **Gross Access Ratio (GAR):** The in primary schools means per cent of total habitations are having the schools with a walkable distance of within the radius of 1 KM from the habitation. Gross Access Ratio in the upper primary section means the per cent of schools situated within the radius of 3 KM of the habitation.
12. **Infant Mortality Rate (IMR):** The number of deaths of infants under age 1 per 1,000 live births in a given year.
13. **Irrigation Intensity**: Percentage of gross irrigated area to net irrigated area.
14. **Life Expectancy at Birth (LEB):** LEB is the average number of years a new born child would be expected to live if the child is subject to the age pattern of mortality prevailing at the time of its birth.
15. **Low Birth Weight (LBW):** The weight at birth is less than 2500 g.
16. **Maternal Mortality Ratio (MMR):** The ratio reflects the risk women face of dying once pregnant. The number of women who die during pregnancy or during the first 42 days after delivery per 1000 live births in a given year from any cause related to or aggravated by pregnancy, but not from accidental or incidental causes.
17. **Neonatal Death:** The number of deaths in the first 28 days of life per in a given year.

18. **Net Enrolment Ratio (NER):** Net enrolment Ratio is defined as the percentage of the total 5+ to 9+ children enrolment to the total school the population of the 5+ to 9+ age group children.

19. **Perinatal Mortality Rate:** This rate avoids the difficulty of defining a live birth and combines late fetal and early neonatal deaths.

20. **Post Neonatal Death:** Death of a child between the ages of 28 days and less than one year.

21. **Post Partum Haemorrhage (PPH)** Usually after delivery there is some bleeding and it stops when the uterus contracts. Sometimes the uterus does not contract and the bleeding can continue resulting in death. This is an indication of inadequate blood banking facilities, and the probability that a large number of deliveries occur at home and the delay caused in reaching blood transfusion facilities.

22. **Pregnancy Induced Hypertension (PIH):** This is a condition where the blood pressure of a pregnant woman increases. If this increased pressure is not identified and controlled during pregnancy then it can lead to sever complications ending up convulsions or fits called eclampsia of pregnancy leading to death. At other times it can cause kidney failure and death. Death due to PIH is an indication of poor antenatal care.

23. **Prenatal Period:** The period between conception and birth.

24. **Pupil Teacher Ratio (PTR):** This ratio means the average numbers of pupils per teacher. This ratio should be kept as low as possible to impart quality education.

25. **Stillbirth:** The death of a fetus weighing at least 500 g (or when birth weight is unavailable, after 22 completed weeks of gestation or with a crown-heel length of 25 cm or more), before the complete expulsion or extraction from its mother.

26. **Total Fertility Rate:** The number of live births per 1,000 women of reproductive age, usually taken as 15-44 years, in a given year.

27. **Transition Rate:** The transition rate in primary standard is expressed as the percentage of the students taking admission in VI standard of total students passed in the V standard.

28. **Work Participation Rate (WPR):** Percentage of persons in Labour Force.

Abbreviations

- AEC Alternative Education Centres
- ANC Ante Natal Care
- ARI Acute Respiratory Infection
- BPL Below Poverty Line
- CBR Crude Birth Rate
- CDR Crude Death Rate
- CPR Couple Protection Rate
- CR Completion Rate
- CV Coefficient of Variation
- CWSS Combined Water Supply Scheme
- DDHS Deputy Director of Health Services
- DISE District Information System for Education
- DLHS District Level Household Survey
- DoES Department of Economics and Statistics
- DPEP District Primary Education Program
- DR Drop out Rate
- ECCE Early Childhood Care Education
- GAR Gross Access Ratio
- HSC Health Sub Centre
- HUD Health Unit District
- ICDS Integrated Child Development Scheme
- IED Integrated Education for the Disabled
- IFA Iron & Folic Acid
- IFPRI International Food Policy Research Institute
- IMR Infant Mortality Rate
- INDUS Indo-U.S.
- IP In Patient
- ITI Industrial Training Institute
- IWSC Integrated Women Sanitation Complex
- KGBV Kasturba Gandhi Balika Vidyalaya
- LBW Low birth Weight

- LIC Life Insurance Corporation of India
- Mf Micro filarial
- MMR Maternal Mortality Ratio
- Mp Malarial parasite
- MPCE Monthly per Capita Expenditure
- NDP Net Domestic Product
- NER Net Enrolment Ratio
- NGO Non Government Organization
- NMP Noon Meal Programme
- NPEGL National Programme of Education for Girls at Elementary Level
- NSA Net Sown Area
- OP Out Patient
- PCO Public Call Office
- PDS Public Distribution System
- PHC Primary Health Centre
- PIH Pregnancy Induced Hypertension
- PPH Post Partum Haemorrhage
- PTR Pupil-Teacher Ratio
- PWD Person With Disability
- RCH Reproductive and Child Health
- RTI Reproductive Tract Infection
- SBR Still Birth Rate
- SHG Self Help Group
- SRI Systemic Rice Intensification
- SSA Sarva Shiksha Abhiyan
- STI Sexually Transmitted Infection
- TAHDCO Tamil Nadu Adi Dravidor Housing and Development Corporation
- TINP Tamil Nadu Integrated Nutrition Project
- TR Transition Rate
- TVM Tiruvannamalai
- VES Vital Event Survey
- WP Within Premises
- WPR Work Participation Rate

References

1. Action Plan for Developmental Works in JFM Villages of Tiruvannamalai District for the Year 2005-06, District Forest Officer, Tamil Nadu Forest Department, Tiruvannamalai Division
2. Annual Action Plan for 2005-06, Tiruvannamalai, Joint Director of Agriculture, Tiruvannamalai District
3. Annual Credit Plan, 2002-03, Tiruvannamalai District, Indian Bank, Lead Bank Department, Tiruvannamalai
4. Annual Plan of Tamil Nadu Government, 2005-06, Chapter on Food Security and Nutrition & Health and Family Welfare
5. Annual Work Plan & Budget for 2001-02, Tiruvannamalai District, District Primary Education Programme
6. Annual Work Plan & Budget for 2002-03, Tiruvannamalai District, District Primary Education Programme
7. *Arivoli Valarkalvi Thittam*, Tiruvannamalai District
8. Bajpai, Nirupam and Sangeeta Goyal: *Primary Education in India: Quality and Coverage Issues,* CGSD Working Paper No. 11, February 2004, Working Papers Series, Center on Globalization and Sustainable Development, The Earth Institute at Columbia University www.earth.columbia.edu
9. Block Statistical Hand Book, 2003-04, (Different issues of the eighteen blocks of Tiruvannamalai), Block Statistical Inspector
10. Census of India (1991), Government of India
11. Census of India (2001), Government of India
12. Child Labour Survey, March 2003, Tamil Nadu
13. Das Abhiman (2001), *Fertility Transition and Threshold Estimation: A District – Level Analysis in India*, Journal of Social and Economic Development, Vol III, No. 2, July-Dec. 2001
14. Department of Public Distribution System, Tiruvannamalai District
15. Deputy Director of Health Services, Cheyyar Health Unit District
16. Deputy Director of Health Services, Tiruvannamalai Health Unit District (HUD)
17. Directorate of Economics and Statistics, Chennai
18. Disability Survey 2002, Disability Office, Tiruvannamalai
19. District Census Hand Book, 1991, Tiruvannamalai District, Series 23, Part XII-A
20. District Census Hand Book, 1991, Tiruvannamalai District, Series 23, Part XII-B
21. District Credit Plan, 2005-06, Tiruvannamalai, Indian Bank, Lead District Office, Tiruvannamalai, Vellore Circle
22. District Crime Record Bureau, Tiruvannamalai District, Deputy Inspector General of Police, Vellor Range, Vellor, Date of Inspection 04.05.2006
23. District Elementary Educational Office, Tiruvannamalai, Tamil Nadu
24. District Employment Office (2005), Tiruvannamalai

46. National Programme for Rehabilitation of Persons with Disabilities (NPRPD), *Sensitization Porgramme for District Level Officials over Issues Relating to Persons with Disabilities*, District Disabilities Rehabilitation Centre, Collectorate Complex, Tiruvannamalai

47. Office of the Assistant Director of Statistics, Tiruvannamalai

48. Office of the Chief Educational Officer, Tiruvannamalai

49. *Padippum Inikkum*–A Campaign to Ensure all Children read Tamil Fluently, AID INDIA

50. Poverty and blindness: A survey of the literature, Kate Gooding, SSI Programme Development Unit, February 2006

51. *Project Appraisal Document on A Proposed Credit In the amount of sdr 73.90 million ($110.83 Million Equivalent) to India for A Tamil Nadu Health Systems Project* November 17, 2004, Document of The World Bank Report No: 30276-IN, Human Development Department, South Asia Region

52. Project Officer, *Mahalir Thittam*, Tiruvannamalai district

53. Project titled *"Lives at Risk; Discrimination of Female Children in Modern India"*, which is wholly funded by the Swedish Research Council.

54. Rajan, Irudaya S, *Emerging Demographic Change in South India*

55. Ravallion, Martin & Gaurav Datt, *Why has Economic Growth been more Pro-poor in Some States of India than Others?*, Journal of Development Economics, 68 (2002) 381– 400

56. Reproductive and Child Health Porgramme, Phase II, District Plan, Tiruvannamalai District

57. *Sarva Shiksha Abhiyan*, District Elementary Education Plan, Annual Work Plan & Budget, 2006-07, Tiruvannamalai District, Tamil Nadu

58. Shakti Vahini, *Assessing Vulnerabilities for Trafficking and HIV/AIDS*, Need Assessment Study, Draft Report

59. SRS/ VES-DANIDA TN Area Health Care Project 1998 & VES 2003

60. Statistical Hand Book of Tamil Nadu 2003

61. Tamil Nadu Agricultural University, *Mission on Rainfed Agricultural Development in Tamil Nadu*, , Coimbatore

62. Tamil Nadu Human Development Report, Government of Tamil Nadu

63. *Tamil Nadu Manithavala Mempattu Arikkai-Oru Kannottam*, Tamil Nadu State Planning Commission, Chennai, Tamil Nadu

64. *Tamil Nadu State Plan for SSA for 2005-06*

65. Venkatesh Athreya and Sheela Rani Chunkath, Tackling Female Infanticide, Social Mobilization in Dharmapuri (1997-99), Economic and Political Weekly, December 2, 2000. (Data source has been stated to be Primary Health Centre (PHC) records.)

66. Vital Events Survey in Cheyyar HUD, 2004

25. District Family Welfare Bureau, Tiruvannamalai

26. District Information System for Education, Tiruvannamalai

27. District Level Household Surveys, Reproductive and Child Health (RCH), Tiruvannamalai District, 2002

28. District Rural Development Agency, Tiruvannamalai

29. District Social Welfare Office, Tiruvannamalai

30. District Social Welfare Officer, Tiruvannamalai

31. District Statistical Handbook 2003-04, Office of the Assistant Director of Statistics, Tiruvannamalai District

32. District Statistical Handbook 2004-05, Tiruvannamalai, Department of Economics and Statistics, Chennai, Government of Tamil Nadu

33. Dreze, Jean and Amartya Sen (2002), '*India Development and Participation*,' Oxford University Press, New Delhi.

34. Executive Engineer, TWAD Board, RWS Division, Tiruvannamalai District

35. *Fact Finding Report on the National Rural Employment Guarantee Scheme in Tamil Nadu*, TN-FORCES, Department of Social Work, Loyola College, Chennai – 600 034. Web page: www.tnforces.com

36. Grover, Shuchi and Nishu Harpreet Singh (2002), 'The Quality of Primary Education: A Case Study of Madurai and Villupuram Districts in Tamil Nadu, India,' Center for International Development, Harvard University.

37. Household Survey, 2001

38. Hristophe C, Z Guilmoto, S Irudaya Rajan (2002), *District Level Estimates of Fertility from India's 2001 Census*, Economic and Political Weekly February 16, 2002

39. Human Development and Health in Tamil Nadu: www.tn.gov.in/spc/workshop/6-HD%20and%20Health-SEC.PPT

40. Inspector of Police, Tiruvannamalai

41. Integrated Child Development Services, Tiruvannamalai District

42. International Food Policy Research Institute (IFPRI), 2002, *Sound Choices for Development – The Impact of Public Investment in Rural India and china*

43. Karkal, Malini.: Our Health: How doest it count? In: Our Lives our Health edited by Dr. Malini Karkal. Co-ordination unit. World conference on women - Beijing '95'. Aug. 1995. P. 191. Location : SNDT Churchgate.

44. *M. G. R. Sathunau Thittam*, Office of the District Collector, Tiruvannamalai

45. National Family Health Survey, 1998-99 (NFHS-2), Tamil Nadu, Preliminary Report, Population Research Centre, Gandhigram and International Institute for Population Sciences, Mumbai. January 2000

46. National Programme for Rehabilitation of Persons with Disabilities (NPRPD), *Sensitization Porgramme for District Level Officials over Issues Relating to Persons with Disabilities*, District Disabilities Rehabilitation Centre, Collectorate Complex, Tiruvannamalai

47. Office of the Assistant Director of Statistics, Tiruvannamalai

48. Office of the Chief Educational Officer, Tiruvannamalai

49. *Padippum Inikkum*–A Campaign to Ensure all Children read Tamil Fluently, AID INDIA

50. Poverty and blindness: A survey of the literature, Kate Gooding, SSI Programme Development Unit, February 2006

51. *Project Appraisal Document on A Proposed Credit In the amount of sdr 73.90 million ($110.83 Million Equivalent) to India for A Tamil Nadu Health Systems Project* November 17, 2004, Document of The World Bank Report No: 30276-IN, Human Development Department, South Asia Region

52. Project Officer, *Mahalir Thittam*, Tiruvannamalai district

53. Project titled *"Lives at Risk; Discrimination of Female Children in Modern India"*, which is wholly funded by the Swedish Research Council.

54. Rajan, Irudaya S, *Emerging Demographic Change in South India*

55. Ravallion, Martin & Gaurav Datt, *Why has Economic Growth been more Pro-poor in Some States of India than Others?*, Journal of Development Economics, 68 (2002) 381– 400

56. Reproductive and Child Health Porgramme, Phase II, District Plan, Tiruvannamalai District

57. *Sarva Shiksha Abhiyan*, District Elementary Education Plan, Annual Work Plan & Budget, 2006-07, Tiruvannamalai District, Tamil Nadu

58. Shakti Vahini, *Assessing Vulnerabilities for Trafficking and HIV/AIDS*, Need Assessment Study, Draft Report

59. SRS/ VES-DANIDA TN Area Health Care Project 1998 & VES 2003

60. Statistical Hand Book of Tamil Nadu 2003

61. Tamil Nadu Agricultural University, *Mission on Rainfed Agricultural Development in Tamil Nadu*, , Coimbatore

62. Tamil Nadu Human Development Report, Government of Tamil Nadu

63. *Tamil Nadu Manithavala Mempattu Arikkai-Oru Kannottam*, Tamil Nadu State Planning Commission, Chennai, Tamil Nadu

64. *Tamil Nadu State Plan for SSA for 2005-06*

65. Venkatesh Athreya and Sheela Rani Chunkath, Tackling Female Infanticide, Social Mobilization in Dharmapuri (1997-99), Economic and Political Weekly, December 2, 2000. (Data source has been stated to be Primary Health Centre (PHC) records.)

66. Vital Events Survey in Cheyyar HUD, 2004